U.S. NAVY PACIFIC MISSILE RANGE FACILITY AND NASA KŌKE'E PARK GEOPHYSICAL OBSERVATORY REAL ESTATE

FINAL ENVIRONMENTAL IMPACT STATEMENT

August 2026

VOLUME 3









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Appendix F

Cultural Resource Reports

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PMRF Archaeological Inventory Survey

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Archaeological Inventory Survey at Pacific Missile Range Facility in Support of Real Estate Environmental Impact Statement, Ahupua‘a of Waimea, Kona District, Kaua‘i Island

TMKs (1) 4-001:013 por., (1) 4-001:014 por., (1) 2-001:006 por., (1) 2-002:013 por., (1) 2-002:025 por., (1) 2-002:026 por., (1) 2-002:001 por., (1) 2-002:027 por., (1) 2-002:029 por.



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Contract No. N62742-18D-1802
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INTERNATIONAL ARCHAEOLOGY, LLC
AUGUST 2025

—DRAFT —

ARCHAEOLOGICAL INVENTORY SURVEY AT PACIFIC MISSILE RANGE FACILITY IN SUPPORT OF REAL ESTATE ENVIRONMENTAL IMPACT STATEMENT, AHUPUA‘A OF WAIMEA, KONA DISTRICT, KAUA‘I ISLAND

TMKS (1) 4-001:013 POR., (1) 4-001:014 POR., (1) 2-001:006 POR., (1) 2-002:013 POR., (1) 2-002:025 POR., (1) 2-002:026 POR., (1) 2-002:001 POR., (1) 2-002:027 POR., (1) 2-002:029 POR.

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ABSTRACT

Under contract to AECOM Technical Services, Inc., and at the request of Naval Facilities Engineering Systems Command Pacific (NAVFAC Pacific), International Archaeology, LLC (IA) conducted archaeological inventory survey (AIS) of 533 acres at Pacific Missile Range Facility (PMRF), Kaua'i, Hawai'i. The AIS included pedestrian survey and subsurface testing on multiple discrete parcels, roads, and utility corridors distributed across PMRF. The survey area consisted of State lands including leaseholds and utility and roadway easement lands currently used by the United States Department of the Navy (Navy) at PMRF. The Navy proposes to retain the use of these 533 acres in support of continued and ongoing military training and testing at PMRF. The 533-acre survey area had not been fully inventoried prior to the current AIS. The proposed action is needed because the existing real estate agreements for these lands are set to expire between 2027 and 2030. The Navy is considering two action alternatives and the No Action Alternative.

All work was done in compliance with the Antiquities Act of 1906; the Archaeological Resources Protection Act (ARPA) of 1979 and implementing regulations (32 CFR Part 229); the National Historic Preservation Act (NHPA) 1966, as amended, and implementing regulations (36 CFR Part 800); the Native American Graves Protection and Repatriation Act (NAGPRA); the PMRF Comprehensive Agreement; Department of Defense Instruction (DoDI) 4715.16; Navy Environmental Manual OPNAV-M 5090.1; and the methods and procedures outlined in the project's Performance Work Statement (PWS). The PWS is considered the equivalent of a federal permit as described in these acts and regulations. The current AIS was also conducted in compliance with Chapter 6E-8, Hawai'i Revised Statutes (HRS) and Hawai'i Administrative Rules (HAR) Chapters 13-276 and 13-275.

Archaeological pedestrian survey and subsurface testing was conducted within approximately 533 acres consisting of multiple discrete parcels, roads, and utility corridors distributed across PMRF leaseholds and easement lands. These areas consisted of four main locations: 1) Mākaha Ridge (approximately 37 acres), 2) Main Base (approximately 320 acres) including a southern survey area between the eastern boundary of PMRF Barking Sands and Kaumuali'i Highway and a northern survey area located northeast of North Nohili Road to the boundary of Polihale State Park , and 3) Kamokalā Ridge and portions of the surrounding area (approximately 176 acres). All of these survey areas are found along the western edge of Waimea Ahupua'a, Kona District, Kaua'i Island (TMKs [1] 4-001:013 por., [1] 4-001:014 por., [1] 2-001:006 por., [1] 2-002:013 por., [1] 2-002:025 por., [1] 2-002:026 por., [1] 2-002:001 por., [1] 2-002:027 por., [1] 2-002:029 por.). Five previously recorded sites and twelve newly recorded sites were identified during the AIS. The five previously recorded sites include one in the southern portion at Main Base (50-30-05-2000), one in northern portion at Main Base (50-30-01-2049), and three in Kamokalā Ridge (50-30-05-0652, 50-30-05-0653, and 50-30-05-0658). Of these previously identified sites, two are historic in age, dating to around the WWII era, and [redacted]

The twelve newly recorded sites were given temporary site numbers: two at Main Base (northern portion [IA011 and IA012]) and 10 at Kamokalā Ridge (IA001 to IA010). Both of the sites at Main Base are historic in age, with one consisting of a wooden framed structure associated with a small arms range and the other an extensive refuse area of bundled barbed wire, concrete rubble, and a mixture of broken glass and ceramic debris. The sites at Kamokalā Ridge include [redacted] features and historic (exclusively WWII era and after) refuse areas with evidence of ranching.

Ten 1 by 1 m excavation units were carried out at different locations within sites IA003, IA004, and IA008. [redacted]

[redacted] Data recorded at these three sites support observation made during pedestrian survey, namely that intensive and extensive Hawaiian agricultural and other specialized activities, [redacted].

Eight sites were recommended for National Register of Historic Places (NRHP) eligibility. Eight of the sites recorded at Kamokalā Ridge (IA001 through IA006, IA008, and IA010) are significant under Criterion D (NRB 15: 1997). [redacted] All the features associated with these sites clearly demonstrate widespread and intensive use for agriculture and possibly management of local hydrology.

The eight sites recommended as eligible for inclusion in the NRHP under Criterion D and recommended as significant under HRS Chapter 6E under Criterion "d" have the potential to provide important information about the prehistory and history of Kaua'i and Hawai'i more generally. These sites are likely part of a more comprehensive system of agricultural infrastructure [redacted] and offer an important opportunity to understand the timing of Hawaiian settlement into interior landscapes on Kaua'i. Additionally, this agricultural landscape also has the potential for providing comparative information useful for documenting the trajectory of this process across the Hawaiian archipelago. [redacted].

The eight sites were also recommended for eligibility under Hawai'i Revised Statue (HRS) Chapter 6E significance (HAR 13-284-6(b) under criteria d and e. The eight sites recommended as significant under HRS Chapter 6E under Criterion "e" were identified during consultation with OHA and Native Hawaiian Organizations as having important value to the native Hawaiian people due to associations with cultural practices once carried out at the sites that are important to native Hawaiian history and cultural identity.

As a consequence of the importance of these eight sites, it is recommended that a preservation plan in compliance with HAR Section 13-277 *Rules Governing Requirements for Archaeological Site Preservation and Development* be developed for the sites. Furthermore, the potential impact to sites from future activities should be assessed during project planning stages and archaeological monitoring or additional mitigation actions be considered. It is recommended that a series of research questions about PMRF's inland sites be integrated into a formal research design as part of PMRF's Integrated Cultural Resource Management Plan (ICRMP) and/or other management documents so that the importance of these inland resources, especially IA03, can be acknowledged and further examined during subsequent archaeological investigations. Finally, PMRF's ICRMP should be updated to include the newly recorded site information gathered during the AIS.

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I. INTRODUCTION

Under contract to AECOM Technical Services, Inc., and at the request of Naval Facilities Engineering Systems Command Pacific (NAVFAC Pacific), International Archaeology, LLC (IA) conducted an archaeological inventory survey (AIS) of approximately 533 acres at Pacific Missile Range Facility (PMRF), Kauaʻi, Hawaiʻi (Figure 1 to Figure 3). The AIS included pedestrian survey and subsurface testing on State lands, including multiple discrete leasehold parcels and utility and roadway easement lands currently used by the United States Department of the Navy (Navy) at PMRF. The Navy proposes to retain the use of these 533-acres in support of continued and ongoing military training and testing at PMRF. The 533-acre survey area had not been fully inventoried prior to the current AIS.

The proposed action is needed because the existing real estate agreements for these lands are set to expire between 2027 and 2030. All work was done in compliance with the Antiquities Act of 1906; the Archaeological Resources Protection Act (ARPA) of 1979 and implementing regulations (32 CFR Part 229); the National Historic Preservation Act (NHPA) 1966, as amended, and implementing regulations (36 CFR Part 800); the Native American Graves Protection and Repatriation Act (NAGPRA); the 2012 COMNAVREG Hawaii Programmatic Agreement; Department of Defense Instruction (DoDI) 4715.16; Navy Environmental Manual OPNAV-M 5090.1; and the methods and procedures outlined in the project's Performance Work Statement (PWS). The PWS is considered the equivalent of a federal permit as described in these acts and regulations. The current AIS was also conducted in compliance with Chapter 6E-42, Hawaiʻi Revised Statutes (HRS) and Hawaiʻi Administrative Rules (HAR) Chapters 13-276 and 13-284.

PROJECT AREA

PMRF is located on the northwest coast of the Hawaiian Island of Kauaʻi. PMRF occupies over 2,454 acres (993.5 hectares) in five separate areas on the island. The Navy is proposing to enter real estate agreements with the State of Hawaiʻi for leases and easements on lands to support PMRF operations. Proposed leaseholds and easments that the Navy is proposing include the following areas.

- Mākaha Ridge: 203 acres of leaseholds used for missile tracking and surveillance and 42.213 acres of easement lands used for roadways and utilities ;
- Main Base: 392 acres of leaseholds used for PMRF operational support and flood control, 8.334 acres of easement lands used for roadways and utilities, and 7,258.44 acres of restrictive use easement lands.
- Kamokalā Ridge: 89 acres of leaseholds (89 acres) used for ordnance storage and tsunami evacuation, 2.269 acres of easement lands used for roadways and utilities, and 176.371 acres of restrictive use easement lands.
- Mānā Water Well: 0.29 acres of leasehold used as the primary potable water source for PMRF; and
-
- Miloliʻi Ridge: 0.015 acres of leaseholds used for radar and telemetry activities; and

The restrictive use easement lands listed above were excluded from the AIS because the proposed easements would not have potential to affect historic properties. The terms of the restrictive use easements that the Navy is proposing would restrict State agencies or their tenants on those easement lands to agricultural uses in order to preclude encroachment on PMRF by development. The Navy would not conduct activities on the restrictive use easement lands, nor would it become a tenant on those lands. The Navy would occasionally close the area temporarily for public safety during certain operations conducted on Navy fee-simple lands at PMRF. The restrictive easement lands were not included in the AIS because the occasional temporary closure of the lands has no potential to affect historic properties.

The 0.015 acres of leaseholds at Miloliʻi Ridge were surveyed separately by the Navy and were not included in the AIS.

For the purposes of the AIS, the project area consists of the proposed leaseholds and the utility and roadway easement lands listed above, totalling approximately 533 acres. The AIS was carried out over four distinct areas within these more extensive parcels: 1) Mākaha Ridge (approximately 37 acres; approximately 1.77 km (1.09 miles [mi], to 6.825 km [4.24 mi] inland , 2) between the eastern boundary of PMRF Barking Sands and Kaumualiʻi Highway (hereafter referred to as Main Base (southern portion); approximately 250 acres, 250 m [820.20 ft.] to 950 m [3,116.80 ft.] inland), 3) northeast of North Nohili Road to the boundary of Polihale State Park (hereafter referred to as Main Base (northern portion); approximately 70 acres, 250 m [820.21 ft.] to 750 m [2,460.63 ft.] inland), and 4) Kamokalā Ridge (approximately 176 acres, 2.82 km [1.75 mi] to 3.74 km [2.32 mi] inland) and portions of the surrounding area. The entirety of the survey area is on the western edge of Waimea Ahupuaʻa, Kona District, Kauaʻi Island (see Figure 1 to 3).

The following TMK parcels were surveyed during the AIS: Mākaha Ridge (TMKs [1] 4-001:013 por., [1] 4-001:014 por., [1] 2-001:006 por.), Main Base (TMKs [1] 2-002:013 por., [1] 2-002:025 por., [1] 2-002:026 por., [1] 2-002:001 por.), and Kamokalā Ridge (TMKs [1] 2-002:001 por., [1] 2-002:027 por., [1] 2-002:029 por.).

REPORT ORGANIZATION

This document includes six sections. Section I introduces the project logistics, describes the project area, and report organization. Section II summarizes the physical environmental characteristics and important cultural, historical, and archaeological background information for the survey areas. Section III presents the research questions that guided the investigations and aided in the NRHP eligibility and HRS Chapter 6E significance recommendations. Section IV discusses the field and laboratory methods that were employed. Section V presents the results of the pedestrian survey and subsurface testing for each of the four survey areas. Section VI provides the NRHP eligibility and HRS Chapter 6E significance recommendations for both newly and previously identified sites. References cited and a glossary of Hawaiian words used in the report are presented after Section VI. Appendix A is the catalog list. Appendix B is the radiocarbon dating results. Appendix C is a list of the fish bony elements used for taxonomic identifications. Appendix D presents the geochemical non-destructive energy-dispersive x-ray fluorescence (EDXRF) data.

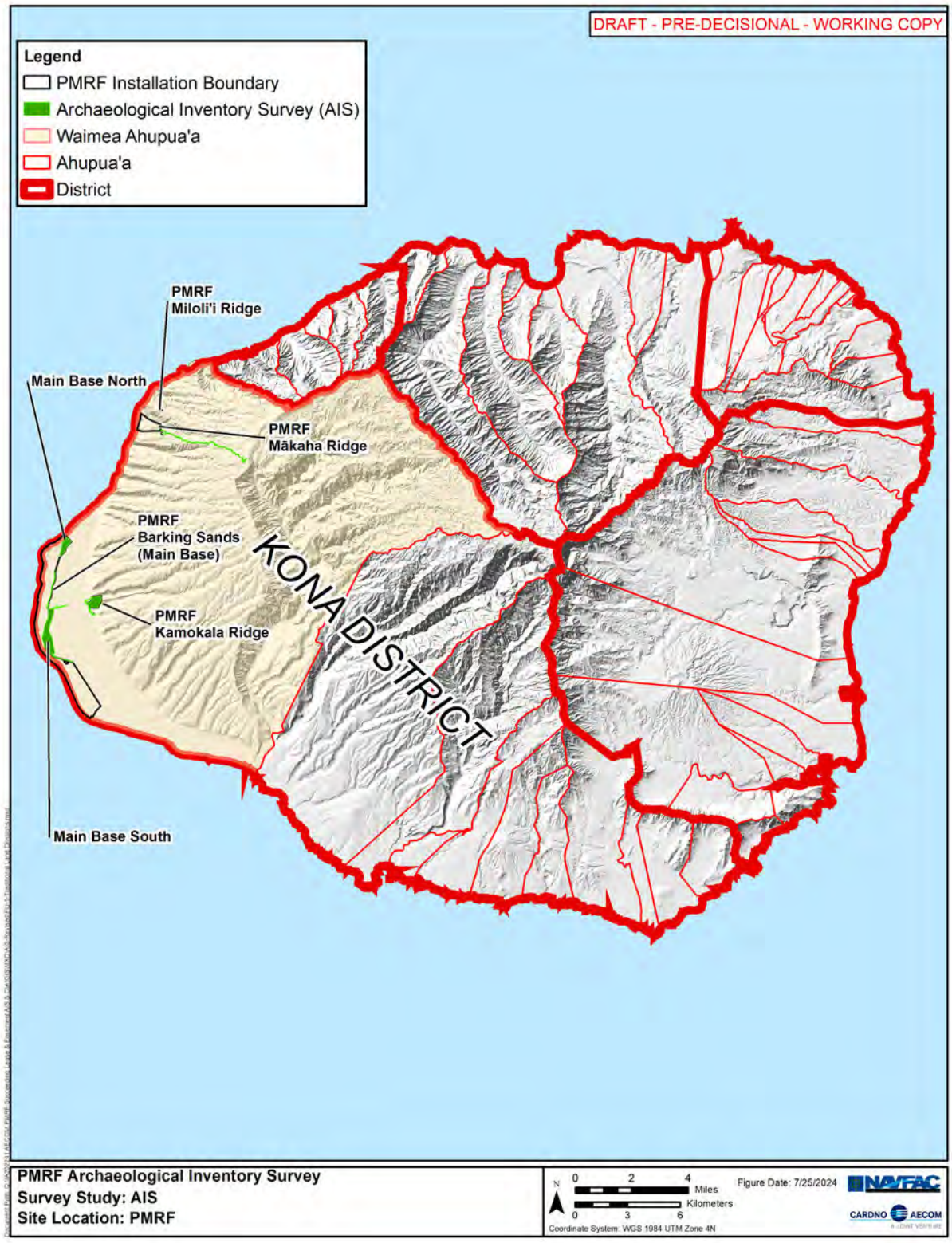


Figure 1. Traditional land divisions in Kauaʻi and location of the archaeological survey areas within Waimea Ahupuaʻa in Kona District.

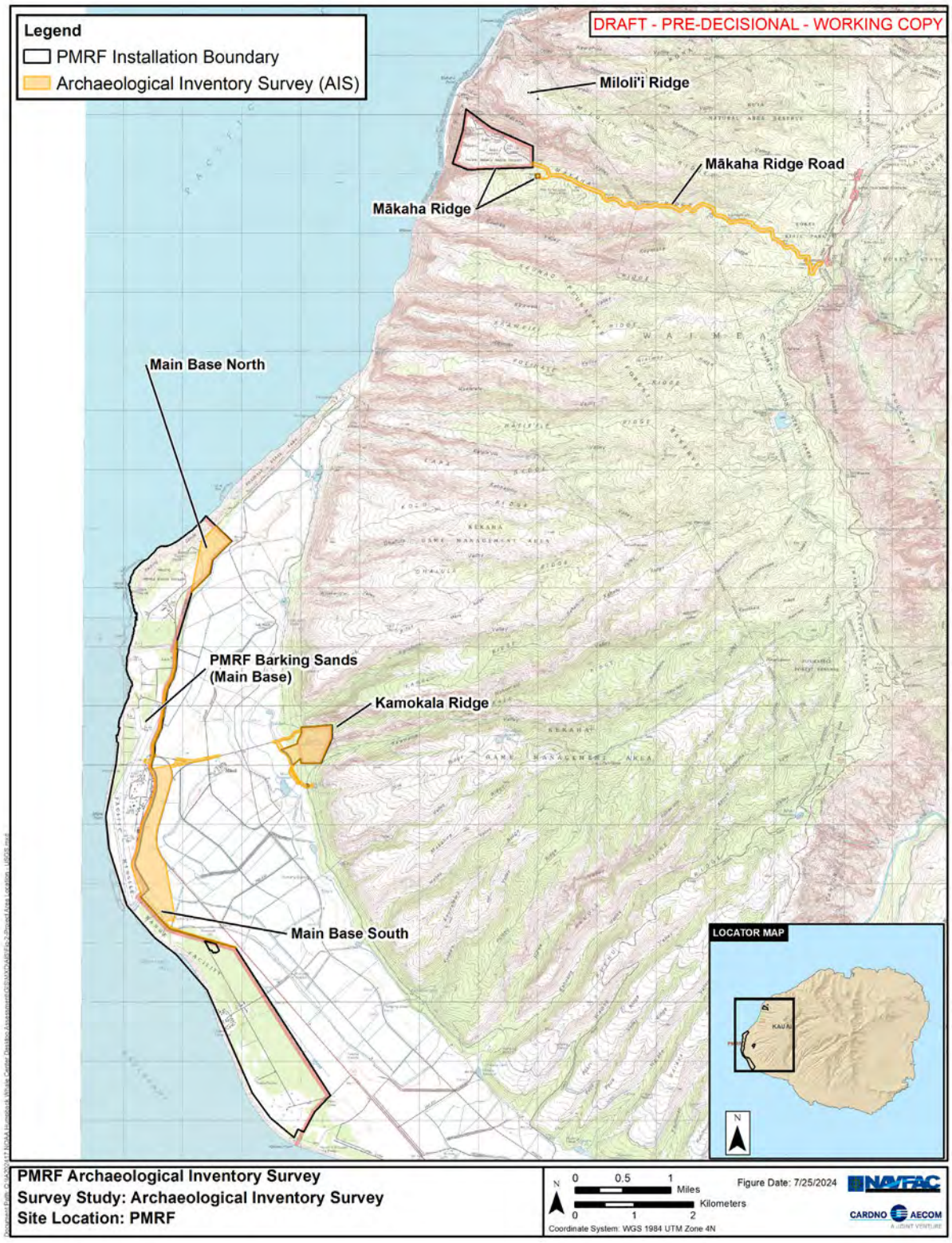


Figure 2. Archaeological survey areas within PMRF (USGS Kekaha and Mākaha Point Quadrangles 1991). Note that Barking Sands refers to the location of the Main Base survey areas.



Figure 3. Archaeological survey areas overlaid on World Imagery (World Imagery, ArcGIS Online 2021). Note that Barking Sands refers to the location of the Main Base survey areas.

II. BACKGROUND

This section presents background information to contextualize the project and summarizes the physical environment, cultural and historical context, and previous archaeological research near the project area. Much of this information has been adapted from the 2005 and 2012 Integrated Cultural Resources Management Plans (ICRMPs) for PMRF (SEARCH 2012; Tomonari-Tuggle and Yoklavich 2005), Bell and Morrison (2009), and Knecht and Rieth (2016). More detailed information about PMRF and the surrounding area can be found in the two primary ICRMPs (Tomonari-Tuggle and Yoklavich 2005; SEARCH 2012).

PHYSICAL ENVIRONMENT

PMRF is located approximately 100 miles from O‘ahu on the northwest coast of the Hawaiian Island of Kaua‘i and occupies over 993.5 ha (2,454 ac.) in five separate areas. The current AIS survey areas are within and around the components of PMRF. The Main Base (often referred to as Barking Sands) is located along the coastal plain. Mākaha Ridge is situated on the central mountain mass of the island. Kamokalā Ridge is at the inland edge of the Mānā Plain at the base of the central mountains.

PMRF’s Main Base covers over 864 ha (2,134 ac.) on the Mānā Plain. The installation occupies most of the coastal fringe of the plain, extending 12.5 km from Kokole Point in the south to Polihale State Park in the north. At its northern and southern boundaries, the Main Base is slightly over 1 km wide, narrowing to less than 0.5 km in the central portion. The northern two-thirds of the plain is a complex of three key physiographic features: coastal dune and back beach sands formed by aeolian and wave action, an arc of alluvial/colluvial deposition at the inland edge of the plain, and wetlands in the intermediate area. The southern third of the plain, in contrast, has a low dune, with relatively level soils extending back to the edge of the central mountain.

PMRF’s Mākaha Ridge Facility encompasses approximately 99 ha (245 acres) of a prominent Nā Pali ridgeline that overlooks the Mānā Plain. The ridge rises from 380 m to 565 m above sea level (asl) with an overall slope from east to west. The terrain surrounding the facility is steep, dropping quickly to the ocean along the west side and into narrow V-shaped drainages along the north and south sides.

PMRF’s Kamokalā Ridge Installation is just inland from the Mānā Plain, in an area where the ancient 150- to 200-meter-high sea cliffs have been incised by narrow, steep-walled gullies. The more gently sloped foothills at the base of the cliffs and mouths of the gullies have formed alluvial and colluvial arcs that project seaward. Atop the largest of these is the Kamokalā Ridge Installation. Kamokalā Ridge is bound by Nahomalu Valley to the north and Ka‘awaloa Valley to the south.

Rainfall across the survey area is very low, with mean annual precipitation averaging 15 to 20 inches, increasing to 36 inches at the Mākaha Ridge Tracking Station and gradually increasing further along Mākaha Ridge to the east with an average of 48 inches (Giambelluca et al. 2013). Most rain falls between October and April. The aridity of this region is caused by its location in the rain shadow of Mount Kawaikini and Mount Wai‘ale‘ale (Tuggle and Tomonari-Tuggle 1997:37).

The hydrography of the Mānā Plain is dominated by ephemeral bedrock streams that are closely spaced together (Gomez 2021). Two main depressions within the Mānā Plain are bordered by alluvium and wave- and wind-formed deposits, with associated poorly drained alluvial deposits.. Prior to historically constructed drainage ditch systems, the area contained substantial wetlands that have been significantly reduced since the early 1900s. The average minimum annual temperature occurs in January and is

approximately 71°F, and the average maximum temperature occurs in August and is 78°F (Giambelluca et al. 2013).

Numerous soil types are found in the survey area due to the variation in terrain (Figure 4 and 5). The following soil descriptions are adapted from Foote et al. (1972).

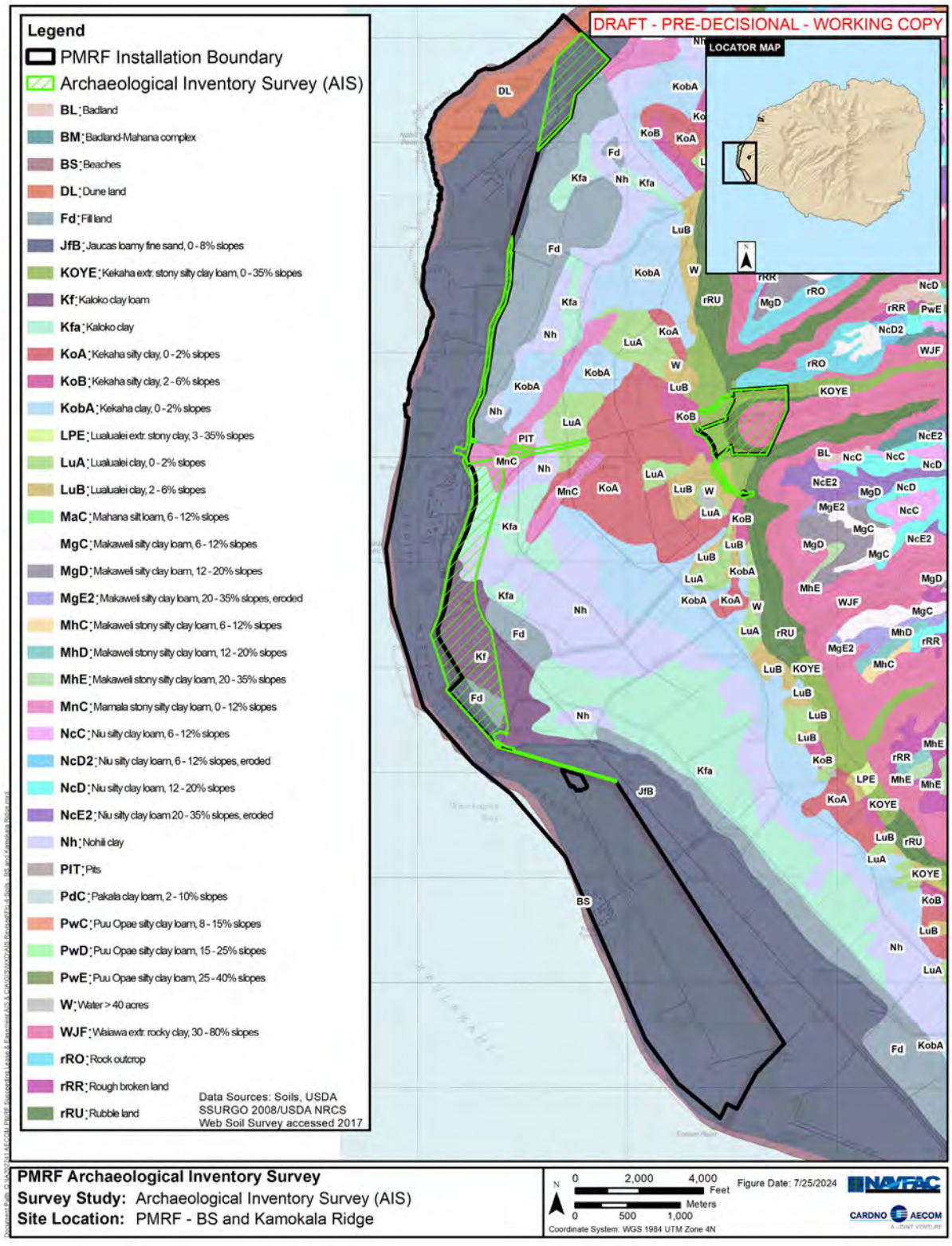


Figure 4. USDA soil classes in the vicinity of the survey area at Barking Sands (North and South) and Kamokalā Ridge.

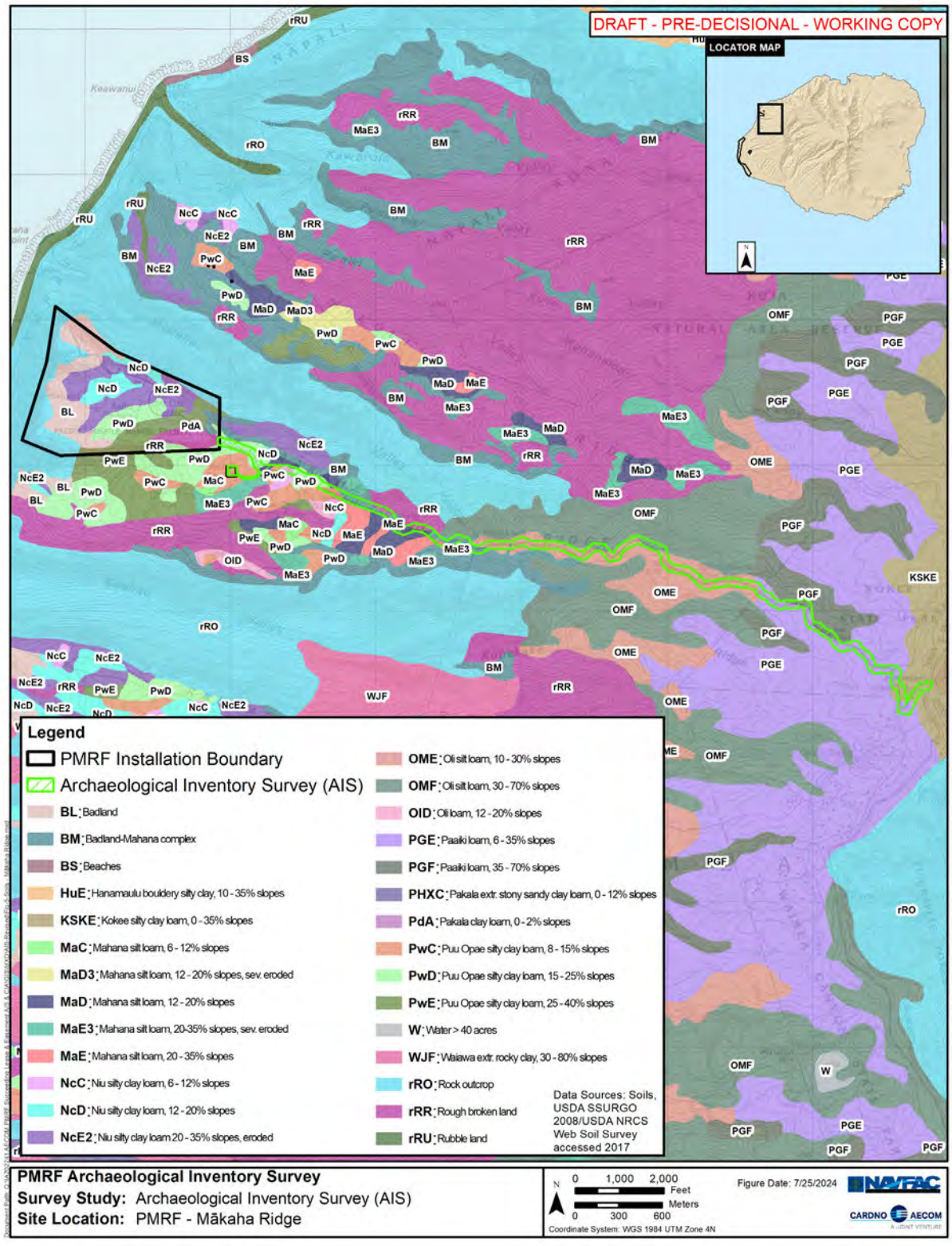


Figure 5. USDA soil classes in the vicinity of the survey area at Mākaha Ridge.

Along the coastal survey areas, five primary soil series are present. The Jaucas series, and Jaucas loamy fine sand (JfB), soils are excessively drained, calcareous soils that occur as strips on coastal plains. These soils develop by alluvial and aeolian deposition of sand formed from coral and seashells. Jaucas loamy fine sand (JfB, 0–8 percent slopes) occurs on old beaches and windblown sand deposits in the western and southern areas of Kaua‘i. The Kaloko series, and Kaloko clay (Kf) and clay loam (Kfa), are poorly drained soils on coastal plains. These soils developed in alluvium derived from basic igneous rocks; the alluvium has been deposited over marly lagoon deposits. The Mamala series, and Mamala stony silty clay loam (MnC), 0–12% slopes, consist of shallow, well-drained soils along coastal plains. These soils formed in alluvium deposited over coral limestone and consolidated calcareous sand. The Lualualei series, and Lualualei clay (LuA), 0–2% slopes, consist of well-drained soils on coastal plains, alluvial fans, and talus slopes. These nearly level to gently sloping soils developed in alluvium and colluvium. The Nohili series, and Nohili clay (Nh), are poorly drained soils on coastal plains. These soils developed in alluvium that was deposited over marly lagoon deposits (Figure 4 and 5). Also present within this area are fill lands, which are low-lying or wetland areas that have been filled with bagasse and slurry from sugarcane processing, and dune lands, which are hills and ridges of sand drifted and piled by wind.

Along Kamokalā Ridge, two primary soil series are present (Figure 4). The Kekaha series, and Kekaha extremely stony silty clay loam (KOYE), 0–35% slopes, consist of well-drained soils on alluvial fans and flood plains that developed in alluvium washed from upland soils. The Waiawa series, and Waiawa extremely rocky clay (WJF), 30–80% slopes, are well-drained, very shallow, extremely rocky upland soils. These soils developed in colluvium and material weathered from basic igneous rock. Also present within this area are rubble lands, where 90 percent or more of the surface is covered by stones and boulders at the base of steep slopes.

Along Mākaha Ridge, five primary soil series are present (Figure 5). The Paaiki series, and Paaiki loam (PGE and PGF) 6–70% slopes, consist of well-drained soils on dissected uplands. These soils developed mainly in material weathered from basic igneous rock but partly in volcanic ash and ejecta. The Oli series, and Oli silt loam (OME and OMF), 10–70% slopes, consist of well-drained, moderately deep to deep soils on uplands. These soils developed in volcanic ash deposited over basic igneous rock. The Mahana series, and Mahana silt loam (MaD and MaE) 12–35% slopes, consist of well-drained soils on uplands. These soils developed in volcanic ash. The Puu Opae series, and Puu Opae silty clay loam (PwC and PwD), 8–40% slopes, consist of well-drained soils on uplands. These soils developed in material weathered from basic igneous rock. The Niu series, and Niu silty clay loam (NcC and NcD), 6–35% slopes, consist of well-drained soils on uplands. These soils developed in material weathered from basic igneous rock, possibly mixed with volcanic ash.

TRADITIONAL LAND USE

Traditional land uses near the survey areas include habitation, subsistence activities, burial, and travel. These themes provide expectations for the categories of archeological sites that may be found during the AIS and also provide historical context for understanding how identified archaeological sites may potentially contribute to generating knowledge about the past. These themes are briefly summarized here and reports from previously conducted CRM projects, historic and ethnographic accounts, peer-reviewed literature, and recorded oral traditions are cited and incorporated where appropriate. These sources include Wulzen and Rosendahl (1997), Bennett (1931), Carpenter and Yent (1994), Dega and Ogg (2000), Flores and Kaohi (1992), Faye (1981), Fornander (1917), Handy (1940), Kikuchi (1987), 9; Kilauano (1991), Maly and Wulzen (1997), Portlock (1789), Pukui (1983), and SEARCH (2012), among others.

Wichman (1991:12), in relaying the story of Polihale, a *konohiki* chief, describes the Mānā area in pre-Contact times as:

> … a land that stretched from the western cliffs of Na Pali to the eastern boundary shared with Waiawa. Mānā is a land of long white beaches with the ocean on one side and a large swamp that teemed with birds on the other. Inland of the marsh was a fertile strip of land where sweet potatoes and gourds were grown. Above these fields cliffs rose stiff backed, broken wide by valleys down which constantly flowed fresh spring or rain water. The ridges, covered with sandalwood and *koa* (*Acacia koa*) trees, stretched into the mountains wreathed with cold and misty rain.

It is likely that permanent settlements were concentrated at the inland edge of the Mānā Plain, where houses, temples, and agricultural complexes were built in the foothills at the base of the cliffs, on high ground overlooking the wetlands and coastline.

Small fishing communities, possibly limited to temporary camps, were scattered along the coast, concentrating near optimal localities such as breaks in the reef where canoes could be launched or where reefs provided rich habitat for near-shore marine resources. Some camps were located on the protected, lee sides of the high dunes from Nohili Point to Polihale. Bennett (1931:102) observed house sites marked "by single rows of stones … or by low walls" along the inland side of the dunes. Flores and Kaohi (1992:44) suggest that the sites on the inland side of the high dunes may have been permanent homes for:

> Those families whose time was mostly occupied with fishing … [The dunes] provided them protection from ocean storm waves, flood waters, and strong on-shore winds—yet, still close enough to easily access the ocean resources. Taro was cultivated in portions of Kolo Swamp that were adjacent and *mauka* of these house sites.

RESOURCE COLLECTION AND SUBSISTENCE

The people of Mānā were noted as fishermen, taking advantage of the rich waters of the channel between Kaua'i and Ni'ihau. Fishing was not confined to the ocean and shoreline of Mānā, but also included the swamps and ponds on the coastal plain. The swamp areas of Limaloa, Kawaiele, Nohili, and Kolo were utilized as brackish water *loko pu'uone* fishponds (Kikuchi 1987:5, 9; Kilauano 1991).

Although their modern forms are clearly related to the plantation era, the Nohili Ditch and the Kawaiele Ditch may have had earlier iterations as traditional Hawaiian ditches related to the functioning of the inland ponds for aquaculture. The Mānā Plain ponds were formed by water accumulating behind the dune berms with the natural ponds enhanced by excavation of channels through the dunes to allow the flow of ocean water into the ponds during high tide (Kikuchi 1987:9). The wetlands were also a place where wild resources could be collected.

Taro, sweet potato, bananas, and other food crops were also grown in and at the mouths of the narrow gulches that fed onto the plain; however, the aridity of the plain limited the amount of farming. Pukui (1983:271) writes of the proverb "*Ola i ka 'ai uwahi 'ole o ke kini o Mānā*, the inhabitants of Mānā live on food cooked without smoking." She says that in ancient days, the people of Mānā "did very little poi-making, except in a place like Kolo, where taro was grown" (see also Kilauano 1991). Handy (1940:61) notes that "wet taro has been grown at the northern end of the Mānā swamp, near the Barking Sands." However, most Mānā people exchanged fish and dryland products (like gourds) with taro producers from other parts of the island. Thus, because "all the taro cooking and poi-making was done elsewhere, the people of Mānā were said to live on 'smokeless food'" (Pukui 1983:271).

The coastal plain adjacent to Main Base was a source of natural items that were collected and used for a variety of purposes. These included *'a'ali'i* shrubs for firewood, *hi'aloa* and other plants for medicine, and *makaloa* and *neki* for weaving. The *neki* and *makaloa* were used in plaiting mats and other articles, the fashioning of which was called *moena makaloa*.

BURIALS

The coastal dunes of the Mānā Plain were the burial grounds of ancient Hawaiians. Human skeletal remains have been found in the sands of PMRF's Main Base, as well as in mixed sandy soils nearly a kilometer inland, from the north end of the installation to Waiapuaʻa Bay and Kokole to the south. References to burials in the Nohili area appear in oral traditions and literature (e.g., Fornander 1917).

TRANSPORTATION

There were two primary traditional land routes across the Mānā Plain: one along the shoreline and the other along the base of the cliffs and ridges. Other trails ran inland from the coastal plain to the mountains. People also traveled by canoe, particularly going to and from the valleys of the Nā Pali coast, by launching from beaches with unobstructed reefs and passageways such as at Palaiholani, Keanapuka, Poʻoahonu, Keawanaiʻa, and Polihale.

An unusual means of travel in this area is noted in historical accounts that describe the Mānā Plain after heavy flooding from Kona storms. These accounts note that one could travel by canoe from Waimea to Kolo through Mānā swamps and marsh lands. Faye (1981) recalls that "in a low bottomed canoe you could row for miles on this lake.… The canoe would tip over and if you were very short you wouldn't be able to touch bottom, but if you were taller, you could sort of tread over."

HISTORICAL PERIOD LAND USE

Historical land uses in this area included grazing, commercial agriculture, forest reserves, and U.S. military activities.

EARLY HISTORIC PERIOD

Early Western explorers were not particularly interested in the Mānā Plain, which was described as a hot and dry place with large sections of marshland (Portlock 1789:170–171; SEARCH 2012). The inhabitants of Mānā, including the Main Base and Kamokalā Ridge survey areas, largely lived in the traditional ways of their ancestors until the 1848 *Mahele*, which wrought wide-ranging social changes and provided for private land ownership. Kamehameha III (Kauikeauouli) was granted the entire *ahupuaʻa* of Waimea as crown land (92,646 acres) which he then provided to the government before his death in 1854 (SEARCH 2012: 36-37; Maly and Wulzen 1997:20). After the *Mahele*, some of these remaining crown lands within the project area at Mānā were used for grazing the royal family's cattle (SEARCH 2012: 37; Gonzalez et al. 1990a:28).

COMMERCIAL AGRICULTURE

Shortly after the *Mahele*, commercial agricultural practices were brought to the Mānā Plain by leases on crown lands to Archibald Archer and eventually Valdemar Knudsen. These commercial practices included grazing cattle, timber harvesting, and cultivation of crops such as tobacco, coffee, fruit, rice, and sugarcane (Jones 1992:6; Sweeney 1994:10; SEARCH 2012). As commercial crop cultivation increased, so too did the number of agricultural workers needed to tend the crops. Most of these agricultural workers came from China, Japan, and the Philippines. With the influx of agricultural workers, the need for workers' housing also increased, and according to Smith (1989:4), the first camp for housing agricultural workers

dates to 1852. As agricultural production on the Mānā Plain expanded, much of the marshland was filled in or drained to provide more space for crops, with increasing amounts of land being converted to sugarcane cultivation. This conversion initially began in 1878 and continued primarily through the Kekaha Sugar Company, Ltd., which was formed in 1898 by Knudsen and L'Orange who maintained operations through the 20th century (SEARCH 2012). While groundwater was originally relied upon for agriculture, numerous crop failures led to the construction in 1903 of the Waimea Ditch (9.5 km long) and four years later, the Kekaha Ditch (32 km long) which connected to the Mānā Pump Ditch. Together, these efforts expanded arable land to nearly 11 km^2 and are relied upon today for agricultural activities (Gomez 2021). Large areas north and east the Kawai'ele Waterbird Sanctuary within the survey area still have remnants of historically constructed irrigation ditches.

FORESTRY

Mākaha Ridge was added to the Pu'u Ka Pele Forest Reserve in 1938 by Governor's proclamation (Department of Land and Natural Resources, 2009) with tree planting started in an attempt to curb soil erosion. Trees of many species - both exotic and native - were planted by the CCC during the 1930s and early 1940s until World War II stopped operations by sugar plantation and government personnel (Honolulu Star-Advertiser, 1936). During the late 1950s and 1960s, tree planting was started again on the lower eroded slopes of the area, primarily with *Eucalyptus saligna*, *Pinus taeda*, and *Pinus elliottii*. In the early 1960s, the Department of Land and Natural Resources began a reforestation program within the Pu'u Ka Pele Forest Reserve. Contractors were hired to clear "non-commercial" trees, shrubs, and grass from plantable areas in the reserve and to plant seedlings provided by the Division of Forestry (Department of Land and Natural Resources, 1961, 1962b, 1962a). This work was conducted on Miloli'i Ridge and other neighboring ridges.

U.S. MILITARY

An early non-agricultural use of the land that would one day become PMRF's Main Base was an airstrip, established by the Territory of Hawaii in 1921 and constructed by 1928 (SEARCH 2012). The landing field at Barking Sands was considered a good location as a stopover for transpacific flights. Prior to formal military use, transpacific flights occurred until the completion of the Līhu'e airport. Photo 1 shows the location of the landing field in 1935.

In 1940, the U.S. Army requested that the 550-acre Barking Sands airfield be set aside for military use. By April 1941 (Photo 2), before U.S. involvement in World War II (WWII), the airfield was expanded to the north and south by 2,058 acres. In May of 1942, the airfield was designated as Barking Sands Army Air Base and was used primarily for flight training and aircraft refueling. Photo 3 shows the landing field in 1943 after the expansion and improvements were completed. Also, in 1943, 10 tunnel magazines, some with monorail transport, were built into the cliffs at Kamokalā Ridge for bomb storage (Photo 4 and 5). In late 1944, Barking Sands was established as a Combat Crew Replacement Center, with the goal of checking, repairing, and maintaining aircraft and housing and training crewmen prior to deployment to the forward area of the Pacific Theater. Activity at the base increased with the end of the war in Europe in May of 1945 and began to gradually decrease with the official surrender of Japan in September of 1945 (SEARCH 2012).

In the years immediately following WWII, military activity at Barking Sands declined and the installation was turned over to the U.S Air Force and renamed Barking Sands Air Force Base (AFB) in 1948 (Clark et al. 2015). In 1953, the base was redesignated as Bonham AFB in honor of a Hawaii Air National Guardsman who was killed during training exercises. The U.S. Navy became a tenant at the airfield in 1956 for the purpose of training with the Regulus missile, and the Navy gave the name of their operations the Pacific Missile Range Facility in late 1958. During the early 1960s, the Kaua'i Test Facility (KTF)

located at Main Base, was created, and operated by Sandia National Laboratories for the Atomic Energy Commission with the mission of high-altitude atmospheric sampling during nuclear tests in the Pacific. The installation was officially transferred to the Department of the Navy in 1966, and later renamed as the Pacific Missile Range Facility at Barking Sands. Between 1966 and 1970, the Navy constructed radar and telemetry facilities at Mākaha Ridge and many additional structures at Barking Sands (Photo 6 and 7) (SEARCH 2012).

PMRF currently remains an active military installation, occupying over 993.5 ha (2,454 ac.) in five separate areas across the island. The installation supports operations ranging from single-unit exercises up to largescale, multiple-unit battle group scenarios. PMRF Barking Sands (Main Base) is the world's largest instrumented multi-domain range. The facility supports subsurface, air, and space operations simultaneously (https://cnrh.cnic.navy.mil/Installations/PMRF-Barking-Sands/, accessed 07/25/2024).



Photo 1. Barking Sands Landing Field in 1935. Source: National Archives.



Photo 2. Barking Sands Army Air Base in 1941. Source: National Archives.



Photo 3. Barking Sands Army Air Base in 1943. Source: National Archives.



Photo 4. Example of Kamokalā Ridge bomb storage magazine. Source: Tomonari-Tuggle and Yoklavich (2005).

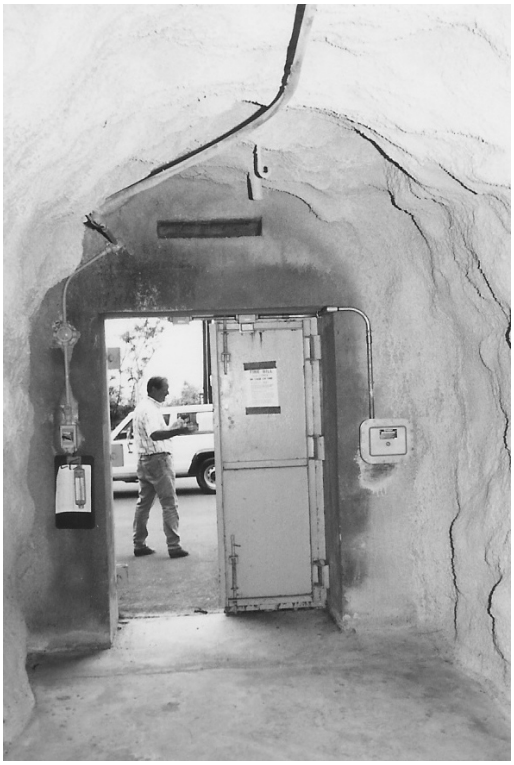


Photo 5. Example of Kamokalā Ridge bomb storage magazine. Source: Tomonari-Tuggle and Yoklavich (2005).

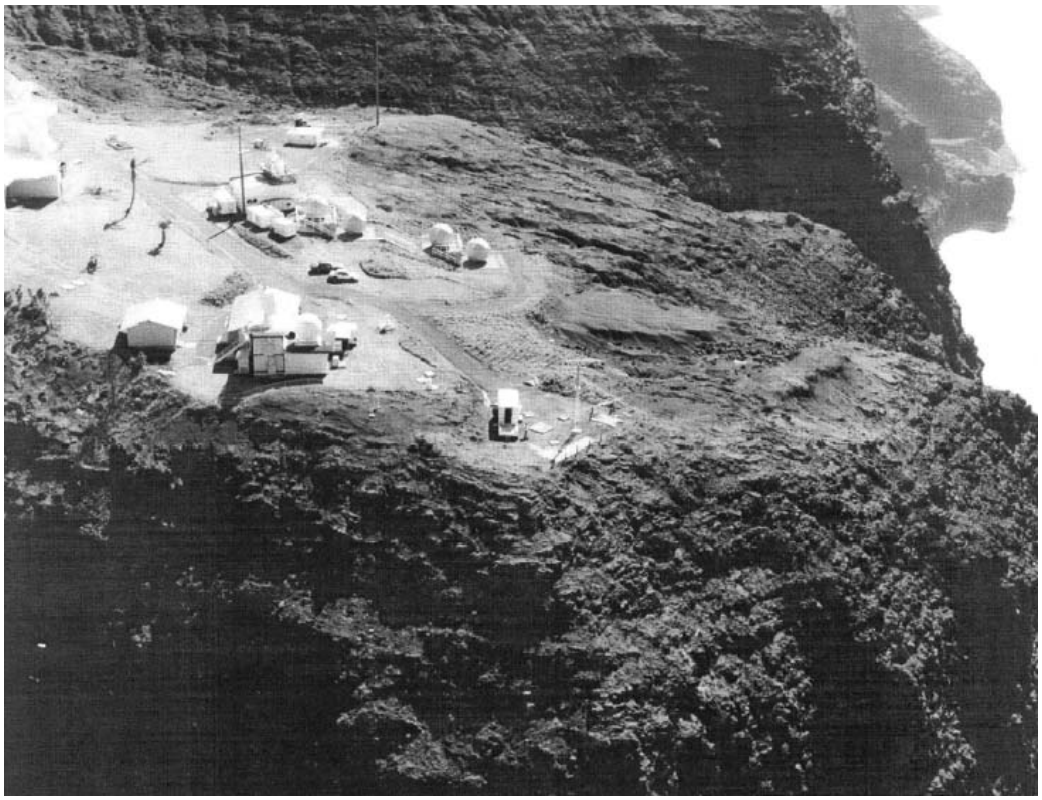


Photo 6. Mākaha Ridge Tracking Station in the 1960s. Courtesy of PMRF.



Photo 7. Mākaha Ridge Tracking Station with Mākaha Ridge Road in the background. Courtesy of PMRF.

PREVIOUS ARCHAEOLOGICAL RESEARCH

This section describes archaeological studies that have been carried out at PMRF. Figures 6 to 11 illustrate the locations of major archaeological studies at PMRF's Main Base (Barking Sands) within approximately 400 m (0.25 miles) of the survey area. Table 1 lists the details of these studies. Figures 12 to 15 show the locations of previously identified historic properties within 400 m and Table 2 details these findings.

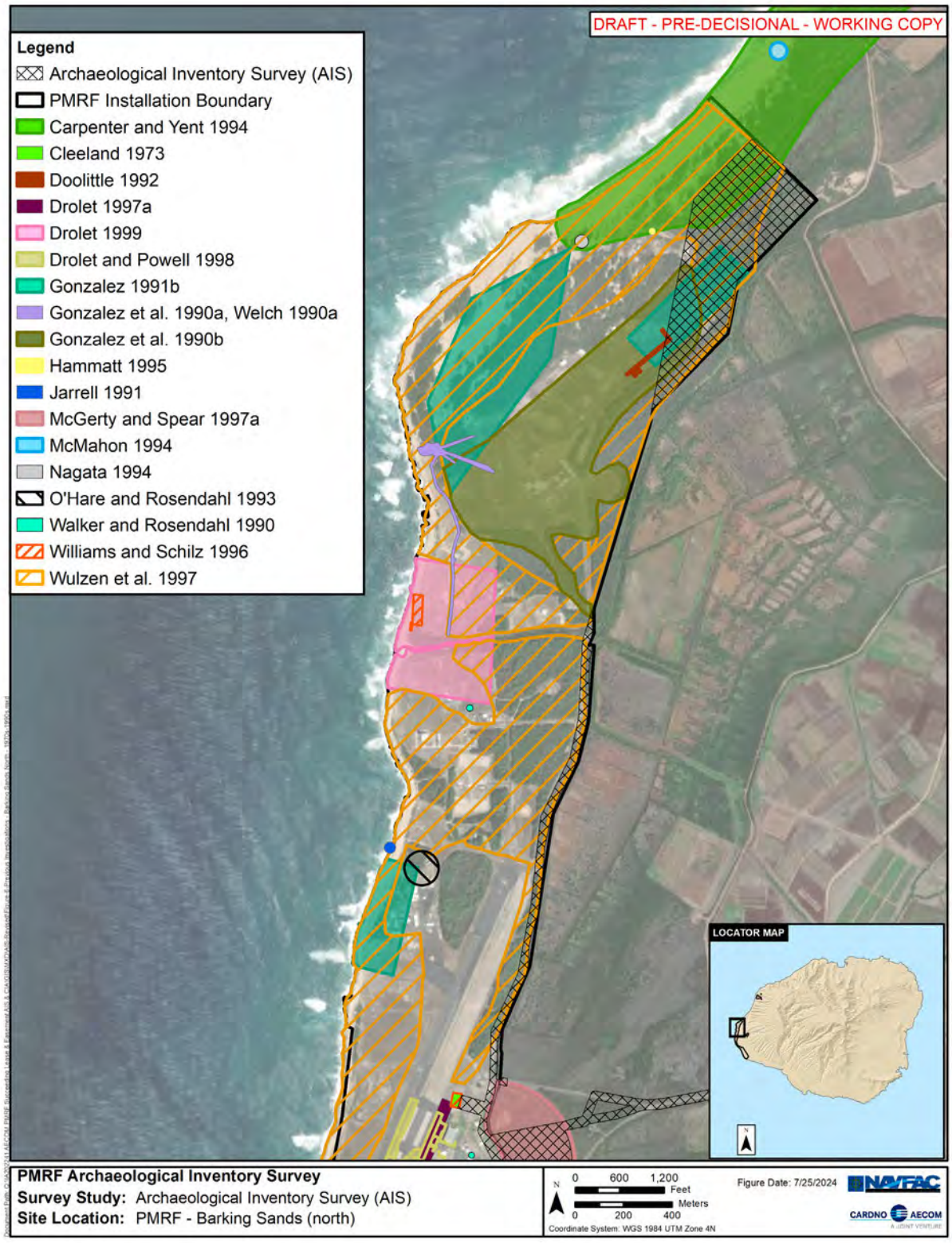


Figure 6. Previous archaeological investigations within 400 m of the survey areas within the northern portion at Main Base (Barking Sands) from the 1970s–1990s.

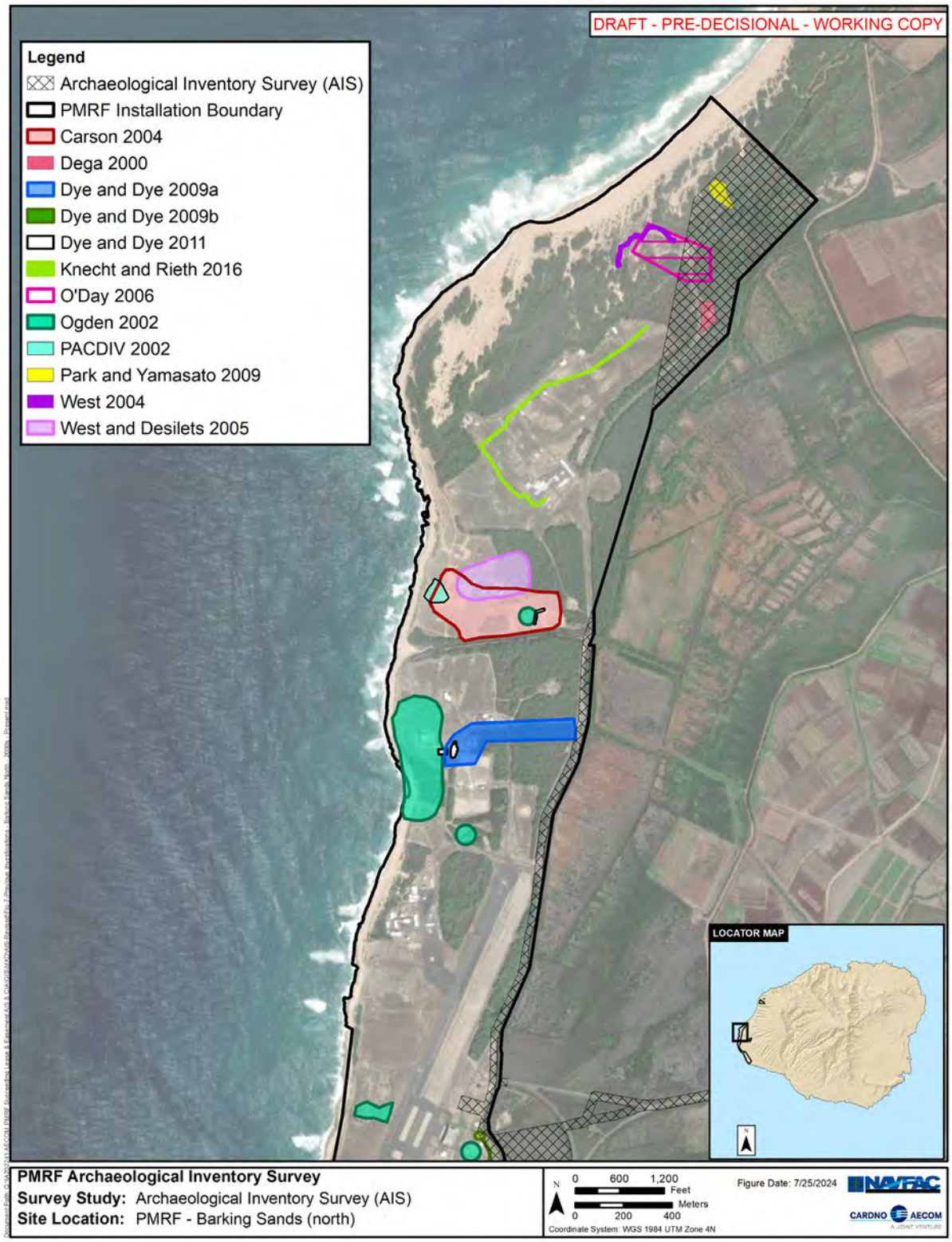


Figure 7. Previous archaeological investigations within 400 m of the survey areas within the northern portion at Main Base (Barking Sands) from the 2000s to the present.

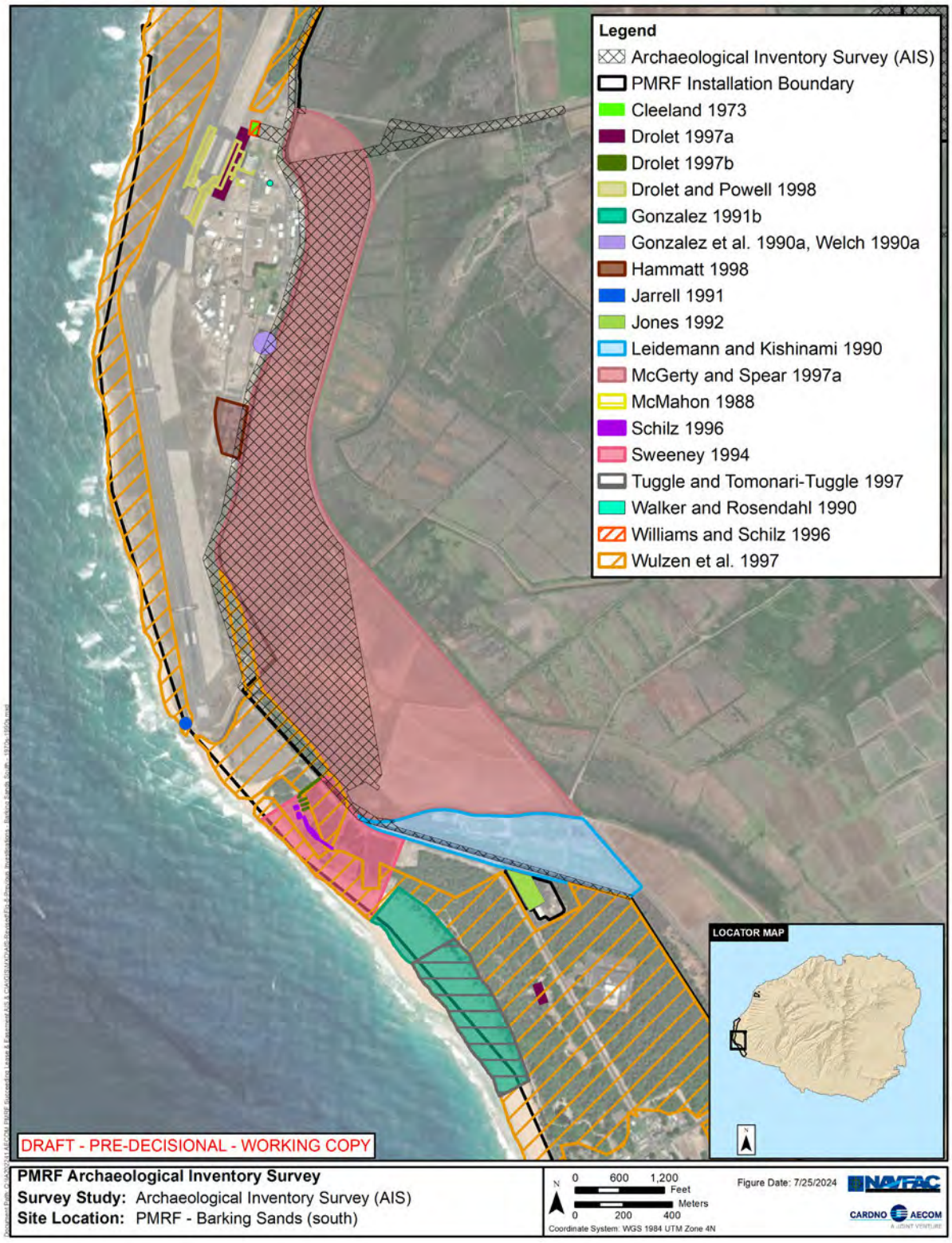


Figure 8. Previous archaeological investigations within 400 m of the survey areas within the southern portion at Main Base (southern portion) from the 1970s–1990s.

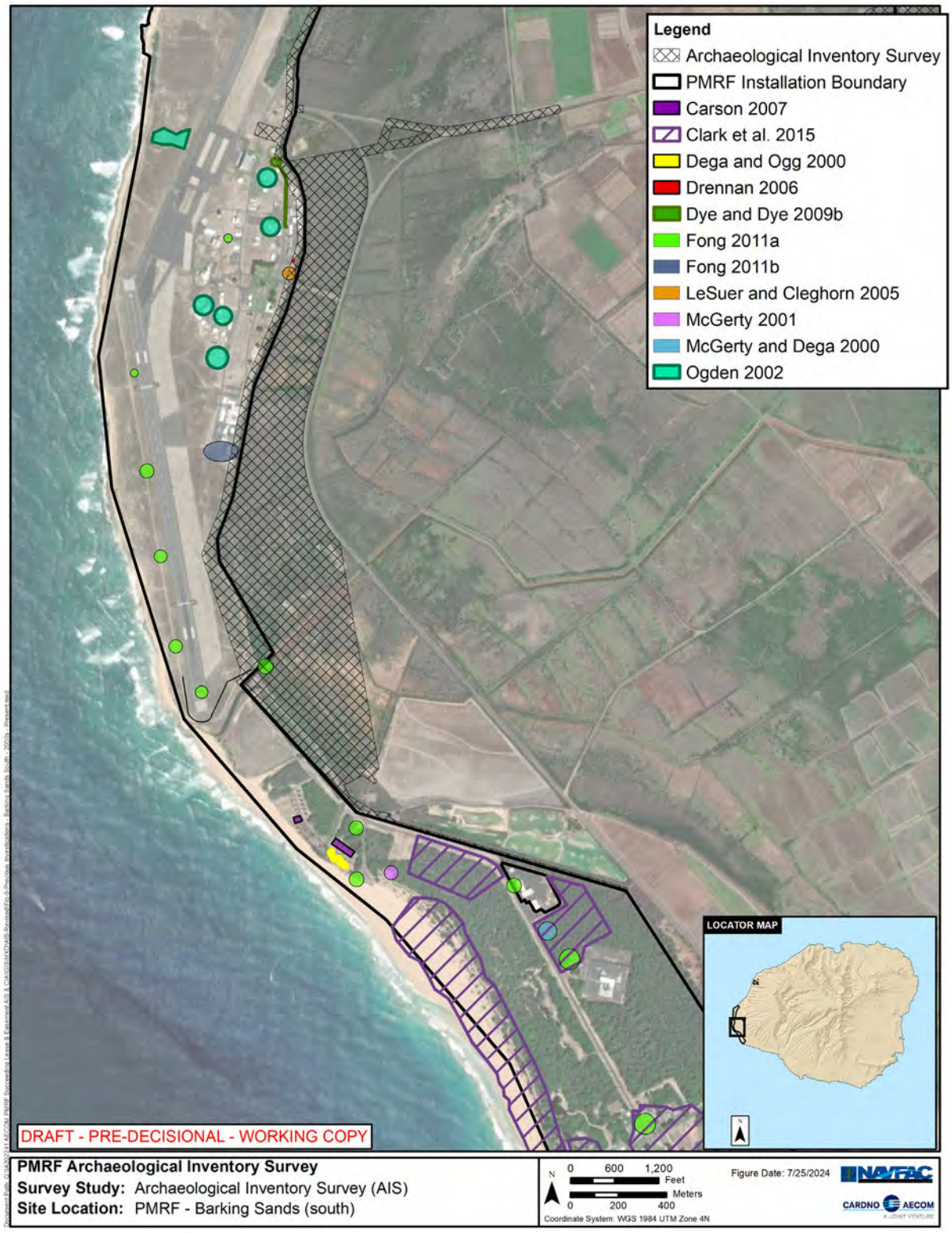


Figure 9. Previous archaeological investigations within 400 m of the survey areas at Main Base (southern portion) from the 2000s to the present.

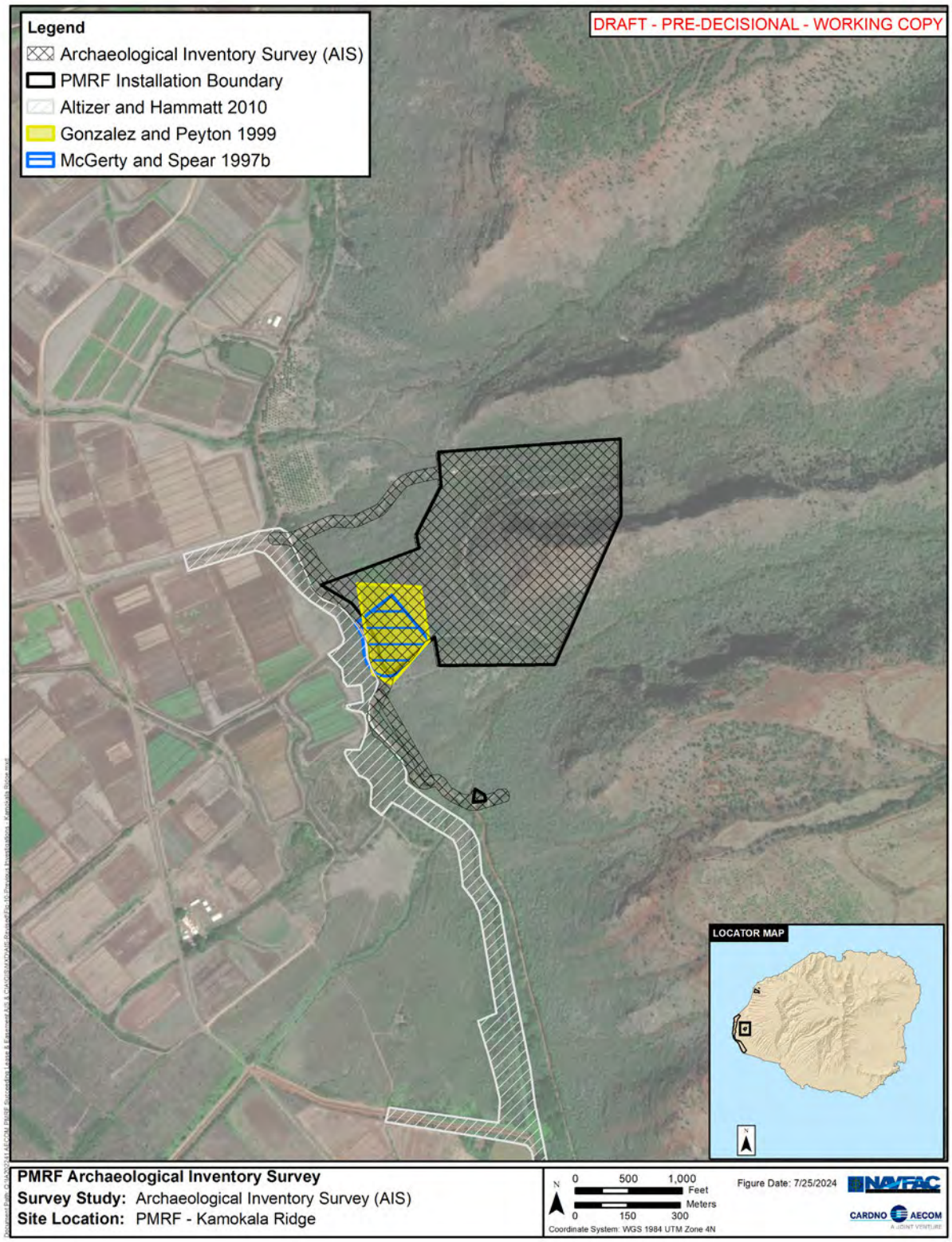


Figure 10. Previous archaeological investigations within 400 m of the survey areas at PMRF Kamokalā Ridge installation.

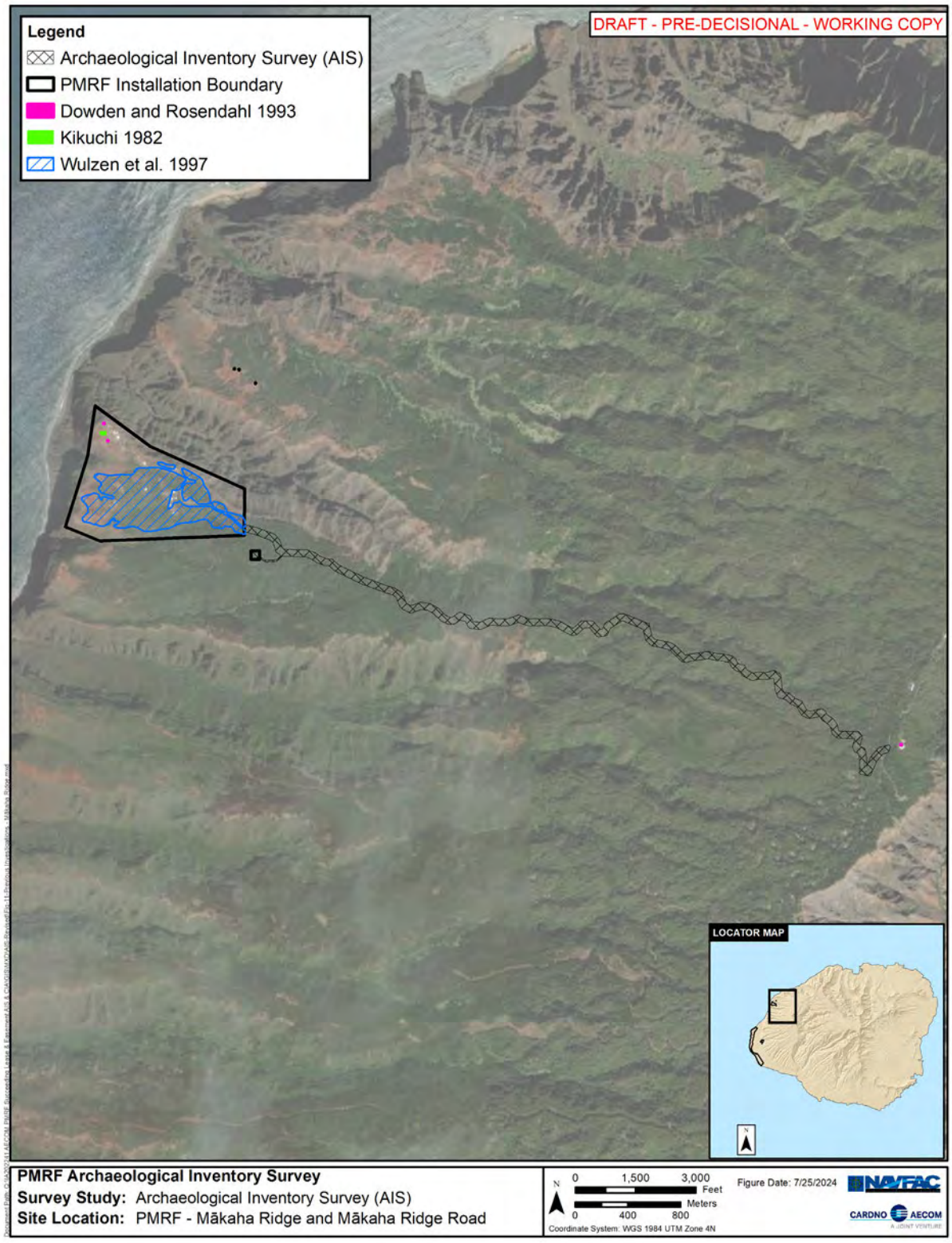


Figure 11. Previous archaeological investigations within 400 m of the survey areas at PMRF Mākaha Ridge installation and Mākaha Ridge Road.

Table 1. Summary of Previous Archaeological Studies at Pacific Missile Range Facility Within 400 m of the Survey Areas. Listed in Chronological Order. Note: Main Base Refers to Barking Sands.

Reference	Type of Study	Location	Findings
Bennett (1931)	Reconnaissance survey	Island-wide	Site 50-30-05-0007, lithic and midden scatter; Site 50-30-05-0008, ʻElekuna Heiau; Site 50-30-05-0009, stone alignments and walls
Cleeland (1973)	Survey	Multiple locations on Kauaʻi; Main Base (northern portion)	Site 50-30-05-0616, Japanese cemetery off Kaiwa Road
Kikuchi (1982)		Mākaha Ridge	No findings
McMahon (1988)[1]	Reconnaissance survey	Main Base	No findings
Leidemann and Kishinami (1990)	Reconnaissance survey and testing	Main Base (southern portion)	No findings
Walker and Rosendahl (1990)	Survey	Main Base	No findings
Welch 1990	Survey and testing	Main Base	No findings
Gonzalez et al. (1990a)	Survey and testing	Main Base (northern portion), EDX project site, just south of Nohili Dune	Excavation of 187 test bore holes; identified a disturbed buried traditional Hawaiian cultural deposit containing charcoal, marine shell, and sea urchin (no State Inventory of Historic Places [SIHP] number assigned)
Gonzalez et al. (1990b)	Subsurface testing	Main Base (northern portion), KTF	Identified a possible cultural deposit containing minimal charcoal and marine shell midden (no SIHP assigned)
Gonzalez (1991a)[1]	Reconnaissance survey	Main Base (northern portion), Nohili Dune/KTF	Identification of fuel tank (subsequently designated Site 50-30-01-2050 by Wulzen et al. 1997)[2]
Gonzalez (1991b)	Reconnaissance survey	Main Base (northern portion), KTF	No findings

Reference	Type of Study	Location	Findings
Jarrell (1991)	Inadvertent discovery of human remains	Main Base	Two burials, no SIHP numbers assigned
Doolittle (1992)	Ground-penetrating radar survey	Main Base (northern portion)	No findings
Flores and Kaohi (1992)[3]	Ethnographic survey	Waimea district	Determinations of cultural sensitivity for PMRF and surrounding lands
Jones (1992)	Survey and testing	Main Base (southern portion)	No findings
Dowden and Rosendahl (1993)	Survey and testing	Kōkeʻe Ridge and Mākaha Ridge	No findings
O'Hare and Rosendahl (1993)	Subsurface testing	Main Base (northern portion)	No findings
Carpenter and Yent (1994)	Reconnaissance	Polihale State Park	Sites 50-30-01-1820, cultural scatter; 50-30-0-1821, lithic scatter
McMahon (1994)	Inadvertent discovery of human remains	Polihale State Park	Site 50-30-01-0869, disturbed burial
Nagata (1994)	Survey	Main Base (northern portion), Nohili Dune	Site 50-30-01-6027, buried cultural deposit
Sweeney (1994)	Survey and testing	Main Base (southern portion)	Site 50-30-05-4016, buried cultural deposit; radiocarbon date of 770±60 years BP
Hammatt (1995)	Subsurface testing	Main Base (northern portion), northeast of KTF	No findings
Schilz (1996)	Monitoring	Main Base (southern portion)	No findings
Drolet (1997a)	Testing	Main Base (northern portion)	No findings
Drolet (1997b)	Monitoring and testing	Main Base (southern portion)	No findings
McGerty and Spear (1997a)	Survey and testing	Main Base (southern portion)	No findings

Reference	Type of Study	Location	Findings
McGerty and Spear (1997b)	Survey	Kamokalā Ridge	Terraces and rock mounds (Sites 50-30-05-0652, 50-30-05-0653, 50-30-05-0657, and 50-30-05-0658); historic artifacts (Site 654); two dirt roads (Sites 50-30-05-0655, 50-30-05-0656)
Tuggle and Tomonari-Tuggle (1997)	Cultural resource assessment	Main Base (southern portion)	No findings
Wulzen et al. (1997)	Reconnaissance survey	Main Base, Mākaha Ridge	53 Sites (including 78 features) at PMRF Barking Sands, no findings at Mākaha Ridge
Drolet and Powell (1998)	Monitoring	Main Base (northern portion)	No findings
Hammatt (1998)	Monitoring	Main Base (southern portion)	No findings
Gonzalez and Peyton (1999)	Survey	South of Kamokalā Caves Ordnance Magazine Area	Historic trash dump, no site numbers assigned
Drolet (1999)	Survey and subsurface testing	Main Base (northern portion)	Identified habitation and midden features associated with extraction of marine resources, possibly a seasonal camp; Sites 05-1829/05-1830 were identified as NRHP-eligible under Criterion D.
Dega (2000)	Survey and monitoring	Main Base (northern portion), missile assembly building, back side of Nohili Dune	No findings
Dega and Ogg (2000)	Survey	Main Base (southern portion)	No findings
McGerty (2000)	Survey and testing	Main Base (southern portion)	No findings
McGerty (2001)	Cultural resource assessment	Main Base (southern portion), Waiapuaʻa Bay	No findings

Reference	Type of Study	Location	Findings
Ogden Environmental and Energy Services, Co., Inc. (2002)	Cultural resource review	PMRF, all installations	Determination of potential disturbance to know historic properties
PACDIV (2002)	Subsurface testing	Main Base	Identified boundary of Site 50-30-05-1829 and associated features[2]
Carson (2004)	Monitoring	Main Base (northern portion), new missile launcher hardstand, coral road and utility trench	No findings
West (2004)	Monitoring	Main Base (northern portion)	No findings
LeSuer and Cleghorn (2005a)[4]	Monitoring	Main Base	No findings
LeSuer and Cleghorn (2005b)[4]	Monitoring	Main Base	No findings
West and Desilets (2005)	Survey and testing	Main Base (northern portion)	No findings
Drennan (2006)	Cultural resource assessment	Main Base	No findings
O'Day (2006)	Survey and testing	Main Base (northern portion), proposed railgun facility	Wetland deposit with one radiocarbon date (calibrated date range AD 1460–1660)
Carson (2007)	Testing	Main Base (southern portion)	No findings
Park and Yamasato (2009)	Monitoring	Main Base (northern portion)	No findings
Dye and Dye (2009a)	Monitoring	Main Base (northern portion)	No findings
Dye and Dye (2009b)	Testing	Main Base (northern portion)	Site 50-30-05-05-05031, 17 subsurface features and cultural deposit, radiocarbon dates from late 1600s to early 1700s

Reference	Type of Study	Location	Findings
Altizer and Hammatt (2010)	Survey	Kamokalā Ridge to Pokiʻi Ridge	Site 50-30-05-2111, 8 agricultural mounds Site 50-40-05-2112, Terrace Site 50-40-05-2113, Historical house site
Dye and Dye (2011)	Data recovery	Main Base (northern portion)	Site 50-30-05-05-05031, 17 subsurface features and cultural deposit, radiocarbon dates from late 1600s to early 1700s
Fong (2011a)	Testing and monitoring	Main Base (southern portion)	No findings
Fong (2011b)	Survey and testing	Main Base (southern portion)	No findings
Clark et al. (2015)	Survey and testing	Main Base (southern portion)	Site 50-80-14-2272, two WWII gun emplacements
Knecht and Rieth (2016)	Monitoring	Main Base (southern portion), KTF	Multiple concrete footing features (likely early 1960s)

[1] This report does not provide a figure displaying the survey area.

[2] The referenced site is outside of the 400 m buffer and is not included in Figures 16 through 19.

[3] As an ethnographic project, the survey area is not depicted in Figures 12 through 15.

[4] These projects have the same survey area.

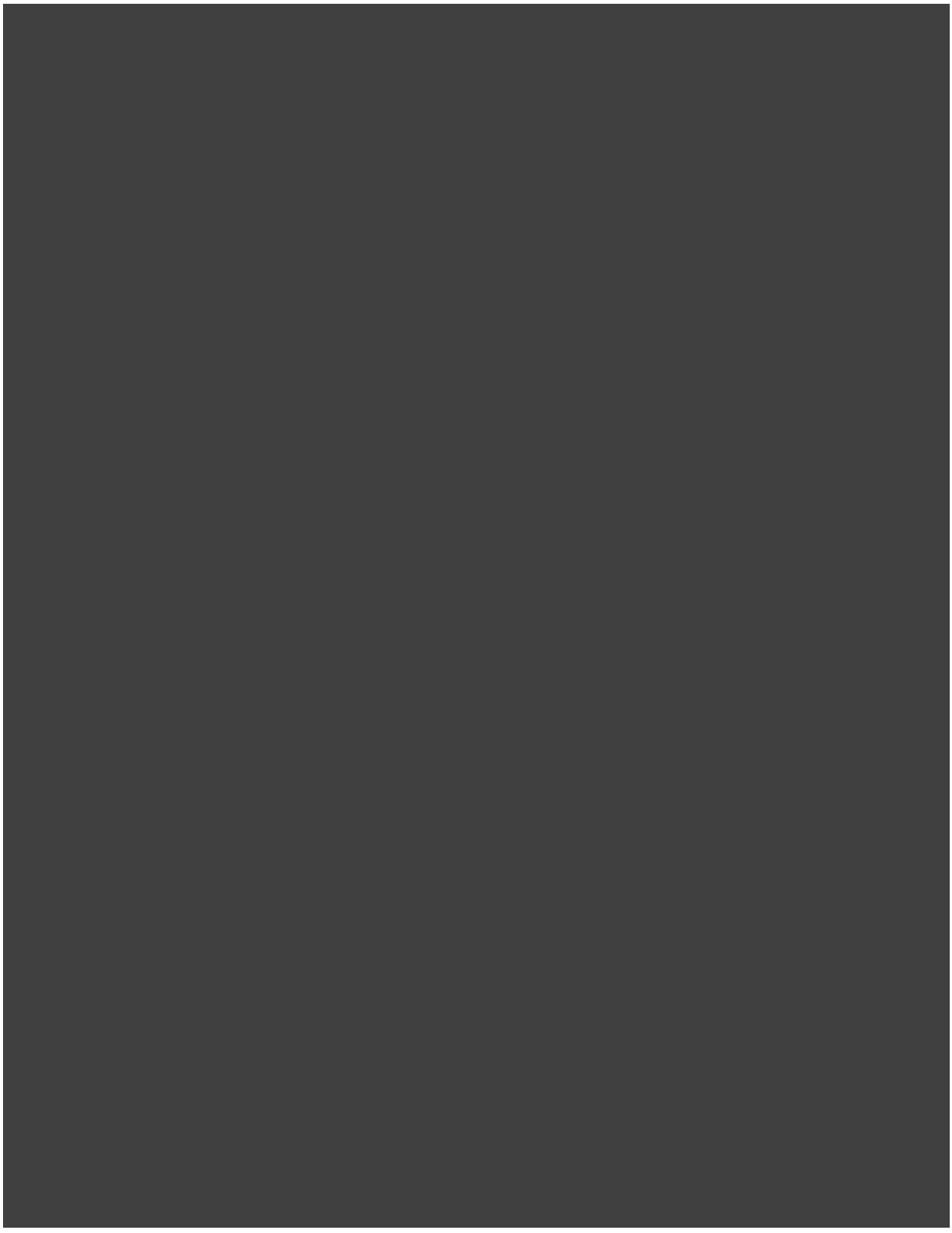


Figure 12. Previously identified historic properties within 400 m of the survey areas at Main Base (northern portion).

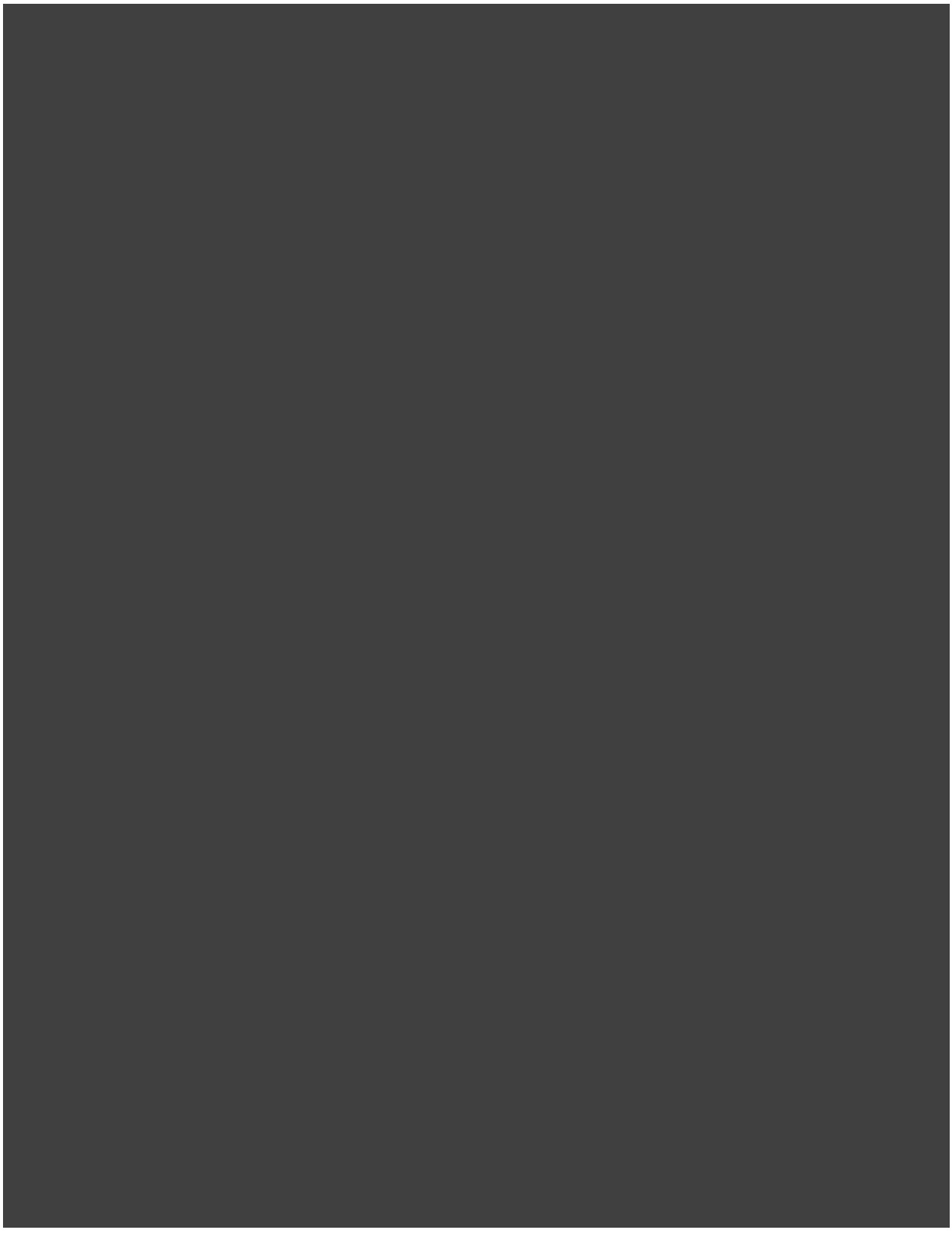


Figure 13. Previously identified historic properties within 400 m of the survey areas at Main Base (southern portion).

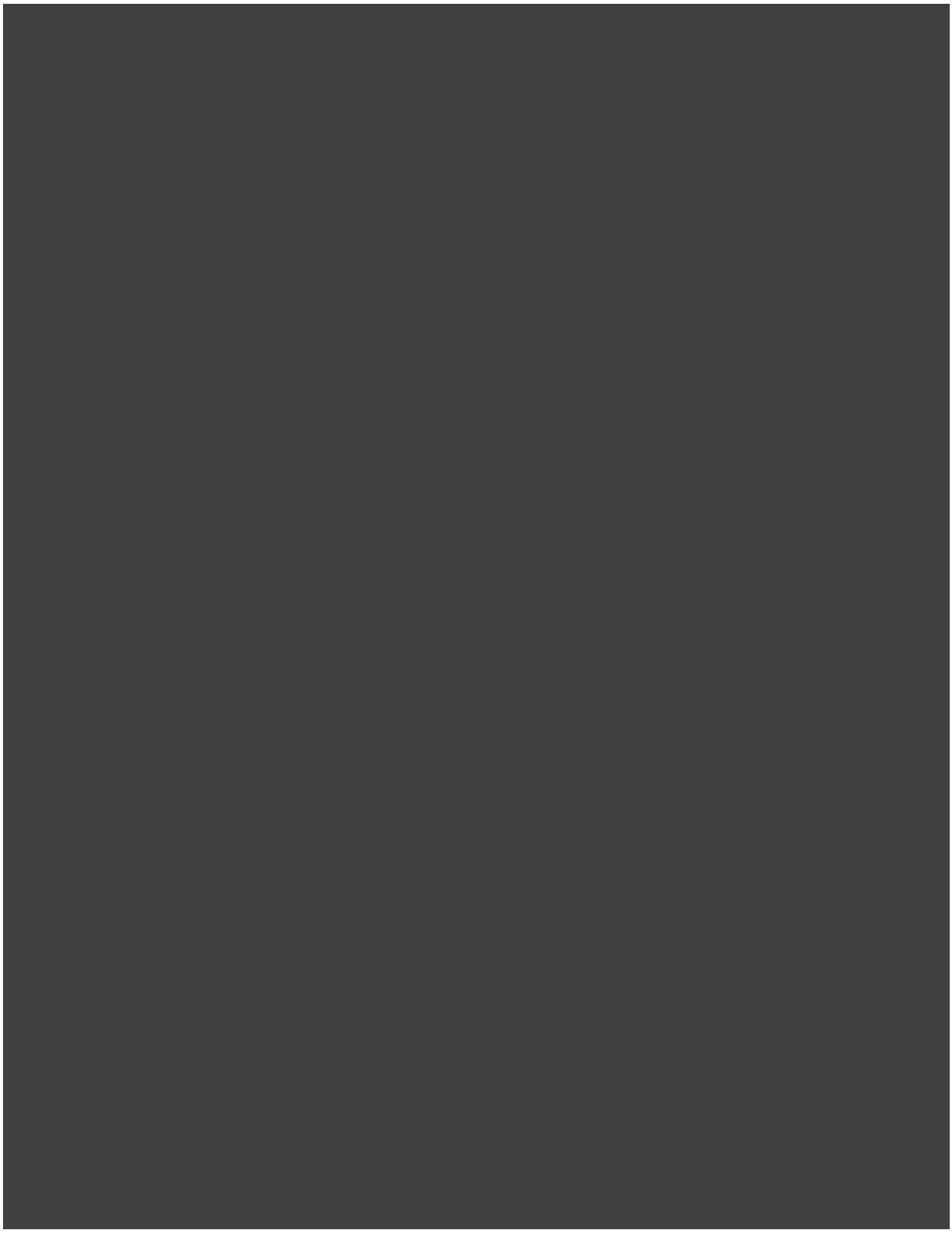


Figure 14. Previously identified historic properties within 400 m of the survey areas at Kamokalā Ridge.

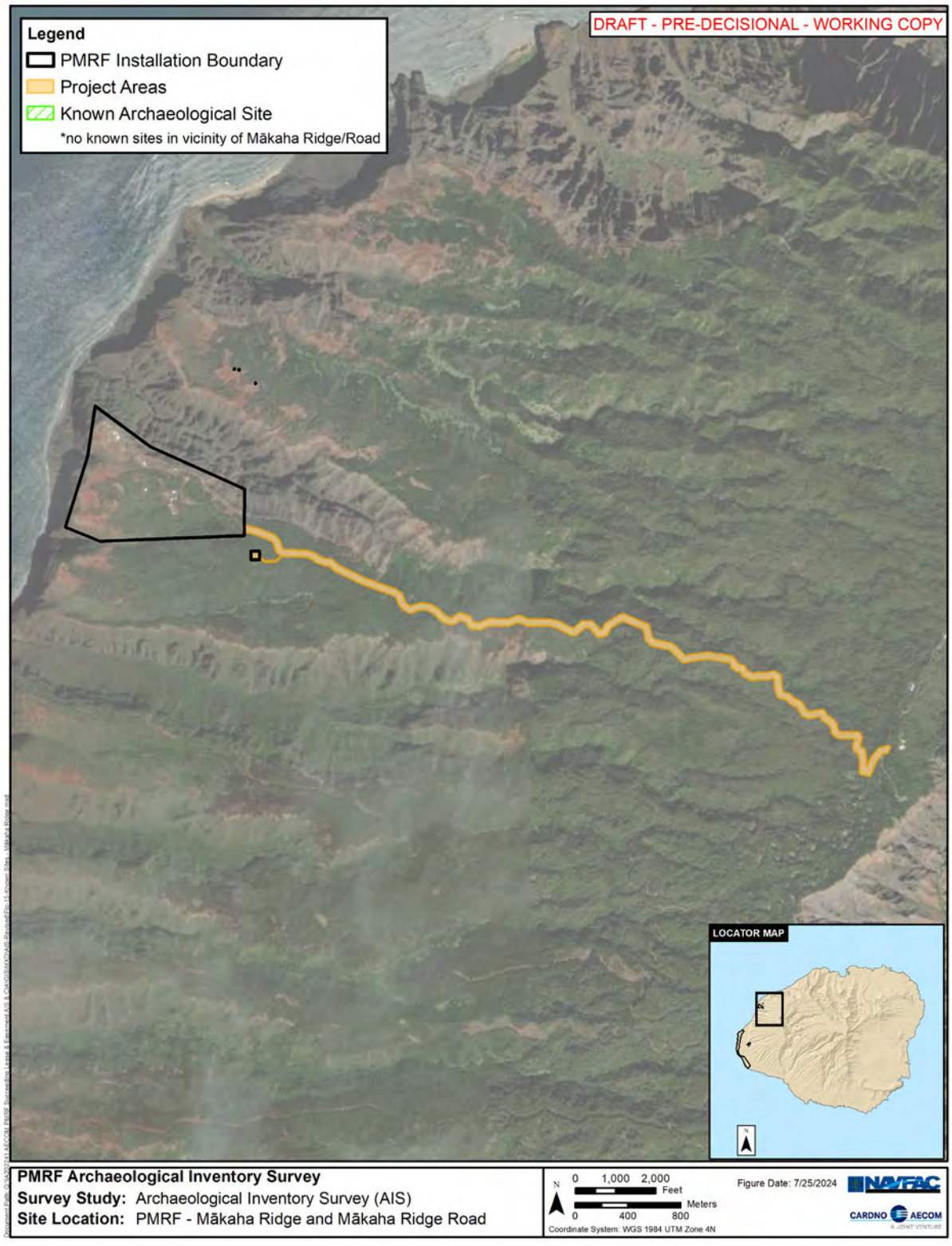


Figure 15. Previously identified historic properties within 400 m of the survey areas at Mākaha Ridge installation and Mākaha Ridge Road.

Table 2. Known Historic Properties Within 400 m of the Survey Areas. Note: Main Base Refers to Barking Sands.

Site No. (50-30-)	Name/Description	Age	Inferred Function	Location	Information Source
01-0007	Lithic and midden scatter atop Nohili Dune (50-30-01-1860)	Traditional Hawaiian	Habitation	Main Base	Bennett (1931)
01-0008	'Elekuna Heiau; inland side of Nohili Dune (50-30-01-1860)	Traditional Hawaiian	Habitation	Main Base	Bennett (1931)
01-0009	Stone alignments and walls; inland side of Nohili Dune (50-30-01-1860)	Traditional Hawaiian	Habitation	Main Base	Bennett (1931)
01-0869	Burial, disturbed	Traditional Hawaiian	Burial	Southern Polihale State Park	McMahon (1994)
01-1820	Lithic and midden scatter	Traditional Hawaiian	Habitation	Southern Polihale State Park	Carpenter and Yent (1994)
01-1821	Lithic scatter	Traditional Hawaiian	Habitation	Southern Polihale State Park	Carpenter and Yent (1994)
01-1860	Nohili Dune	Traditional Hawaiian	Burial, habitation	Main Base	Thrum (1907), Bennett (1931)
01-2013	Gun emplacement	WWII era	Military	Main Base	Wulzen et al. (1997)
01-2014	Historic midden	WWII era	Military	Main Base	Wulzen et al. (1997)
01-2017	Midden deposit	Traditional Hawaiian	Habitation	Main Base; [redacted]	Wulzen et al. (1997)
01-2042	Historic midden	WWII era	Military	Main Base	Wulzen et al. (1997)

Site No. (50-30-)	Name/Description	Age	Inferred Function	Location	Information Source
01-2044	Concrete structure	WWII era	Military	Main Base	Wulzen et al. (1997)
01-2049	Historic midden	WWII era	Military	Main Base	Wulzen et al. (1997)
01-6027	Midden deposit; part of Nohili Dune (50-30-01-1860)	Traditional Hawaiian	Habitation	Main Base	Wulzen et al. (1997)
05-0616	Japanese cemetery	Plantation	Burial	Main Base [redacted]	Cleeland (1973)
05-0652	Rock mound	Traditional Hawaiian	Agriculture	[redacted] Kamokalā Ridge	McGerty and Spear (1997b)
05-0653	Seven rock mounds	Traditional Hawaiian	Agriculture	[redacted] Kamokalā Ridge	McGerty and Spear (1997b)
05-0654	Historic midden	Plantation/WWII era	Dump	[redacted] Kamokalā Ridge	McGerty and Spear (1997b)
05-0655	Historic dirt road	Plantation/WWII era	Transportation	[redacted] Kamokalā Ridge	McGerty and Spear (1997b)
05-0656	Historic dirt road	Plantation/WWII era	Transportation	[redacted] Kamokalā Ridge	McGerty and Spear (1997b)
05-0657	Terrace complex	Traditional Hawaiian	Agriculture	[redacted] Kamokalā Ridge	McGerty and Spear (1997b)
05-0658	Rock mound	Traditional Hawaiian	Agriculture	[redacted] Kamokalā Ridge	McGerty and Spear (1997b)
05-0721	Kawaiele Ditch	Traditional Hawaiian and Plantation era	Agriculture	Main Base [redacted]	Tomonari-Tuggle and Yoklavich (2005:102); SEARCH (2012:137)
05-0825	Unmarked cemetery	Plantation era	Burial	Main Base, [redacted]	Drolet et al. (1996:34–35)

Site No. (50-30-)	Name/Description	Age	Inferred Function	Location	Information Source
05-1832	Burial	Traditional Hawaiian or Plantation era	Burial	Main Base, [redacted]	Drolet et al. (1996:37)
05-1833	Burial (may be the same as 50-30-05-1885)	Traditional Hawaiian	Burial	Main Base, [redacted]	Drolet et al. (1996:37)
05-1834	Burial area	Traditional Hawaiian	Burial	Main Base, [redacted]	Drolet et al. (1996:37–38)
05-1885	Burial and midden scatter (may be the same as 50-30-05-1833)	Traditional Hawaiian	Burial, habitation	Main Base, [redacted]	Drolet et al. (1996:38)
05-2000	Bathhouse complex	WWII era	Military	Main Base (southern portion)	Wulzen et al. (1997)
05-2001	Concrete slab	WWII era	Military	Main Base (southern portion)	Wulzen et al. (1997)
05-2002	Fence	WWII era	Military	Main Base (southern portion)	Wulzen et al. (1997)
05-2003	Historic midden	WWII era	Military	Main Base (southern portion)	Wulzen et al. (1997)
05-2004	Concrete slab	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2005	Housing complex	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2010	Latrine complex	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2011	Historic midden	Post-WWII era	Military	Main Base (southern portion)	Wulzen et al. (1997)
05-2012	Excavation	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)

Site No. (50-30-)	Name/Description	Age	Inferred Function	Location	Information Source
05-2015	Housing complex	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2016	Concrete slab	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2018	Historic midden	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2022	Concrete structure	Cold War era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2024	Culvert complex	WWII era	Military	Main Base (southern portion)	Wulzen et al. (1997)
05-2025	Metal box	WWII era	Military	Main Base (southern portion)	Wulzen et al. (1997)
05-2026	Concrete structure	WWII era	Military	Main Base (southern portion)	Wulzen et al. (1997)
05-2027	Historic midden	WWII era	Military	Main Base (southern portion)	Wulzen et al. (1997)
05-2036	Revetment	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2037	Revetment	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2038	Revetment	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2039	Revetment	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2040	Revetment	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)

Site No. (50-30-)	Name/Description	Age	Inferred Function	Location	Information Source
05-2041	Concrete structure (Building 507)	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2046	Historic midden	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2047	Gun emplacement complex	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2048	Concrete pillbox	WWII era	Military	Main Base (northern portion)	Wulzen et al. (1997)
05-2111	Eight rock mounds	Indeterminant	Agricultural	Kamokalā Ridge	Altizer and Hammatt (2010)
05-2112	Terrace	Indeterminant	Habitation	Kamokalā Ridge	Altizer and Hammatt (2010)
05-2113	House site	Historic	Habitation	Kamokalā Ridge	Altizer and Hammatt (2010)
05-80-2772	Gun emplacements	WWII era	Military	Between N Sidewinder Road and Waiapua'a Bay Beach	Clark et al. (2015)
05-4016	Buried cultural deposit	Traditional Hawaiian	Habitation	Barking Sands: [redacted]	Sweeney (1994)
05-5031	Buried cultural deposit	Traditional Hawaiian	Habitation	Main Base: [redacted]	Dye and Dye (2009a and 2011)
50-Ka-C5-5 (BPBM)	Burial	Traditional Hawaiian	Burial	Main Base: [redacted]	Drolet et al. (1996:39)

Thomas G. Thrum (1907) can be credited with conducting the earliest archaeological survey of the Mānā Plain as part of an island-wide review of Hawaiian temples. Bennett (1931) followed in 1928–1929 and added additional sites to the island inventory. Bennett's (1931) Site 7 (SIHP 50-30-01-0007), an artifact and midden scatter, and Site 9 (50-30-05-0009), walls and alignments, are now subsumed under the Nohili Dune site (50-30-01-1860) which includes a portion at Main Base (northern portion) survey area. His Site 8, 'Elekuna Heiau, which Thrum (1906:39) notes "is termed a heiau by the natives of the district," has not been re-located.

[redacted]

Cleeland (1973) identified a Japanese cemetery (Site 50-30-05-0616) [redacted] at Main Base (northern portion). At the time of the survey at least 60 graves were visible, with the earliest marked grave dating to 1901.

At Kamokalā Ridge, McGerty and Spear (1997b), identified seven sites during an archaeological inventory survey and subsurface testing. Sites 50-30-05-652, 50-30-05-0653, 50-30-05-0657, and 50-30-05-0658 are [redacted]. Sites 50-30-05-0654, 50-30-05-0655, and 50-30-05-0656 are historical trash dumps and two historical dirt roads, respectively. Altizer and Hammatt (2010) identified seven sites during an archaeological inventory survey [redacted] Three sites, 50-30-05-2111, 50-30-05-2112, and 50-30-05-2113, are relevant to the current project.

[redacted]

Knecht and Rieth (2016) conducted archaeological monitoring [redacted].

Flores and Kaohi (1992) conducted ethnographic and ethnohistoric surveys across the *ahupua'a* of Mānā, identifying and describing traditional cultural properties, historic properties, legends, stories, resources, flora, fauna, and other elements of cultural significance.

Many other studies, which include survey, subsurface testing, and monitoring projects, resulted in no findings (Carson 2004, 2007; Dega 2000; Dega and Ogg 2000; Doolittle 1992; Dowden and Rosendahl 1993; Drennan 2006; Drolet 1997a, 1997b; Drolet and Powell 1998; Dye and Dye 2009b; Fong et al. 2011a, 2011b; Gonzalez 1991b; Hammatt 1995; Jones 1992; Leidemann and Kishinami 1990; LeSuer and Cleghorn 2005a, 2005b; McGerty 2001; McGerty and Spear 1997a, b; McMahon 1988; O'Day 2006; O'Hare and Rosendahl 1993; Park and Yamasato 2009; Tuggle and Tomonari-Tuggle 1997; Walden and Clark 2010; Walker and Rosendahl 1990; West 2004; West and Desilets 2005).

In summary, while numerous studies across PMRF have resulted in no findings, many others have identified both pre-Contact and post-Contact archaeological sites, particularly those related to WWII. The current survey areas overlap with some of these previously recorded sites [redacted] The next section describes the research questions used to guide the fieldwork.

III. RESEARCH QUESTIONS

Three research questions guided the archaeological investigation carried out for this project.

1) What were the depositional and soil-forming sequences for the different survey areas? Stratigraphic sequences exposed during sub-surface excavation can provide information about past environmental processes that shaped the back beach, inland edge, and central mountain areas of PMRF. Exposed stratigraphy can also provide information on the extent of human modification of the landscape.

2) Are archaeological deposits present and, if so, what past activities do they document? The Nohili Dune (Site 50-30-01-1860) and buried deposits inland from Waiapua'a Bay (Sites 50-30-05-4016) [redacted] Identification of new deposits or sites in the survey area, particularly in areas that have been less impacted by development, agricultural, and ranching activities (e.g., Kamokalā Ridge) may provide further data relating to the chronology of traditional occupation, the types of activities that were carried out, and the spatial extents of these activities. Historical deposits relating to 19th century and early to mid-20th century activities may be encountered, as well providing evidence for historic-Era land use.

3) If burials or human skeletal remains are encountered during the archaeological survey, what are their contexts and conditions? Burials and secondarily deposited, isolated, fragmentary human skeletal elements have been discovered in the calcareous sands and mixed sandy soils across PMRF Barking Sands. These burials and human skeletal remains have been found in various states of preservation, disturbance, and exposure. If any burials are encountered, documentation of their depositional context and condition can inform on traditional land use and aid the government in proactive management practices for ancestral remains.

IV. FIELDWORK LOGISTICS AND METHODS

This section discusses project logistics, the field methods that were employed, the laboratory procedures conducted, and NRHP eligibility and HRS Chapter 6E significance recommendation procedures.

PERSONNEL

Alex E. Morrison, Ph.D., was the Project Manager (PM) and Principal Investigator (PI). He is an SOI qualified archaeologists operating under IA's State of Hawai'i permit. Dr. Morrison was responsible for overall management of the project, ensuring that appropriate research standards were maintained and that appropriate personnel were selected to conduct the project. Dr. Morrison also provided research direction and oversight to ensure the client's needs were fully addressed. He provided project-specific guidance, including assistance in the establishment of research questions and goals and procedures as appropriate to the project scope of work, and oversight of project development, field investigations, laboratory analysis, and report preparation.

Scott M. Fitzpatrick, Ph.D., was the Project Director (PD). Dr. Fitzpatrick was responsible for coordinating and conducting field investigations and preparation of the final technical report with assistance from the PM/PI. Other crew members included Field Supervisors, Emily VanZanten, B.A., and Brennan V. Chambers, M.A., who alternated roles over the course of the project, along with Field Technicians Jenna Golnik, B.A., and Grace Fritsch, B.A. Fieldwork work was completed between November 6, 2023, and February 5, 2024, under the direct guidance of the PD and PM/PI.

Fieldwork along Mākaha Ridge Road took place between November 7, 2023, and November 16, 2023, and consisted entirely of pedestrian survey. Fieldwork at Main Base (southern portion) took place intermittently between November 8, 2023, and February 5, 2024. Fieldwork at Main Base (northern portion) took place intermittently between December 5, 2023, and December 15, 2023. Fieldwork at Kamokalā Ridge took place intermittently between November 13, 2023, and January 26, 2024.

PEDESTRIAN SURVEY AND SUBSURFACE TESTING METHODS

A pedestrian survey of the four areas was conducted by the PD, Field Supervisors, and two Field Technicians. The pedestrian survey and subsurface testing methods followed the procedures outlined in the Work Plan (Chambers and Rieth 2023). The entire surface of the the project area was visually inspected with the exception of [however many] acres of former sugarcane fields in the southern portion of Main Base that were overgrown and impassable. Additional details on survey coverage are presented with the results for each survey area. Survey transects, with few exceptions, were spaced no more than 5 m apart; tighter spacing was employed in areas of dense vegetation and/or low surface visibility. In some areas, wider transects were done, but only in cases where ground visibility was 100 percent and clearly impacted by historical and/or modern activities. Transect sweeps were recorded as line geometries with a Trimble DA2 global positioning system (GPS) unit. Areas that were dangerous or otherwise inaccessible were demarcated in the field and noted on subsequent maps.

Each field staff kept an updated daily log with a record of work completed (including the number of transects), notes on any finds, and summaries of other relevant information (e.g., the density of vegetation or evidence for modern disturbance). The daily log was completed using a standardized form on a Samsung tablet computer.

Photographs were taken of all archaeological finds and overviews of the survey areas. Photographs included a scale and north arrow (with the exception of landscape overview photographs) and were recorded in a photography log. The log included the photograph file number, the date that the photograph was taken, the direction the photographer was facing, a general description of the photograph, and the initials of the photographer.

The locations of archaeological sites and features were recorded with a professional-grade Trimble DA2 GPS unit. GPS data were differentially corrected for submeter accuracy and then exported as a geographic information system (GIS) geodatabase.

Archaeological features were documented through text descriptions, profile and/or plan view maps as appropriate, and photography (with a north arrow and scale), along with GPS recording. Text descriptions were completed using a standardized form on the tablet computers, which included fields to record site/feature form and construction details, metric dimensions, age and function assessments, integrity and condition evaluations, associated surface artifacts, and environmental characteristics (slope, substrate/soil, vegetation).

Previously identified sites within or adjacent to the survey areas were revisited to assess the veracity of the recorded information and, if necessary, update site descriptions and GPS boundaries. To revisit previously recorded sites, the most up-to-date site boundary was uploaded into the Trimble DA2 GPS unit along with the associated text descriptions and maps. The GPS unit was then used in the field to navigate back to the site.

Following pedestrian survey, subsurface testing was conducted with the excavation of 10 controlled excavation units using the following methods:

Ten 1 by 1-meter controlled excavation units were excavated with the locations of the units determined by the PM/PI and PD in consultation with the PMRF Cultural Resource Manager. These excavations were undertaken to acquire information about the age and characteristics of the site's subsurface deposits with the goal of aiding NRHP eligibility and HRS Chapter 6E significance recommendations. The following procedures were generally adhered to during the excavations:

Excavations were carried out to establish the presence or absence of archaeological deposits, documenting deposition and site formation processes, and collecting artifacts, midden contents, and suitable dating samples to characterize the deposits.

Units were placed against selected masonry features (if present) to obtain datable material below foundations for terminus post quem (limit after the age of) feature estimates.

Units were also placed in areas with visible surface deposits or artifacts, or in areas suspected of containing such deposits, to characterize the function and age of deposits.

Subsurface features, such as combustion features, were excavated sperate from the rest of the test units. The contents of the excavations were placed in separate bags and analyzed according to their own provenience.

Each test unit was manually excavated by natural strata with arbitrary 10 cm levels. All excavated sediment was screened through 1/8-inch mesh. Archaeological material retained in screens was collected and catalogued.

Units were recorded using standardized grid level forms.

Scaled stratigraphic profile drawings were completed for at least one of the sidewalls of each unit. Soils were described and the excavation unit sidewalls and locations were photographed. Stratigraphic profiles and soil descriptions were described using a fresh vertical face. The following soil characteristics were recorded, at a minimum: color, including moisture condition (wet, moist, dry) when color read; texture; structural grade, size, and form (or absence of structure); dry or moist consistence; wet consistence (stickiness, plasticity); root frequency and size; presence of charcoal or other cultural materials; and lower boundary distinctness and topography (Munsell Color 2000; Soil Science Division Staff 2017). Each deposit was examined for signs of sedimentary structures, such as bedding, and for any other information (e.g., evidence for basaltic or coralline origin) that could help to clarify depositional and soil forming history.

The locations of all excavation units were recorded using a professional-grade Trimble GPS unit using the North American Datum of 1983 (NAD 83) in Universal Transverse Mercator Zone 4 North (UTM 4N). Data were differentially corrected to provide submeter accuracy.

Any artifacts, faunal, charcoal, or bulk samples recovered during excavation were collected in sealable plastic bags and given a unique catalog number, which recorded the contents, provenience (excavation unit number, layer and level, and depth below surface), collection date, and recorder.

LABORATORY METHODS

All archaeological materials recovered as part of survey and excavation were transported to the IA Laboratory in Honolulu for sorting and analysis. Laboratory procedures followed the Work Plan (Chambers and Rieth 2023) and consisted of artifact classification and description, taxonomic identification of faunal remains, taxonomic identification of wood charcoal specimens, radiocarbon dating, and geochemical characterization of selected lithic artifacts.

All archaeological collections generated by the project are stored in archival-quality containers and boxes suitable for long-term curation at PMRF. These collections and all original field documents and electronic files will be transferred to the PMRF CRM at the completion of the project.

ARTIFACTS

Artifacts were cleaned, sorted by material, and analyzed for functional, manufacturing, and chronological characteristics. Artifact analyses began with general sorting by material and class. Artifacts were categorized by artifact or manuport form and material. Debitage was quantified by form (i.e., flake, shatter, or core) and polished surfaces were noted, if present. Manuports and fire-cracked rock were counted and weighed. Post-Contact artifacts were analyzed for diagnostic characteristics that infer item identification, manufacture date, functions using standard and specialized text and online references.

FAUNAL REMAINS

All recovered vertebrate or marine invertebrate material were sorted into the lowest taxonomic categories possible. Marine shell, mammal, and fish remains were identified with the aid of comparative reference collections housed at IA's Honolulu laboratory and the University of Hawai‘i at Mānoa. All taxonomic nomenclature for marine mollusks was verified following the World Register of Marine Species

online database (WoRMS Editorial Board 2021). Marine invertebrates that were waterworn or showed signs of natural or secondary deposition (not from midden contexts) or predation (e.g., predator drill holes) were discarded. Taxonomic identification of fish relied on an expanded suite of bony elements (e.g., Butler 1988, 1994; Filimoehala 2019; Lambrides and Weisler 2016), as well as a series of special bones from various taxa (Appendix C). Skeletal terminology for fish followed Wheeler and Jones (2009). Vertebrate elements were examined for modification indicative of food processing (e.g., burning) or tool manufacturing (e.g., cut/sawn edges). Vertebrate faunal remains were quantified as the number of individual specimens (NISP).

WOOD CHARCOAL IDENTIFICATION AND RADIOCARBON DATING

Gail Murakami, B.A., and Carly Walker, B.A., completed the taxonomic identifications of wood charcoal samples. This analysis was conducted to select short-lived taxa or plant parts for radiocarbon dating, and to provide paleoenvironmental information about the woody plant taxa that were previously available in the area. Identifications were done under magnification of a dissecting microscope comparing the anatomical features seen in the freshly fractured transverse and tangential facets of the charcoal pieces with those of known woods from the Pacific Islands Wood Collection at the University of Hawai‘i at Mānoa, Department of Botany, and CSIRO Atlas of Hardwoods (Ilic 1991). Charcoal specimens from suitable short-lived taxa were submitted to the University of Georgia’s Center for Applied Isotope Studies Laboratory for radiocarbon dating using the accelerator mass spectrometry (AMS) technique.

GEOCHEMICAL CHARACTERIZATION

Lithic samples were submitted to the Geoarchaeological Laboratory at the University of Hawai‘i at Hilo (UHH) for geochemical characterization and provenance analysis using non-destructive energy-dispersive x-ray fluorescence (EDXRF). The resulting geochemical data were compared to a database of lithic source geochemistry to determine the likely origin of the material.

NATIONAL REGISTER OF HISTORIC PLACES AND HRS CHAPTER 6E SIGNIFICANCE RECOMMENDATIONS

Newly identified archaeological sites identified during pedestrian survey and subsurface testing were evaluated for eligibility for inclusion in the NRHP using the criteria set forth in 36 CFR Part 60.4. These sites were also recommended for significance under HRS Chapter 6E as described in HAR 13-284-6(b). The criteria for each of these is described separately below.

NRHP CRITERIA FOR RECOMMENDATION

The NRHP criteria set forth in 36 CFR Part 60.4 states:

> (t)he quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and
>
> (A) that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (B) that are associated with the lives of persons significant in our past; or

C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(D) that have yielded, or may be likely to yield, information important in prehistory or history.

HRS CHAPTER 6E SIGNIFICANCE RECOMMENDATIONS

The State of Hawai‘i has similar criteria for recommendation of significance described in HAR 13-275-6(b) which states:

To be significant, a historic property shall possess integrity of location, design, setting, materials, workmanship, feeling, and association and shall meet one or more of the following criteria:

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) that are associated with the lives of persons significant in our past; or

(c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) that have yielded, or may be likely to yield, information important in prehistory or history.

(e) have an important value to the native Hawaiian people or to another ethnic group of the State due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity.

A group of sites can be collectively argued to be significant under any of the criteria.

The NRHP eligibility and HRS 6E significance recommendations are presented separately in Section VI. Note that the HRS Chapter 6E criteria are denoted with lowercase letters in this report.

V. RESULTS

This section presents the results of the pedestrian survey, subsurface testing, and laboratory analyses. During fieldwork, no archaeological sites were recorded within the Mākaha Ridge Road survey area. Archaeological sites were identified within the additional two survey areas: Main Base (southern and northern portions) and Kamokalā Ridge. These sites include five that were previously recorded and 12 newly identified ones (Table 3). The results include a description of both the previously and newly recorded sites that were encountered, features found within these sites, and a summary of the subsurface testing and laboratory analyses that were conducted.

PEDESTRIAN SURVEY RESULTS

This section presents the results of the pedestrian survey. The survey included three primary goals. First, where possible, previously recorded sites were visited to update geographical coordinates with high precision GPS and to provide any additional descriptive data about the site and its features. Secondly, all newly identified sites and associated features were recorded according to the methods described in Section IV and the project Work Plan (Chambers and Rieth 2023). Finally, newly recorded sites were examined for their potential to provide information to address the project research questions and to aid in NRHP eligibility and HRS Chapter 6E significance recommendations through subsurface excavations. The results of the pedestrian survey are presented first, and the excavation results are described later in the section.

Table 3. Previously and Documented and Newly Recorded Sites Found During Survey. Note: Main Base Refers to Barking Sands.

Site Number	Survey Area	Site Type	Number of Features	Interpreted Function	Temporal Period	Justification for Interpretation
50-30-01-2049	Main Base (northern portion)	Historic Refuse Area			Historic	
50-30-05-0652	Kamokalā Ridge	Rock Mound			Indeterminate	
50-30-05-0653	Kamokalā Ridge	Rock Mounds			Indeterminate	
50-30-05-0658	Kamokalā Ridge	Rock Mounds			Indeterminate	
50-30-05-2000	Main Base (southern portion)	Bathhouse Complex			WWII	
IA001	Kamokalā Ridge	Rock Wall			Hawaiian	
IA002	Kamokalā Ridge	Rock Wall and Enclosure Complex			Hawaiian and/or post-Contact	
IA003	Kamokalā Ridge	Midden, Rockshelters, and Retaining Wall Complex			Hawaiian and/or post-Contact	
IA004	Kamokalā Ridge	Stone Platform and Modified Outcrop			Hawaiian	

Site Number	Survey Area	Site Type	Number of Features	Interpreted Function	Temporal Period	Justification for Interpretation
IA005	Kamokalā Ridge	Historically Modified Rock Wall			Hawaiian and post-Contact	
IA006	Kamokalā Ridge	Terrace and Retaining Wall Complex			Hawaiian	
IA007	Kamokalā Ridge	Mound and Basalt Quarry			Hawaiian and/or post-Contact	
IA008	Kamokalā Ridge	Terrace and Retaining Wall Complex			Hawaiian	
IA009	Kamokalā Ridge	Historic Refuse Area			WWII and after	
IA010	Kamokalā Ridge	Mound			Hawaiian and/or post-Contact	
IA011	Main Base (northern portion)	Small Arms Range			WWII and after	
IA012	Main Base (northern portion)	Historic Refuse Area			Indeterminate	

MĀKAHA RIDGE ROAD

The Mākaha Ridge Road parcel is a ca. 4 mile (6.4 km) stretch of road with a corridor approximately 60 m (196.85 ft.) wide leading west-northwest from Kokee Road (State Highway 550) toward the Nā Pali coast. Survey transects were conducted on either side of the road and along a short offshoot in the very western part of the corridor (Figure 16). Vegetation was generally thick, comprising a combination of short to medium high grasses and shrubs intermixed with larger trees in densely forested areas, resulting in extensive leaf litter and other debris covering the ground's surface (see Photos 8 to 11). The topography was also generally steep on either side of the corridor, preventing more expansive survey coverage in some locations. No archaeological sites were identified at Mākaha Ridge. Similarly, Wulzen et al. (1997:77) also did not identify archaeological sites during the survey of the leased portion of the PMRF facility at Mākaha Ridge.

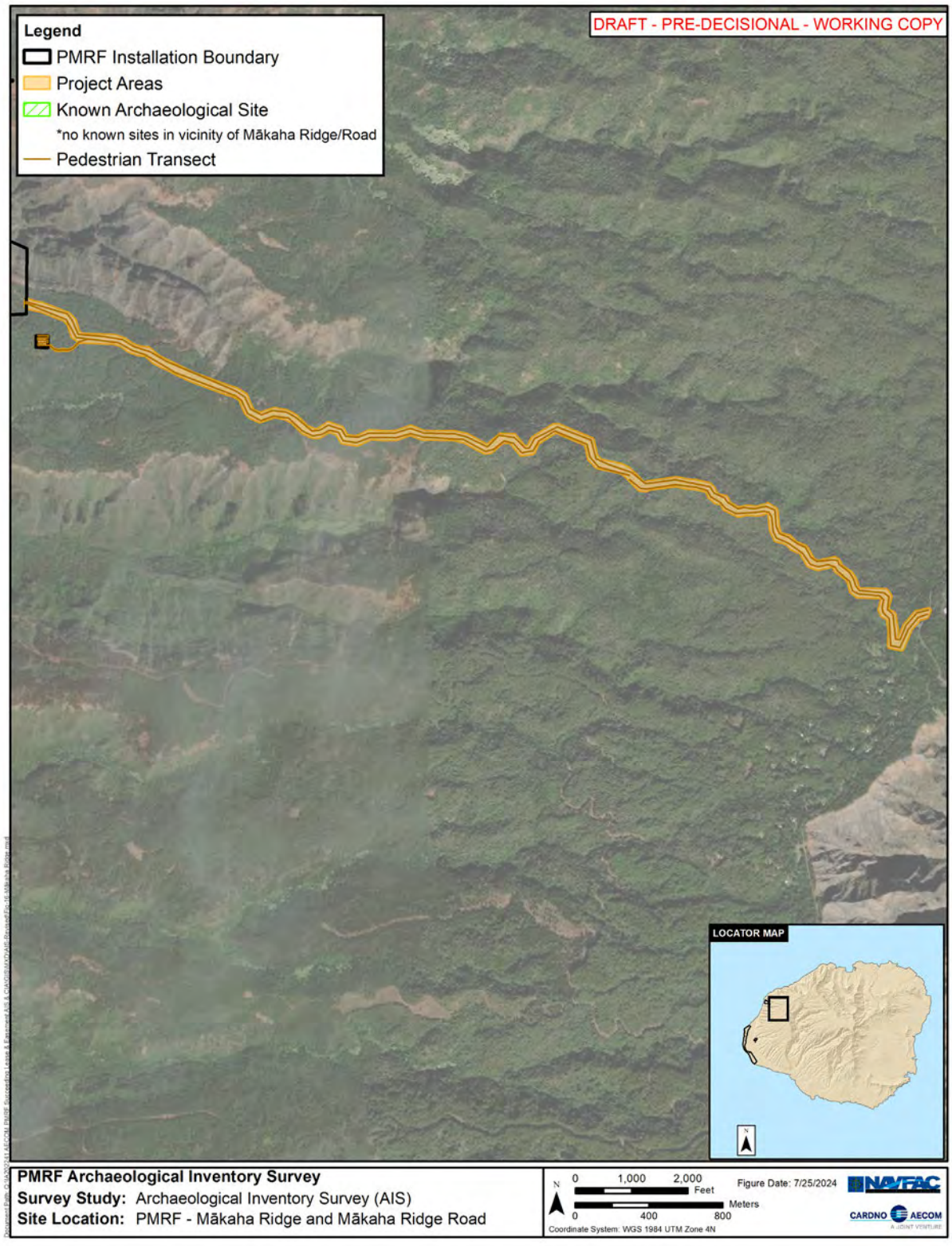


Figure 16. Map of Mākaha Ridge Road showing transects.



Photo 8. View of terrain along Mākaha Ridge Road; looking south.



Photo 9. View of terrain along Mākaha Ridge Road; looking north.



Photo 10. View into one of the valleys at Mākaha Ridge on the south side of road; looking southwest.



Photo 11. View of two-track off Mākaha Ridge Road showing vegetation; looking east-southeast.

MAIN BASE (SOUTHERN PORTION)

The southern portion at Main Base was the largest of the four survey areas (Figures 17 to 20). Ground cover in the survey area was a mix of actively mowed grassy areas adjacent to facility buildings, airfield runways, and densely forested areas with a mix of *kiawe*, short to medium sized trees, and shrubbery. Much of Main Base (southern portion) has been improved to support infrastructure and airfield operations. In the process woody debris has been pushed into berms along the perimeter of forested sections in many locations. These berms were often difficult to traverse and significantly limited ground surface visibility (Photos 12 to 19).

Survey sections that extended east onto former sugarcane fields adjacent to Kiko Road were often heavily vegetated with larger shrubs, smaller trees, and fields of tall sword grass or other grasses. This portion of Main Base South was also impacted by plantation era ditch systems that crisscrossed through the survey area with other evidence for historic and/or modern agricultural activities that included plastic tubing and irrigation pipes. As a result of these historically known impacts to the landscape from sugarcane production on drained marsh land, ground cover in many places exceeded more than 10 percent, making both survey and visibility extremely difficult.

Survey within Main Base (southern portion), however, did result in the identification of a number of previously recorded WWII-era sites and associated features, including concrete structures associated with a bathing area for U.S. servicemen at site 50-30-05-2000 (Figure 20). Detailed descriptions of each of these previously identified sites and features are provided below. Note that previously recorded sites are shown on the survey area maps, but only those that were observed by the field crew are reported here.

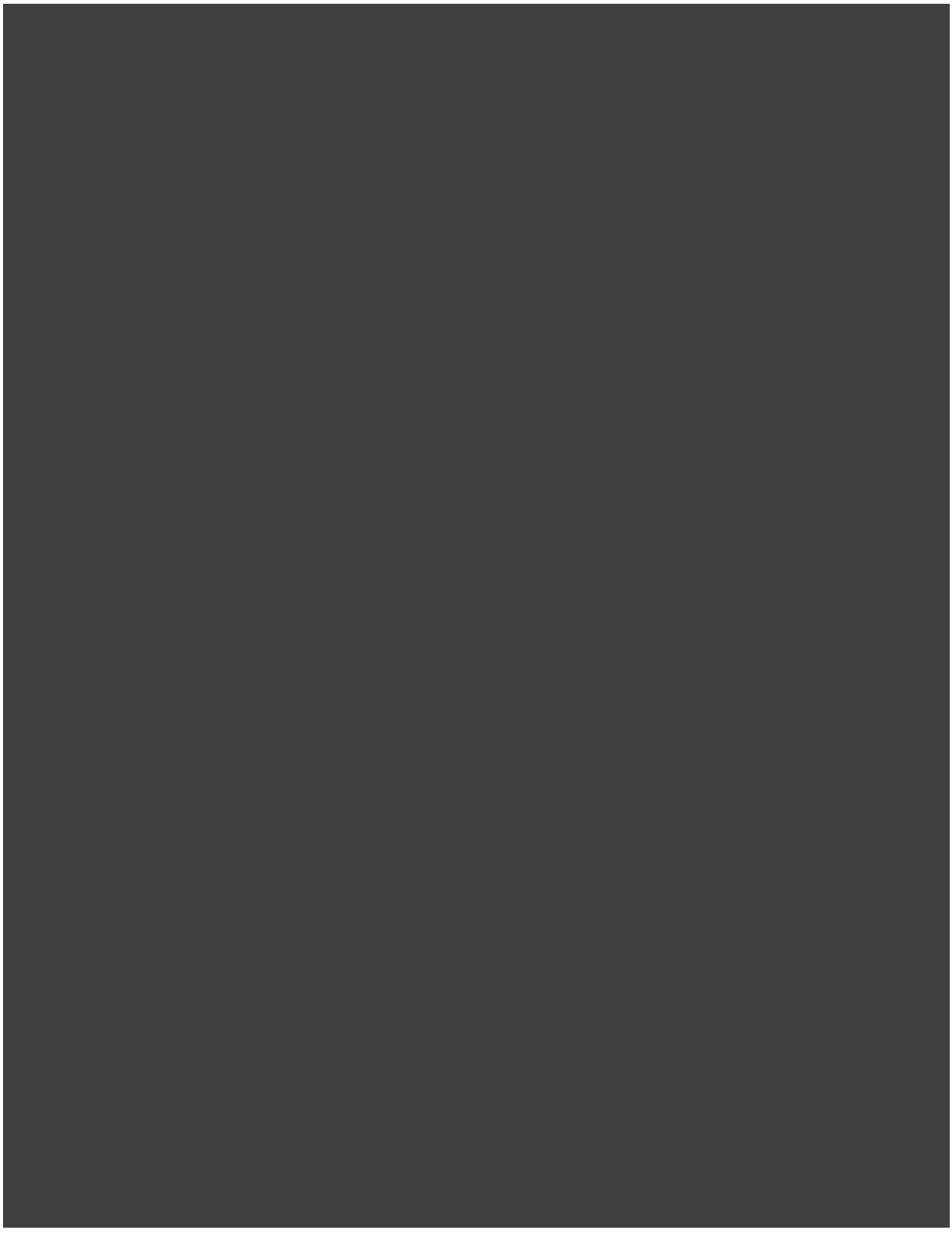


Figure 17. Survey map of Main Base (southern portion) showing pedestrian transects, sites, and known sites; 1 of 3. Note: Main Base refers to Barking Sands.

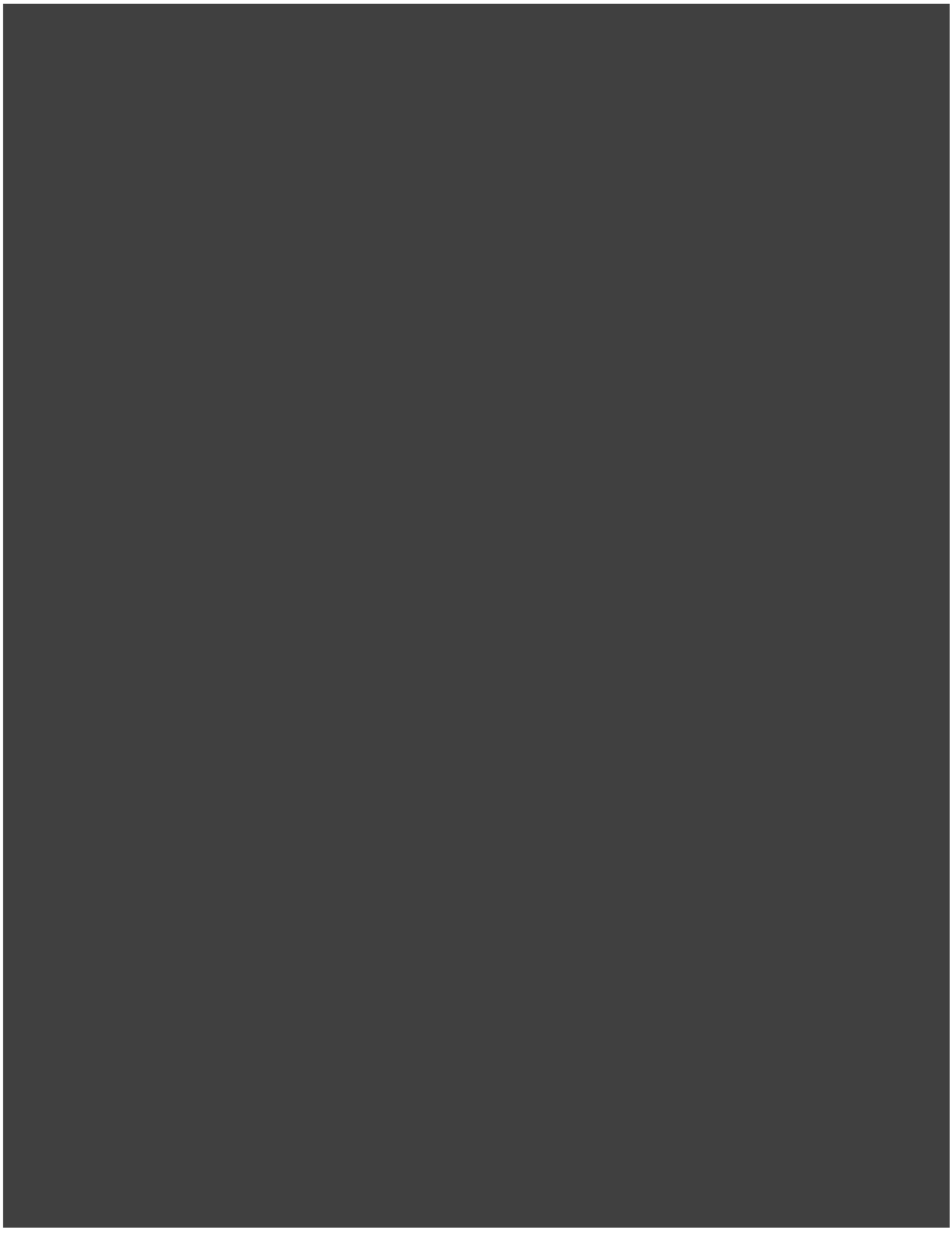


Figure 18. Survey map of Main Base (southern portion) showing pedestrian transects, sites, and known sites; 2 of 3. Note: Main Base refers to Barking Sands.

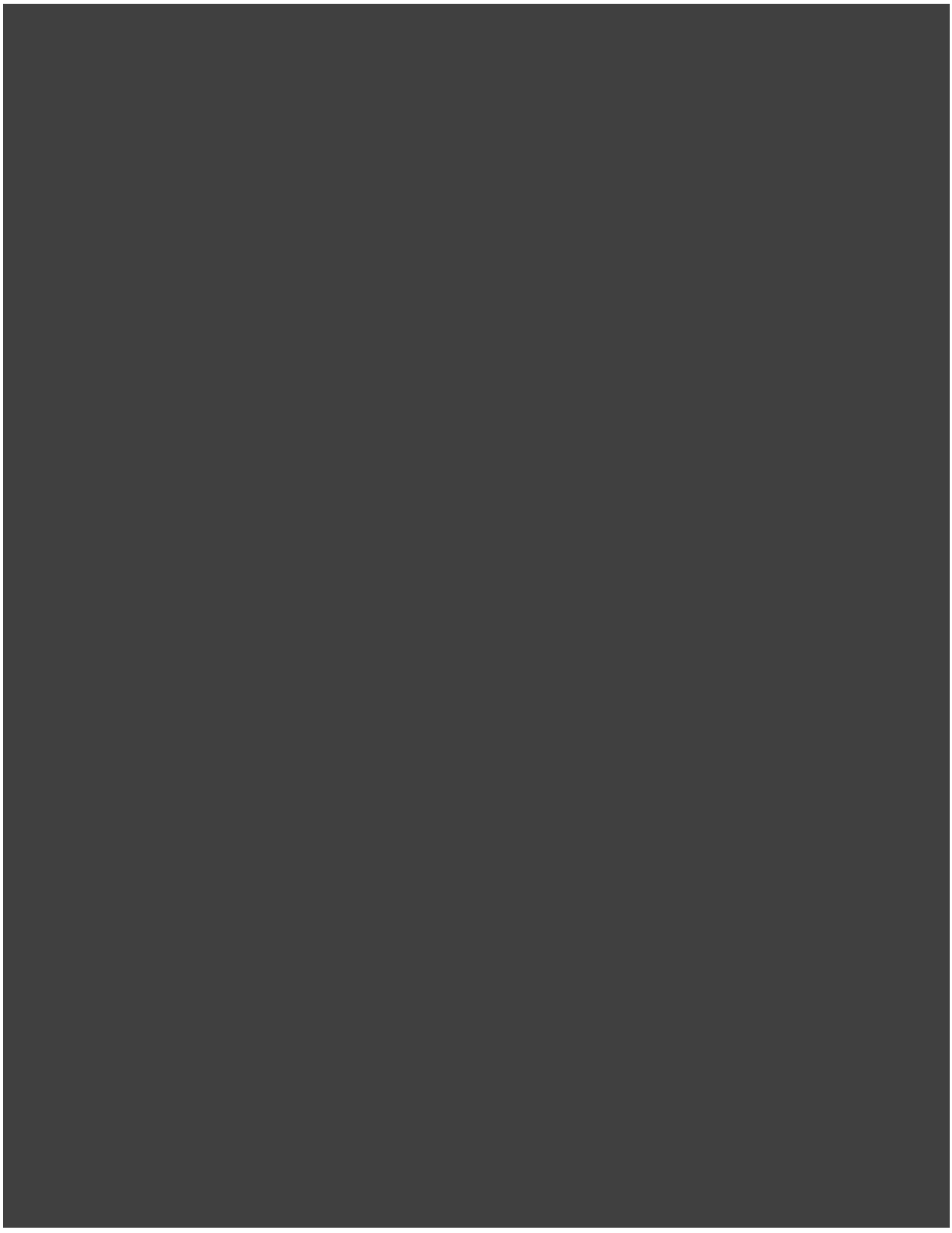


Figure 19. Survey map of Main Base (southern portion) showing pedestrian transects, sites, and known sites; 3 of 3. Note: Main Base refers to Barking Sands.

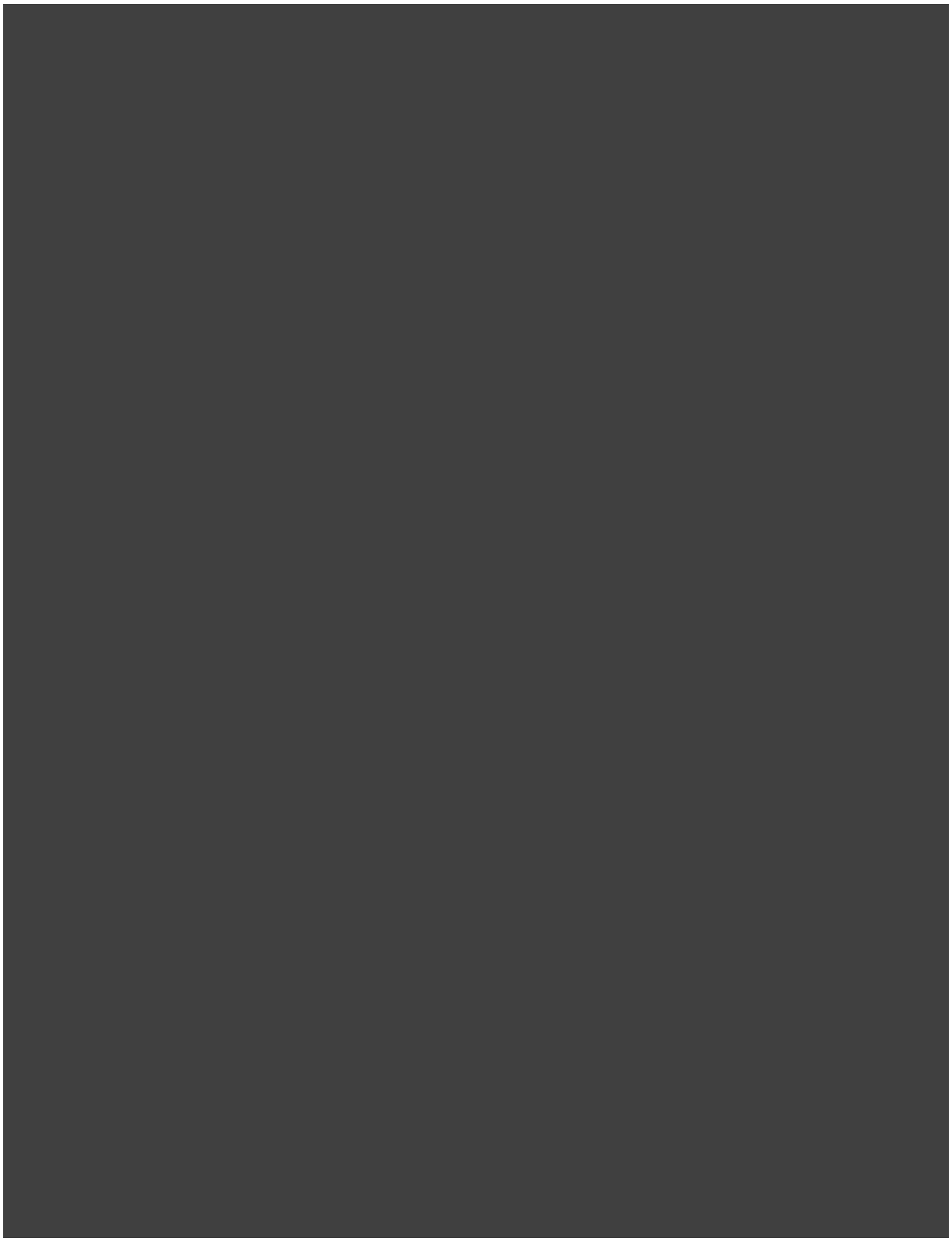


Figure 20. Map of Main Base (southern portion [Section 2 of 3]) showing previously documented sites and recommended site boundary update for Site 50-30-05-2000. Note: Main Base refers to Barking Sands.



Photo 12. Pumping station accessed through security gate at the Kawai‘ele Waterbird Sanctuary and used to access survey areas outside (and east) of PMRF.



Photo 13. Overview of landscape in Barking Sands Southeast of main PMRF facility within the intersecting canal zone showing mudflats interspersed by dense vegetation; looking northwest.



Photo 14. Overview of landscape and dense vegetation in Barking Sands South, west of Kaumualii Highway in area intersected with canals; looking south-southwest.



Photo 15. Landscape overview in Main Base (southern portion), east of the main PMRF facility and west of Kaumualii Highway showing flooded mudflats;180-degree panorama, northwest to southeast.



Photo 16. Landscape overview in Main Base (southern portion) showing dense vegetation within an area of intersecting canals; looking northwest to south.



Photo 17. Landscape overview of mudflats in Main Base (southern portion) surrounded by dense vegetation; looking north to southwest.



Photo 18. Landscape overview of Main Base (southern portion) showing the flooding of mudflats after heavy rains, just south of Imiloa Road and west of Kaumualii Highway;180-degree panorama looking northwest to southeast.



Photo 19. Landscape overview of Main Base (southern portion) showing the flooding of mudflats after heavy rains, just south of Imiloa Road and west of Kaumualii Highway; looking south.

Previously Recorded Sites Within Main Base (Southern Portion)

One previously recorded archaeological site (Site 50-30-05-2000) was found during the survey. This site is described below along with additional information that had not been previously presented in earlier reporting of the site. Numerous archaeological and historical sites have been documented in the Barking Sands South area, though only a few of these potentially overlapped within the project area.

Site 50-30-05-2000

Site 50-30-05-2000 (see Figure 18) was previously recorded by Wulzen et al. (1997) as a WWII "Bathhouse complex" and consisted of five concrete features. It is located about 40 m west of South Nohili Road between the Waioli and Kauaiʻele Drains. Four of the five features were encountered during survey These correspond to Features A through D as reported by Wulzen et al. (1997: B-1 to B-3; Photo 20; Figure 22). Feature A is an excavated area filled with basalt rocks that may have functioned as a cesspool (Wulzen et al. 1997: 62). Feature B is a concrete box water catchment/basin (Photo 20: Figure 22). Feature C is similar to Feature A and is an excavated pit filled with basalt rocks (Wulzen et al. 1997: 62). Note that only one of the two cesspools were recorded by GPS and it is unclear whether this is Feature A or C in Wulzen's report (see Table 4; Figure 21; Photo 40).

Feature D is a large concrete slab. Upon cleaning and closer examination, numerous inscriptions were revealed in the concrete. These included the names of 23 servicemen (19 of which were decipherable), and in most cases, their hometown and date of inscription. These men had presumably aided in the foundation's construction and left their mark before the concrete had completely dried (Table 5). The concrete was poured on October 20, 1942. A selection of those inscriptions that were mostly decipherable can be seen below in Photo 23 to Photo 37. Feature D was previously recorded by Wulzen et al. (1997); however, they did not mention the inscriptions. At the request of the PMRF CRM, IA field staff attempted to determine whether any of these individuals or their relatives could be identified in military or other public registries. A search online suggested that they were part of the 40th Infantry Division who arrived in Hawaiʻi in September 1942. These men were stationed on Oahu and Kauaʻi before being sent into active combat in the Pacific Theater at Guadalcanal (Solomon Islands) and Luzon and Panay (Philippines).

The fifth feature (Feature E) reported by Wulzen (1997: B-3) consisted of concrete fence posts that may "be remnants of pre-World War II cattle grazing on the dunes" (Wulzen et al. 1997:56); however, these fence posts were not identified during survey.

Of note was another feature found in proximity to the site, which was a rectangular, four course stacked rock structure (Feature F; Photo 38 and 39). This feature overlaps with the current site boundary but does not fit the description of other features reported by Wulzen et al. (1997:45: Figure 16) and so was assigned a new letter.

Wulzen (1997) did not find the site to be eligible for NRHP listing. We also agree with this recommendation. While new data acquired during this project more clearly demonstrates the association between the site and the event of WW II, the function of the site as a bath house complex does not illuminate anything specific regarding the build-up of World War II in the Pacific theater and is therefore not significant under Criterion A, B, C, or D.

The site is also recommended as not significant under HRS Chapter 6E. The site is not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the

work of a master, or possess high artistic values (Criterion c). Furthermore, the site has not yielded nor is likely to yield information important for research on prehistory or history (Criterion d), nor does the site offer important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to the group's history and cultural identity (Criterion e).

Table 4. Features Recorded at Site 50-30-05-2000 by Both Wulzen et al. (1997) and During This Survey.

Site Number (50-30-05-)	Survey Area	Feature Number	Morphology (Feature Type)	Maximum Length (m)	Maximum Width (m)	Depth (m)	Orientation
2000	Main Base (southern portion)	F	Concrete Feature, Stone Alignment	3.3	1.3	0.5	
2000	Main Base (southern portion)	B	Concrete Box (Basin)	2.0	1.8	0.9	NE-SW
2000	Main Base (southern portion)	D	Concrete Feature (Slab)	6.5	6.0	---	N-S
2000	Main Base (southern portion)	A or C	Excavation/Cesspool	16.0	15.0	---	

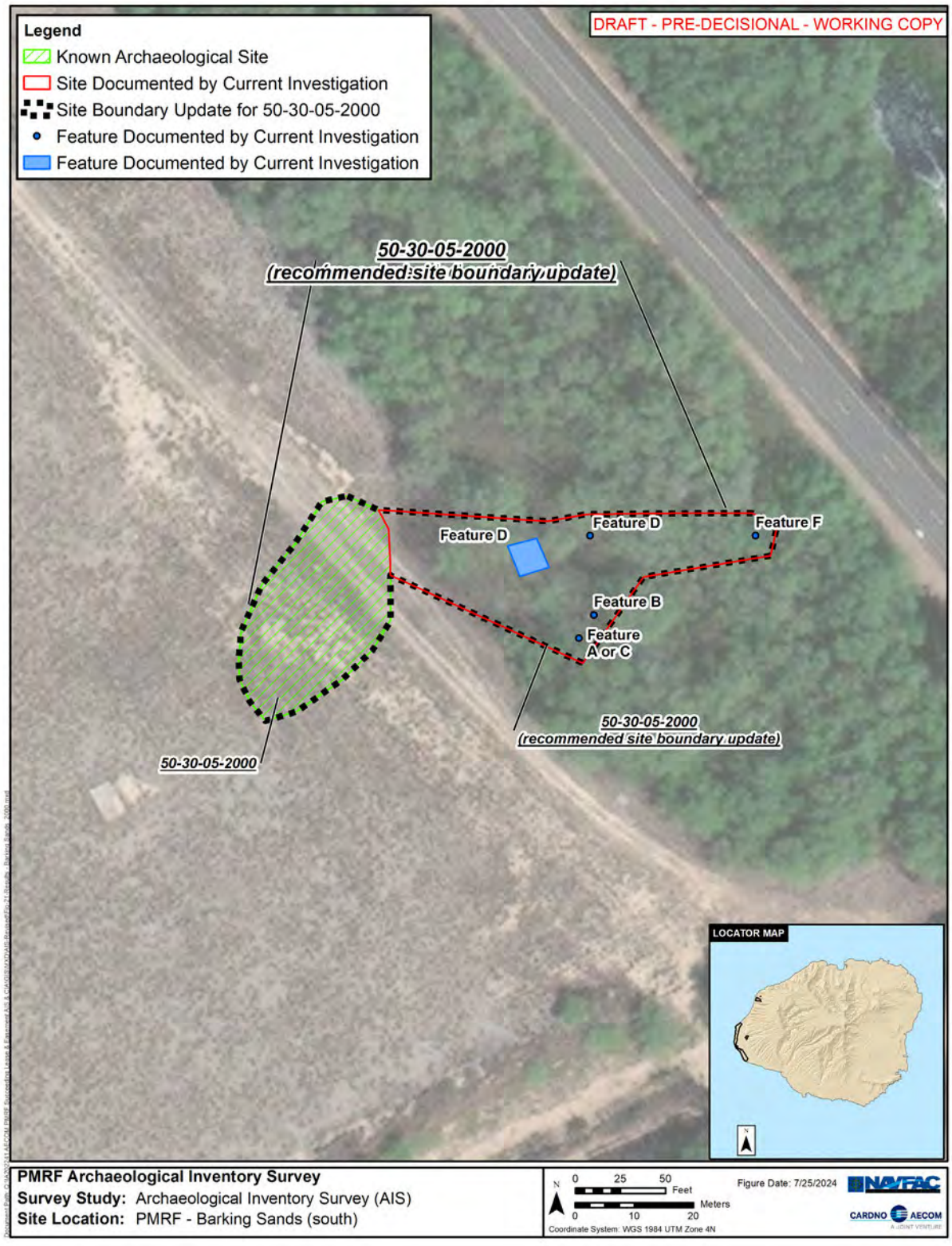


Figure 21. Map of site 50-30-05-2000 at Main Base (southern portion) showing previously recorded site boundary and updated boundary. Note: Main Base refers to Barking Sands.



Photo 20. Feature B at Site 50-30-05-2000: concrete basin associated with U.S. Army showering facility (Wulzen et al. 1997:45).

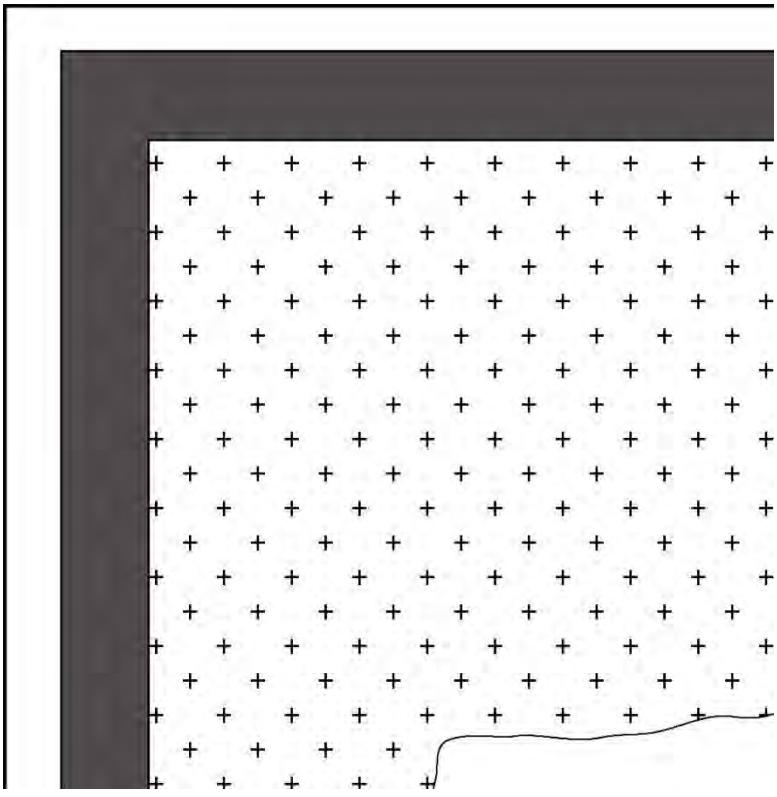


Figure 22. Feature B at Site 50-30-05-2000: plan view map of concrete basin.



Photo 21. Feature D at Site 50-30-05-2000: concrete showering area used by U.S. servicemen during WWII; looking south-southwest.



Photo 22. Feature D at Site 50-30-05-2000: concrete showering area used by U.S. servicemen during WWII; looking north-northeast.

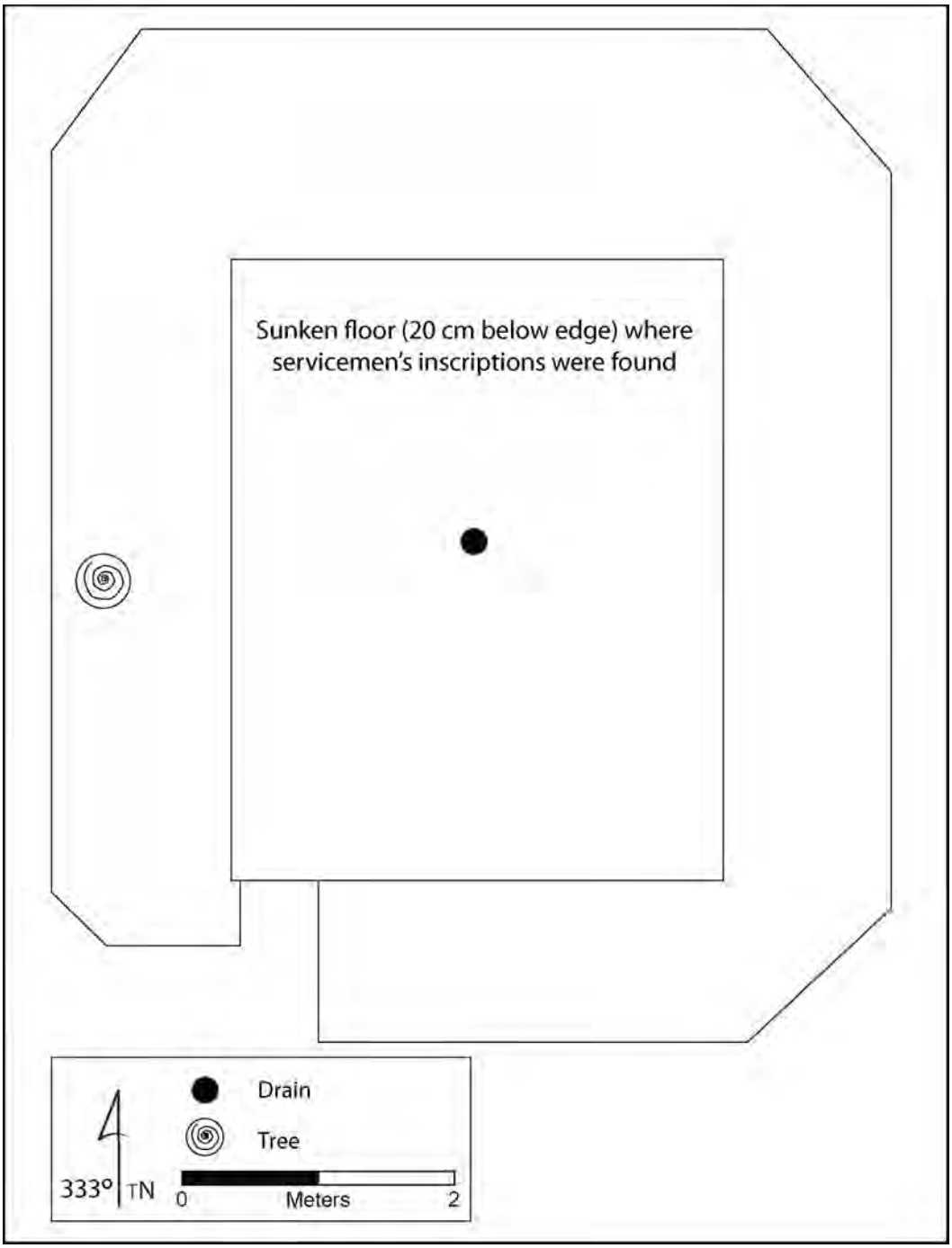


Figure 23. Feature D at Site 50-30-05-2000: concrete pad bathing area.

Table 5. Names and Associated Inscriptions of U.S. Servicemen.

No.	Name	Inscription
1	Walter Strizic	Butte, Montana
2	Frank Buchholz	Grafton Wisconsin
3	Ray Ponder	Mississippi
4	Gordon Lindenburg	Chicago, Illinois
5	S/SGT Ashton	Kansas
6	Jimmy Verderoci	Oakland, California
7	PFC G Seyroyt	Los Angeles, California
8	Geo Baker	Pineville, California
9	Ty Unaitis	Kenosha, Wisconsin
10	Dan Larson	Los Angeles, California
11	A.E. Cleary	Ironton, Ohio
12	PFC Lauver	---
13	G. Ross	Nevada
14	Deruuse	Texas
15	SGT Wingrud	Anaheim, California
16	Shorty Linklater	---
17	Ponce Whittier	---
18	Ken Gibs	Texas
19	LT. Dever	---



Photo 23. Feature D at Site 50-30-05-2000: inscription of names of two U.S. servicemen, including "PFC Lauver" on the floor of concrete showering area dating to October 20, 1942.



Photo 24. Feature D at Site 50-30-05-2000: inscription of "Walter Strizic, Butte, Mont" on the floor of concrete showering area.

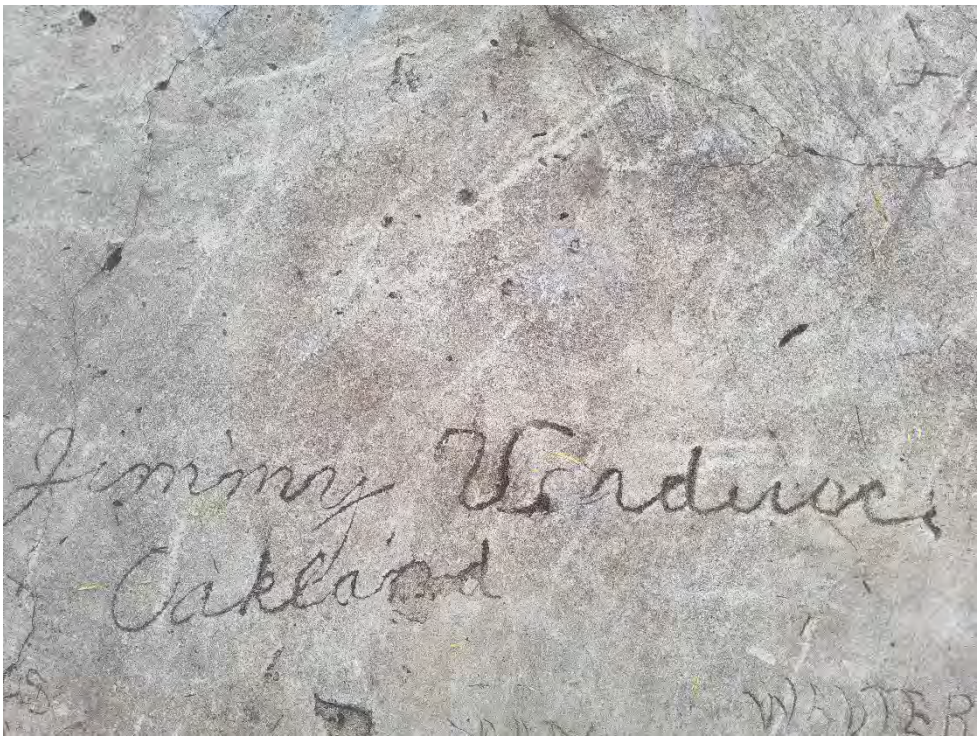


Photo 25. Feature D at Site 50-30-05-2000: inscription of "Jimmy V (?), Oakland" on the floor of concrete showering area.



Photo 26. Feature D at Site 50-30-05-2000: inscription of "Pfc G. Seymor (?), Los Angeles, Calif, 10-20-42" on the floor of concrete showering area.

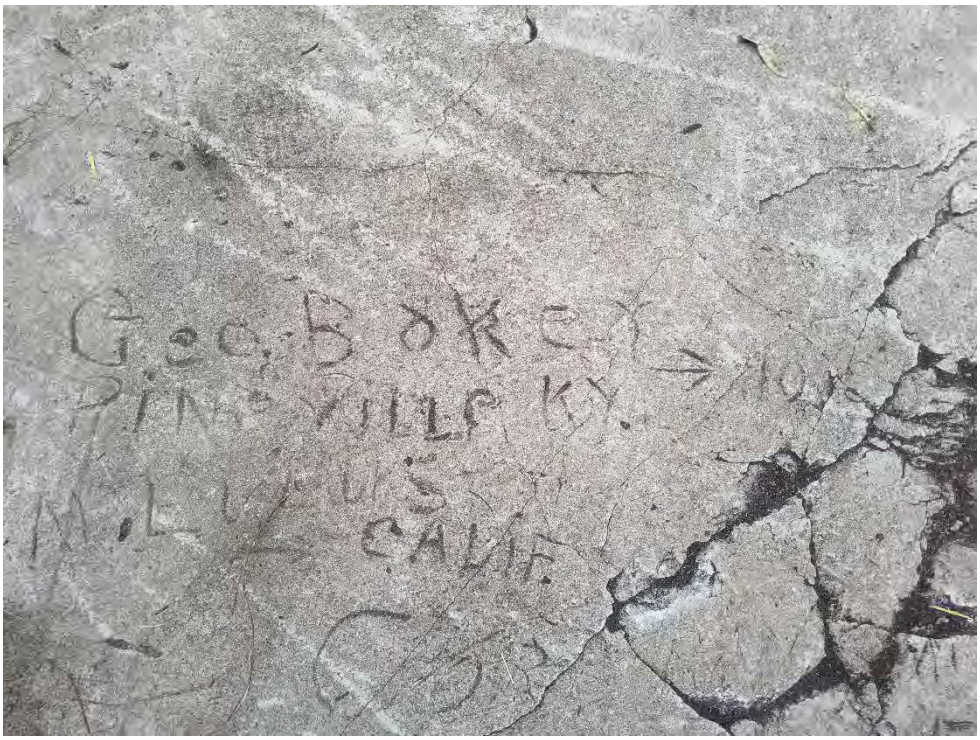


Photo 27. Feature D at Site 50-30-05-2000: inscriptions of two U.S. servicemen, including "Geo. Baker, Pineville, KY" and "M.L (?), Calif." on the floor of concrete showering area.

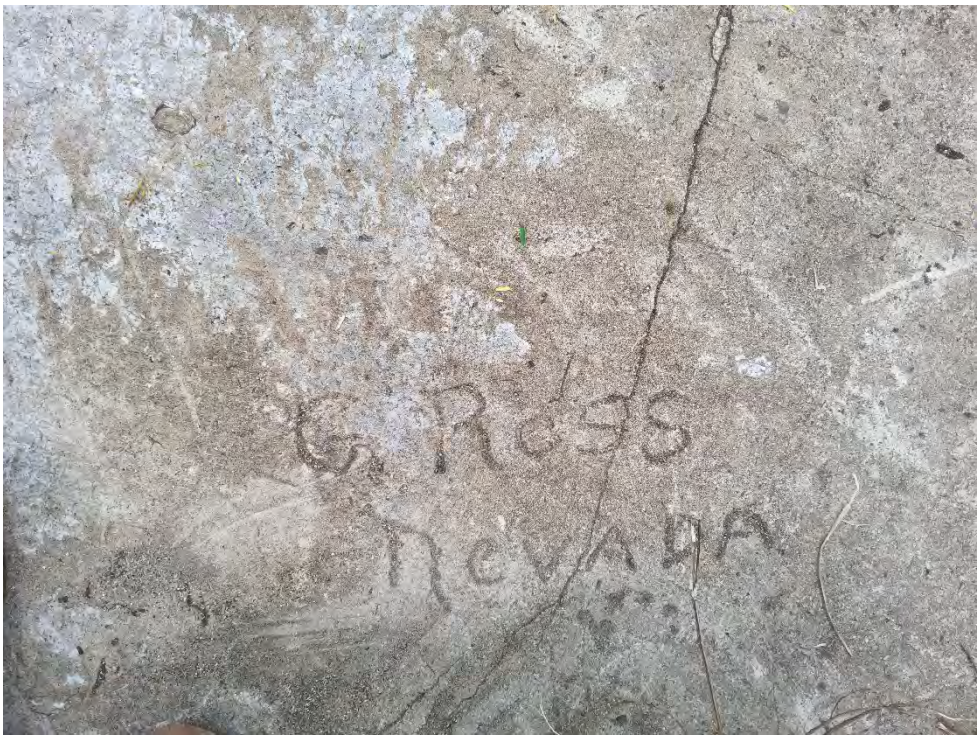


Photo 28. Feature D at Site 50-30-05-2000: inscription of U.S. serviceman "G. Ross, Nevada" on the floor of concrete showering area.



Photo 29. Feature D at Site 50-30-05-2000: inscription of U.S. serviceman "S/SGT Ashton, Salina, Kansas" on the floor of concrete showering area.

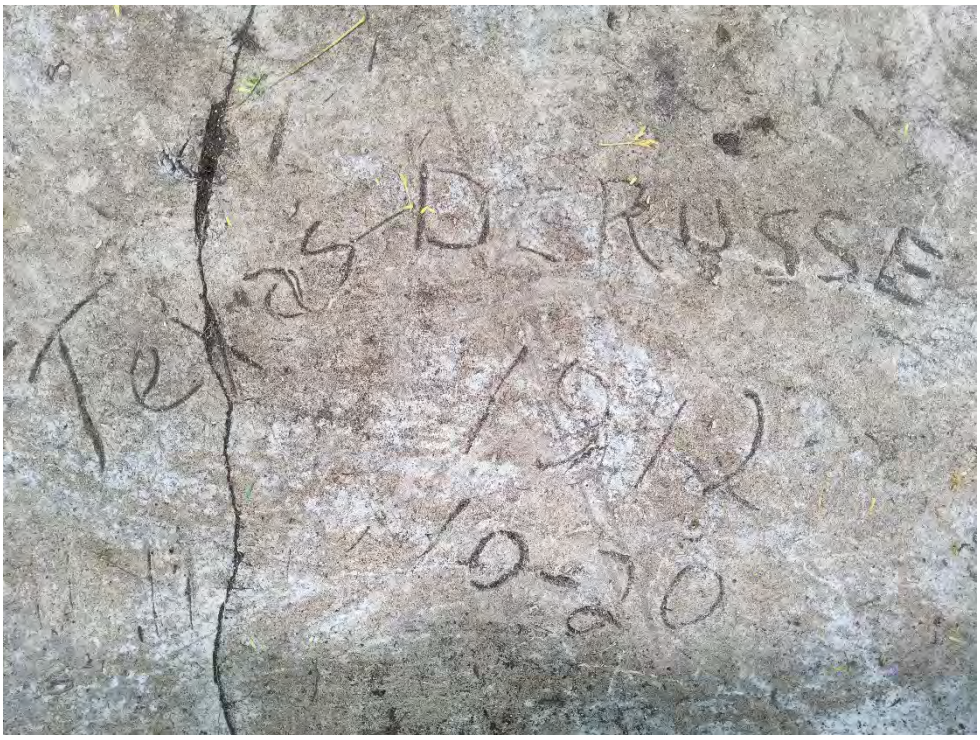


Photo 30. Feature D at Site 50-30-05-2000: inscription of "Texas—Derusse, 1942, 10-20" on the floor of concrete showering area.



Photo 31. Feature D at Site 50-30-05-2000: inscription of U.S. serviceman "Ty Unitis, Kenosha, Wisconsin" on the floor of concrete showering area.

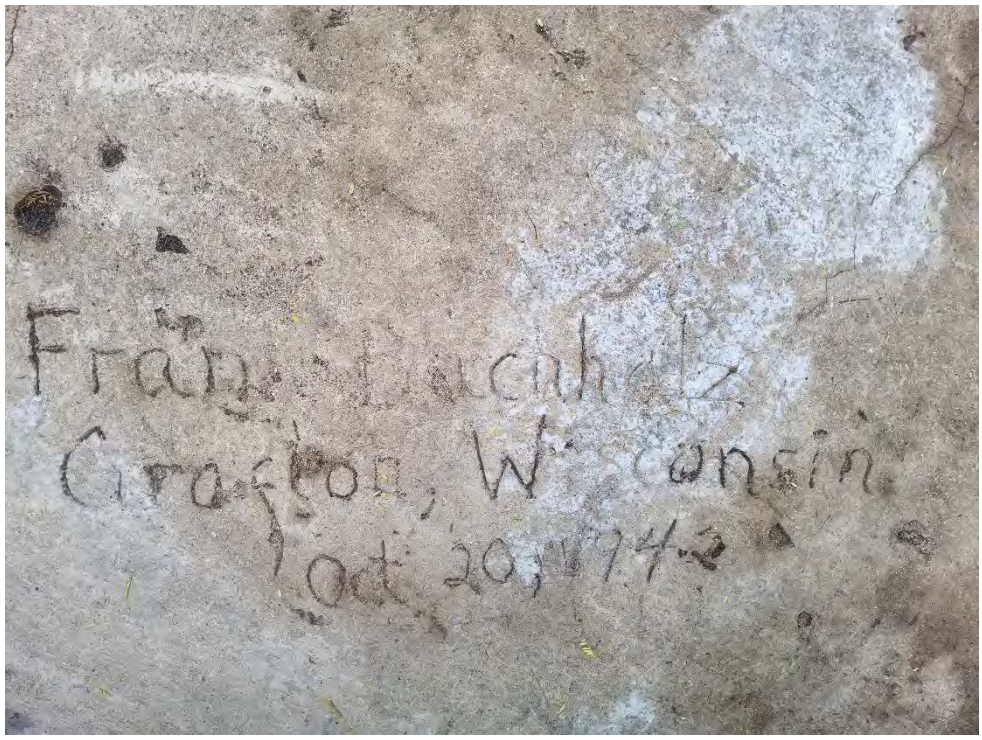


Photo 32. Feature D at Site 50-30-05-2000: inscription of U.S. serviceman "Frank Buchholz, Grafton, Wisconsin, Oct. 20, 1942" on the floor of concrete showering area.

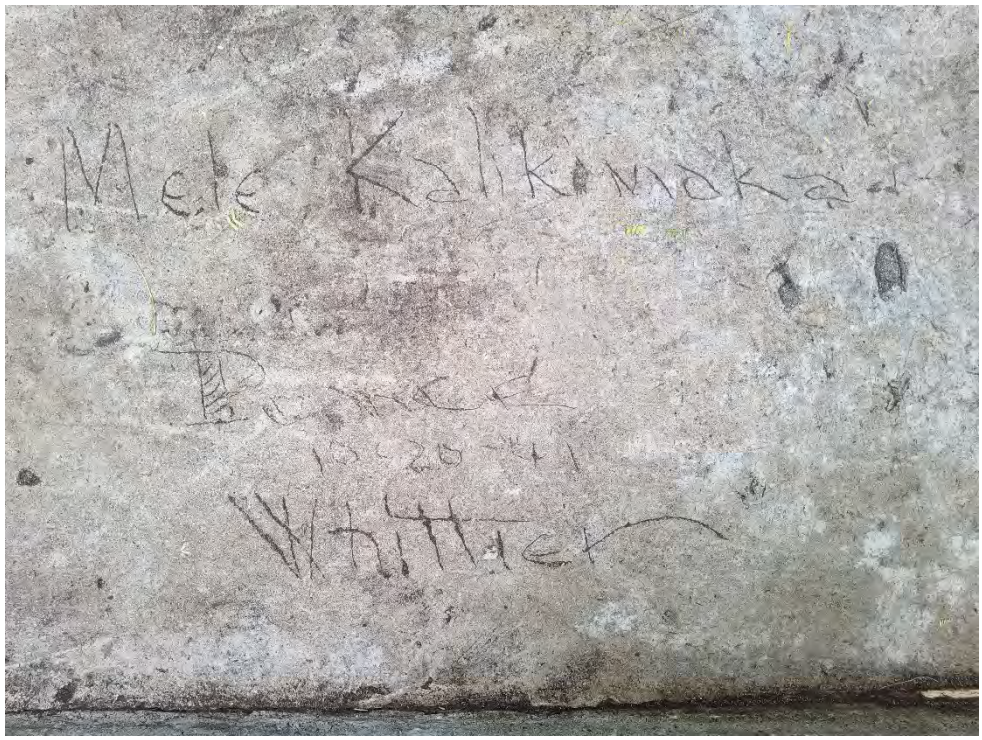


Photo 33. Feature D at Site 50-30-05-2000: inscription of "Mele Kalikimaka" and U.S. serviceman "P…, 10-20-42, Whittier" on the floor of concrete showering area.



Photo 34. Feature D at Site 50-30-05-2000: inscription of U.S. serviceman “Ray Ponder, Mississippi” on the floor of concrete showering area.

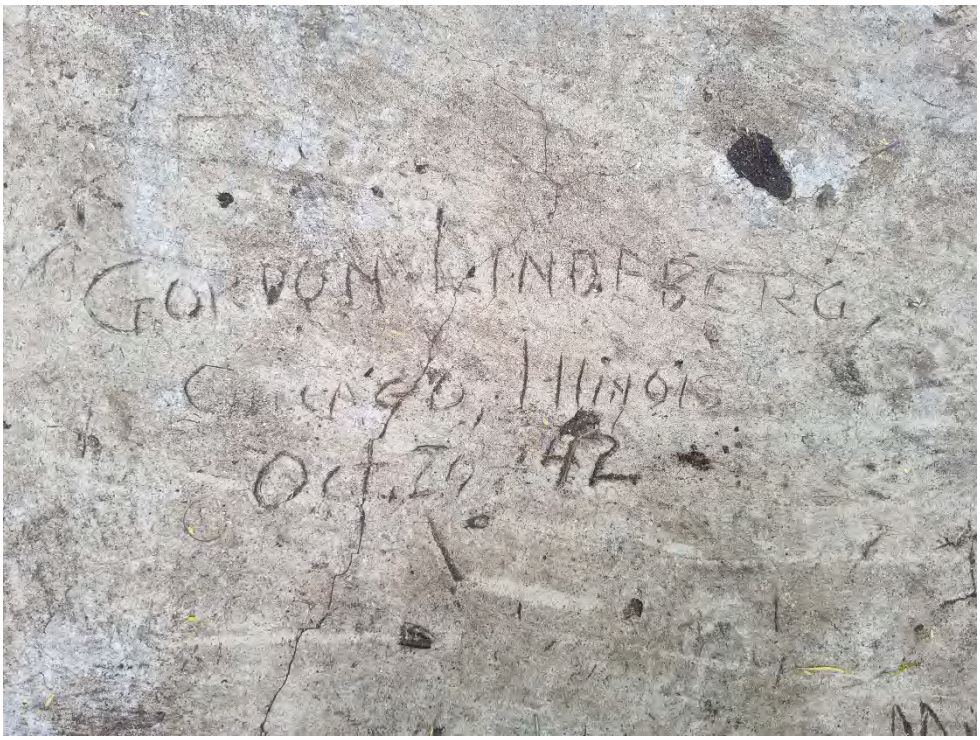


Photo 35. Feature D at Site 50-30-05-2000: inscription of U.S. serviceman “Gordon Lindeberg, Chicago, Illinois, Oct. 20, 42” on the floor of concrete showering area.



Photo 36. Feature D at Site 50-30-05-2000: inscription of U.S. serviceman "Ken Gibbs, Texas" on the floor of concrete showering area.

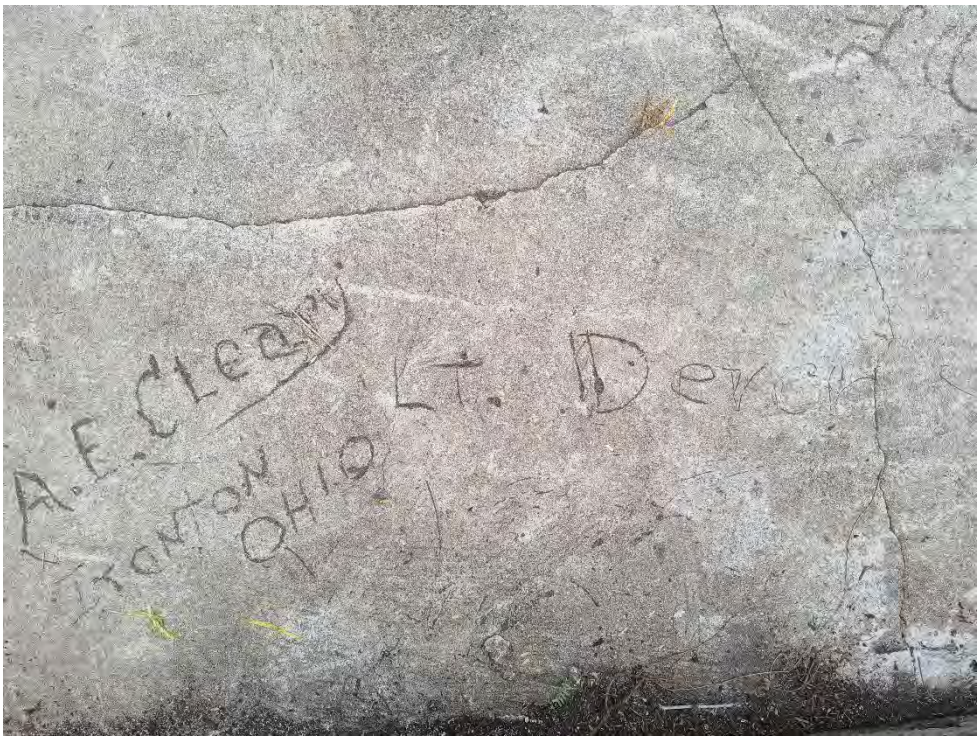


Photo 37. Feature D at Site 50-30-05-2000: inscription of U.S. serviceman "A. E. Cleary, Trenton, Ohio" and "Lt. Dever (?)" on the floor of concrete showering area.



Photo 38. Feature 1 at Site 50-30-05-2000: four course stacked rock structure in embedded concrete; looking south-southeast.



Photo 39. Feature 1 at Site 50-30-05-2000: four course stacked rock structure in embedded concrete; looking south-southwest.



Photo 40. Feature A or C at Site 50-30-05-2000 in Main Base (southern portion).

MAIN BASE (NORTHERN PORTION)

The northern portion of the Main Base survey area contained a mix of dense vegetation, dunes in the northwestern section, and to the east, forest intermixed with large piles of concrete rubble, barbed wire bales, and an abandoned apiary that made it difficult and at times impossible to complete transects (Photos 41 to 47). As was noted by cultural resources staff at PMRF prior to survey, this area had long been a dumping ground for materials moved from demolition and other infrastructure projects. Hence, there are several open spaces on the survey transect map (Figure 24) corresponding to locations deemed unsafe or impractical for survey.

The survey area also overlapped with four known sites: three traditional Hawaiian and one historic. The three traditional Hawaiian sites included Nohili Dune (Site 50-30-01-1860)—[redacted], Site 50-30-01-0009 which was noted by Bennett (1931) [redacted], and Site 50-30-1-2049, a[redacted]. The other historic site, 50-30-01-2042, is a trash deposit related to military activities dating to WWII and after. Two newly recorded sites, IA011 and IA012, were identified, both of which were historic in age, including remnants of a structure associated with a small arms range and a long segment of barbed wire bundles and refuse (Figure 25).

The northwestern portion of this survey area included steep dunes covered in *kiawe* trees that led up to Site 50-30-01-1860 in the Nohili Dunes with the survey area overlapping with an approximately 350 m by 75 m sector, a small area of the overall site. No new archaeological sites were found in this location. Site 50-30-01-0009, which was surmised to partially overlap with the northeastern corner of the survey area, could not be located. Given that these and many other sites were previously recorded using coarser survey methods (e.g., without the aid of GPS), their locations are sometimes rough approximations based on the digitization of older reports (i.e., in this case, Bennett 1931). It is quite possible that Site 50-30-01-0009, is further to the east.

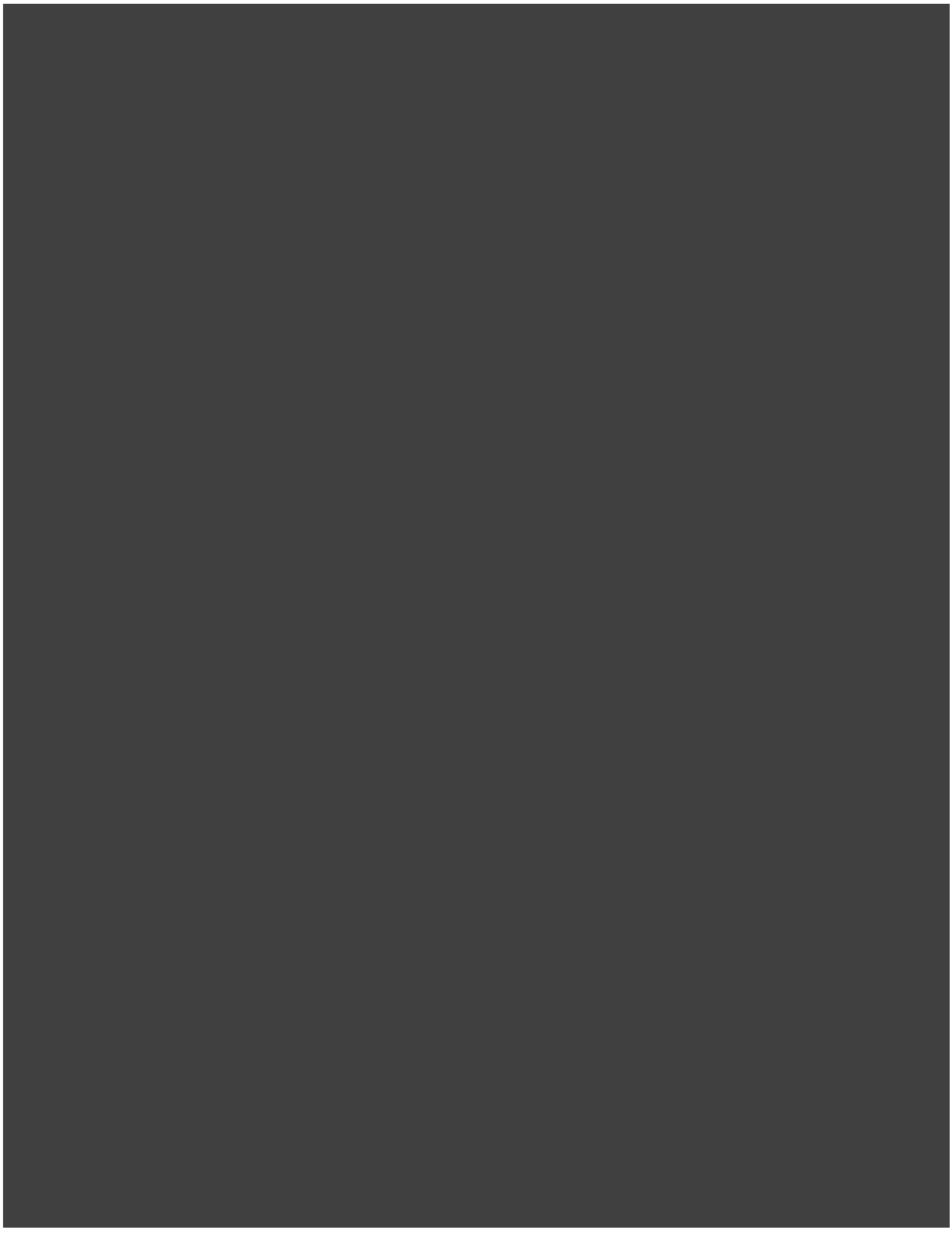


Figure 24. Survey map of Main Base (northern portion) showing pedestrian transects, sites, and known sites. Note: Main Base refers to Barking Sands.

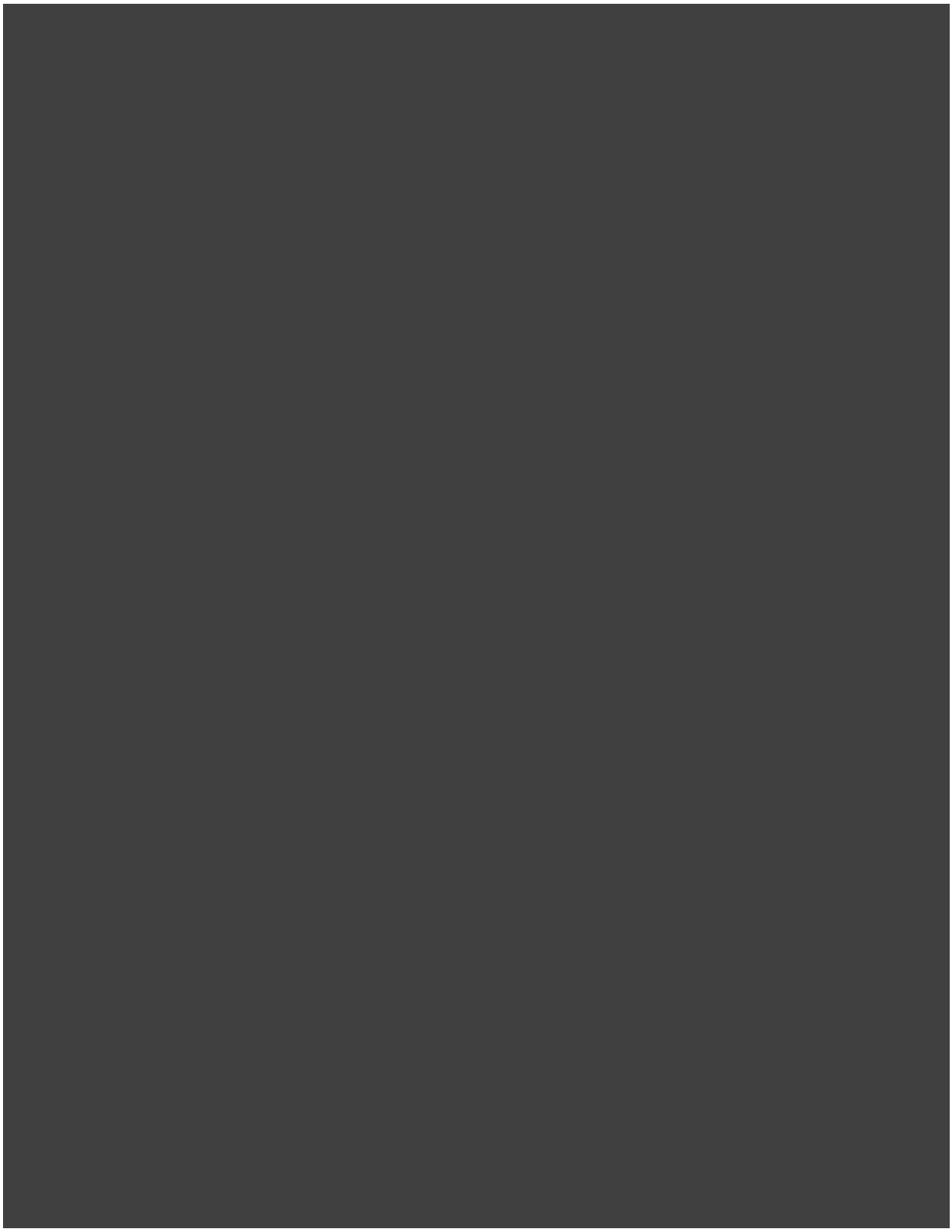


Figure 25. Map of previously and newly documented sites at Main Base (northern portion), including updated site boundaries for previously recorded sites . Note: Main Base refers to Barking Sands.



Photo 41. View of portion of survey area and ground visibility at Main Base Main Base (northern portion); looking north.



Photo 42. View of portion of survey area and ground visibility at Main Base Main Base (northern portion); looking southeast. Note density of kiawe trees.



Photo 43. Survey area overview showing vegetation density.



Photo 44. Overview of the previously recorded Nohili Dune site (50-30-01-1860).



Photo 45. Example of concrete and metal debris rubble pile; looking north.



Photo 46. Landscape in northeast section of Main Base Main Base (northern portion) showing vegetation and ground visibility; looking west.



Photo 47. Abandoned apiary; looking north.

Previously Recorded Sites Visited Within Main Base Main Base (Northern Portion)

During survey of the Main Base (northern portion) survey area, two previously recorded sites, 50-30-01-2042 and 50-30-01-2049, were encountered and the site boundaries were updated. Further information about the two sites is presented below.

Site 50-30-01-2042

This site was recorded as a trash deposit by Wulzen et al. (1997: 69). They note, "Site 2042, at the far northeast corner of the base, consists of a series of large piles of barbed wire, metal fence posts, metal cans, and bottles covering c. 30 m by 15 m. These may be the remains of shoreline barbed wire defenses." The site was determined not eligible for inclusion in the NRHP (SEARCH 2012:138).

During the current survey, the site was re-located but was found to be approximately 40 m to the west recognizable by a scattering of metal, glass, and ceramic debris largely consistent with the description provided in Wulzen (1997: 69). The site boundaries were updated based on newly acquired GPS data and can be seen in Figure 26. Site 50-30-01-2042 is a is a temporally mixed refuse area that was probably related to a number of different agricultural, historical, and military activities. The site lacks any contextual information, is not related to the base's mission, and contains no historically significant materials, and therefore does not meet NRHP criteria A, B, C, or D. As such, it is not recommended as eligible for listing in the NRHP.

The site is also recommended as not significant under HRS Chapter 6E. The site is a large trash deposit that was probably related to a number of different agricultural, historical, and military activities but deposition and alterations have resulted in a loss of integrity and therefore the site is not recommended as

eligible for listing in the NRHP. The site is not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values (Criterion c). Furthermore, the site has not yielded nor is likely to yield information important for research on prehistory or history (Criterion d), nor does the site offer important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to the group's history and cultural identity (Criterion e).



Figure 26. Map of Site 50-30-01-2042 at Main Base (northern portion) showing updated site boundary. Note: Main Base refers to Barking Sands.

Site 50-30-01-2049

Site 50-30-01-2049 is a historic era midden that was reported by Wulzen et al. (1997: B-35 to B-36) as a trash deposit dating to WWII or later. They note the site as "containing piles of crushed metal barrels and glass bottles. It is found east of North Nohili Road, at the junction with the pistol-range dirt road, and may post date World War II (p. 69)". The site was determined not eligible for listing in the NRHP (SEARCH 2012:138).

During the current survey, the site boundary was updated based on newly acquired GPS data and can be seen in Figure 27. The site is approximately 20–25 m square and about 10 m east of the small arms range as noted by Wulzen et al. (1997) (Site IA011, described below). The site is a large scatter of burnt barrels, glass and ceramic debris, and various metal pieces (Photos 48 to 51). The site is a trash deposit that was probably related to a number of different agricultural, historical, and military activities but deposition and alterations have resulted in a loss of integrity and therefore the site is not recommended as eligible for listing in the NRHP.

The site is also recommended as not significant under HRS Chapter 6E. The site is not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values (Criterion c). Furthermore, the site has not yielded nor is likely to yield information important for research on prehistory or history (Criterion d), nor does the site offer important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to the group's history and cultural identity (Criterion e).

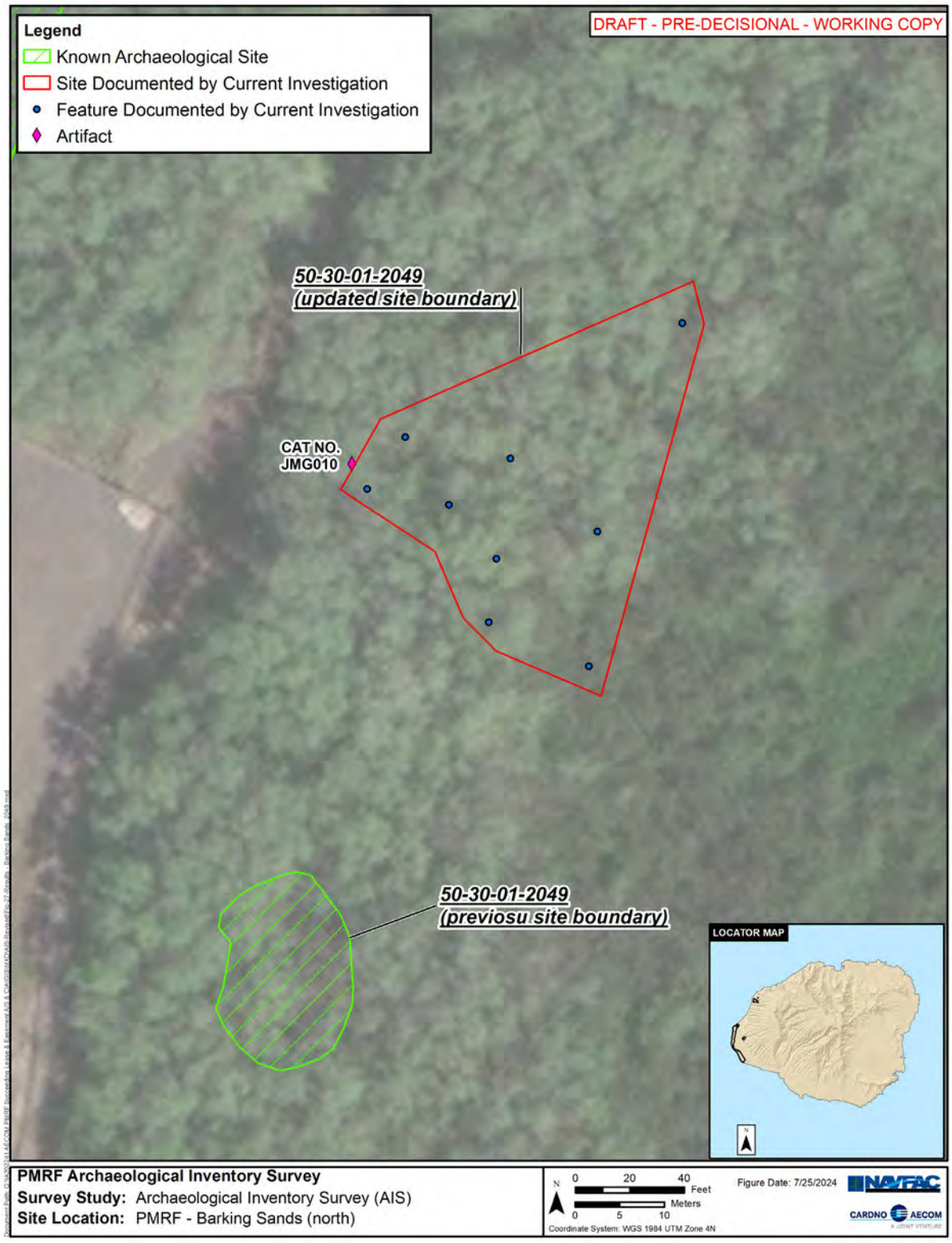


Figure 27. Map of Site 50-30-01-2049 at Main Base (northern portion) showing updated site boundary. Note: Main Base refers to Barking Sands.



Photo 48. Large metal burnt barrel pile at Site 50-30-01-2049; looking south.



Photo 49. View of landscape and metal debris at Site 50-30-01-2049; far right; looking south.



Photo 50. Glass bottles and other glass and ceramic debris at Site 50-30-01-2049.



Photo 51. Glass bottle, ceramic bowl, leather fragments, and other miscellaneous items at Site 50-30-01-2049.

Newly Identified Sites Within Barking Sands North

Two new historic sites were identified during the survey, including remnants of a wood frame structure used previously in association with the small-arms firing range (IA011) and a refuse area dominated by bundles of barbed wire and other debris (IA012).

Site IA012: Historic Refuse Area

Site IA012 is a historic refuse area, including bundles of barbed wire within a larger push pile of debris (Table 7; Photo 55). The push pile appears like a mound that was created by mechanically removing barbed wire fencing, perhaps initially placed along the edges of the canal that lies about 5 m to the northwest. The push pile is oriented roughly northeast-southwest and consists of large piles of rusted barbed wire roughly 2–2.5 m in diameter, concrete fragments, tree stumps, metal fence post fragments, and glass and ceramic bottles.

The site is not recommended as eligible for listing in the NRHP as it lacks any contextual information, is not related to the base's mission, and contains no historically significant materials. As such, the site is not associated important events that have made a significant contribution to the broad patterns of our history (Criterion A), nor is it associated with a person of historical significance or have that association with the activities, events, etc., for which the person is important (Criterion B), nor does it embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C). Furthermore, the site does not have the potential to yield important information about history or prehistory (Criterion D).

The site is also recommended as not significant under HRS Chapter 6E. The site is not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values (Criterion c). Furthermore, the site has not yielded nor is likely to yield information important for research on prehistory or history (Criterion d), nor does the site offer important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to the group's history and cultural identity (Criterion e).

Table 6. Site IA012 Site Dimensions.

Site Number	Survey Area	Feature No.	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Height (m)	Orientation
IA012	Barking Sands North	N/A	Historic Refuse Area	X	38.0	1.0	1.2	NE-SW



Photo 52. Site IA012: Bundles of rusted barbed wire found adjacent to canal; looking west.

Isolated Finds Within Main Base (Northern Portion)

Apart from the two sites identified and recorded within Main Base (northern portion), IA011 and IA012, three historic bottles, a possible marine shell artifact, coral abrader, and lava rock manuport were recorded and collected as isolated finds across different parts of the survey area (Table 8; Photos 56 to 60).

Table 7. Isolated finds collected from Barking Sands (northern portion).

Cat. No.	Type	Age
JMG008.01	Glass milk bottle	Historic
JMG008.02	Glass milk bottle	Historic
JMG010	Glass medicinal bottle	Historic
EVZ002	Possible shell artifact	pre-Contact
JMG009	Coral abrader	pre-Contact
JMG011	Waterworn basalt cobble manuport	pre-Contact



Photo 53. Historic milk bottle from Sokei Dairy, Kauaʻi found at Barking Sands North (Cat. No. JMG008.02).



Photo 54. Historic milk bottle from Waimea Dairy, Kauaʻi found at Barking Sands North (Cat. No. JMG008.01).



Photo 55. Glass medicinal bottle found at Barking Sands North (Cat. No. JMG010).



Photo 56. Possible shell artifact (Cat. No. EVZ002).



Photo 57. Grooved coral abrader (Cat. No. JMG009).

KAMOKALĀ RIDGE

Kamokalā Ridge is east of the Main Base. During the survey, vegetation was typically dense and the terrain rocky with some areas having deep ravines or steep topography exhibiting active flooding during heavy rain (Photos 61 and 62). As such, some parts of the survey area could not be traversed safely. Nevertheless, of the four survey areas, Kamokalā Ridge had the densest concentration of previously recorded and newly identified sites, including remnants of pre-Contact and early historic agricultural activities [redacted] and historic era refuse areas (e.g., see McGerty and Spear 1997b). The latter includes abandoned cars, metal pipes, appliances, glass/metal debris, and other miscellaneous trash.

In addition to the significant amount of historic refuse found scattered across the survey area at Kamokalā Ridge, particularly in the northwest section, there has also been several other larger and noteworthy disturbances. The most visible are 10 caves (ordnance magazines) with offset entrances that were excavated into the cliff faces during World War II. These are accessed by a paved road and situated just below or adjacent to a series of sites and features that were either previously known or identified during the survey. The caves are still used today for storing various sensitive materials for the military (Gonzalez and Payton 1999:41). The northeastern section of the survey that follows Nahomalu stream also has evidence for cattle penning and related barbed or wire (high tensile) fencing along or on top of traditional Hawaiian stone architectural features.

Most of the previously recorded sites within the Kamokalā survey area were verified during the pedestrian survey and a number of newly recorded sites were also identified. These included sites IA001 through IA010 [redacted] (Figures 29 and

30) [redacted].

Fieldwork at Kamokalā Ridge also consisted of subsurface testing through excavation of ten 1 by 1 m units. These units were placed [redacted] at Site IA003 (n=3; see Figure 29) and [redacted] at Site IA004 and IA008. Of these 10 units, eight were positive for cultural material [redacted]. The laboratory results are discussed in detail later in this chapter.

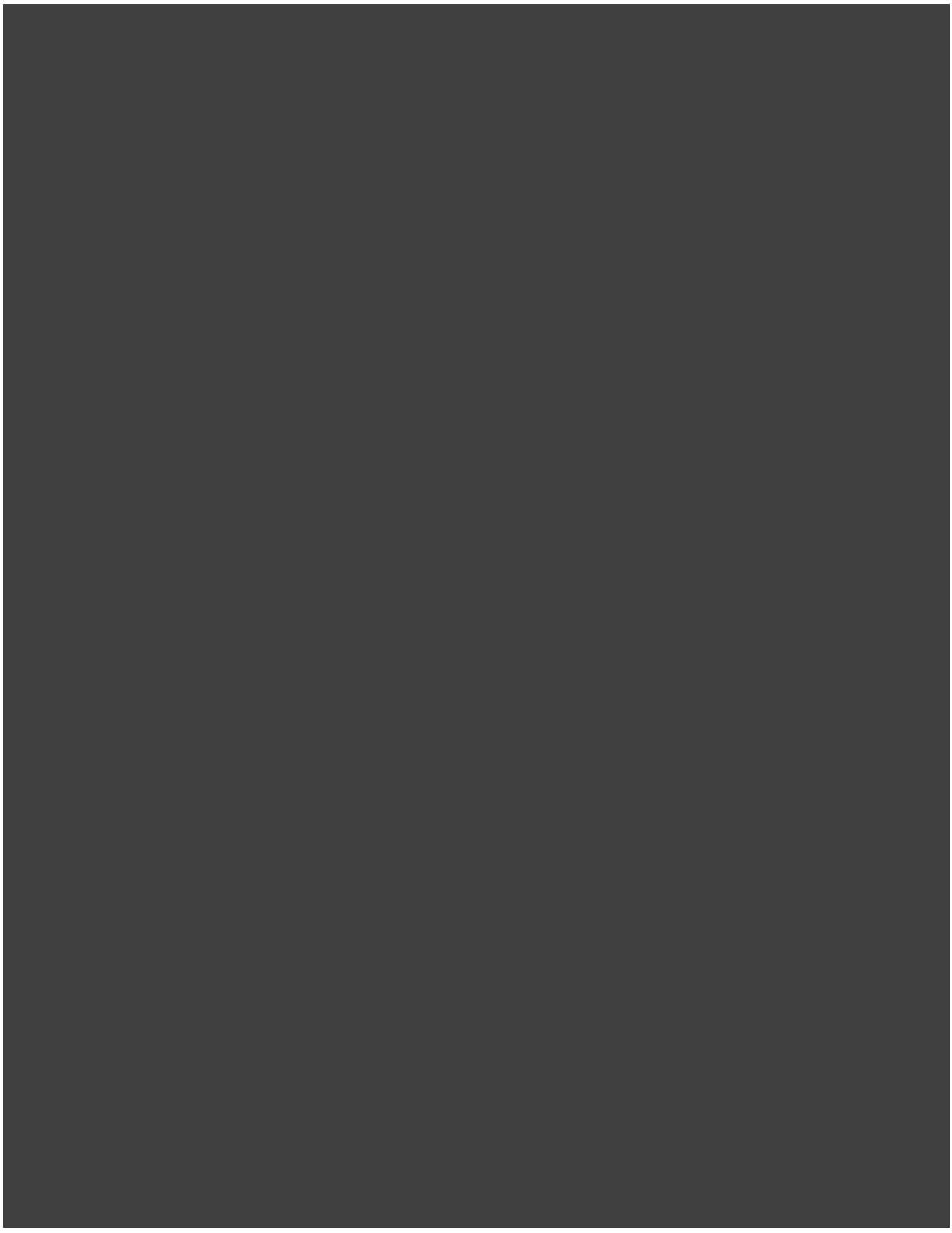


Figure 28. Survey map of Kamokalā Ridge showing pedestrian transects and previously recorded sites.

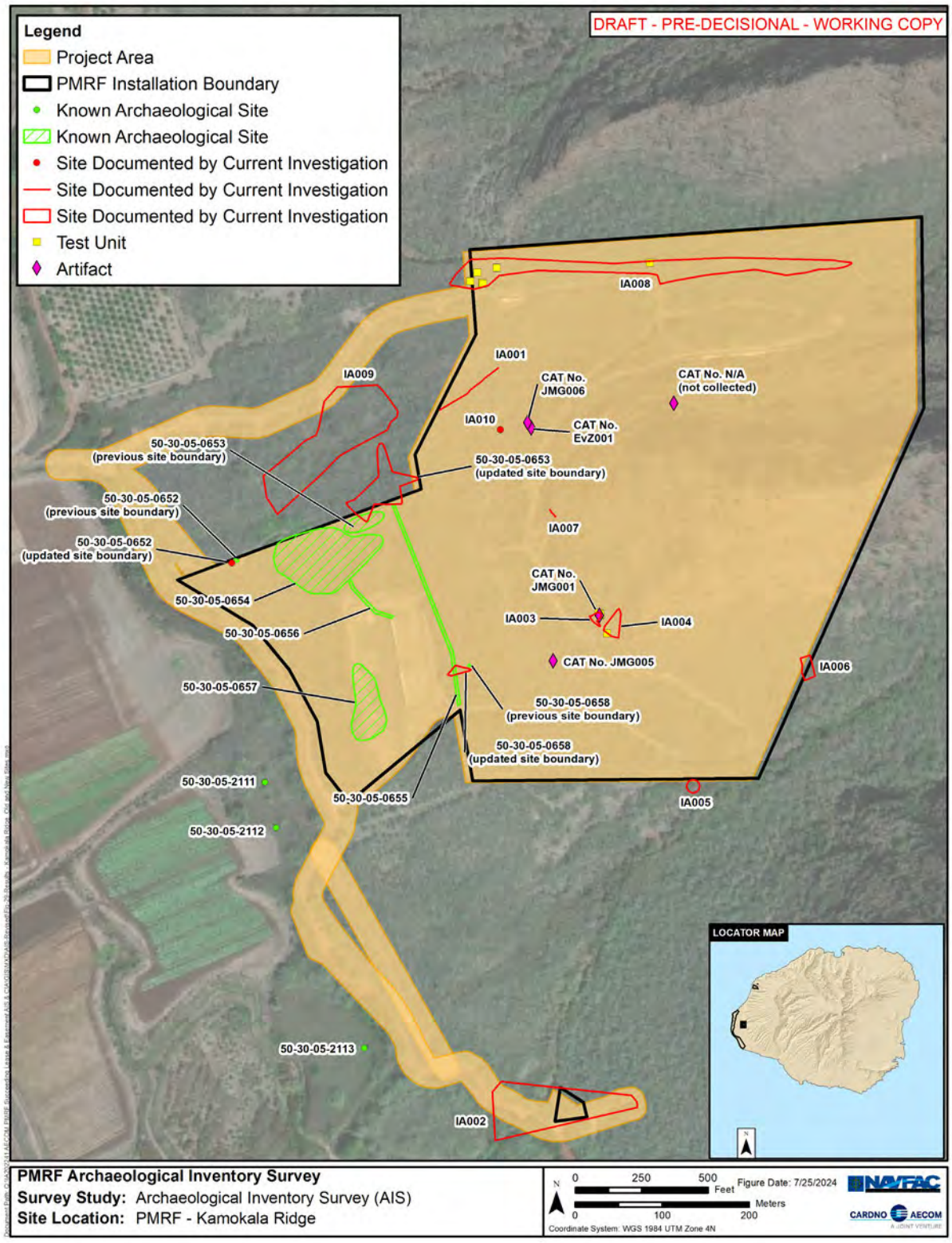


Figure 29. Map of both previously and newly recorded sites identified within the survey area at Kamokalā Ridge, including updated site boundaries.



Photo 58. Portion of extensive Night-Blooming Cereus Dragon Fruit (*Hylocereus undatus*) grove that prohibited access through part of the survey area; looking northeast.



Photo 59. Stream bed along the northern boundary of the survey area after heavy rains during the previous day.

Previously Recorded Sites

During the survey, three sites that had been previously recorded were identified: 50-30-05-0652, 50-30-05-0653, and 50-30-05-0658. These sites were verified during the pedestrian survey and are briefly described below.

Site 50-30-05-0652

Site 50-30-05-0652 consists of a single feature (Feature 1 in McGerty and Spear 1997b:22) which was described as "a single rock mound featur [redacted] This and other mounds were interpreted by McGerty and Spear (1997:41) as "agricultural in function, [redacted] McGerty and Spear (1997:41) noted that "sufficient data has been recovered from Sites 652 through 658 so that they may be considered no longer significant." As such, it was determined that this site is not eligible for inclusion in the NRHP (SEARCH 2012:115, 138).

The site is also recommended as not significant under HRS Chapter 6E. The site is an isolated rock mound that may or may not have been related to historical agricultural activities in the upland areas of Kaua'i and has no other connecting features. The site is not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values (Criterion c). Furthermore, the site has not yielded nor is likely to yield information important for research on prehistory or history (Criterion d), nor does the site offer important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to the group's history and cultural identity (Criterion e).

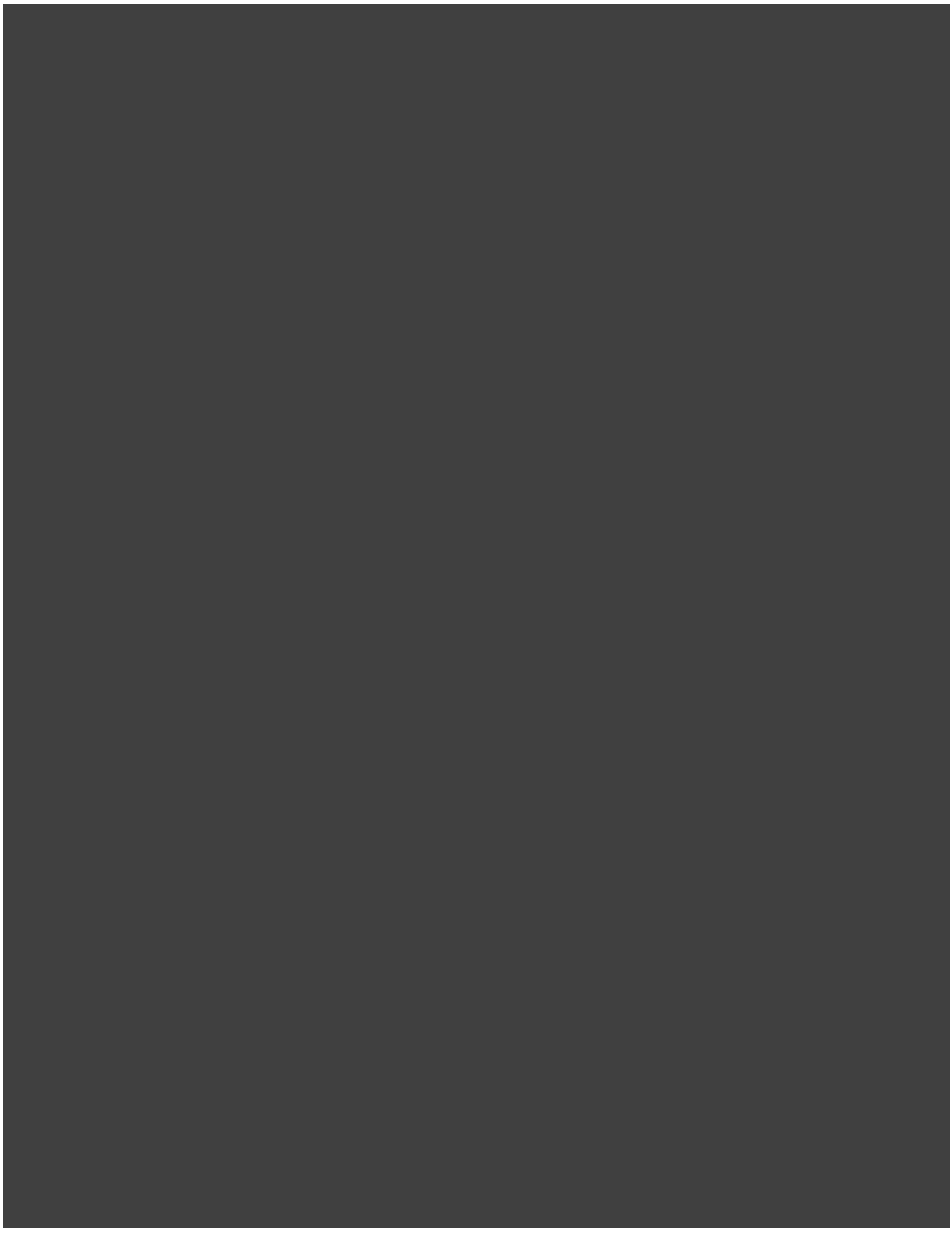


Figure 30. Site 50-30-05-0652 showing updated site boundary.



Photo 60. Site 50-30-05-0652: rock mound (recorded as Feature 1 by McGerty and Spear 1997b:22); looking north-northwest.

Site 50-30-05-0653

Site 50-30-05-0653 was reported by McGerty and Spear (1997b: 22) to consist of seven rock mounds interpreted as being agricultural in nature (see also Altizer and Hammatt 2010; Figure 32). The site was verified during this pedestrian survey and the boundary was updated. However, four more similar features were found in the vicinity, making a total of 12 rock mounds. It was not possible to correlate the previously identified mounds from McGerty and Spear (1997b:25) and therefore the mounds were give new feature numbers (Features 1–12; see Table 9; see Figure 26; Photos 64 to 75). These and other mounds were interpreted by McGerty and Spear (1997:41) as "agricultural in function, [redacted] McGerty and Spear (1997:41) noted that "sufficient data has been recovered from Sites 652 through 658 so that they may be considered no longer significant." As such, it was determined that this site is not eligible for inclusion in the NRHP (SEARCH 2012:115, 138).

The site is also recommended as not significant under HRS Chapter 6E. The site comprises rock mounds that may or may not have been related to historical agricultural activities in the upland areas of Kaua'i and has no other connecting features. The site is not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values (Criterion c). Furthermore, the site has not yielded nor is likely to yield information important for research on prehistory or history (Criterion d), nor does the site offer important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to the group's history and cultural identity (Criterion e).

Table 8. Features Recorded at Site 50-30-05-0653 Both by McGerty and Spear (1997b) and in This Survey.

Site Number (50-30-05-)	Survey Area	Feature Number	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Height (m)	Orientation
0653	Kamokalā Ridge	1	Rock Mound					
0653	Kamokalā Ridge	2	Rock Mound					
0653	Kamokalā Ridge	3	Rock Mound					
0653	Kamokalā Ridge	4	Rock Mound					
0653	Kamokalā Ridge	5	Rock Mound					
0653	Kamokalā Ridge	6	Rock Mound					
0653	Kamokalā Ridge	7	Rock Mound					
0653	Kamokalā Ridge	8	Rock Mound					
0653	Kamokalā Ridge	9	Rock Mound					
0653	Kamokalā Ridge	10	Rock Mound					
0653	Kamokalā Ridge	11	Rock Mound					
0653	Kamokalā Ridge	12	Rock Mound					

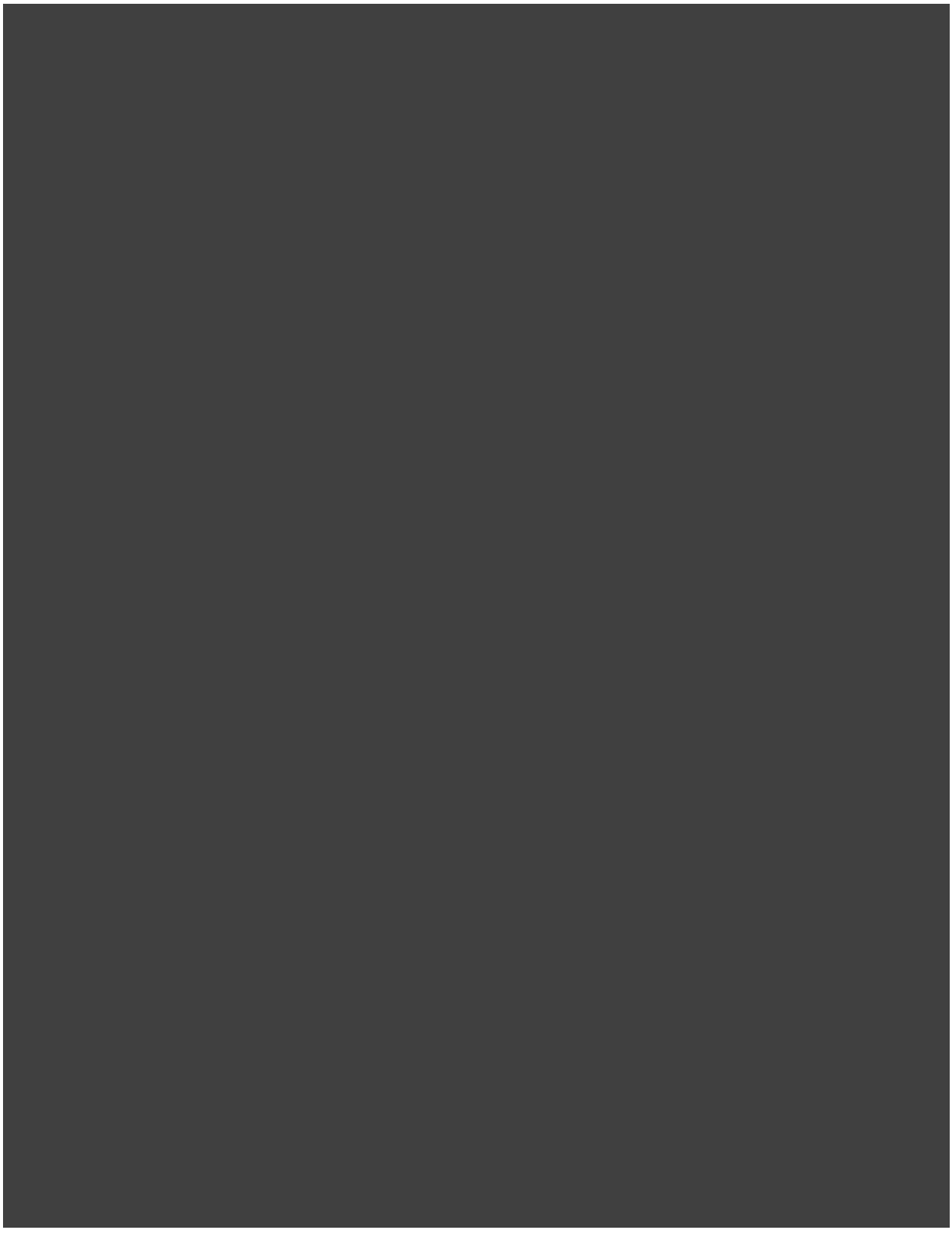


Figure 31. Site 50-30-05-0653 showing updated site boundary.



Photo 61. Feature 1 at Site 50-30-05-0653: rock mound; looking east-northeast.



Photo 62. Feature 2 at Site 50-30-05-0653: rock mound; looking north-northwest.



Photo 63. Feature 3 at Site 50-30-05-0653: rock mound; looking east.



Photo 64. Feature 4 at Site 50-30-05-0653: rock mound; looking south-southwest.



Photo 65. Feature 5 at Site 50-30-05-0653: rock mound; looking east-southeast.



Photo 66. Feature 6 at Site 50-30-05-0653: rock mound; looking south



Photo 67. Feature 7 at Site 50-30-05-0653: rock mound; looking north.



Photo 68. Feature 8 at Site 50-30-05-0653: rock mound; looking east.



Photo 69. Feature 9 at Site 50-30-05-0653: rock mound; looking east.



Photo 70. Feature 10 at Site 50-30-05-0653: rock mound; looking southeast.



Photo 71. Feature 11 at Site 50-30-05-0653: rock mound; looking northeast.



Photo 72. Feature 12 at Site 50-30-5-0653: rock mound; looking east-southeast.

Site 50-30-05-0658

This site was originally described as "a single feature consisting of a rock mound [redacted] McGerty and Spear (1997:41) noted that "sufficient data has been recovered from Sites 652 through 658 so that they may be considered no longer significant." As such, it was determined that this site is not eligible for inclusion in the NRHP (SEARCH 2012:138).

During survey, however, three features and a ground stone artifact found on top of Feature 2 were identified (see Table 10; Photos 76 to 79). [redacted] is currently unclear which rock mound corresponds to McGerty and Spear's (1997b) feature. Note that given the discovery of additional features in the area, the site boundary was updated using newly acquired GPS coordinates. This and other rock mounds at Kamokalā were interpreted by McGerty and Spear (1997:41) as "agricultural in function, [redacted] McGerty and Spear (1997:41) to note that "sufficient data has been recovered from Sites 652 through 658 so that they may be considered no longer significant." As such, this site has been determined not eligible for inclusion in the NRHP (SEARCH 2012:138).

The site is also recommended as not significant under HRS Chapter 6E. The site comprises rock mounds that may or may not have been related to historical agricultural activities in the upland areas of Kaua'i and has no other connecting features. The site is not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values (Criterion c). Furthermore, the site has not yielded nor is likely to yield information important for research on prehistory or history (Criterion d), nor does the site offer important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to the group's history and cultural identity (Criterion e).

Table 9. Features Recorded at Site 50-30-05-0658 Both by McGerty and Spear (1997b) and in This Survey.

Site Number (50-30-05-)	Survey Area	Feature Number	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Height (m)	Orientation
0658	Kamokalā Ridge	1	Rock Mound					
0658	Kamokalā Ridge	2	Rock Mound					
0658	Kamokalā Ridge	3	Rock Mound					

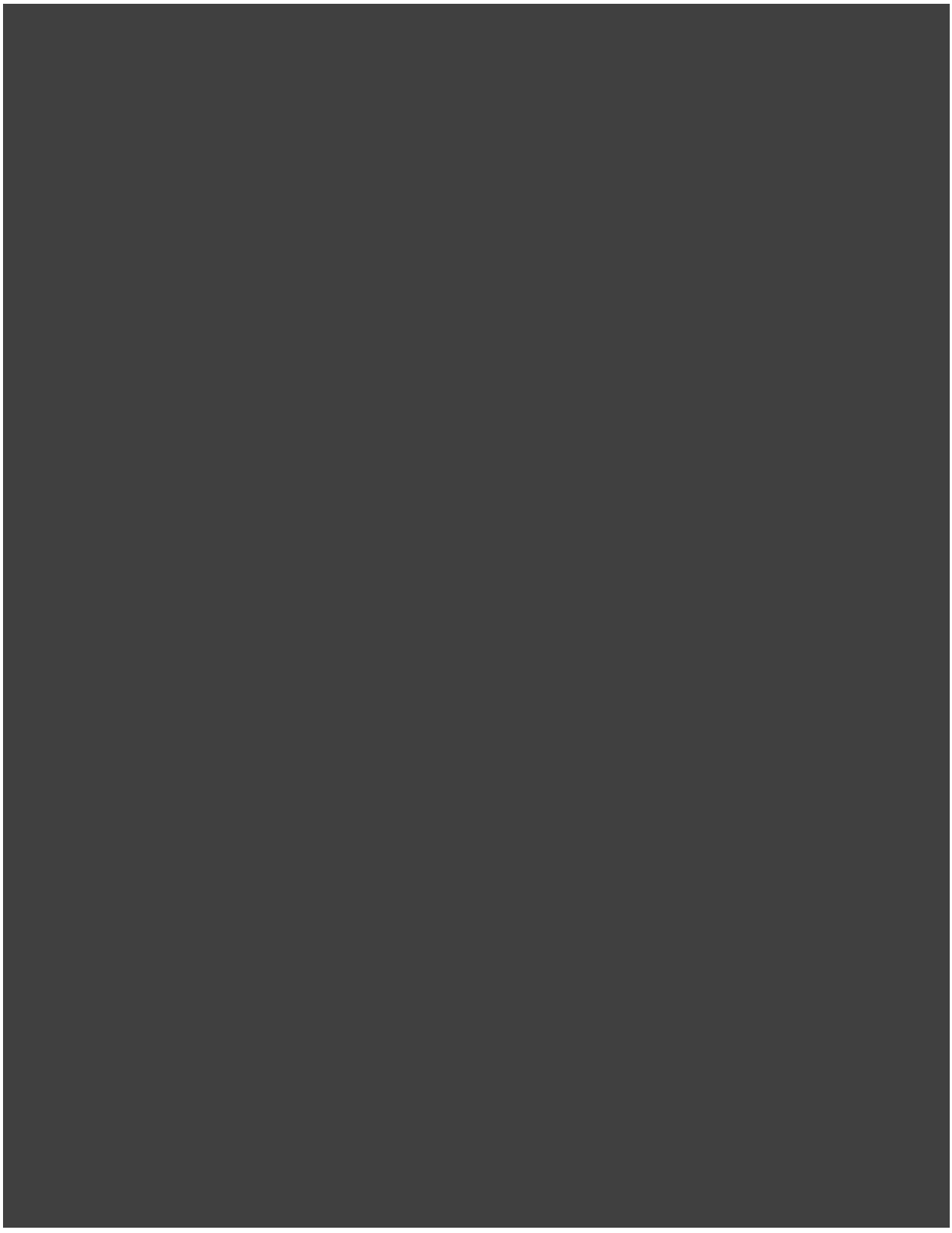


Figure 32. Site 50-30-05-0658 showing features and site boundary update.



Photo 73. Feature 1 at Site 50-30-05-0658: rock mound; looking north-northeast.



Photo 74. Feature 2 at Site 50-30-05-0658: rock mound; looking south-southwest.



Photo 75. Feature 2 at Site 50-30-05-0658: ground stone artifact.



Photo 76. Feature 3 at Site 50-30-05-0658: rock mound; looking west.

Newly Identified Sites

A total of ten new sites were identified within the Kamokalā Ridge survey area. These newly recorded sites are associated with traditional Hawaiian activities and historic period landscape use. Each of the sites and their associated features are described further below.

Site IA001: Rock Wall

Site IA001 consists of a traditional Hawaiian rock wall (Figure 34). [redacted] No artifacts were observed within the surrounding vicinity.

Site IA001 is eligible for inclusion in the NRHP under Criterion D. This site, along with others recorded in the Kamokalā survey area (IA002-IA004, IA006-IA008, and IA010), are related to agricultural activities in the upland areas of Kaua'i [redacted] e historic context for these sites is the development of agricultural practices in upland Kaua'i and the Hawaiian Islands more generally. In recent years, the trajectory of expansion of agriculture into the interior island landscapes of Hawai'i has received considerable research attention (see Morrison et al. 2022; Quintus et al. 2023), however very little research on the topic has been conducted on the island of Kaua'i.

This site is also recommended as significant under HRS Chapter 6E Criteria d and e. Criterion d is recommended because it offers an important area for comparison with studies that have been conducted on O'ahu and Hawai'i island. These types of studies offer the potential to answer questions about the trajectory of use of Hawai'i's interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. In addition to Criterion d, this site is also recommended significant under Criterion e because it offers important value to the native Hawaiian people of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to their history and cultural identity.

Table 10. Site IA001 Dimensions.

Site Number	Survey Area	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Height (m)	Orientation
IA001	Kamokalā Ridge	Stone Wall	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

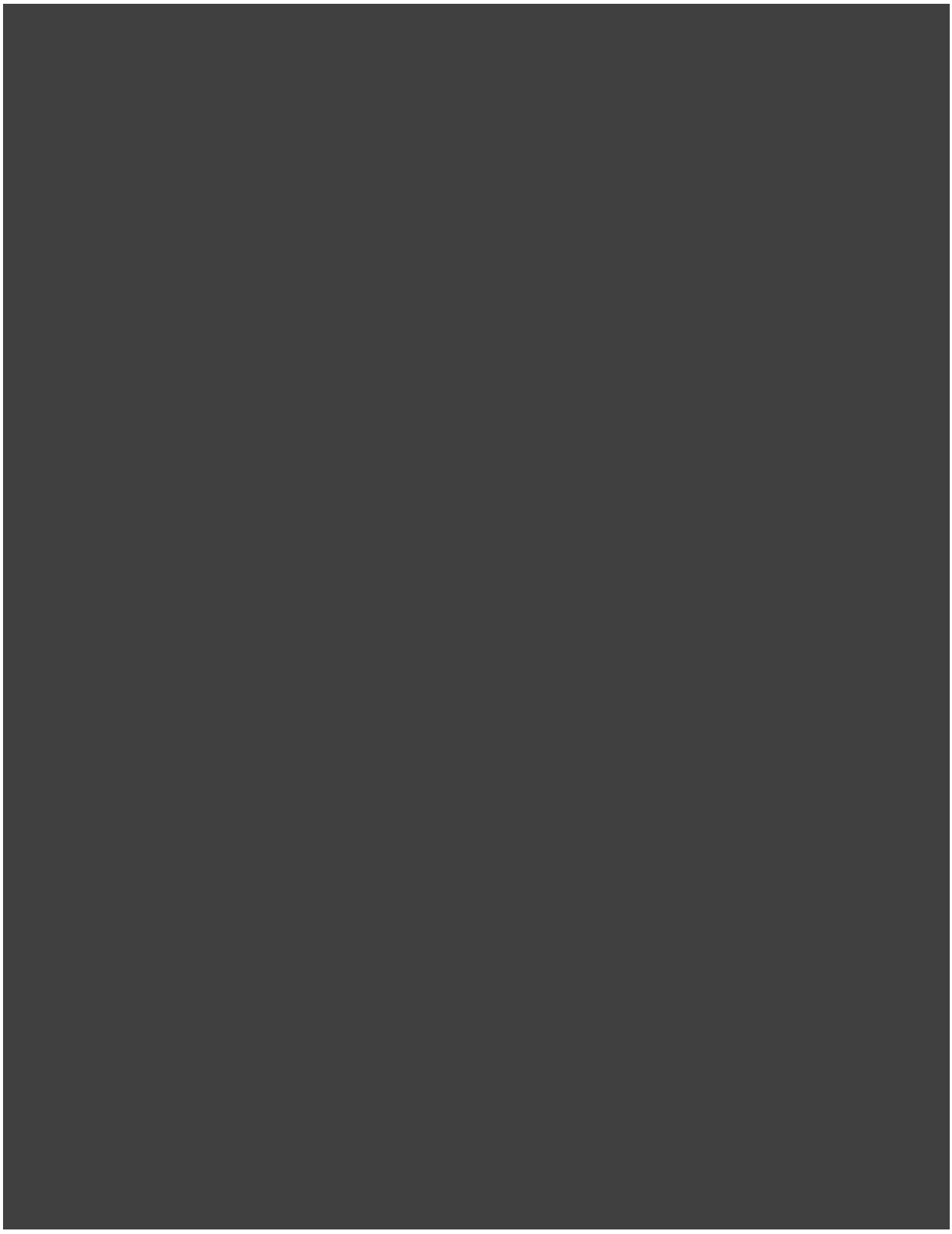


Figure 33. Site IA001 location relative to IA010.



Photo 77. Site IA001: rock wall; view to the west.



Photo 78. Site IA001: rock wall (south side of collapsed section); view to the west-northwest.



Photo 79. Site IA001: rock wall; view to the west-northwest.



Photo 80. Site IA001: rock wall; collapsed area along southern end; view to the east.

Site IA002: Rock Wall and Enclosure Complex

Site IA002 consists of three late pre-Contact/early Contact Hawaiian features: Features 1, 2, and 3 (Figure 35; Table 12). [redacted] he site is likely related to livestock ranching in the area, with both pre-Contact and post-Contact elements having been incorporated into its design.

Feature 3 includes several retaining walls, [redacted] Given the steepness of the terrain, wood debris, and evidence of rockfall, it was not possible to take exact measurements of all of the feature components nor obtain photographs from all angles.

Site IA002 is eligible for inclusion in the NRHP under Criterion D. This site, along with others recorded in the Kamokalā survey area (IA001, IA003-IA004, IA006-IA008, and IA010), are related to agricultural activities in the upland areas of Kaua'i [redacted] The historic context for these sites is the development of agricultural practices in upland Kaua'i and the Hawaiian Islands more generally. In recent years, the trajectory of expansion of agriculture into the interior island landscapes of Hawai'i has received considerable research attention (see Morrison et al. 2022; Quintus et al. 2023), however very little research on the topic has been conducted on the island of Kaua'i.

This site is also recommended as significant under HRS Chapter 6E Criteria d and e. Criterion d is recommended because it offers an important area for comparison with studies that have been conducted on O'ahu and Hawai'i Island. These types of studies offer the potential to answer questions about the trajectory of use of Hawai'i's interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. In addition to Criterion d, this site is also recommended significant under Criterion e because it offers important value to the native Hawaiian people due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to their history and cultural identity.

Table 11. Site IA002 Feature Dimensions.

Site Number	Survey Area	Feature No.	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Depth (m)	Orientation
IA002	Kamoka lā Ridge	1	Rock Wall	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
IA002	Kamoka lā Ridge	2	Rock Enclosure	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
IA002	Kamoka lā Ridge	3	Retaining walls and terraces	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

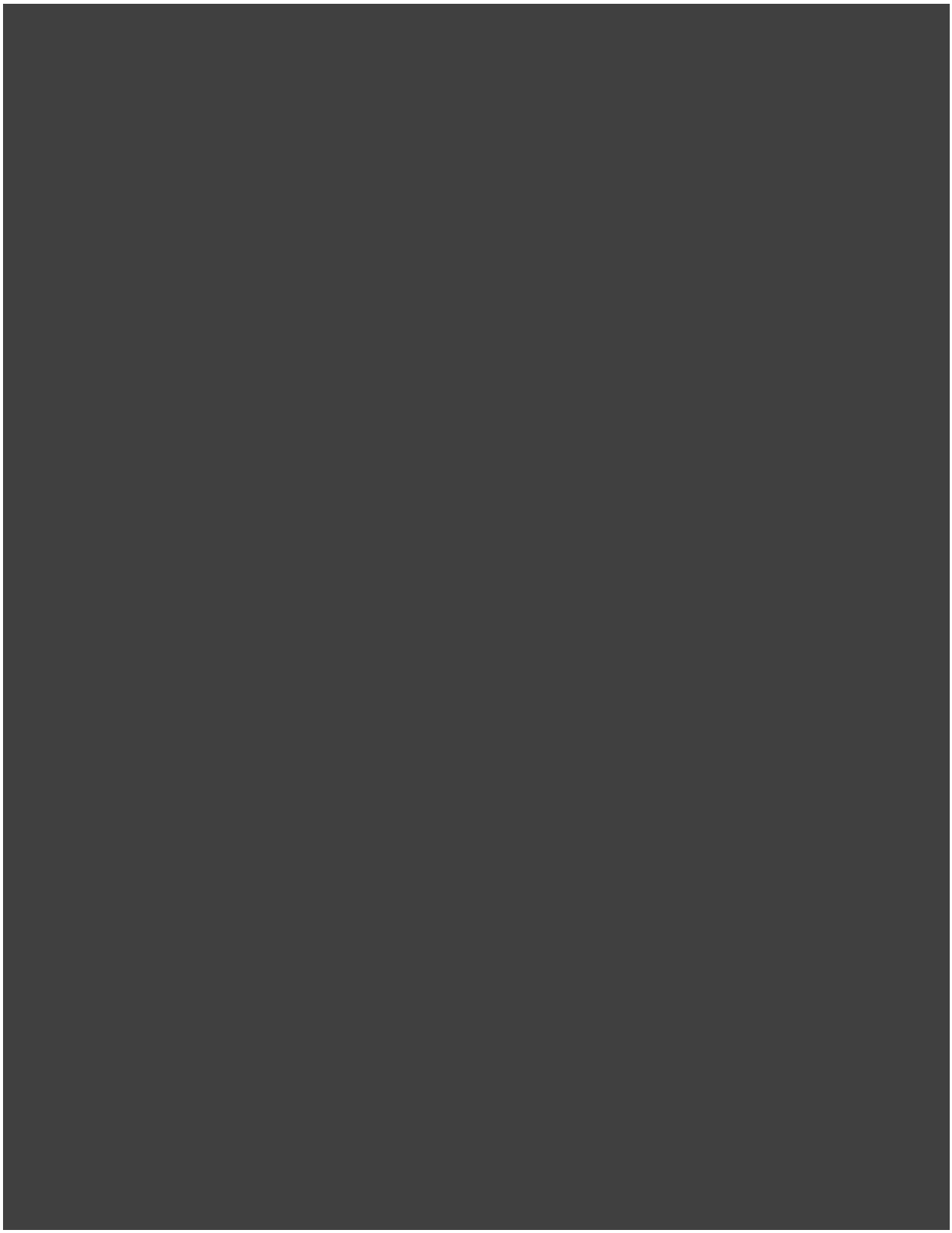


Figure 34. Site IA002 dimensions and location of associated features.



Photo 81. Feature 1 at Site IA002: rock wall on southern side; view to the east.



Photo 82. Feature 1 at Site IA002: rock wall with modern fencing; view to the northeast.



Photo 83. Feature 1 at Site IA002: rock wall; view to the south.



Photo 84. Feature 2 at Site IA002: rock wall; view to the west.

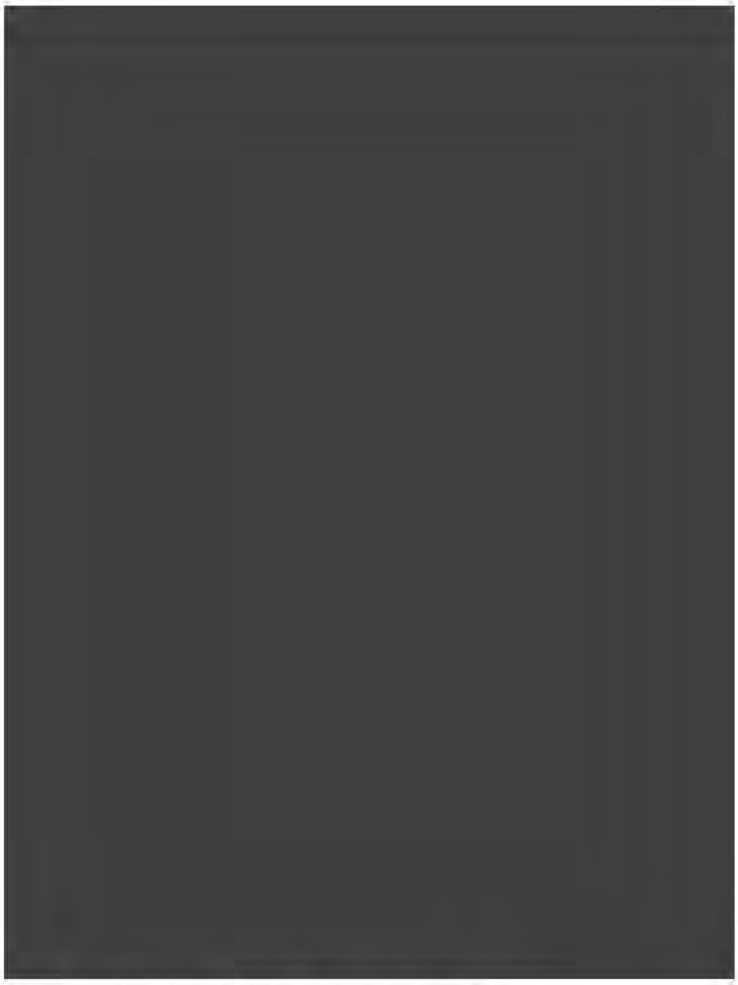


Photo 85. Entrance to Feature 3 at Site IA002: retaining walls



Photo 86. Overview of Feature 3 at Site IA002: retaining walls; view to the east.



Photo 87. Overview of Feature 3 at Site IA002: retaining walls; view to the east-northeast.



Photo 88. Overview of Feature 3 at Site IA002: retaining walls; view to the north.

Site IA003: Rock Shelter

Site IA003 consists of a series of naturally occurring basalt rockshelters, [redacted]

Three 1 by 1 m test units (TU1, TU2, and TU4) were placed [redacted] These units and subsurface features are discussed later in this section in reference to the excavations.

Site IA003 is eligible for inclusion in the NRHP under Criterion D and HRS Chapter 6E Criteria d and e. This site, along with others recorded in the Kamokalā survey area (IA001-IA002, IA004, IA006-IA008, and IA010), are related to agricultural activities in the upland areas of Kaua'i [redacted] The historic context for these sites is the development of agricultural practices in upland Kaua'i and the Hawaiian Islands more generally. In recent years, the trajectory of expansion of agriculture into the interior island landscapes of Hawai'i has received considerable research attention (see Morrison et al. 2022; Quintus et al. 2023), however very little research on the topic has been conducted on the island of Kaua'i.

This site is also recommended as significant under HRS Chapter 6E Criteria d and e. Criterion d is recommended because it offers an important area for comparison with studies that have been conducted on O'ahu and Hawai'i Island. These types of studies offer the potential to answer questions about the trajectory of use of Hawai'i's interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. In addition to Criterion d, this site is also recommended significant under Criterion e because it offers important value to the native Hawaiian people due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to their history and cultural identity..

Table 12. Site IA003 Feature Dimensions.

Site Number	Survey Area	Feature No.	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Height (m)	Orientation
IA003	Kamokalā Ridge	1	Lithic scatter and midden	[redacted]	[redacted]	[redacted]		[redacted]
IA003	Kamokalā Ridge	2	Retaining Wall	X	[redacted]	[redacted]	[redacted]	[redacted]
IA003	Kamokalā Ridge	3	Rockshelter with Retaining Wall	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
IA003	Kamokalā Ridge	4	Rockshelter with Retaining Wall	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

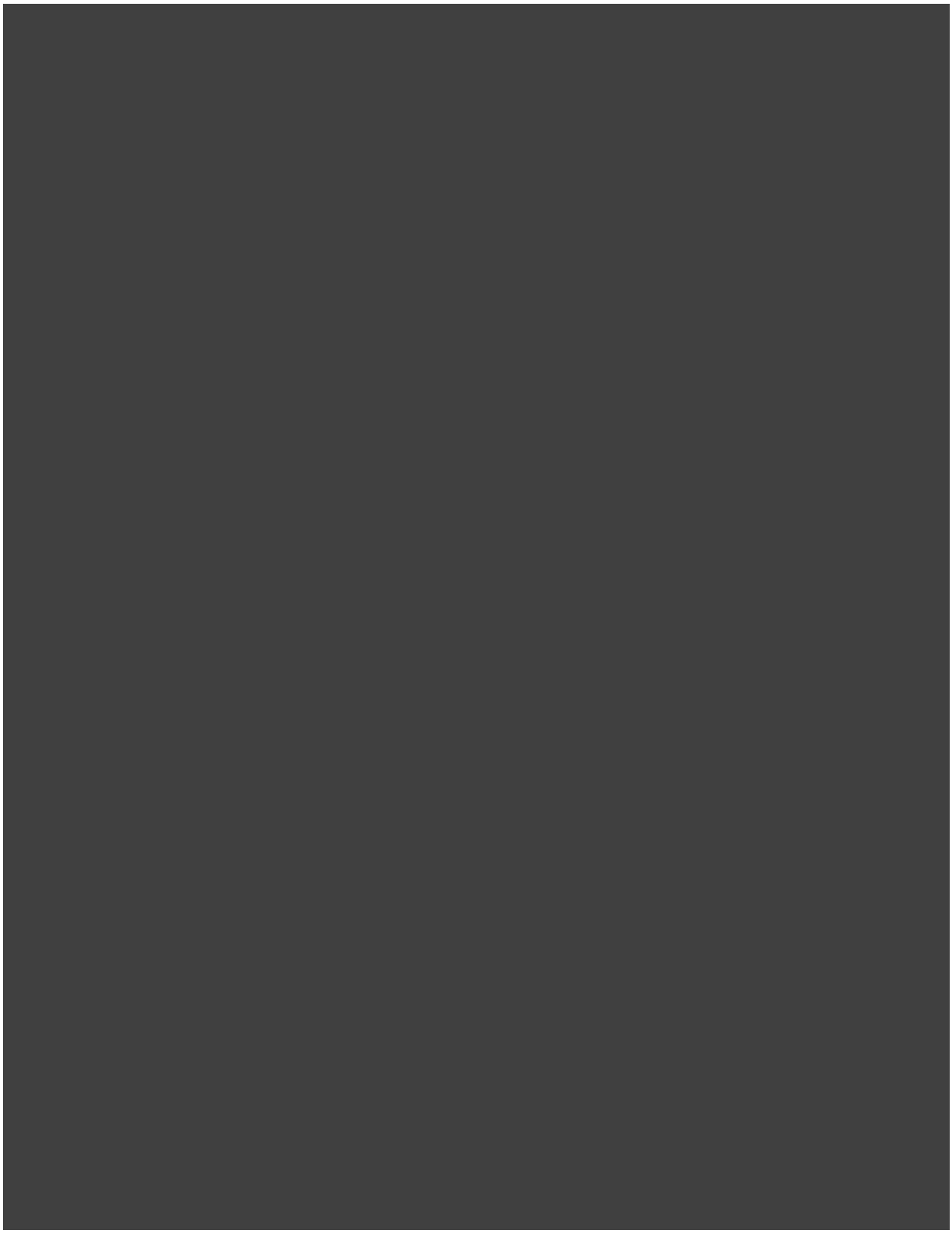


Figure 35. Location of sites IA003 and IA004 and surface features at Kamokalā Ridge.



Photo 89. Feature 2 at Site IA003: Retaining wall below floor of larger rockshelter.

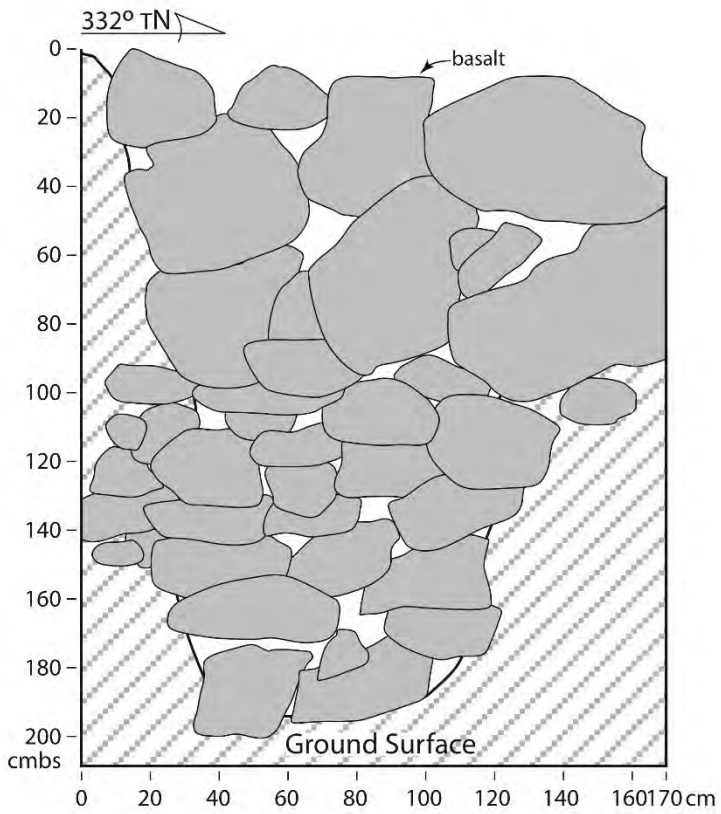


Figure 36. Profile of Feature 2 at Site IA003: Retaining wall; west wall.



Photo 90. View of Feature 3 at Site IA003: smaller rockshelter situated to the north of larger overhang; view to the north-northeast.



Photo 91. Feature 4 at Site IA003: overview of southern end of larger rockshelter; view to the east.



Photo 92. Feature 4 at Site IA003: view of larger rockshelter situated above Cave 10; view to the east.

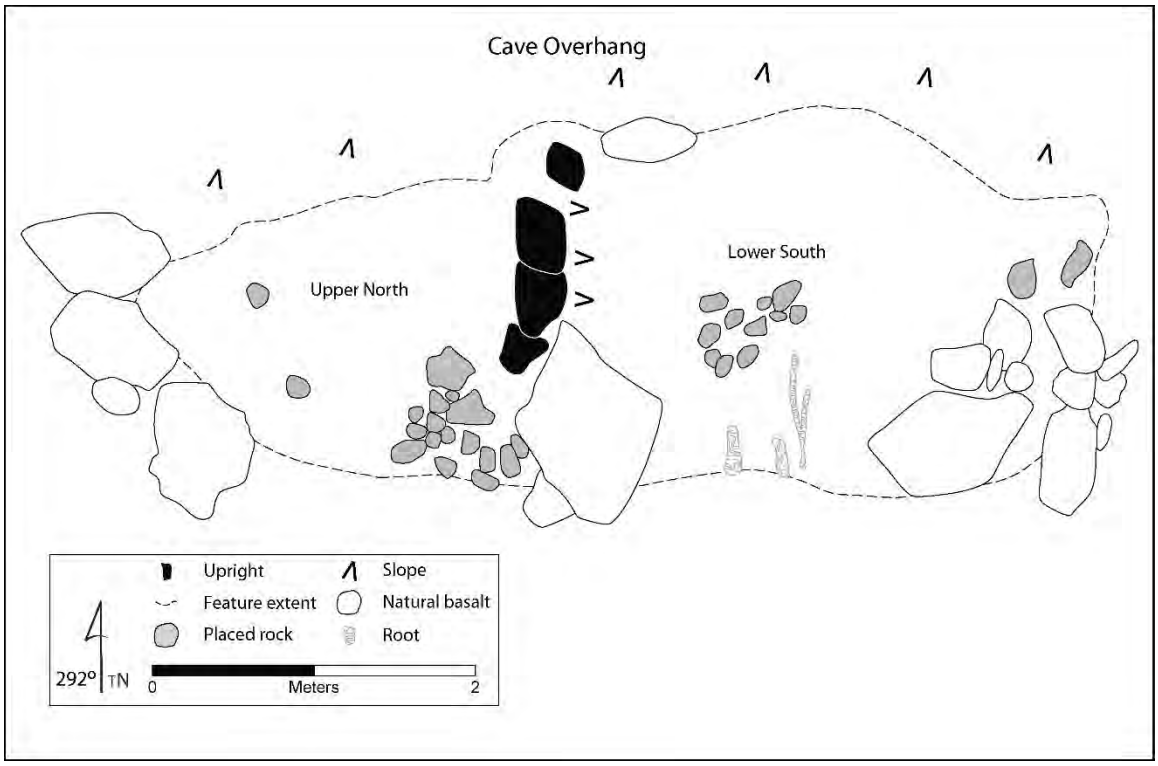


Figure 37. Feature 4 at Site IA003: plan view of larger rockshelter.



Photo 93. Feature 4 at Site IA003: view of larger rockshelter after clearing; view to the east.



Photo 94. Hematite net sinker found on surface (Cat. No. JMG001).



Photo 95. Marine gastropod shell (Morula sp.) found on surface.



Photo 96. Metal can found on surface.

Site IA004: Stone Platform and Modified Outcrop

Site IA004 is located [redacted] includes two features. Feature 1 is a roughly rectangular platform exhibiting traditional Hawaiian construction (Photo 100 to Photo 102; Figure 39; Table 14). The area northeast of the feature has an approximately 20-degree slope covered in grasses, *kiawe*, and fallen rocks. To the southwest, the shelf extends an additional 2.5 m before it becomes a vertical drop-off.

The platform (Feature 1) is stacked roughly 1–4 courses in height along the southwestern edge, averaging 80–130 cm above the ground's surface, while the northeast edge appears to have been built into the side of the flatter shelf. The platform measures 21 m in length and extends in a southeast/northwest orientation. The surface of the platform is relatively flat, but there is evidence of erosion and additional rock fall from the ridge above. The site may have been used for short-term habitation, perhaps in association with the rockshelter (Site IA003) below, but its function is not entirely clear. Feature 2 is a modified rock outcrop about 25 m north of Feature 1 (Photo 103).

Site IA004 is eligible for inclusion in the NRHP under Criterion D and HRS Chapter 6E Criteria d and e. This site, along with others recorded in the Kamokalā survey area (IA001-IA003, IA006-IA008, and IA010), are related to agricultural activities in the upland areas of Kaua'i [redacted] The historic context for these sites is the development of agricultural practices in upland Kaua'i and the Hawaiian Islands more generally. In recent years, the trajectory of expansion of agriculture into the interior island landscapes of Hawai'i has received considerable research attention (see Morrison et al. 2022; Quintus et al. 2023), however very little research on the topic has been conducted on the island of Kaua'i.

This site is also recommended as significant under HRS Chapter 6E Criteria d and e. Criterion d is recommended because it offers an important area for comparison with studies that have been conducted on O‘ahu and Hawai‘i Island. These types of studies offer the potential to answer questions about the trajectory of use of Hawai‘i’s interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. In addition to Criterion d, this site is also recommended significant under Criterion e because it offers important value to the native Hawaiian people due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to their history and cultural identity.

Table 13. Site IA004 Feature Dimensions.

Site Number	Survey Area	Feature No.	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Depth (m)	Orientation
IA004	Kamokalā Ridge	1	Stone Platform	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
IA004	Kamokalā Ridge	2	Modified Rock Outcrop	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]



Photo 97. Feature 1 at Site IA004: overview after vegetation clearing; view to the east.



Photo 98. West end of Feature 1 at Site IA004: overview; view to the north-northwest.



Photo 99. Feature 1 at Site IA004: overview; view to the east.

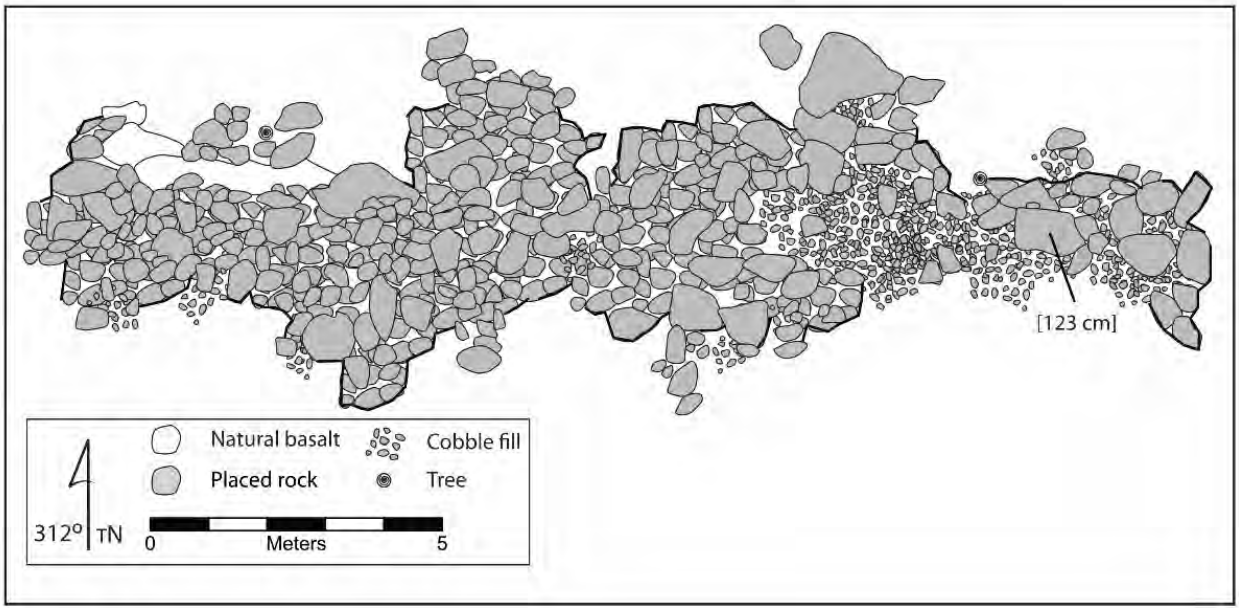


Figure 38. Feature 1 at Site IA004: plan view map of stone platform.



Photo 100. Feature 2 at Site IA004: modified rock outcrop; view to the north.

Site IA005: Historically Modified Rock Wall

Site IA005 consists of two features—a J-shaped rock wall 16 m in length, 1.5 m average in width, and between 0.7 and 1.2 m in height (Table 15; Figure 40) and a concrete culvert that was constructed after modifying the original rock wall. The wall is similar to a traditional Hawaiian structure; however, it has been modified with a concrete and metal culvert system visible along two different sections. One of these sections (Photo 104) would have required the removal and replacement of basalt boulders to construct the concrete thruway while the other modified section was built along the adjacent side, possibly without requiring modification of the original structure (Photo 105 to Photo 106). Both of these historic additions, possibly related to plantation era activity, would have allowed water from a nearby stream to be diverted into and around the structure and possibly elsewhere. The site is located north of the stream, which was active at the time of recording, though no water movement through the feature was observed.

Site IA009 is significant under NRHP Criterion D and HRS Chapter 6E Criteria d and e. This site is related to agricultural activities in the upland areas of Kauaʻi and therefore have the potential to provide information important for research within the theme of agricultural practices during the Hawaiian pre-Contact or early post-Contact Period. The historic context for these sites is the development of agricultural practices in upland Kauaʻi and the Hawaiian Islands more generally. In recent years, the trajectory of expansion of agriculture into the interior island landscapes of Hawaiʻi has received considerable research attention (see Morrison et al. 2022; Quintus et al. 2023), however very little research on the topic has been conducted on the island of Kauaʻi. While the site meets the significance criteria for the reasons presented above, the historic alterations which include the placement of two concrete culverts. These alterations have resulted in a loss of integrity of design, materials, and workmanship and therefore it is not recommended as eligible for listing on the NRHP or HRS Chapter 6E.

Table 14. Site IA005 Dimensions.

Site Number	Survey Area	Feature Number	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Depth (m)
IA005	Kamokalā Ridge	1	Rock Wall	X	16.0	1.5	1.2
IA005	Kamokalā Ridge	2	Concrete Culvert	X	3.5	1.0	1.0



Figure 39. Site IA005 showing feature locations.



Photo 101. Features 1 and 2 at Site IA005: modified rock wall with concrete culvert; view to the east.



Photo 102 Feature 1 at Site IA005: modified rock wall; view to the east.



Photo 103. Feature 2 at Site IA005: concrete and metal culvert extension; view to the northeast.

Site IA006: Retaining Wall Complex with Terraces

Site IA006 is an agricultural complex consisting of five features: [redacted] The walls appear to be of traditional Hawaiian construction and likely functioned for soil retention for dryland terrace farming.

[redacted]

Site IA006 is eligible for inclusion in the NRHP under Criterion D and HRS Chapter 6E Criteria d and e. This site, along with others recorded in the Kamokalā survey area (IA001-IA004, IA007-IA008, and IA010), are related to agricultural activities in the upland areas of Kaua'i [redacted]

[redacted] The historic context for these sites is the development of agricultural practices in upland Kaua‘i and the Hawaiian Islands more generally. In recent years, the trajectory of expansion of agriculture into the interior island landscapes of Hawai‘i has received considerable research attention (see Morrison et al. 2022; Quintus et al. 2023), however very little research on the topic has been conducted on the island of Kaua‘i.

This site is also recommended as significant under HRS Chapter 6E Criteria d and e. Criterion d is recommended because it offers an important area for comparison with studies that have been conducted on O‘ahu and Hawai‘i Island. These types of studies offer the potential to answer questions about the trajectory of use of Hawai‘i’s interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. In addition to Criterion d, this site is also recommended significant under Criterion e because it offers important value to the native Hawaiian people due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to their history and cultural identity.

Table 15. Site IA006 Rock Wall Feature Dimensions.

Site Number	Survey Area	Feature No.	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Depth (m)	Orientation
IA006	Kamokalā Ridge	1	Retaining Wall	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
IA006	Kamokalā Ridge	2	Retaining Wall	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
IA006	Kamokalā Ridge	3	Upper Terrace	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
IA006	Kamokalā Ridge	4	Middle Terrace	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
IA006	Kamokalā Ridge	5	Lower Terrace	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

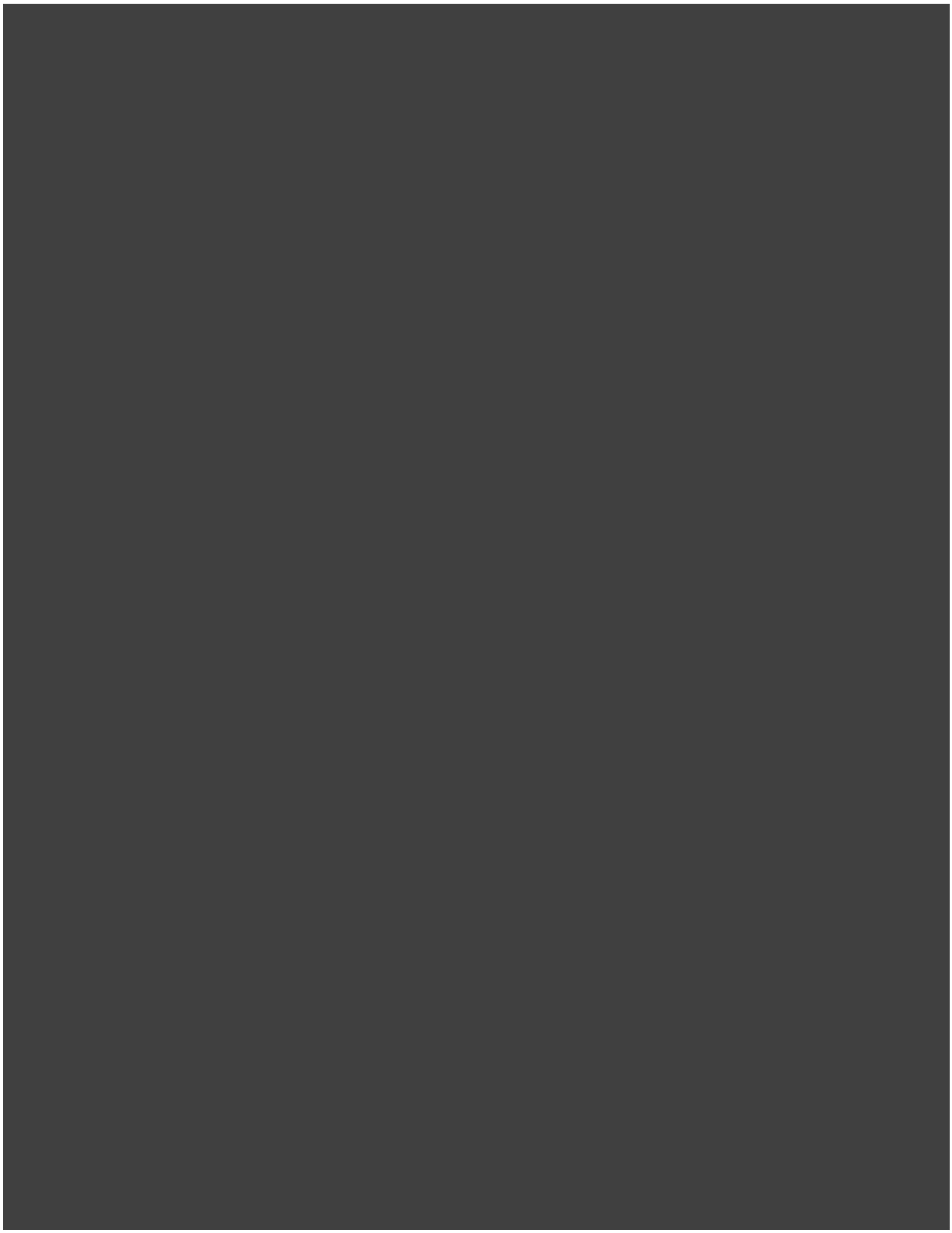


Figure 40. Site IA006 showing site boundary and feature locations.



Photo 104. Feature 1 at Site IA006: retaining wall; view to the east-northeast.



Photo 105. Feature 1 at Site IA006: retaining wall; view to the north.



Photo 106. Feature 2 at Site IA006: retaining wall; view to the north.

Site IA007: Basalt Quarry

Site IA007 is a basalt quarry [redacted]

Site IA007 is eligible for inclusion in the NRHP under Criterion D and HRS Chapter 6E Criteria d and e. This site, along with others recorded in the Kamokalā survey area (IA001-IA004, IA006, IA008, and IA010), are related to agricultural activities in the upland areas of Kaua'i [redacted]. The historic context for these sites is the development of agricultural practices in upland Kaua'i and the Hawaiian Islands more generally. In recent years, the trajectory of expansion of agriculture into the interior island landscapes of Hawai'i has received considerable research attention (see Morrison et al. 2022; Quintus et al. 2023), however very little research on the topic has been conducted on the island of Kaua'i.

This site is also recommended as significant under HRS Chapter 6E Criteria d and e. Criterion d is recommended because it offers an important area for comparison with studies that have been conducted on O'ahu and Hawai'i Island. These types of studies offer the potential to answer questions about the trajectory of use of Hawai'i's interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. In addition to Criterion d, this site is also recommended significant under Criterion e because it offers important value to

the native Hawaiian people due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to their history and cultural identity. .

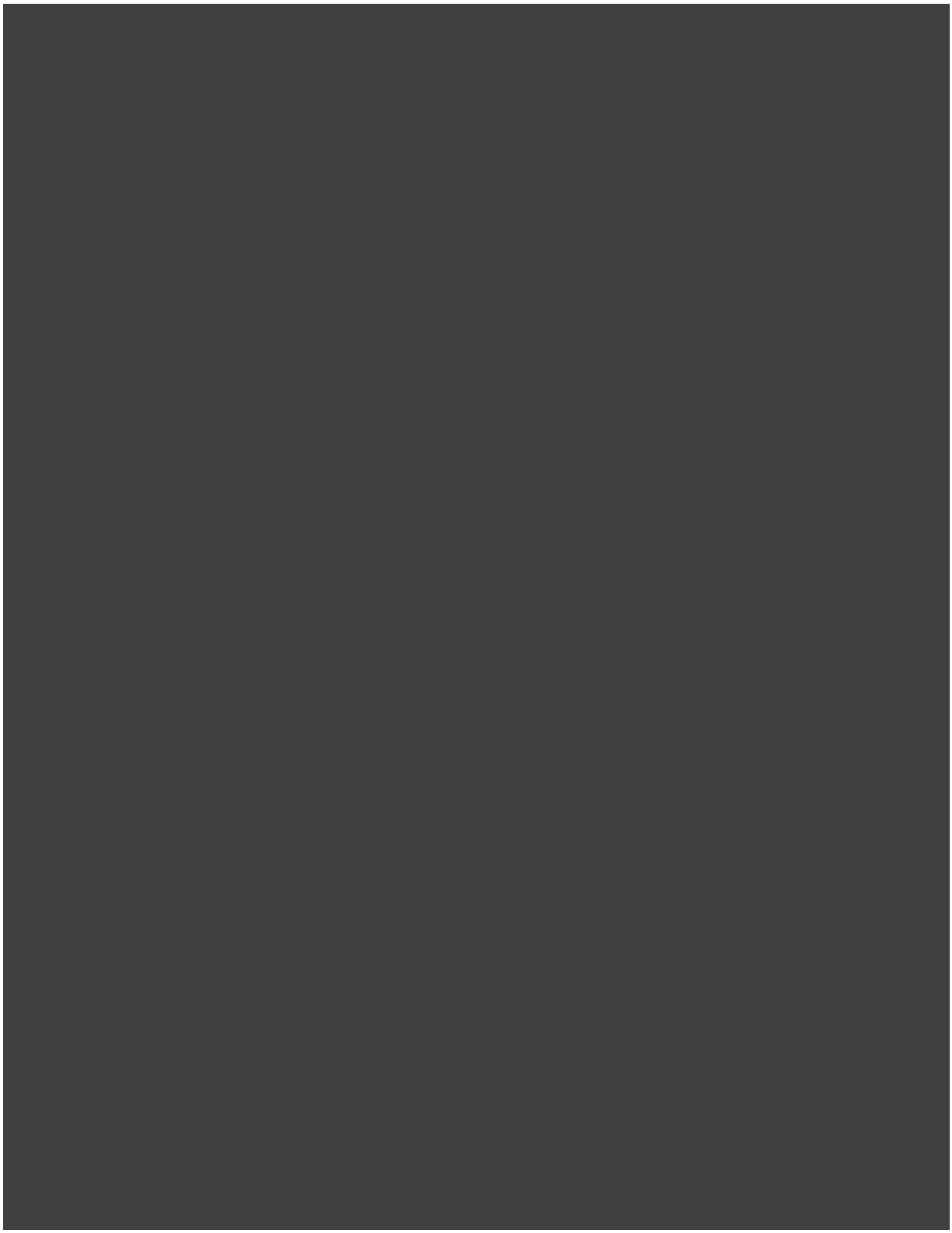


Figure 41. Map of Site IA007 location.



Photo 107. Feature 2 at Site IA007: basalt quarry; view to the east.



Photo 108. Feature 2 at Site IA007: basalt quarry.



Photo 109. Feature 2 at Site IA007: surface scatter of debitage at basalt quarry; view to the east.

Site IA008: Terrace Complex

Site IA008 consists of a terrace complex [redacted] Each feature is described below.

Site IA008 is eligible for inclusion in the NRHP under Criterion D and HRS Chapter 6E Criteria d and e. This site, along with others recorded in the Kamokalā survey area (IA001-IA004, IA006-IA007, and IA010), are related to agricultural activities in the upland areas of Kaua'i [redacted]. The historic context for these sites is the development of agricultural practices in upland Kaua'i and the Hawaiian Islands more generally. In recent years, the trajectory of expansion of agriculture into the interior island landscapes of Hawai'i has received considerable research attention (see Morrison et al. 2022; Quintus et al. 2023), however very little research on the topic has been conducted on the island of Kaua'i.

This site is also recommended as significant under HRS Chapter 6E Criteria d and e. Criterion d is recommended because it offers an important area for comparison with studies that have been conducted on O'ahu and Hawai'i Island. These types of studies offer the potential to answer questions about the trajectory of use of Hawai'i's interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. In addition to Criterion d, this site is also recommended significant under Criterion e because it offers important value to

the native Hawaiian people due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to their history and cultural identity.

Table 16. Site IA008 Feature Dimensions.

Site Number	Survey Area	Feature No.	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Depth (m)	Orientation
IA008	Kamokalā Ridge	1	Platform					
IA008	Kamokalā Ridge	2	Wall					
IA008	Kamokalā Ridge	3	Wall					
IA008	Kamokalā Ridge	4	Alignment					
IA008	Kamokalā Ridge	5	Alignment					
IA008	Kamokalā Ridge	6	Wall					
IA008	Kamokalā Ridge	7	Wall					
IA008	Kamokalā Ridge	8	Historic Corral					
IA008	Kamokalā Ridge	9	Alignment					
IA008	Kamokalā Ridge	10	Modified Outcrop					
IA008	Kamokalā Ridge	11	Rock Wall					

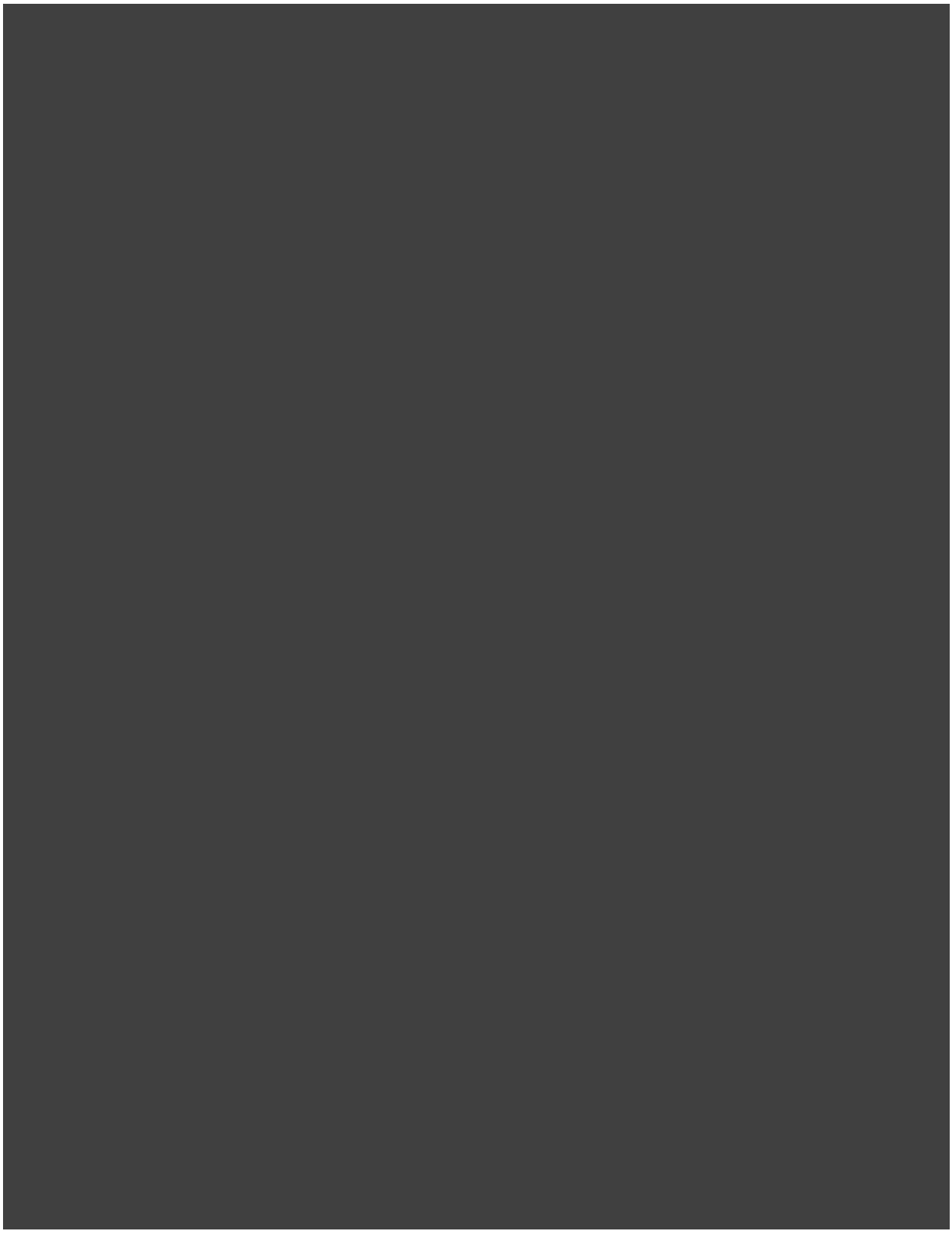


Figure 42. Site IA008 showing site boundary and features.

Feature 1 (Photo 113 and Photo 114: Figure 45 and Figure 46) is a stone platform [redacted]



Photo 110. Feature 1 at Site IA008: stone platform; view to the east.



Photo 111. Feature 1 at Site IA008: stone platform; view to the west.

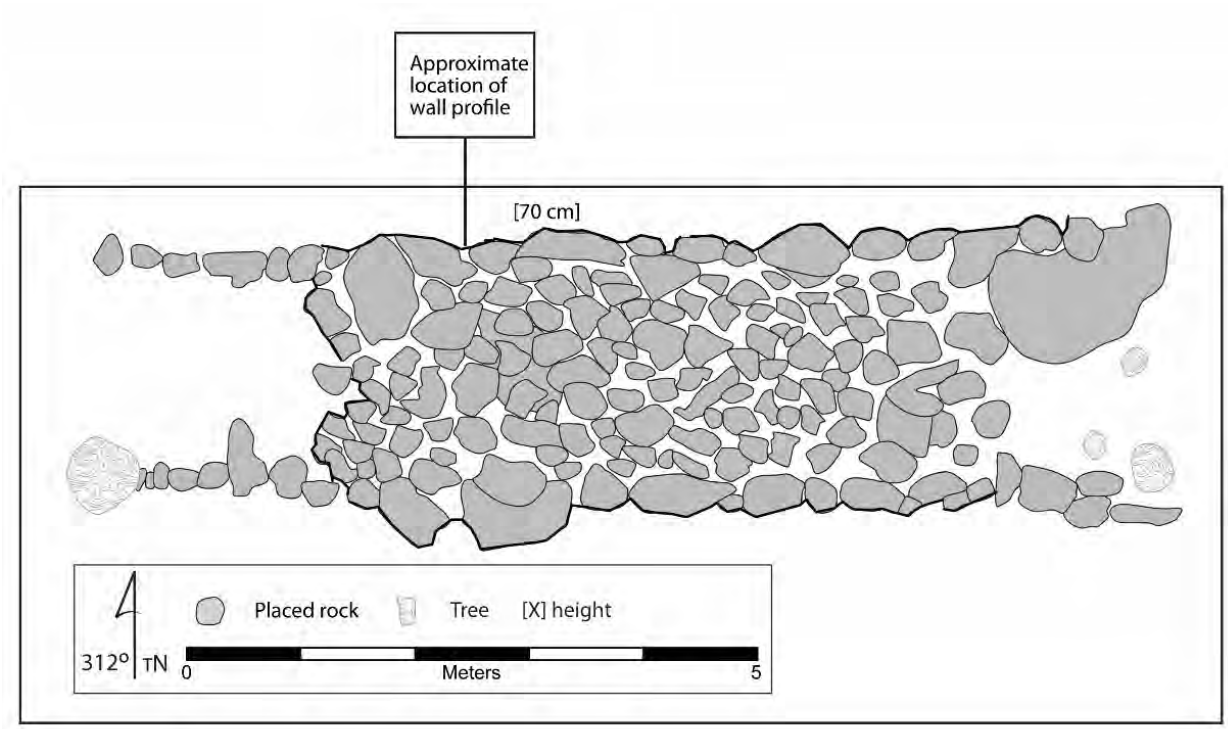


Figure 43. Feature 1 at Site IA008: plan view map of stone platform.

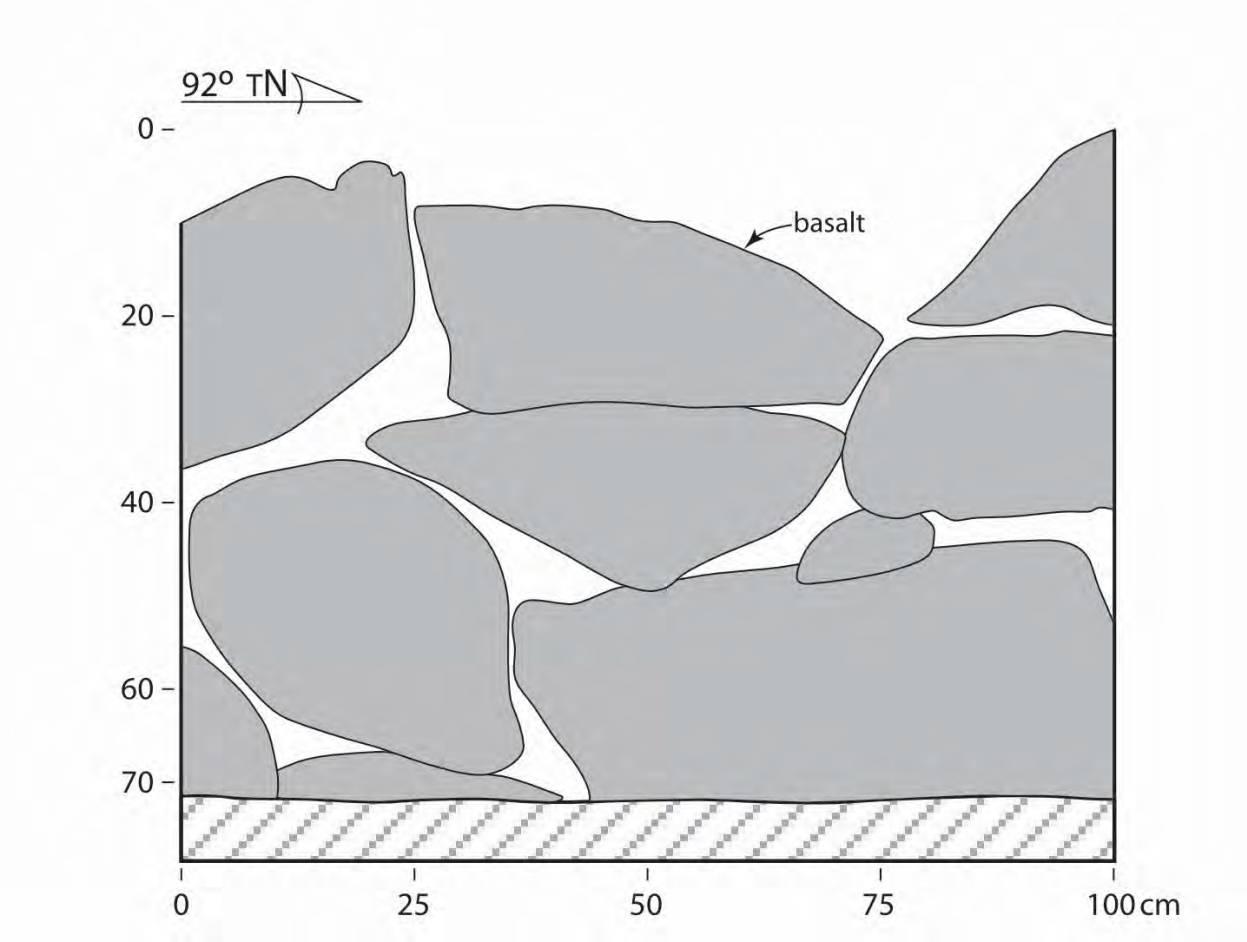


Figure 44. Feature 1 at Site IA008: profile drawing of stone platform; north wall.

Feature 2 (Photo 115) is a rock wall [redacted].



Photo 112. Feature 2 at Site IA008: rock wall; view to the north.

Feature 3 (Photo 116 and Photo 117) is a rock wall [redacted]



Photo 113. Feature 3 at Site IA008: rock wall; view to the south.



Photo 114. Feature 3 at Site IA008: rock wall; view to the west.

Feature 4 (Photo 118) is a rock alignment [redacted]



Photo 115. Feature 4 at Site IA008: rock alignment; view to the north.

Feature 5 (Photo 119 to Photo 121) is a rock alignment [redacted]



Photo 116. Feature 5 at Site IA008: rock alignment; view to the south.



Photo 117. Feature 5 at Site IA008: rock alignment; view to the west.



Photo 118. Feature 5 at Site IA008: termination of rock alignment at western end; view to the east/northeast.

Feature 6 is a rock wall [redacted]



Photo 119. Feature 6 at Site IA008: rock wall; view to the east.



Photo 120. Feature 6 at Site IA008: rock wall; view to the south.

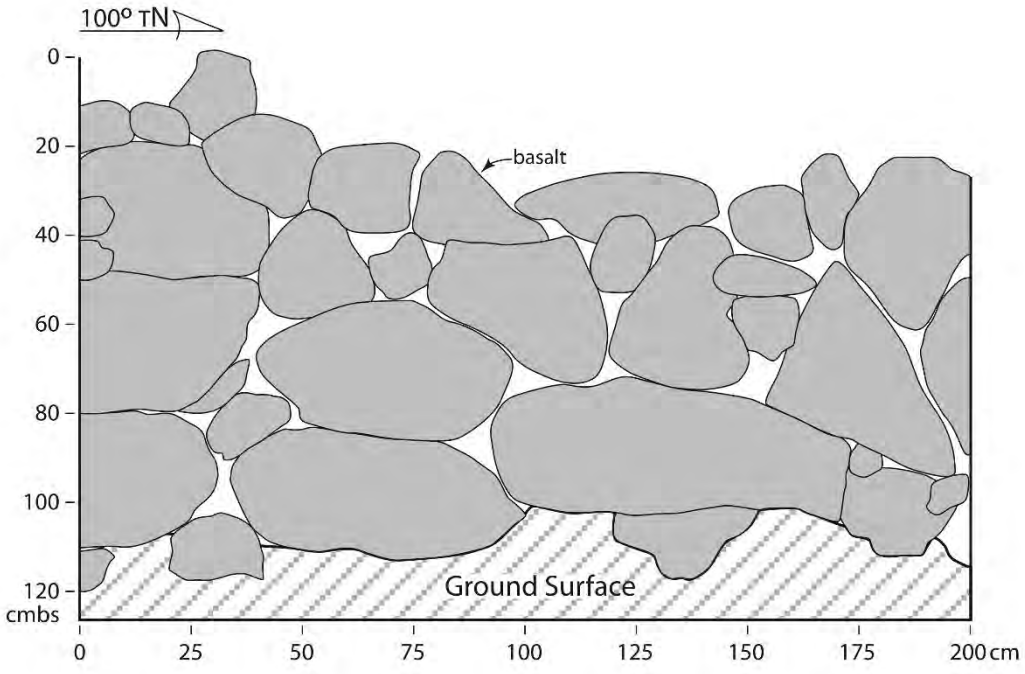


Figure 45. Feature 6 at Site IA008: profile drawing of rock wall.

Feature 7 is a rock wall (Photo 124) [redacted].



Photo 121. Feature 7 at Site IA008: rock wall; view to the north.

Feature 8 is an historic era corral [redacted]

The main entrance is marked by two concrete posts that are still standing (Photo 125 to Photo 127). The corral then widens into a triangular shape bordered by a series of milled wooden posts that support metal (steel) and wooden planking sections along with barbed or high tensile (New Zealand) fencing used to also support posts or wound around trees. Sizes of planking differs across various sections, from 12×1" to smaller and thicker planks or beams, likely the result of repairing and rebuilding section. On the opposite (eastern) side of the corral is another entryway with a narrow enclosure that, when opened, would have extended access to grazing for hundreds of meters eastward, though there are no remnants of gates apart from the aforementioned posts and possible collapsed wooden planking at the entrance. Barbed wire and other fencing stretching parallel to the stream would have ensured that livestock were contained.



Photo 122.. Feature 8 at Site IA008: main entrance to corral.



Photo 123. Feature 8 at Site IA008: paneled fence; view to north-northeast.



Photo 124. Feature 8 at Site IA008: view to the southeast.

Feature 9 is a rock alignment ([redacted].



Photo 125. Feature 9 at Site IA008: rock alignment within a terrace formation; view to the south-southeast.



Photo 126. Feature 9 at Site IA008: rock alignment within constructed terrace formation; view to the south-southeast.

Feature 10 (Photo 130 and Photo 131) is a roughly V-shaped modified natural rock outcrop [redacted]



Photo 127. Feature 10 at Site IA008: modified rock outcrop .



Photo 128. Feature 10 at Site IA008: modified rock outcrop.

Feature 11 (Photo 132 and Photo 133) is a roughly U-shaped rock wall



Photo 129. Feature 11 at Site IA008: rock wall; view to the north.



Photo 130. Feature 11 at Site IA008: rock wall; view to the east.

[redacted] The site is best described as multicomponent agricultural complex, with a pre-Contact/early Contact component of terraces and a historic component of the corral

Site IA009: Historic Refuse Area

Site IA009 (Figure 48; Photo 134 to Photo 139) is an approximately 180 m by 70 m area within the northwestern portion of the survey area that comprises a historic dumpsite. This site primarily consists of historic and modern refuse, particularly automobiles, appliances, metal pipes, and other types of metal and glass debris. A selection of photographs below provides a short summary of what was found. While most of these are not culturally or historically significant, the refuse area may be associated with a former plantation camp. A WWII era canteen was also found and collected (Photo 140; Cat. #EVZ001).

Site IA009 is not recommended as eligible for inclusion in the NRHP. The site is not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion A), nor is it associated with a person of historical significance or have that association with the activities, events, etc., for which the person is important (Criterion B), nor does it embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C). Furthermore, the site does not have the potential to yield important information about history or prehistory (Criterion D).

The site is also recommended as not significant under HRS Chapter 6E. The site is not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values (Criterion c). Furthermore, the site has not yielded nor is likely to yield information important for research on prehistory or history (Criterion d), nor does the site offer important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to the group's history and cultural identity (Criterion e).

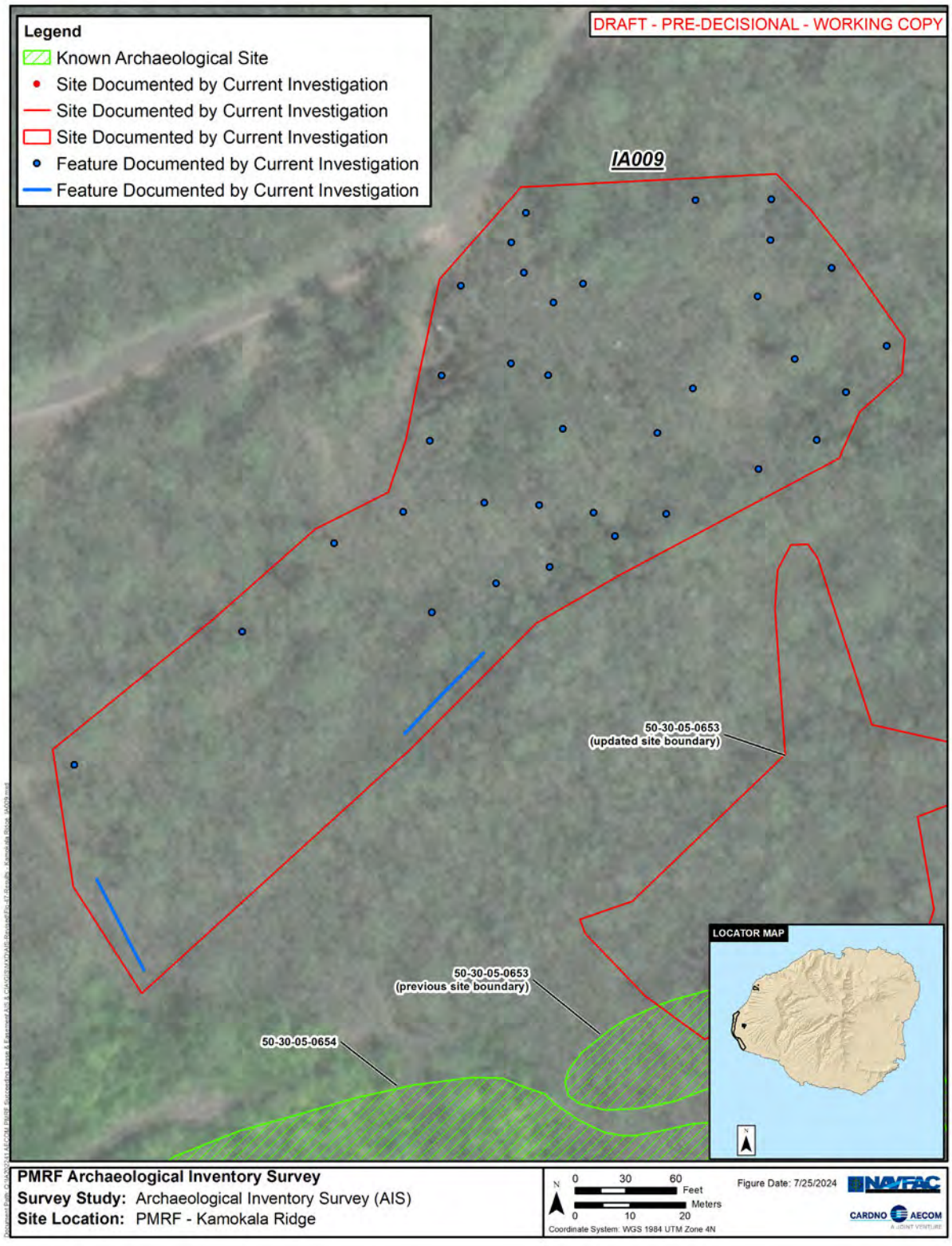


Figure 46. Site IA009 showing site boundary and feature locations.



Photo 131. Feature 1 at Site IA009: abandoned vehicles and other metal debris; view to the north.



Photo 132. Feature 1 at Site IA009: abandoned vehicle.



Photo 133. Feature 1 at Site IA009: collection of glass and ceramic debris.



Photo 134. Site IA009: abandoned vehicle showing engine block; view to the northeast.



Photo 135. Site IA009: Metal debris, tires, and other refuse; view to the south.



Photo 136. Site IA009: Large metal pipes; view to the northwest.



Photo 137. Site IA009: Military canteen found on surface (Cat. No. EVZ001).

Site IA010: Mound

Site IA010 is a single basalt rock mound [redacted]

Site IA010 is eligible for inclusion in the NRHP under Criterion D and HRS Chapter 6E Criteria d and e. This site, along with others recorded in the Kamokalā survey area (IA001-IA004, and IA006-IA008), are related to agricultural activities in the upland areas of Kaua'i [redacted] The historic context for these sites is the development of agricultural practices in upland Kaua'i and the Hawaiian Islands more generally. In recent years, the trajectory of expansion of agriculture into the interior island landscapes of Hawai'i has received considerable research attention (see Morrison et al. 2022; Quintus et al. 2023); however, very little research on the topic has been conducted on the island of Kaua'i.

This site is also recommended as significant under HRS Chapter 6E Criteria d and e. Criterion d is recommended because it offers an important area for comparison with studies that have been conducted on O'ahu and Hawai'i Island. These types of studies offer the potential to answer questions about the trajectory of use of Hawai'i's interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. In addition to Criterion d, this site is also recommended significant under Criterion e because it offers important value to the native Hawaiian people due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts--these associations being important to their history and cultural identity.

Table 17. Site IA010 Site Dimensions.

Site Number	Survey Area	Morphology (Feature Type)	Surface	Maximum Length (m)	Maximum Width (m)	Depth (m)	Orientation
IA010	Kamokalā Ridge	Mound	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]



Photo 138. Site IA010: rock mound.

Pedestrian Survey Summary

The Mākaha Ridge Road survey area was a narrow ca. 4 mile (6.4 km) stretch of road with generally thick vegetation and steep topography which limited ground visibility and access. Pedestrian survey did not reveal cultural resources in this area.

At Main Base (southern portion), identification of cultural resources was limited to a single previously recorded site (50-30-05-2000)—a WWII era bathhouse that consisted of several concrete features. Though the site had already been recorded (see Wulzen et al. 1997), the clearing of the largest concrete pad revealed inscriptions from more than 20 U.S. servicemen that had not been previously reported. Research into the identities of these individuals indicated they were part of the 40th Infantry Division that came to Hawaii in September 1942 prior to being deployed to the Solomon Islands and the Philippines and who later engaged in active combat with the Japanese in the Pacific Theater. This discovery

adds importance to what would otherwise be a series of relatively common concrete structures and provides new information on activities that took place on the PMRF property during World War II. The exact date for the pouring of the concrete is also know.

The Main Base (northern portion) survey area overlapped with four known traditional [redacted] stone alignments and walls on the inland side of site 50-30-01-0009 along with WWII (and after) trash deposits (50-30-01-2042, 50-30-01-2049). No cultural resources were found near the Nohili Dune site in the small area that pedestrian survey overlapped with it and the site extension was not found. Only one of the two historic trash deposits recorded were re-identified during survey. However, two new historic sites were recorded, including remnants of a wooden framed structure used in association [redacted] and a refuse area dominated by bundles of barbed wire and other debris (IA012).

Of the four survey areas included in the pedestrian survey, Kamokalā Ridge contained the highest number of archaeological sites. Three previously known sites were revisited and documented, including 50-30-05-0652, 50-30-05-0653, and 50-30-05-0658. In addition, ten new sites were recorded (IA001-IA010) in several different sections of the survey area. Of these sites, the three most prominent were: 1) [redacted] (IA002); 2) [redacted] (IA003) and [redacted] (IA004) found in the central part of the survey area; and 3) [redacted] (IA008).

These four sites across three different sections of Kamokalā Ridge appear to be part of an integrated network of temporary/semi-permanent habitations coupled with stonework infrastructure to facilitate water management for agricultural activities. These are clear testaments to the development of food production systems in a part of Kaua'i that to date have received little research attention. Given the density and extensiveness of these sites and features at Kamokalā Ridge—coupled with the paucity of similar cultural resources in the area—ten 1 by 1 m excavation units were placed in proximity to sites IA003, IA004, and IA008. The overall goal was to try and recover short-lived materials for dating and cultural material that might prove useful for understanding each site's use and the duration of various activities to aid NRHP eligibility and HRS Chapter 6E significance recommendations. The results of these subsurface investigations are discussed in the following section.

SUBSURFACE INVESTIGATIONS

This section presents the results of subsurface testing at three sites within the Kamokalā Ridge survey area. Based on information collected during pedestrian survey, ten 1 by 1 m units were excavated. [redacted]

Overall, eight of the ten units were positive for cultural material. One unit (TU 8) contained only charcoal but no artifacts. Below is a summary table (Table 19) of the test units and a description of what was recorded in each. Detailed laboratory analysis of materials recovered from the excavation units is presented later in the chapter.

Three charcoal (*Euphorbia* sp.) samples were submitted for radiocarbon dating to the University of Georgia Center for Applied Isotope Studies from TUs 1, 7, and 10. The sample details are presented below in Table 20.

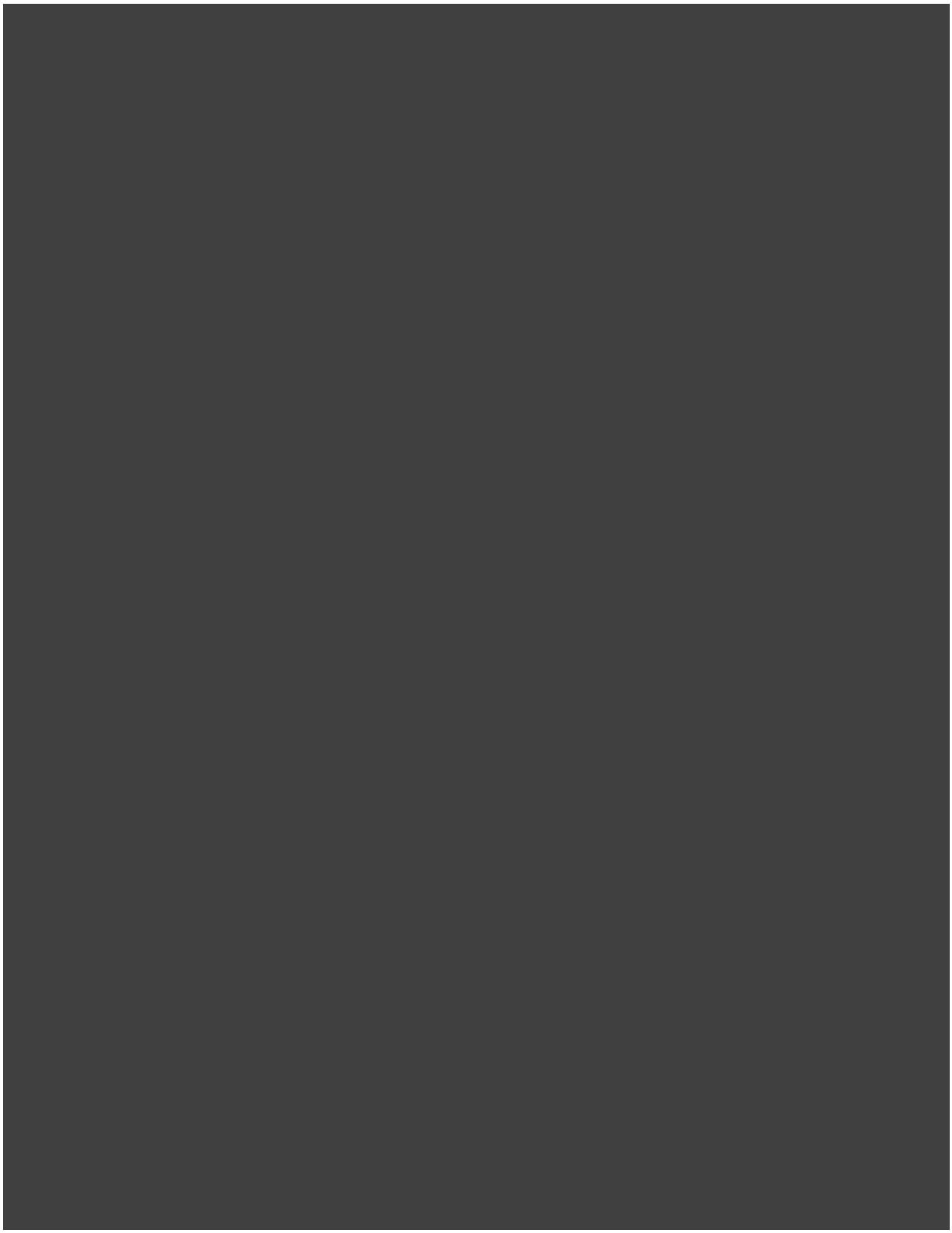


Figure 47. Locations of Test Units 1 through 10 at sites IA003, IA004, and IA008.

Table 18. Summary of Test Units at Sites IA003, IA004, and IA008 at Kamokalā Ridge.

Test Unit/Site	Depth	Stratigraphy	Archaeological Material	Comments
1/IA003			positive	
2/IA003			positive	
3/IA004			positive	
4/IA003			positive	
5/IA008			positive	
6/IA008			positive	
7/IA008			positive	
8/IA008			negative	
9/IA008			negative	
10/IA008			positive	

Table 19. Summary of Radiocarbon Dates and Calibrated Results.

UGAMS#	Sample ID	TU	Layer	cmbd	Material	Species	δ13C, ‰	14C age, years BP	±	cal. BP (2σ)	Prob. Dist. %
69177	IA202241.JMG023	[redacted]	[redacted]	[redacted]	charcoal	*Euphorbia* sp.	-11.03	410	25	332–513	0.100
69993	IA202241.JMG019.22	[redacted]	[redacted]	[redacted]	gourd rind	*cf. Lagenaria* sp.	-25.25	320	20	314-459	.960
69178	IA202241.GOF030	[redacted]	[redacted]	[redacted]	charcoal	*Euphorbia* sp.	-10.75	170	25	0–288	0.100
69179	IA202241.GOF018	[redacted]	[redacted]	[redacted]	charcoal	*Euphorbia* sp.	-10.71	250	25	152–425	0.980

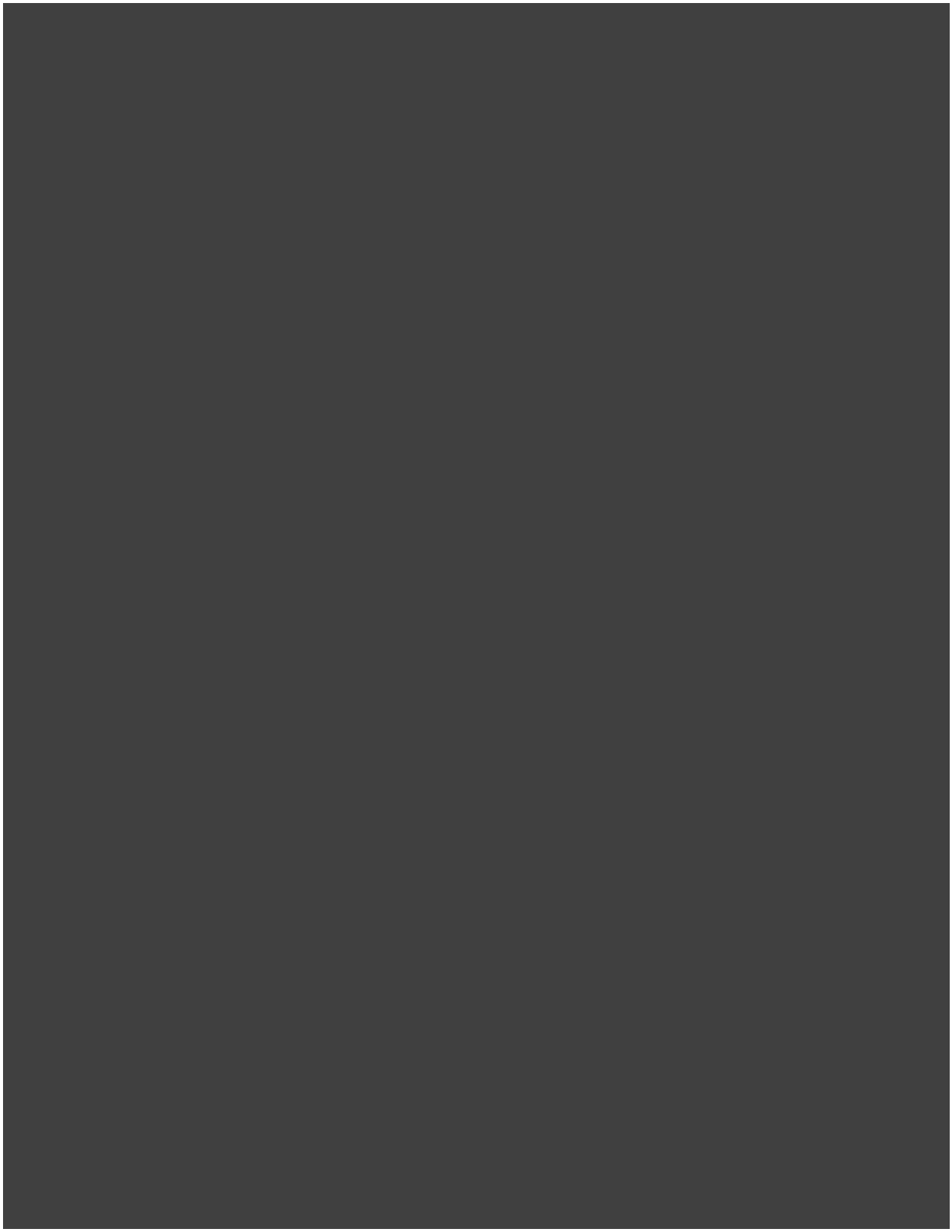


Figure 48. Locations of Sites IA003 and IA004, identified features, and Test Units 1 through 4.

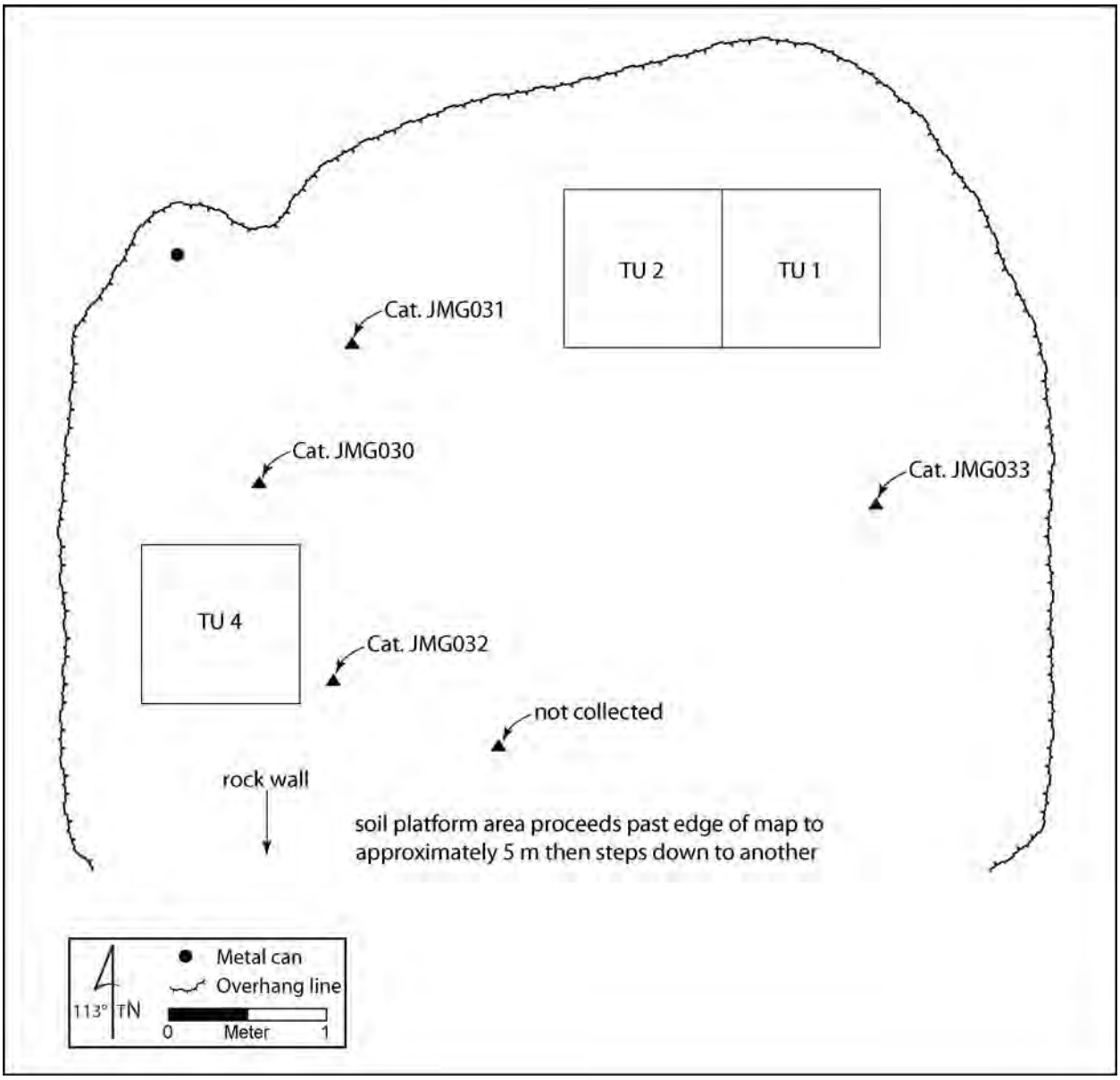


Figure 49. Locations of Test Units 1, 2, and 4 [redacted]

IA003

Three units (TU1, TU2, and TU4) were excavated within IA003 [redacted] to determine the depth of deposits and extent of site constituents. These are described below.

TU 1

TU 1 was a 1 by 1 m unit excavated [redacted]

Subsurface Feature 1

Subsurface Feature 1 was [redacted]

Table 20. Soil Descriptions for Test Unit 1.

Layer	Typical Depth Range (cmbs)	Descriptions	Interpretation
I	0–44	Dark reddish brown (5YR 3/3) silt loam; dry; structureless; non-plastic; few to many roots; few pebbles; smooth boundary; [redacted]	Humic soil (A horizon) mixed with aeolian sediment; [redacted]
II	44–54	Dark reddish brown (5YR 2.5/2) silt loam; dry; structureless; non-plastic; few to no roots; few pebbles; smooth boundary; [redacted]	Mix of A and B horizons; [redacted]



Photo 139. Placement of TU 1 within larger rockshelter, Site IA003; view to the east.



Photo 140. TU 1 base of excavation at 54 cm bs; view to the southeast at Site IA003.



Photo 141. TU 1 west wall profile at Site IA003.

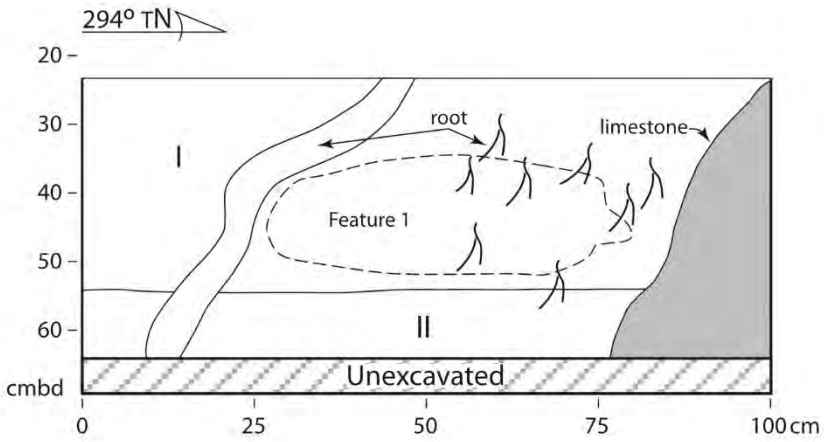


Figure 50. TU 1 west wall profile (note dashed line indicating [redacted] [Subsurface Feature 1]) at Site IA003. Note: datum was placed at 10 centimeters above the ground surface.

Table 21. Artifacts and Manuports Recovered from TU 1 (Counts) at Site IA003.

Material	Layer I	Layer I/II	Feature 1	Total
Traditional Manuport and Artifact				
Traditional Manuport and Artifact Total				

Table 22. Vertebrate Remains Recovered from TU 1 (NISP).

Taxon	Layer I	Layer I/II	Total
Bird			
Fish			
Mammal			
Vertebrate			
Traditional Manuport and Artifact Total			

Table 23. Invertebrate and Macrobotanical Remains Recovered from TU 1 (Weight, g) at Site IA003.

Taxon	Layer I	Layer I/II	Feature 1	Total
Marine Invertebrate Remains				
Marine Invertebrate Remains Total				
Terrestrial Invertebrate Remains				
Terrestrial Invertebrate Remains Total				
Macrobotanical Remains				
Macrobotanical Remains Total	**87.89**	**4.75**	**63.8**	**63.1**

TU 2

TU 2 was a 1 by 1 m unit [redacted] at Site IA003. The unit was excavated to a depth of 49 cmbs before terminating at bedrock. Two stratigraphic layers were recorded (Layers I and II) (Table 25). Similar to TU 1, the soil was a fine-grained silt loam that was loose and intermixed with smaller rocks, creating uneven walls with low integrity. A single subsurface pit feature, Subsurface Feature 2, was documented. [redacted]

Subsurface Feature 2

Subsurface Feature 2 [redacted]

Table 24. Soil Descriptions for Test Unit 2 at Site IA003.

Layer	Typical Depth Range (cm bs)	Descriptions	Interpretation
I	0–20	Dark reddish brown (5YR 3/2) silt loam; dry; structureless; non-plastic; few to many roots; few pebbles; smooth boundary; [redacted]	Humic soil (A horizon) mixed with aeolian sediment; [redacted]
II	20–39	Dark reddish brown (5YR 3/3) silt clay loam; dry; structureless; non-plastic; few to no roots; few pebbles; smooth boundary; [redacted]	Mix of A and B horizons; [redacted]



Photo 142. TU 2 base of excavation at 39 cm bs; view to the northwest at Site IA003.



Photo 143. TU 2 north wall profile at Site IA003; note remnants of Subsurface Feature 2 in the northeast wall on the right.

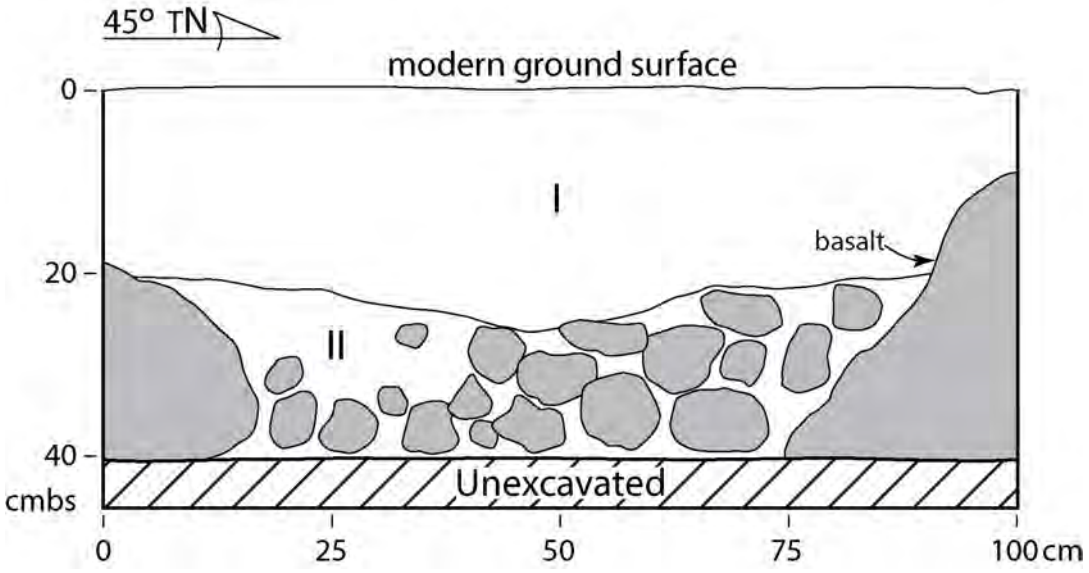


Figure 51. TU 2 northwest wall profile at Site IA003. Note: subsurface Feature 2 was not present in this wall.

Table 25. Artifacts and Manuports Recovered from TU 2 (Counts) at Site IA003.

Material	Layer I	Feature 2	Total
Traditional Manuport and Artifact			
Traditional Manuport and Artifact Total			

Table 26. Invertebrate and Macrobotanical Remains Recovered from TU 2 (Weight, g) at Site IA003.

Taxon	Layer I	Feature 2	Total
Marine Invertebrate Remains			

Taxon	Layer I	Feature 2	Total
[redacted]			
Marine Invertebrate Remains Total	[redacted]	[redacted]	[redacted]
Terrestrial Invertebrate Remains			
[redacted]			
Terrestrial Invertebrate Remains Total	**0.23**	-	**0.23**
Macrobotanical Remains			
[redacted]			
Macrobotanical Remains Total	[redacted]	[redacted]	[redacted]

TU 4

TU 4 was a 1 by 1 m unit excavated [redacted] at Site IA003. The unit was excavated to a depth of 20 cmbs before terminating at bedrock. Two stratigraphic layers were recorded (Layers I and II) (Table 28). [redacted]

Table 27. Soil Descriptions for Test Unit 4 at Site IA003.

Layer	Typical Depth Range (cm bs)	Descriptions	Interpretation
I	05–45	Very dark brown (10YR 2.5/1) silt clay loam; moist; well-formed structure; moderately-plastic; moderate roots; some pebbles; wavy boundary; [redacted]	Humic (A horizon) soil mixed with aeolian sediment; [redacted]

Layer	Typical Depth Range (cm bs)	Descriptions	Interpretation
II	45–55	Very dark gray (10YR 3/1) clay; moist; well-formed structure; plastic; few to no roots; some pebbles; wavy boundary; [redacted]	Mix of A and B horizons; [redacted]



Photo 144. TU 4 base of excavation at 35 cm bs at Site IA003.



Photo 145. TU 4 east wall profile at Site IA003.

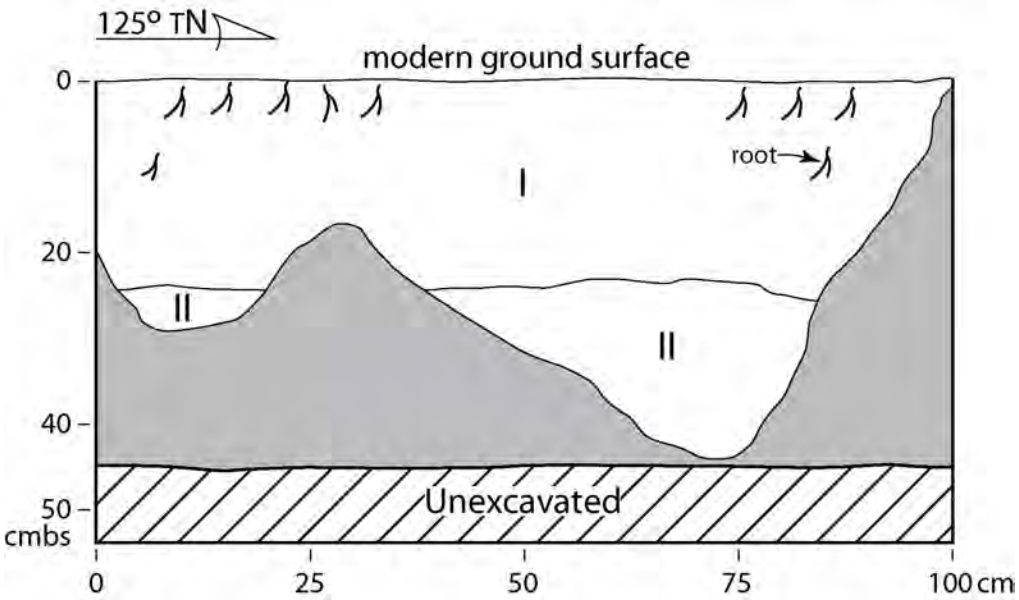


Figure 52. TU 4 northeast wall profile at Site IA003.

Table 28. Artifacts and Manuports Recovered from TU 4 (Counts) at Site IA003.

Material	Layer I	Layer I/II	Total
Traditional Manuport and Artifact			
Traditional Manuport and Artifact Total			

Table 29. Invertebrate and Macrobotanical Remains Recovered from TU 4 (Weight, g) at Site IA003.

Taxon	Layer I	Layer I/II	Total
Marine Invertebrate Remains			
Marine Invertebrate Remains Total			
Macrobotanical Remains			
Macrobotanical Remains Total			

IA004

One test unit (TU 3) was carried out at IA004. The excavation revealed three stratigraphic layers and terminated at 38 cmbs. [redacted]

TU 3

TU 3 was a 1×1 m unit e[redacted] within Site IA004. The unit was excavated to a depth of 38 cmbs. Three stratigraphic layers were recorded (Layer I, II, and III) (Table 31). [redacted]

Table 30. Soil Descriptions for Test Unit 3 at Site IA004.

Layer	Typical Depth Range (cm bs)	Descriptions	Interpretation
I	0–6	Very dark brown (7.5YR 3/2) silt loam; moist; weak structure; very friable; many roots; few pebbles; smooth boundary; [redacted]	Humic soil (A horizon)
II	6–30	Very dark gray (7.5YR 3/1) silt clay; moist; moderate structure; firm; few to no roots; subrounded gravels; smooth boundary; [redacted]	Mix of A and B horizon. [redacted]
III	30–38	Very dark brown (7.5YR 3/1) clay; moist; moderate structure; firm; few to no roots; subrounded gravels; smooth boundary; [redacted]	B horizon with some colluvium



Photo 146. TU 3 base of excavation at 39 cm bs at Site IA004.

Table 31. Artifacts Recovered from TU 3 (Counts) at Site IA004.

Material	Layer I	Total
Traditional Manuport and Artifact		
[redacted]		
Traditional Manuport and Artifact Total		

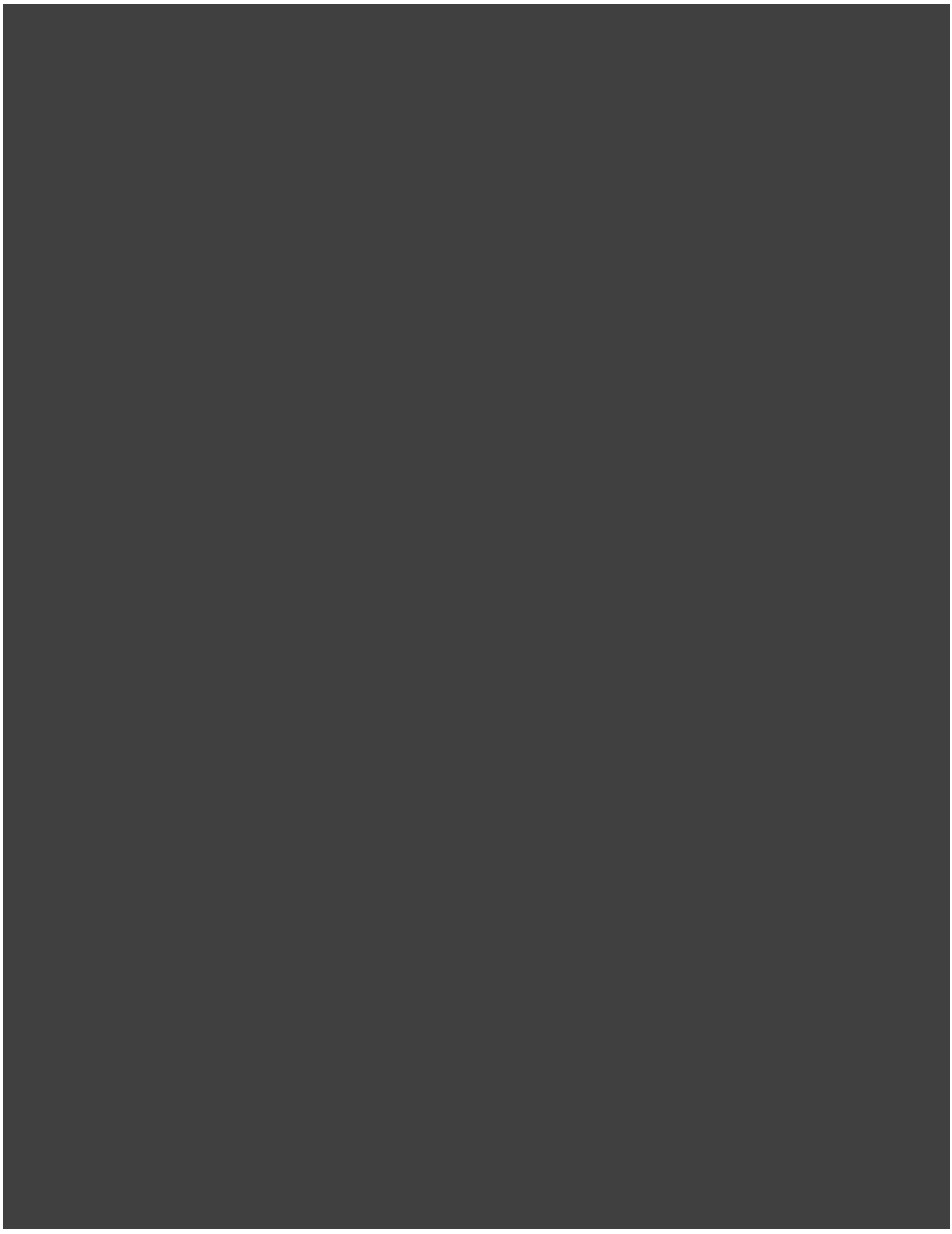


Figure 53. Locations of sites IA001, IA008, and IA010, recorded features, and Test Units 5 through 10.

IA008

Six units were excavated within IA008 (TU 5, TU 6, TU 7, TU 8, TU9, TU 10). Details of these excavations including the identified strata and cultural material are described below.

TU 5

TU 5 was a 1×1 m unit [redacted] within Site IA008. The unit was excavated to a depth of 57 cm bs and consisted of a single stratigraphic layer (Layer I) (Table 33). [redacted]

Table 32. Soil Descriptions for Test Unit 5 at Site IA008.

Layer	Typical Depth Range (cm bs)	Descriptions	Interpretation
I	0–57	Dark reddish brown (5YR 3/3) silt loam; dry; structureless; non-plastic; few roots; few pebbles; smooth boundary; boulders at base of unit; [redacted]	Humic soil (A horizon) mixed with alluvium



Photo 147. TU 5 base of excavation at 57 cm bs at Site IA008.

Table 33. Artifacts and Manuports Recovered from TU 5 (Counts) at Site IA008.

Material	Layer I	Total
Traditional Manuport and Artifact		
[redacted]		
[redacted]		
Traditional Manuport and Artifact Total		

Table 34. Macrobotanical Remains Recovered from TU 5 (Weight, g) at Site IA008.

Taxon	Layer I	Total
Macrobotanical Remains		
[redacted]		
Macrobotanical Remains Total		

TU 6

TU 6 was a 1×1 m unit excavated [redacted] within Site IA008. The unit was excavated to a depth of 45 cmbs and consisted of a single stratigraphic layer (Layer I) (Table 36; Figure 55). [redacted] .

Table 35. Soil Descriptions for Test Unit 6.

Layer	Typical Depth Range (cm bs)	Descriptions	Interpretation
I	0-45	Dark reddish brown (5YR 3/4) silt clay loam; dry; non-plastic; abundant roots; cobbles and boulders common; smooth boundary; [redacted]	Humic soil (A horizon) mixed with alluvium



Photo 148. TU 6 base of excavation at 45 cm bs at Site IA008 view to the west.

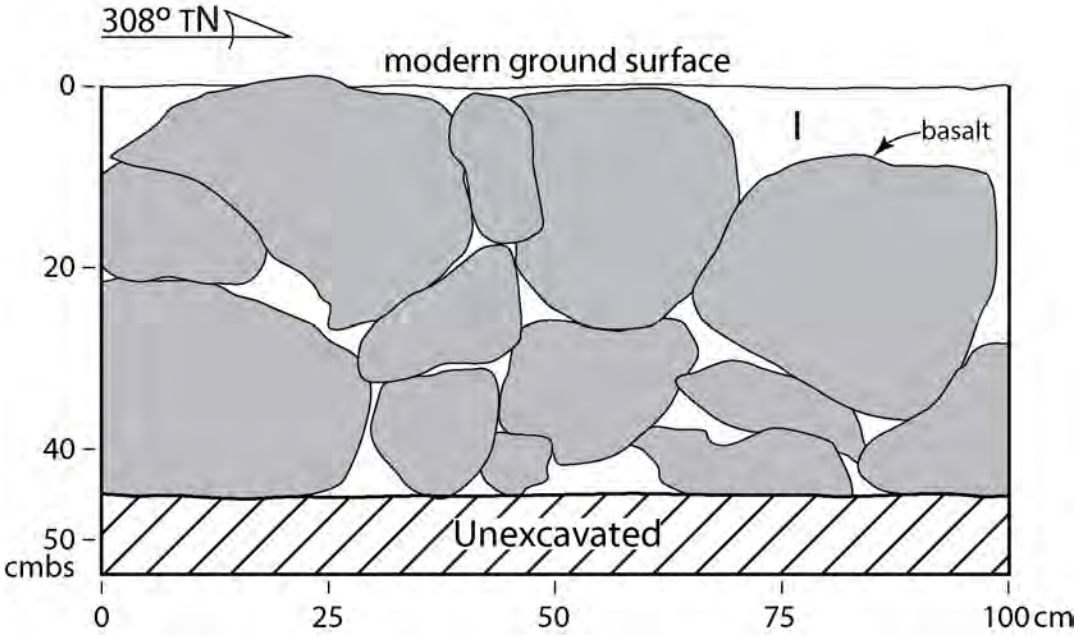


Figure 54. TU 6 southwest wall profile at Site IA008.

Table 36. Artifacts and Manuports Recovered from TU 6 (Counts) at Site IA008.

Material	Layer I	Total
Traditional Manuport and Artifact		
[redacted]		
Traditional Manuport and Artifact Total		

Table 37. Macrobotanical Remains Recovered from TU 6 (Weight, g).

Taxon	Layer I	Total
Macrobotanical Remains		
[redacted]		
Macrobotanical Remains Total		

TU 7

TU 7 was a 1 by 1 m unit excavated [redacted] within Site IA008. [redacted]. The unit was excavated to a depth of 70 cmbs before terminating at multiple basalt boulders. Two stratigraphic layers were recorded (Layers I and II) (Table 39). A [redacted]

Subsurface Feature 1

Feature 1 was a small [redacted] feature [redacted] A sample of charcoal (*Euphorbia* sp.) from Subsurface Feature 1 was submitted for radiocarbon dating to the University of Georgia Center for Applied Isotope Studies (sample UGAMS#69179) and dated to cal. 152–425 BP (AD 1530–1803). While the calibration had multiple intercepts that make it difficult to narrow down the temporal range of activity, it does suggest that there is a strong likelihood that the area was active during the pre-Contact period and probably continued after European contact.

Table 38. Soil Descriptions for Test Unit 7 at Site IA008.

Layer	Typical Depth Range (cm bs)	Descriptions	Interpretation
I	0–32	Dark reddish brown (5YR 3/4) silt clay loam; moist; non-plastic; roots common; well-rounded gravels (15–35%); smooth boundary; [redacted]	Humic soil (A horizon) intermixed with alluvium; [redacted]
II	32–70	Dark reddish brown (5YR 3/4) silt clay loam; moist; plastic; few to many roots; large boulders; smooth boundary; [redacted]	Alluvium



Photo 149. TU 7 base of excavation at 70 cm bs showing west wall profile; view to the northwest at Site IA008.

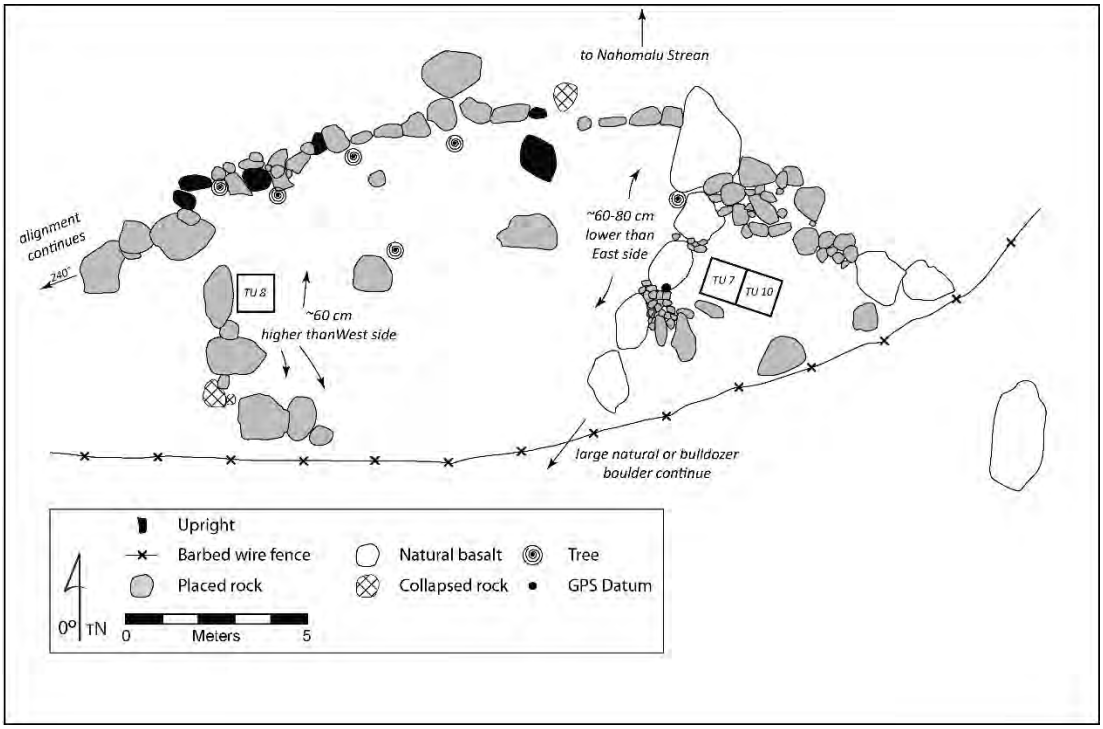


Figure 55. Location of TUs 7, 8, and 10 within Site IA008 along with associated features and natural rock formations.

Table 39. Artifacts and Manuports Recovered from TU 7 (Counts) at Site IA008.

Material	Layer I	Feature 1	Total
Traditional Manuport and Artifact			
Traditional Manuport and Artifact Total			

Table 40. Invertebrate and Macrobotanical Remains Recovered from TU 7 (Weight, g) at Site IA008.

Taxon	Layer I	Feature 1	Total
Marine Invertebrate Remains			
Marine Invertebrate Remains Total			
Terrestrial Invertebrate Remains			
Terrestrial Invertebrate Remains Total			
Macrobotanical Remains			
Macrobotanical Remains Total			

TU 8

TU 8 was a 1 by 1 m unit excavated [redacted] within Site IA008. The unit was excavated to a depth of 38 cmbs and consisted of two stratigraphic layers (Layers I and II) (Table 42). [redacted].

Table 41. Soil Descriptions for Test Unit 8 at Site IA008.

Layer	Typical Depth Range (cm bs)	Descriptions	Interpretation
I	0–22	Dark reddish brown (5YR 3/4) silt clay loam; dry; structureless; non-plastic; roots common; few pebbles; smooth boundary; [redacted]	Humic soil (A horizon) mixed with alluvium
II	22–38	Very dark brown (7.5YR 2.5/2) silt clay loam; dry; structureless; non-plastic; roots abundant; few pebbles with some boulders; smooth boundary; [redacted]	Alluvium



Photo 150. TU 8 base of excavation at 38 cm bs; view to the north at Site IA008.



Photo 151. TU 8 east wall profile at Site IA008.

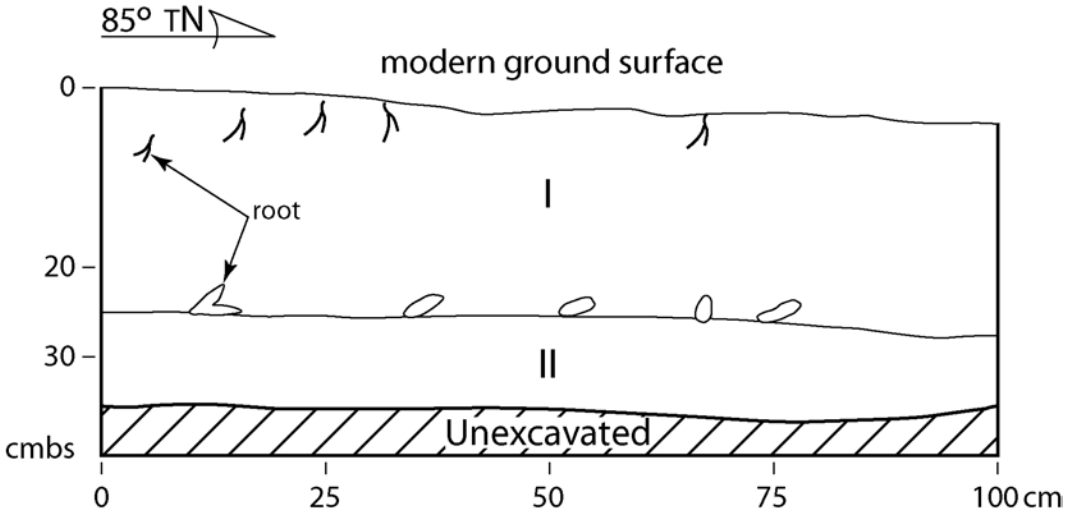


Figure 56. TU 8 north wall profile at Site IA008.

Table 42. Macrobotanical Remains Recovered from TU 8 (Weight, g) at Site IA008.

Taxon	Layer I	Layer II	Total
Macrobotanical Remains			
Macrobotanical Remains Total			

TU 9

TU 9 was a 1 by 1 m unit excavated [redacted] within Site IA008) [redacted] The unit was excavated to a depth of 32 cm bs and consisted of a single stratigraphic layer (Layer I) (Table 44; Photo 155). [redacted].

Table 43. Soil Descriptions for Test Unit 9 at Site IA008.

Layer	Typical Depth Range (cm bs)	Descriptions	Interpretation
I	0–32	Dark reddish brown (5YR 3/4) silt clay loam; moist; slightly plastic; few to no roots; few pebbles; smooth boundary; [redacted]t	Humic soil (A horizon) mixed with alluvium



Photo 152. TU 9 base of excavation at 32 cm bs showing north wall profile at Site IA008.

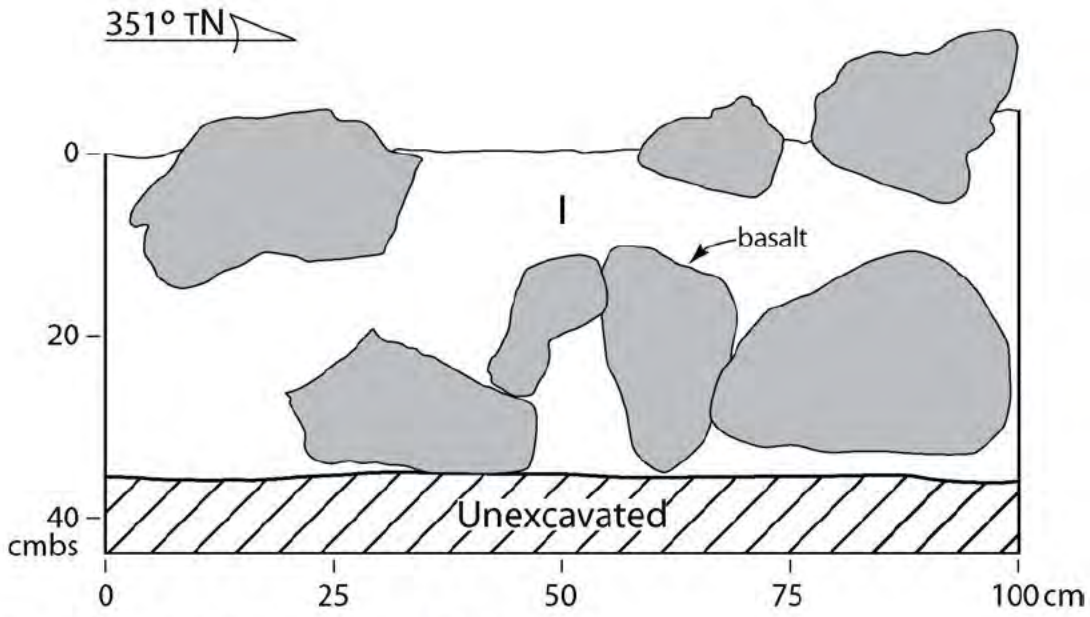


Figure 57. TU 9 west wall profile at Site IA008.

TU 10

TU 10 was a 1 by 1 m unit excavated [redacted] 9 within Site IA008). The unit was excavated to a depth of 70 cm bs. Two stratigraphic layers were recorded (Layers I and II) (Table 45) [redacted]

Subsurface Feature 1

Subsurface Feature 1 was a small [redacted] feature [redacted] sample of charcoal (*Euphorbia* sp.) was submitted for radiocarbon dating to the University of Georgia Center for Applied Isotope Studies (sample UGAMS#69178) and dated to cal. 0–288 BP (AD 1667 to modern). This date, taken from the same combustion feature as that reported for TU 7, statistically overlaps with sample UGA#69179, though could be slightly earlier if using the median probability. Both dates suggest a possible pre-Contact use of the site and that likely continued into the post-Contact period.

Table 44. Soil Descriptions for Test Unit 10 at Site IA008.

Layer	Typical Depth Range (cm bs)	Descriptions	Interpretation
I	0–55	Dark reddish brown (5YR 3/4) silt clay loam; moist; non-plastic; roots common; well-rounded gravels (15–35%); smooth boundary; [redacted]	Humic soil (A horizon) intermixed with alluvium; [redacted]
II	40–70	Dark reddish brown (5YR 3/4) silt clay loam; moist; plastic; few to many roots; large boulders; smooth boundary; [redacted]	Alluvium



Photo 153. TU 10 base of excavation at 70 cm bs. Note [redacted]



Photo 154. Overview of adjacent TU 7 (left) and TU 10 (right) at base of excavation 70 cm bs showing east wall profile at Site IA008.

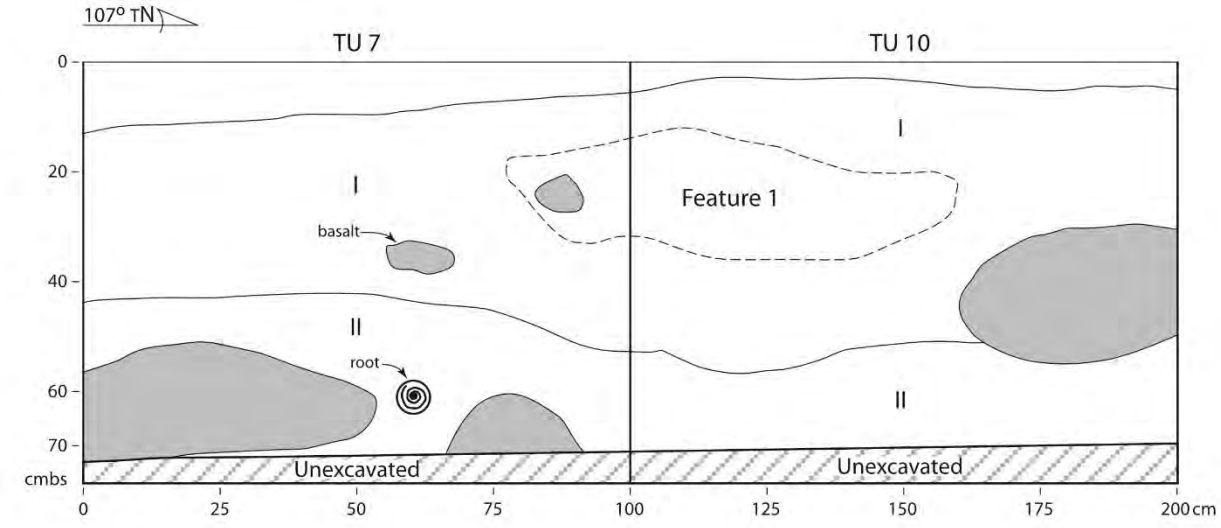


Figure 58. TU 7 and 10 northeast wall profile. [redacted].

Table 45. Artifacts and Manuports Recovered from TU 10 (Counts) at Site IA008.

Material	Layer I	Feature 1	Total
Traditional Manuport and Artifact			
Basalt flake	8	-	**8**
Basalt shatter	20	2	**22**
Coral abrader	1	-	**1**
Coral manuport	8	-	**8**
Fire-cracked rock	1	-	**1**
Polished basalt flake	1	-	**1**
Polished basalt shatter	1	1	**2**
Possible hematite fragment	3	-	**3**
Volcanic glass flake	1	1	**2**
Volcanic glass shatter	1	-	**1**
Waterworn basalt pebble manuport	10	-	**10**
Traditional Manuport and Artifact Total	**55**	**4**	**59**

Table 46. Invertebrate and Macrobotanical Remains Recovered from TU 10 (Weight, g) at Site IA008.

Taxon	Layer I	Feature 1	Total
Marine Invertebrate Remains			
Cypraeidae	0.18	-	**0.18**
Drupa morum	4.1	-	**4.1**
Monetaria caputserpentis	-	1.94	**1.94**
Nerita picea	-	0.08	**0.08**
Echinometra oblonga	-	0.07	**0.07**
Echinoidea	2.15	3.04	**5.19**
Marine Invertebrate Remains Total	**6.43**	**5.13**	**11.56**
Terrestrial Invertebrate Remains			
Terrestrial snail	-	0.01	**0.01**
Terrestrial Invertebrate Remains Total	**-**	**0.01**	**0.01**
Macrobotanical Remains			
Aleurites moluccana endocarp	-	0.59	**0.59**
Charcoal	35.8	32.89	**68.69**
Macrobotanical Remains Total	**35.8**	**33.48**	**0.59**

SYNTHESIS OF LABORATORY RESULTS

This subsection provides a synthesis of the laboratory results organized by past activities (e.g., subsistence), artifact age (e.g., historical artifacts), and specialized analyses including wood charcoal identifications, and radiocarbon dating. Results are presented by site, with inter-site comparisons, as warranted.

ANIMAL-BASED SUBSISTENCE

Vertebrate Fauna

A small vertebrate assemblage was collected from subsurface excavations at IA003. Table 48 summarizes the vertebrate remains recovered. Ray-finned fish and non-human medium mammal make up the majority of the vertebrate collection. The former are represented by at least four families and five species. Labridae (wrasse) is the most abundant (by NISP). These taxa are largely nearshore reef fish that could have been captured through netting, spearing, and hook-and-line techniques. Similarly, a variety of food preparation methods could have been employed, with broiling, drying/salting, and raw consumption perhaps equally common. Bird, pig, dog, rat and small vertebrate were secondary contributors of protein.

Table 47. Vertebrate Remains Recovered from Across the Project Area (NISP).

Taxon	Site IA003
Bird	
Aves	5
Fish	
Acanthuridae (surgeonfish)	3
Balistidae (triggerfish)	1
Labridae (wrasse)	6
Scaridae (*Calotomus* sp.) (parrotfish)	2
Scaridae (parrotfish)	1
Actinopterygii (ray-finned fish)	117
Mammal	
Canis familiaris (dog)	1
Rattus exulans (Pacific rat)	2
Medium mammal (non-human)	143
Sus scrofa (pig)	6
Vertebrate	
Vertebrate (small)	1
Vertebrate	88
Vertebrate Total	**376**

Invertebrate Fauna

Approximately 142 g of marine invertebrates were collected from IA003 and IA008 (Table 49). The marine invertebrate collection consists of at least 12 marine mollusk genera, four echinoderm species and crustacean. A small number of terrestrial invertebrates was also recovered from each site.

Monetaria caputserpentis is the highest-ranking exploited taxon from [redacted] followed by *Drupa morum*. *Monetaria caputserpentis* are common on reef flat and reef crest, and *Drupa morum* can be collected from the shoreline and reef areas. The invertebrate collection from Site [redacted] is considerably less diverse than [redacted] and consists of four marine mollusk species and two echinoderm species. The highest-ranking exploited taxon is *Drupa morum*.

Table 48. Invertebrate Remains Recovered from Across the Project Area (Weight, g.).

Taxon	Habitat	[redacted]	[redacted]	Total
Marine Invertebrate Remains				
Brachidontes crebristriatus	Shore	0.54	-	**0.54**
Cellana sandwicensis	Shore	1.23	-	**1.23**
Cellana sp.	Shore	1.71	-	**1.71**
Chiton sp.	Shore	0.58	-	**0.58**
Conus sp.	Variable, uncertain	6.49	-	**6.49**
Drupa morum	Shore, reef	21.19	4.1	**25.29**
Sistrum ricinus	Shore, reef	2.36	-	**2.36**
Rapaninae	Variable, uncertain	3.82	-	**3.82**
Isognomon sp.	Variable, uncertain	0.23	-	**0.23**
Littoraria pintado	Shore	4.53	0.17	**4.7**
Monetaria caputserpentis	Reef flat, reef crest	35.11	1.94	**37.05**
Cypraeidae	Variable, uncertain	29.51	0.43	**29.94**
Nerita picea	Shore	1.91	0.3	**2.21**
Pinctada sp.	Reef flat	0.37	-	**0.37**
Siphonaria sp.	Variable, uncertain	8.4	-	**8.4**
Nondiagnostic gastropod	Variable, uncertain	3.67	0.07	**3.74**
Colobocentrotus atratus	Shore	0.25	-	**0.25**
Echinometra mathaei	Shore	0.22	-	**0.22**
Echinometra oblonga	Shore	0.77	0.07	**0.84**
Heterocentrotus mamillatus	Variable, uncertain	0.13	-	**0.13**
Echinoidea	Variable, uncertain	6.63	5.43	**12.06**
Crustacea	Variable, uncertain	0.02	-	**0.02**
Marine Invertebrate Remains Total		**129.67**	**12.51**	**142.18**
Terrestrial Invertebrate Remains				
Terrestrial snail	-	0.24	0.11	0.35
Terrestrial Invertebrate Remains Total		**0.24**	**0.11**	**0.35**

TRADITIONAL TOOL MANUFACTURE AND USE

An assemblage of artifacts manufactured from lithic material, coral, shell, gourd, and bone were recovered from both the surface during survey and in excavation units. Below is a summary of these assemblages for both the project area and specific test units. The gourd artifacts are described in a subsequent section.

Lithic Artifacts

Two hundred and twenty-five lithic artifacts were collected from excavations and surface contexts (Table 50). The majority is debitage (n = 161) with the ratio of volcanic glass and basalt debitage being 19.5:1, revealing a preference for the latter material.

Table 49. Traditional Lithic Artifacts Collected from Across the Project Area (Counts).

Artifact	[redacted]	[redacted]	[redacted]	[redacted]	Total
Basalt adze preform	1	-	-	-	1
Basalt flake	24	1	15	-	40
Polished basalt flake	-	-	1	-	1
Retouched basalt flake	1	-	-	-	1
Basalt point	-	-	1	-	1
Basalt shatter	45	-	44	-	89
Polished basalt shatter	-	-	2	-	2
Modified basalt	-	-	1	-	1
Waterworn basalt cobble manuport	-	-	1	2	3
Waterworn basalt pebble manuport	2	-	38	-	40
Chert flake	1	-	-	-	1
Fire-cracked rock	1	-	1	-	2
Hematite octopus lure sinker	1	-	-	-	1
Hematite fragment	1	-	10	-	11
Ochre fragment	-	-	2	-	2
Volcanic glass flake	16	-	2	-	18
Volcanic glass fragment	-	-	1	-	1
Volcanic glass shatter	9	-	1	-	10
Total	**102**	**1**	**120**	**2**	**225**

A complete hematite octopus lure sinker (*luhe'e*) was recovered from the surface of [redacted] (Photo 158; Cat. JMG001). It is a "coffee bean" sinker type with a flat dorsal surface and domed ventral surface with a 0.3 cm wide groove running down the length; several chips are present on both the dorsal and ventral surfaces, but overall, the sinker is intact, in good condition, and highly polished. It is 4.7 cm long, 3.5 cm wide, and 1.7 cm thick.

An unmodified hematite fragment was also recovered from [redacted] Additional unworked hematite fragments were recovered from Feature 9, [redacted] within

[redacted] The unworked hematite fragments are enigmatic, and their function(s) are unclear, but given the complete hematite coffee bean sinker recovered from within [redacted] it is likely indicative of raw material collection and manufacturing at these locations. Filimoehala et al. (2015) examined the distribution of hematite artifacts (their presence and artifact forms) across the archipelago and found that the majority of hematite artifacts identified on Kaua‘i were recovered within Nu‘alolo Kai, Hanalei District, approximately 14 kilometers northeast from Kamokalā Ridge. Modified hematite fragments (e.g., abraded, polished on one or more facets) were the most common artifact class, followed by sinkers and sinker fragments (Filimoehala et al. 2015:11). The two most common sinker types were the coffee bean and bread loaf. Coffee bean sinkers were used in both shallow and deeper waters where they could be jigged.

A basalt point consisting of two conjoining fragments was recovered from [redacted] (Photo 159; Cat. GOF011.02). The basalt fragment has been abraded on multiple sides to create a pointed shape. One of lateral sides is thicker than the other creating an asymmetrical cross section, portions of lateral edges appear polished from excessive grinding. The dimensions of the tool are 8.3 cm long by 1.4 cm wide by 0.8 cm thick.

A basalt adze preform was collected from [redacted] (Photo 160; Cat. JMG033). The preform is a large flake that has been reduced along one edge with microflaking to create a more triangular edge. The terminus of the flake is rounded and appears to have been the intended bevel edge. The dimensions of the preform are 6.8 cm long by 2.8 cm wide (at the bevel) by 1.6 cm wide (poll). Maximum thickness is 1.2 cm and 0.7 cm thick at the bevel.



Photo 155. Hematite octopus lure sinker (*luhe‘e*) recovered from [redacted]



Photo 156. Basalt point recovered from [redacted]



Photo 157. Basalt adze preform recovered from [redacted]

Geochemical Analysis of Selected Volcanic Stone Tools

Geochemical analysis provides a means to evaluate geographical relationships between the past populations of the area. Twenty-eight basalt, hematite, and volcanic glass artifacts from Sites IA003 and IA008 were submitted to the UHH Geoarchaeology Laboratory for geochemical characterization using non-destructive EDXRF (Table 51). Samples were selected to characterize the geochemistry of formal tools and debitage to elucidate resource procurement sources. All basalt and volcanic glass samples fall within the well-defined groups for Kaua'i, specifically Groups A, C, and I (Peter Mills, pers. comm., 2024). Group A consists of local shield-building theoleiitic lavas of Na Pali member basalts which includes "low concentrations of incompatible trace elements (Rb, Sr, Y, Zr, Nb, and Ba) and relatively high concentrations of compatible trace elements (Ni and Cu) (Mills et al. 2010:3390). Group C falls within the range of the Waimea Canyon basalts. Group I departs from expected compositions of the Waimea Canyon basalt series. The higher concentrations of incompatible trace elements, lower concentrations of compatible trace elements (Ni and Cu), and higher K2O and MnO values, all point to post-shield orrejuvenated stage lavas, such as those that compose the Kōloa Volcanic Series that cover much of the eastern half of Kaua'i (Mills et al. 2010:3392).

The hematite artifacts vary in composition. The sinker produced the highest concentration of iron (17%) and the lowest silicate (39%) and is the most pure example of a well-developed hematite for this collection (Peter Mills, pers. comm., 2024)

Table 50. Geochemical Grouping and Probable Sources of Basalt, Hematite, and Volcanic Glass Artifacts .

Artifact (Count)	Site	Provenience	Justification	Cat. No	Group	Probable Source
Hematite octopus lure sinker (1)	[redacted]	[redacted] 4;	Formal tool	JMG001	Hematite	
Basalt flake (5)	[redacted]	[redacted]	Debitage to compare with formal tools	JMG019.18	I	
Volcanic glass flake (2)	[redacted]	[redacted]	Debitage to compare with formal tools	JMG026.10	A	
Retouched basalt flake (1)	[redacted]	[redacted]	Modified debitage	JMG032	I	
Basalt adze preform (1)	[redacted]	[redacted]	Formal tool	JMG033	C	
Hematite fragment (1)	[redacted]	[redacted]	Material type sample	JMG040.02	Hematite	

Artifact (Count)	Site	Provenience	Justification	Cat. No	Group	Probable Source
Volcanic glass flake (1)	[redacted]	[redacted]	Debitage to compare with formal tools	JMG041.05	A	
Basalt flake (1)	[redacted]	[redacted]	Debitage to compare with formal tools	JMG051.11	I	
Basalt point (1)	[redacted]	[redacted]	Formal tool	GOF011.02	A	
Polished basalt flake (1)	[redacted]	[redacted]	Modified debitage	GOF020.04	C	
Volcanic glass flake (1)	[redacted]	[redacted]	Debitage to compare with formal tools	GOF 020.09	Hematite	
Hematite fragment (3)	[redacted]	[redacted]	Material type sample	GOF022.06	Hematite	
Polished basalt shatter (1)	[redacted]	[redacted]	Modified debitage	GOF 023.10	C (small)]	
Polished basalt shatter (1)	[redacted]	[redacted]	Modified debitage	GOF026	C	
Hematite fragment (7)	[redacted]	[redacted]	Material type sample	JMG047.08	Hematite	

Coral, Bone, and Shell Artifacts

Non-lithic artifacts recovered from across the project area consist of various coral, bone, and shell artifacts (Table 52). In addition to the artifacts collected, a total of 23 coral manuports were recovered. The coral items were determined to be manuports after no modification was visible under magnification.

Table 51. Coral, Bone, and Shell Artifacts Recovered from Within the Project Area (Counts).

Material	Temporary Site IA003	Temporary Site IA008	N/A	Total
[redacted]				
[redacted]				
[redacted]				
[redacted]				
[redacted]				
[redacted]				
Total				

A bone (medium mammal; non-human) fishhook fragment was collected [redacted] (Photo 161; Cat. GOF011.01). The fragment is the lower portion of the shank with a maximum length of 1.1 cm, width of 0.8 cm from the hook to back of shank, and 0.2 cm thick. Three modified bone fragments (medium mammal; non-human) were also recovered and likely the result of bone fishhook manufacturing. One of the modified bone fragments is a bone tab, and exhibits small cut marks along the lateral edge and a deep groove on the short end (Photo 162; Cat. JMG021). Dimensions of the tab are 2.1 cm long by 1.4 cm wide by 0.6 cm thick.

Two coral abraders were collected during the project. One was recovered on the surface during pedestrian survey (Photo 163; Cat. JMG009) and the other was identified during the excavation of [redacted] (Photo 164; Cat. GOF022.11). The coral abrader from the surface is triangular in cross section and at least one facet has been abraded. The dimensions of the abrader are 4.7 by 2.8 by 2.7 cm. The [redacted] coral abrader has dimensions of 7.2 by 2.4 by 1.1 cm and a slight groove is visible on the coral's surface from use as an abrader.

A pearl shell fishhook fragment was recovered from [redacted] (Photo 165; Cat. JMG027.15). Based on the shape and angle of the fragment, the hook is most likely a two-piece or composite fishhook. The dimensions of the fragment are 1.7 cm long by 0.6 cm wide (maximum) by 0.1 cm wide at the point and 0.3 cm thick.



Photo 158. Bone fishhook fragment (Cat. GOF011.01) recovered from [redacted].



Photo 159. Modified bone (medium mammal; non-human; bone tab, Cat. JMG021) recovered from [redacted]



Photo 160. Coral abrader (Cat. JMG009) collected from the surface during pedestrian survey.



Photo 161. Coral abrader (Cat. GOF022.11) recovered from [redacted]



Photo 162. Pearl shell fishhook fragment (Cat. JMG027.15) recovered from [redacted].

HISTORICAL ARTIFACTS

Several glass and metal artifacts were recovered from general surface contexts within the project area. Three diagnostic glass bottles and a glass ink well were collected from general surface contexts within the project area; a 1928 U.S. dime was recovered from the surface within [redacted] and a metal canteen was recovered from [redacted] (Table 53–Table 54).

Table 52. Historical Artifacts Recovered from Within the Project Area (Counts).

Material	[redacted]	[redacted]	[redacted]	[redacted]	Total
Ceramic insulator	1	-	-	-	**1**
Glass bottle	-	-	-	3	**3**
Glass ink well	-	-	-	1	**1**
Mercury dime	-	1	-	-	**1**
Metal canteen	-	-	1	-	**1**
Total	**1**	**1**	**1**	**4**	**7**

A U.S. dime was recovered from the surface within [redacted] (Photo 166; Cat. JMG003) indicating visitation to the area during the historic era. It is a 1928 mercury dime. Mercury dimes, also called Winged Liberty Head dimes, were produced by the United States Mint from 1916 to 1945. The coin was designed by Adolph A. Weinman and his monogram (AW) is visible on the front of the coin. Manufacturing of the coin began at all three U.S. mints in the Fall of 1916: San Francisco, Philadelphia, and Denver, with each dime featuring either an "S", "P", or "D" denoting the minting location. The dime features a young Liberty wearing a winged cap who is often confused with the Roman god Mercury. The coin's reverse features a Fasces, a bundle of rods with a projecting axe blade, surrounded by olive branches. The Fasces is a symbol of the Nation's strength through unity with the olive branches representing peace. The recovered dime was minted in 1928 at the San Francisco mint facility.



Photo 163. 1928 Mercury Dime recovered [redacted] (Cat. JMG003).

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Table 53. Historical Artifact Table for Material Recovered Within the Project Area.

Catalog Number	Feature/Layer	Form & Portion	Color	Function/Contents	Manufacturer Mark	Manufacturer & Origin	Manufacturing Characteristics	Manufacturing Date	Count
JMG050	N/A	Inkwell, complete	Clear	Household, ink	Embossed “PARKER” arched over “MADE IN U.S.A.” over “2 oz.” over “59 cc” (base)	Unknown	Base has slightly rounded square shape; orange peel stippling texture on base surrounding embossed text; deep suction scar is also present on base; each corner of the bottle has 7 ribs that are widest at the shoulder and narrow to a more pointed shape at the heel; ribs are present encircling the entire neck from base of finish to the shoulder (the neck is not very distinct in width compared to the body. Finish is an external thread and has two broken threads to hold a cap. Bottle is likely a Parker “Quink” inkwell. Bottle is slightly frosted and has patina from age.	1940s[1]	1
JMG010	N/A	Bottle, complete	Sun-colored amethyst	Medicinal?	None	Unknown	Octagonal flask body (four main sides and then each corner is also flattened into a short side giving the flask 8 total sides); no seams are visible through the body or neck. Bottle has a tooled prescription finish.	1880s–1920s[2]	1
EvZ001	N/A	Canteen, complete	Metal	Military	Engraved “U.S” above “L.F.&C.” over “1918” (lower portion of body)	Landers, Frary & Clark	Aluminum canteen with welded side seams; cap is part of the design change from 1914 that includes a flat top and full knurling around the side. Cap is attached to canteen neck with a chain.	1918[3]	1
JMG008.01	N/A	Bottle, complete	Clear	Household, milk	Painted text in green “Waimea” over “Dairy” (in script) over “THE BEST IN DAIRY FOODS” over “WAIMEA, Kaua‘i” over “PHONE: 38-4441” (all on front face); “Keep Me Cold Keep Me Cold Keep Me Cold” (in script) along shoulder. Embossed “LIQUID 2” (heel of side face); “ONE QUART” (heel of back face). “I” inside “O” with “23” to the left and “61” to the right (base).	Owens-Illinois Glass Co., Los Angeles, CA	Machine made milk bottle with circular base and rounded square body; side mold seams start at horizontal heel seam and continue to base of finish; capseat finish with additional ridges on the exterior lower portion of finish.	1961[4]	1

[1] https://fountainpenlove.com/fountain-pen-ink/identifying-vintage-fountain-pen-ink-bottles-and-boxes/

[2] https://sha.org/bottle/finishstyles.htm#Prescription; https://sha.org/bottle/colors.htm

[3] https://history.army.mil/html/museums/messkits/Field_Mess_Gear(upd_Jul09).pdf

[4] https://sha.org/bottle/pdffiles/OwensIllinois2015.pdf

Catalog Number	Feature/Layer	Form & Portion	Color	Function/Contents	Manufacturer Mark	Manufacturer & Origin	Manufacturing Characteristics	Manufacturing Date	Count
JMG008.02	N/A	Bottle, complete	Clear	Household, milk	Painted text in orange “SOKEI” over “DAIRY” over heart logo with text “BUSINESS WITH A HEART” over “KAPAA, KAUAI” (front face). Additional painted text on back face is mostly chipped off but appears to read: “GRADE A” over “PASTEURIZED MILK” over “AND” over “CREAM” over “WASH AND RETURN” (back face). Embossed “ONE QUART” (heel on back face). “I” inside a diamond inside “O” with 23” to the left and “52” to the right over “Duraglas” in script (base).	Owens-Illinois Glass Co., Los Angeles, CA	Machine made milk bottle with circular base and body; has long neck and thick capseat finish. One side mold seam is present and is most noticeable along the shoulder, the seam is much fainter near the heel and finish. Note that the interior of the bottle is partially filled with some sort of dried tar.	1952[5]	1

[5] https://sha.org/bottle/pdffiles/OwensIllinois2015.pdf

A U.S. Army issued field metal canteen was recovered from [redacted] (Photo 167; Cat. EvZ001). The metal canteen was manufactured by the Landers, Frary & Clark, New Britain, Connecticut, company in 1918. It is constructed from two aluminum halves that were welded together around the outer edge. "U.S." above "L.F.&C.", over "1918" is engraved on the lower portion of the body. The cap has a flat top, full knurling around the side, and a lug which secures the cap chain with a small pin. The cap is still attached to the canteen neck with its chain. During World War I, the Quartermaster Corps, a sustainment support branch of the U.S. Army, took over responsibility for individual military equipment, including the manufacturing of canteens[6]. In 1918, the Quartermaster Corps contracted five U.S. companies to take over the manufacturing of canteens, one of which was the Landers, Frary & Clark company. Landers, Frary & Clark manufactured housewares, including food scales, coffee grinders, and metal tableware but once contracted in World War I, temporarily produced equipment including canteens like the one recovered, trench knives, and sabers required for the United States Cavalry. However, the date of 1918 may only refer to the 1918 army standard, the canteen may date between 1918 and 1942 when the Bakelite cap became standard.



Photo 164. Complete metal canteen (Cat. EvZ001).

Glass Artifacts

A total of four complete glass bottles were collected from the surface across the project area. The oldest glass bottle recovered during the pedestrian survey is a possible medicinal bottle which has a sun-colored amethyst color (Photo 168). This bottle has a tooled prescription finish and likely dates to between 1880 to 1920 based on the manufacturing characteristics. One of the glass bottles was a clear Parker inkwell which is likely a Parker's "Quink" inkwell (Photo 169). Quink was fist manufactured in 1931 using isopropyl alcohol which was a solvent not previously used in inks. Some of the features which made Quink

[6] https://history.army.mil/html/museums/messkits/Field_Mess_Gear(upd_Jul09).pdf

such a successful fountain pen ink included: it resisted water, did not clog, had proper ink flow quality, resisted molding, non-corrosive, did not leave deposits, did not fade, and was quick drying[7].

Two of the glass bottles recovered are complete milk bottles from two different Kaua‘i dairies. One bottle (Catalog JMG008.01) is a Waimea Dairy milk bottle manufactured by the Owens-Illinois Glass Company at their Los Angeles, CA plant in 1961 (Photo 170). The history of Waimea Dairy begins in 1848 when Reverend George Rowell was awarded a large land grant from Kaua‘i’s last queen, Deborah Kapule (Soboleski 2014). Initially, Rowell’s only supplied milk to his family and other missionaries before expanding to larger commercial purposes. Following Rowell’s death, the dairy and pasture lands were leased to E. E. Conant in 1884. Approximately ten years later, H. P. Faye, a sugar planter, facilitated the consolidation of his wife’s family dairy, Moloaa Dairy with Waimea Dairy. In 1904, Faye, who was now the manager of the Kekaha Sugar Company, purchased the dairy to ensure milk supplies for the Kekaha Sugar Co. By 1923, Waimea Dairy had a herd of 25 milking cows and was selling 200 quarts of milk each day. Alan Faye Sr., son of H. P. Faye, oversaw the management and ran Waimea Dairy from 1928 to 1964. This included the acquisition of the Lihue William Hyde Rice Dairy in 1940 following its closure. Waimea Dairy was sold to Meadow Gold in 1964 where operations continued at the original location between Waimea and Kikiaola Harbor until 1989. The dairy was then moved to Moloa‘a before closing in 2000, marking the end of Kaua‘i’s dairy production.

Catalog JMG008.02 is a Sokei Dairy milk bottle manufactured by the Owens-Illinois Glass Company at their Los Angeles, CA plant in 1952 (Photo 171). The complete history of the Sokei Dairy is unknown; however, it was started by Ryoju Sokei and grew from a small operation of just 3 cows supplying 13 quarts per day to include over 300 acres of land and 200 cows by 1960 (Moriki 2014; Soboleski 2010). Similar to Waimea Dairy, Sokei Dairy was eventually sold to Meadow Gold.

[7] https://ksgills.com/blogs/updates/the-story-behind-quink-fountain-pen-ink#:~:text=Quink%20was%20first%20marketed%20in,the%20alcohol%20contained%20in%20Quink.



Photo 165. Complete sun-colored amethyst medicinal bottle (Cat. JMG050).



Photo 166. Complete Parker inkwell (Cat. JMG050).



Photo 167. Complete Waimea Dairy milk bottle (Cat. JMG008.01).



Photo 168. Complete Sokei Dairy milk bottle (Cat. JMG008.02).

WOOD CHARCOAL IDENTIFICATION

Four charcoal samples were analyzed for taxonomic identification to aid in the selection of short-lived taxa or plant parts for radiocarbon dating. These identifications also provide information on firewood gathering and by extension the woody plant communities accessible to past inhabitants. Table 55 presents the charcoal identification results. Two woody taxa are present, including at least one Polynesian introduction (*Aleurites moluccana*).

Table 54. Wood Charcoal Identifications for the Current Investigations (Wt, g).

Provenience	Taxon	Part	Weight (g)	Cat. No	^{14}C Sample
[redacted]	*Euphorbia* sp. (*'akoko*)	Wood charcoal	0.06	Cat. JMG023	Yes
[redacted]	*Euphorbia* sp. (*'akoko*)	Wood charcoal	0.06	Cat. JMG029	No
	Aleurites moluccana (*kukui*)	Charred endocarp	0.05	Cat. JMG029	No
[redacted]	*Euphorbia* sp. (*'akoko*)	Wood charcoal	0.15	Cat. GOF018	Yes
[redacted]	*Euphorbia* sp. (*'akoko*)	Wood charcoal	1.14	Cat. GOF030	Yes

RADIOCARBON DATING

Four charcoal samples from short-lived taxa or plant parts were submitted to the University of Georgia's Center for Applied Isotope Studies Laboratory for accelerator mass spectrometry (AMS) radiocarbon dating (Table 56). UGAMS# 69177 from TU 1 returned a calibrated age of cal. 332–513 BP (AD 1442-1623) (2σ). UGAMS# 69993 from TU 1 returned a calibrated age of cal. 314–459 BP (AD 1496–1641) (2σ). These age range firmly establishes the deposit within the pre-Contact period a conclusion supported by the cultural material recovered from the excavation units. Furthermore, sample UGAMS# 69993 is a modified gourd rind (*cf. Lagenaria sp.*) which establishes a direct date for a traditional Hawaiian artifact. Samples UGAMS# 69178 and 69179 both recovered from adjoining excavation units at IA008 returned calibrated ages of cal. 0–288 (AD 1667 to modern) and 152–425 BP (AD 1530–1803) (2σ) respectively. These dates overlap and suggest an age range of the late pre-Contact to early historic period for use of the site.

Table 55. Radiocarbon Results from Test Units 1, 7, and 10.

UGAMS#	Sample ID	TU/ SITE	Layer	cmbs	Material	Species	δ13C, ‰	14C age, years BP	±	cal. BP (2σ)
69177	IA202241.JMG023	[redacted]			charcoal	*Euphorbia* sp.	-11.03	410	25	332–513
69993	IA202241.JMG019.22	[redacted]			gourd rind sample	*cf. Lagenaria* sp.	-25.25	320	20	314-459
69178	IA202241.GOF030	[redacted]			charcoal	*Euphorbia* sp.	-10.75	170	25	0–288
69179	IA202241.GOF018	[redacted]			charcoal	*Euphorbia* sp.	-10.71	250	25	152–425

MACROBOTANICAL REMAINS

Beyond the woody taxa identified during wood charcoal taxonomic identifications, additional macrobotanical remains were recovered during lab processing. These include *kukui* (candlenut; *Aleurites moluccana*) endocarp, *Cocos nucifera* (coconut; *niu*), Cucurbitaceae gourd rind fragments, including one gourd stopper with attached sennit cordage and one modified gourd fragment, and cf. *Lagenaria siceraria* (bottle gourd; *ipu*) seeds.

The stopper was manufactured from the top portion of a Cucurbitaceae gourd (probably *Lagenaria siceraria*) (Photo 172–Photo 174). It has a single drilled hole on one side with sennit strung through the hole. On the interior of the gourd, the sennit is knotted to ensure the cord remains intact. The sennit is manufacture from multiple fibers separated into two strands then twisted together and possibly from coconut (*Cocos nucifera*) fibers. The stopper length is 4 cm, with a diameter of 2.6 at the widest end and 1.4 at the narrow end. The length of the sennit extends from the stopper is 2.4 cm.



Photo 169. Gourd stopper with sennit cordage (Cat. JMG020).



Photo 170. Closeup of twisted sennit fibers extending from stopper (Cat. JMG020).



Photo 171. Interior view of stopper. Note that the cordage is knotted to remain intact with stopper (Cat. JMG020).

CONSULTATION

Note to Reviewer—This section is a requirement for HRS 6E-8 review.

[Placeholder text for Criterion "e" consultation. To be provided by PMRF CRM. This consultation will occur with OHA and knowledgeable native Hawaiian individuals and groups about important associations that the identified sites have with their history and cultural identity.]

Requirements come from :
HAR 13-276(g) The report shall contain information on the consultation process with individuals knowledgeable about the project area's history, if discussion with SHPD, background research or public input indicate a need to consult with knowledgeable individuals.

(1) Information shall include:

(A) Personnel conducting the consultation process, with names and qualifications;

(B) Methods of identifying and contacting knowledgeable persons;

(C) Names of knowledgeable persons consulted, or if the person wishes to remain anonymous, a characterization of the person; and

(D) A summary as to whether additional archaeological historic properties were identified during the consultation process, and whether additional information on archaeological site function was obtained during the consultation process.

HAR 13-275-6(c) Prior to submission of significance evaluations for properties other than architectural properties, the agency shall consult with ethnic organizations or members of the ethnic group for whom some of the historic properties may have significance under criterion "e" to seek their views on the significance evaluations. For native Hawaiian properties which may have significance under criterion "e" the Office of Hawaiian Affairs also shall be consulted.]

VI. SUMMARY AND NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILTY RECOMMENDATIONS

Archaeological pedestrian survey and subsurface testing was conducted within approximately 533 acres consisting of multiple discrete survey areas, roads, and utility corridors distributed across and outside of the PMRF installation. These consisted of four main locations: 1) Mākaha Ridge Road; 2) between the eastern boundary of PMRF Barking Sands and Kaumualiʻi Highway (Main Base [southern portion]); 3) northeast of North Nohili Road to the boundary of Polihale State Park (Main Base [northern portion]) ; and 4) Kamokalā Ridge and portions of the surrounding area, all of which are found along the western edge of Waimea Ahupuaʻa, Kona District, Kauaʻi Island. The following TMK survey areas were surveyed during the AIS Mākaha Ridge (TMKs [1] 4-001:013 por., [1] 4-001:014 por., [1] 2-001:006 por.), PMRF Main Base (northern and southern portions) (TMKs [1] 2-002:013 por., [1] 2-002:025 por., [1] 2-002:026 por., [1] 2-002:001 por.), and Kamokalā Ridge (TMKs [1] 2-002:001 por., [1] 2-002:027 por., [1] 2-002:029 por.).

Results from pedestrian survey found no archaeological sites along the Mākaha Ridge Road corridor. However, five previously identified sites were encountered at Main Base (southern portion [50-30-05-2000]), Main Base (northern portion [50-30-01-2049]), and Kamokalā Ridge (50-30-05-0652, 50-30-05-0653, and 50-30-05-0658). Additionally, 12 new sites were recorded, two of which were found at Main Base (northern portion [IA011 and IA012]) and 10 at Kamokalā Ridge (IA001 to IA010). Of the two newly recorded sites identified at Main Base (northern portion [IA011 and IA012]) both were historic, consisting of a wooden frame structure associated with a small-arms shooting range (IA011) and a refuse area (IA012). The latter, in particular, was extensive, and included dense concentrations of concrete rubble and large bales of barbed wire running roughly parallel to one of the old canals (with several offshoots), along with scatters of broken glass, ceramic, and metal debris

In contrast, ten newly recorded sites at Kamokalā Ridge (IA001 to IA010) revealed intensive use of the area from the pre-Contact period up through the historic era. [redacted]

SITE FUNCTION

The 12 newly recorded sites documented during the fieldwork can be categorized by their inferred function and include agriculture, ranching, temporary and permanent habitation, refuse disposal, and military activity (Table 57). [redacted] The chronological results are discussed in greater detail in the following section about history and land use.

Table 56. Functional Classification of Newly Identified Sites Recorded During the Project.

Site Number	Survey Area	Site Type	Interpreted Function	Temporal Period
IA001	Kamokalā Ridge	Rock Wall	Agriculture	Hawaiian
IA002	Kamokalā Ridge	Rock Wall and Enclosure Complex	Agriculture, Plantation, and Ranching	Hawaiian and/or post-Contact
IA003	Kamokalā Ridge	Midden, Rockshelters, and Retaining Wall Complex	Temporary Habitation	Hawaiian and/or post-Contact
IA004	Kamokalā Ridge	Stone Platform and Modified Outcrop	Habitation	Hawaiian
IA005	Kamokalā Ridge	Historically Modified Rock Wall	Agriculture	Hawaiian and post-Contact
IA006	Kamokalā Ridge	Terrace and Retaining Wall Complex	Agriculture	Hawaiian
IA007	Kamokalā Ridge	Mound and Basalt Quarry	Agriculture	Hawaiian and/or post-Contact
IA008	Kamokalā Ridge	Terrace and Retaining Wall Complex	Agriculture/Habitation	Hawaiian
IA009	Kamokalā Ridge	Historic Refuse Area	Refuse Area	WWII and after
IA010	Kamokalā Ridge	Mound	Agriculture	Hawaiian and/or post-Contact
IA011	Barking Sands North	Small Arms Range	Military	WWII and after
IA012	Barking Sands North	Historic Refuse Area	Refuse Area	Post-Contact

HISTORY AND LAND USE IN THE PROJECT AREA

Most newly recorded sites (excluding IA011 and IA012) identified during the survey were found within the Kamokalā Ridge survey area approximately 2.82 km (1.75 mi) to 3.74 km (2.32 mi) inland. Therefore, these sites may provide important information about the use of interior areas on Kaua‘i and the

Hawaiian Islands more generally. Aside from IA002 and IA009, all of these sites appear to date to the pre-Contact/post-Contact interval and may have been integrated into an intricate network of stone features and efforts to modify the landscape for temporary or perhaps longer-term habitation as well as agricultural activities. [redacted]

Two radiocarbon date provides important information about initial site chronology within the interior of the project area. UGAMS# 69177 from TU 1 [redacted] returned a calibrated age of cal. 332–513 BP (AD 1442-1623) (2σ). UGAMS# 69993 from TU 1 returned a calibrated age of cal. 314–459 BP (AD 1496-1641) (2σ). These dates indicate that the deposit dates firmly within the pre-Contact period. Review of the artifact content recovered from the excavations corroborates this conclusion as a variety of traditional Hawaiian artifacts and faunal remains were recovered from the deposit. Although no historic artifacts were found in TU 1, a dime dating to 1928 was recovered from the surface near the excavation unit. Two radiocarbon dates both recovered from adjoining excavation units [redacted] returned calibrated ages of cal. 0–288 (AD 1667 to modern) and 152–425 BP (AD 1530-1803) (2σ), respectively. These dates overlap and suggest an age range of the late pre-Contact to early historic period for use of the site.

The four radiocarbon dates in combination indicate use of the Kamokalā Ridge area from around the 17th century into historic times. These results indicate that the upslope areas of PMRF were initially used for temporary habitation and perhaps agriculture as early as cal. 332–513 BP (AD 1442-1623) (2σ) and into the historic period. While many of the previously acquired dates from archaeological sites on PMRF are problematic for several reasons including the dating of samples of unidentified wood charcoal, current evidence suggests that coastal sites such as Nohili (Site 50-30-05-1829) may date to as early as the 14th century (SEARCH 2012: 156). If these dates for coastal sites are reliable, then it is possible that expansion into upland areas occurrent several hundred years after settlement of the coast. Importantly, the overall suite of radiocarbon dates from traditional Hawaiian deposits acquired from PMRF is relatively small (less than 20 not including the current project results). Consequently, the results reported here make a major contribution to understanding the chronology of the area's settlement and land use. The following section revisits the project research questions considering the results of the fieldwork and laboratory analysis. The discussion about research contributions provides important context for evaluating the newly identified sites' eligibility for inclusion in the NRHP and HRS Chapter 6E significance recommendations.

REVISITING THE PROJECT RESEARCH QUESTIONS

Three research questions guided the archaeological investigation carried out for this project. These questions are:

1. What were the depositional and soil-forming sequences for the different survey areas?
2. Are archaeological deposits present and, if so, what past activities do they document?
3. If burials or human skeletal remains are encountered during the archaeological survey, what are their contexts and conditions?

These questions are discussed briefly in context of the results of the fieldwork and subsequent laboratory analysis.

1) What Were the Depositional and Soil-forming Sequences for the Different Survey Areas?

The excavations conducted in support of the project can help to address this question within the Kamokalā Ridge survey areas where 10 excavation units were carried out. Documentation of the subsurface characteristics indicate that soil forming sequences in the Kamokalā Ridge survey area have resulted in shallow sedimentary deposition and soil formation. For example, excavation units carried out at IA003 (TU 1, 2, and 4) all terminated at bedrock between 39 and 55 cmbs with some excavations at IA008 reaching slightly deeper (70 cmbs). The typical stratigraphic sequence in an excavation unit included a well-developed A horizon consisting of organic material and aeolian sediment on top of an eroding B horizon. [redacted]

Importantly, the evidence from the excavations at Kamokalā Ridge demonstrates that depositional processes in the area [redacted]. Finally, it should be noted that areas in Kamokalā Ridge have been affected by feral goat activity and PMRF allows hunting with prior approval by the Installation Commanding Officer. Therefore, it is likely that some of the sites in the survey area experience disturbance from bioturbation from feral goats,other wildlife, and hunting.

2) Are Archaeological Deposits Present and, If So, What Past Activities Do They Document?

The 12 newly recorded sites identified during the pedestrian survey are indicative of past landscape use ranging from traditional Hawaiian habitation and agriculture to historic era ranching and military activities [redacted].

[redacted] Given the presence of *kukui* endocarps recovered in some of the test units, it is possible that aboriculture was an important part of the subsistence activities practiced in the Kamokalā Ridge area. It is becoming increasingly recognized that Hawaiian traditional aboriculture involving *kukui* and breadfruit, for example, has been underestimated (Lincoln et al. 2024). Given that this part of Kaua‘i has received little attention archaeologically—and that many of the rock walls and alignments and other features extend further into areas that were outside the scope of this investigation—expanding survey beyond these boundaries could prove useful in identifying how local agroforestry and other food production systems developed.

[redacted] Of particular importance from a research perspective is the acquisition

of a full suite of short-lived charcoal samples for radiocarbon dating from stratified contexts in TU 1, 2, 7, and 10. Continued research designed to minimize impact with directed testing may be warranted in future research plans.

3) If Burials or Human Skeletal Remains Are Encountered During the Archaeological Survey, What Are Their Contexts and Conditions?

No burials or secondarily deposited human skeletal remains were encountered during the project.

NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILITY AND HRS CHAPTER 6E SIGNIFICANCE RECOMMNEDATIONS

This section presents the NRHP eligibility and HRS Chapter 6E significance recommendations for the 12 newly identified sites. It should be noted that the criteria between the Federal NRHP and Hawaii HRS Chapter 6E assessment guidelines differ slightly in language and therefore each site is treated separately in terms of their eligibility for both.

Overall, the archaeological resources at Kamokalā Ridge and Main Base (southern portion) have much to contribute to our understanding of either traditional use of the inland portions of Kauaʻi for agricultural and habitation purposes or WWII activities. Based on results from both pedestrian survey and subsurface investigation in this area, one of the sites meet NRHP Criterion A and HRS criteria d and e (50-30-05-2000) in that is contributes to an event important in American history. Eight of the sites located at Kamokalā Ridge are eligible for Criterion D of the NRHP in that they have or are likely to yield "information important for research on prehistory or history" and HRS Chapter 6E Criteria d and e. These recommendations are presented separately below.

NRHP Eligibility Recommendations

This section presents NRHP eligibility recommendations for the 12 newly and six previously recorded sites (Table 58). The recommendations discuss theme, context, association, criteria, and integrity, where appropriate, following the guidelines in National Register Bulletin 15 (NRB 15: 1997).

Table 57. National Register of Historic Place and HRS Chapter 6E Significance Status for the 12 Newly and 6 Previously Recorded Sites During the Survey.

Site #	Description	Feature Time Period	NRHP Criteria	HRS Chapter 6E Criteria
IA001	Rock wall	Late pre-Contact/early historic	D	d, e
IA002	Rock wall and enclosure complex	Late pre-Contact/early historic	D	d, e
IA003	Midden, overhangs, retaining walls complex	Late pre-Contact/early historic	D	d, e

Site #	Description	Feature Time Period	NRHP Criteria	HRS Chapter 6E Criteria
IA004	Platform and modified outcrop	Late pre-Contact/early historic	D	d, e
IA005	Modified rock wall	Late pre-Contact/early historic/historic	None	None
IA006	Retaining wall and terrace complex	Late pre-contact/early historic	D	d, e
IA007	Basalt quarry	Late pre-contact/early historic	D	d, e
IA008	Retaining wall and terrace complex	Late pre-Contact/early historic/historic	D	d, e
IA009	Historic refuse area	Historic	None	None
IA010	Rock mound	Late pre-Contact/early historic	D	d, e
IA011	Former Shooting Range	Historic	None	None
IA0012	Push pile and historic refuse area	Historic	None	None
50-30-01-2042	Trash deposit	Historic	None	None
50-30-01-2049	Trash deposit	Historic	None	None
50-30-05-0652	Rock mound	Historic	None	None
50-30-05-0653	Rock mounds	Historic	None	None
50-30-05-0658	Rock mounds	Historic	None	None
50-30-05-2000	WWII “Bathhouse complex”	Historic	None	None

SITES ELIGIBLE FOR INCLUSION IN THE NRHP UNDER CRITERION D

Eight of the 12 newly recorded sites (IA001-IA004, IA006-IA008, and IA010) are recommended eligible for inclusion in the NRHP under Criterion D. These sites are all related to agricultural activities in the upland areas of Kaua‘i and therefore have the potential to provide information important for research within the theme of agricultural practices during the Hawaiian pre-Contact or early post-Contact Period. The historic context for these sites is the development of agricultural practices in upland Kaua‘i and the Hawaiian Islands more generally. In recent years, the trajectory of expansion of agriculture into the interior

island landscapes of Hawai‘i has received considerable research attention (see Morrison et al. 2022; Quintus et al. 2023), however very little research on the topic has been conducted on the island of Kaua‘i.

Therefore, the eight previously recorded sites are recommended as eligible for inclusion in the NRHP under significance Criterion D because they offer the potential to answer questions about the timing of use of Hawai‘i’s interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. These sites all retain the integrity of location, design, material, and setting to help convey the significance of the site’s characteristics in relationship to the historic context of agricultural development in the Hawaiian Islands. These eight sites are not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion A), nor are they associated with a person of historical significance or have that association with the activities, events, etc., for which the person is important (Criterion B), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C).

SITES NOT ELIGIBLE FOR INCLUSION IN THE NRHP

Three ewly recorded (IA005, IA009, and IA012) and six previously recorded sites (50-30-01-2042, 50-30-01-2049, 50-30-05-0652, 50-30-05-0653, 50-30-05-0658, 50-30-05-2000) are recommended as not eligible for inclusion in the NRHP. None of these sites described below are associated with important events that have made a significant contribution to the broad patterns of our history (Criterion A), nor are they associated with a person of historical significance or have that association with the activities, events, etc., for which the person is important (Criterion B), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C). Furthermore, these sites do not have the potential to yield important information about history or prehistory (Criterion D).

IA005 is a historically modified rock wall identified in the Kamokalā Ridge survey area. The site was probably related to agricultural activities in the upland areas of Kaua‘i but has since been altered during the historic period to include two concrete culverts perhaps to allow for water control. The alterations to the wall have resulted in a loss of integrity and therefore the site is not recommended as eligible for NRHP criteria A, B, C, or D.

IA009 is a temporally mixed refuse area identified in the Kamokalā Ridge survey area and includes a variety of disposed historic and modern material, including vehicles, appliances, large metal pipes, and concentrations of broken glass, metal, and plastic. The site lacks any contextual information, is not related to the base’s mission, and contains no historically significant materials, and therefore does not meet NRHP criteria A, B, C, or D.

IA012 is a temporally mixed refuse area at Main Base (northern portion). The site lacks any contextual information, is not related to the base’s mission, and contains no historically significant materials, and therefore does not meet NRHP criteria A, B, C, or D.

Site 50-30-01-2042 is a is a temporally mixed refuse area at Main Base (northern portion) that was probably related to a number of different agricultural, historical, and military activities. The site lacks any contextual information, is not related to the base’s mission, and contains no historically significant materials, and therefore does not meet NRHP criteria A, B, C, or D.

Site 50-30-01-2049 is a trash deposit at Main Base (northern portion) that was probably related to a number of different agricultural, historical, and military activities. The site lacks any contextual information, is not related to the base's mission, and contains no historically significant materials, and therefore does not meet NRHP criteria A, B, C, or D.

Sites 50-30-05-0652, 50-30-05-0653, and 50-30-05-0658 are all rock mounds found at Kamokalā Ridge that are known to have been used traditionally or historically for growing crops or from clearing areas for agriculture. These were interpreted by McGerty and Spear (1997:41) as "agricultural in function, stemming from the late pre-Contact to early historic period. Excavations uncovered nothing that might specifically define their purpose or time period. Nothing historic was found directly associated with the mounds." As such, McGerty and Spear (1997:41) noted that "sufficient data has been recovered from Sites 652 through 658 so that they may be considered no longer significant." These sites have been determined not eligible for inclusion in the NRHP (SEARCH 2012:138).

Site 50-30-05-2000, a historic WWII bathing complex was previously determined not eligible for listing on the NRHP (Wulzen et al. 1997) and we agree with this recommendation. Although information recovered during this project helps to better document when the site was built and who built it, the complex itself provides little relevant important information to make the site significant under Criterion A, B, C, or D.

HRS CHAPTER 6E SIGNIFICANCE RECOMMENDATIONS

This section presents the HRS Chapter 6E significance recommendations for the 12 sites and follows the guidelines for recommendations of significance presented in HAR 13-284-6(b).

Eight newly (IA001-IA004, IA006-IA008, IA010 are recommended significant under HRS Chapter 6E using Criteria d and e. With respect to their significance under Criterion d, Sites IA001-IA004, IA006-IA008, and IA010 are all related to agriculture in the upland areas of Kaua'i during the Hawaiian pre-Contact or early post-Contact Period. The importance of expansion of agriculture from coastal settings into the upslope interior environments of Hawai'i has been the focus of recent research projects (see Morrison et al. 2022; Quintus et al. 2023), however the island of Kaua'i has not received much attention. The results of surface survey and subsurface testing at these sites indicate that they have the potential to provide valuable information for comparison with studies that have been conducted on O'ahu and Hawai'i Island. Archaeological data from Sites IA001-IA004, IA006-IA008, and IA010 offer the potential to answer questions about the historical trajectory of use of Hawai'i's interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. For this reason, these sites are recommended significant under Criterion d. These eight sites are recommended significant under Criterion e because they offer important value to the native Hawaiian people due to associations with cultural practices related to agriculture and other cultural practices once carried out at these sites. *[Placeholder text for Criterion "e" consultation. What did consultation with OHA and knowledgeable native Hawaiian individuals and groups say about important associations with their history and cultural identity.]*

The sites all retain the integrity of location, design, material, and setting to help convey the significance of the site in relationship to the historic context of agricultural development in the Hawaiian Islands. These sites are not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values (Criterion c).

SITES RECOMMENDED NOT SIGNIFICANT UNDER HRS CHAPTER 6E

Four new (IA005, IA009, IA011, and IA012) and six previously recorded (50-30-05-2000, 50-30-01-2042, 50-30-01-2049, 50-30-05-0652, 50-30-05-0653, 50-30-05-0658) sites are recommended as not significant under HRS Chapter 6E.

IA005 is a historically modified rock wall identified in the Kamokalā Ridge survey area. The site was probably related to agricultural activities in the upland areas of Kauaʻi but has since been modified during the historic period to include two concrete culverts perhaps to allow for water control. While the site is significant NRHP Criteria D for its association with the development of agriculture in Kauaʻi's upland areas, the alterations to the wall have resulted in a loss of integrity and is therefore not recommended eligible under HRS 6E.

Site 50-30-05-2000, a historic WWII bathing complex was previously determined not eligible for listing on the NRHP (Wulzen et al. 1997). Although new information was acquired during the survey to provide more precise information about when the site was built and who constructed it, there is very little information potential to make the site significant under Criterion a, b, c, d, or e.

Historic Refuse Areas

Sites IA009, IA012, 50-30-01-2042, and 50-30-01-2049 are historic refuse areas. These sites lack any contextual information, are not related to the base's mission, and contains no historically significant materials, and therefore dos not meet criteria under HRS Chapter 6E. Furthermore, these sites contain refuse collected from different parts of the base resulting in a mixture of materials of differing of ages and functions. None of these sites are associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values (Criterion c). Furthermore, these sites have not yielded nor are they likely to yield information important for research on prehistory or history (Criterion d), nor do the sites offer important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the properties or due to associations with traditional beliefs, events or oral accounts--these associations being important to the group's history and cultural identity (Criterion e).

Rock Mounds

Sites 50-30-05-0652, 50-30-05-0653, and 50-30-05-0658 are rock mound sites. It is unclear if these mounds are related to historical agricultural activities in the upland areas of Kauaʻi and they have no other connecting features. As a result of the limited amount of information that is known or can potentially be learned from the sites, they are recommended as not significant under HRS Chapter 6E. These site are not associated with important events that have made a significant contribution to the broad patterns of our history (Criterion a), nor are they associated with the lives of persons important in our past (Criterion b), nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values (Criterion c). Furthermore, these sites have not yielded nor are they likely to yield information important for research on prehistory or history (Criterion d), nor do these sites offer important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the properties or due to associations with traditional beliefs, events or oral accounts--these associations being important to the group's history and cultural identity (Criterion e).

RECOMMENDATIONS

The eight newly recorded sites are recommended as eligible for inclusion in the NRHP and recommended as significant under HRS Chapter 6E have the potential to provide important information about the prehistory and history of Kauaʻi and Hawaiʻi more generally. The eight newly recorded sites are likely part of a more comprehensive system of agricultural infrastructure that extends beyond the boundaries of the current project area and offer an important opportunity to understand the timing of Hawaiian settlement into interior landscapes on Kauaʻi. Additionally, this agricultural landscape has the potential for providing comparative information useful for documenting the trajectory of this process across the Hawaiian archipelago. Excavations conducted within a rockshelter (IA003) attest to the high preservation of organic material, an often rarely recovered class of artifact. *[Placeholder text from Criterion "e" consultation about significance to them.]* General and site-specific recommendations are provided below to aid in future planning, including suggestions for mitigation measures that might be appropriate if future projects are found to have effects on these sites.

GENERAL RECOMMENDATIONS

This section provides general recommendations for managing the sites discussed in this report. The Navy has established guidelines in place for caring for historic properties that should also include the following actions:

1. Develop procedures with DLNR Land Division and SHPD that integrate NHPA and HRS Chapter 6E-8 project review on leaseholds and easement lands. During the term of the Navy's lease on the lands where these sites are located, project effects from Navy undertakings will need to be reviewed under NHPA and HRS Chapter 6E-8 due to the overlapping jurisdictions of these two laws. By developing such process, the Navy and DLNR Land Division can ensure timely review under both requirements.

2. Incorporate the newly recorded sites in the ICRMP. Update archaeology sensitivity areas in ICRMP based on results of this AIS. Develop research questions about PMRF's inland sites and the area around them and include these questions in a formal research design as part of PMRF's ICRMP to guide subsequent archaeological investigations. Doing this will facilitate the continued implementation of protective measures prescribed by the PMRF ICRMP Standard Operating Procedures:

   SOP #4 *NHPA Section 106 Compliance,* which requires NHPA Section 106 review by PMRF CRM of all proposed undertakings;

   SOP #5 *ARPA Compliance*, which describes how PMRF enforces ARPA to protect archaeological resources;

   SOP #6 *Native Hawaiian Consultation*, which describes how PMRF will conduct consultation regarding historic properties with OHA and Native Hawaiian Organizations;

   SOP #7 *Management of Historic Properties*, which requires PRMF CRM to activate the Section 106 consultation process consistent with the 2012 COMNAVREG HI PA should Navy undertakings potentially have effects or adverse effects on these sites;

SOP #8 *Monitoring During Construction and/or Ground Disturbing Activities*, which requires archaeological monitoring during construction and/or ground disturbing activities in areas of potential effects identified as archaeologically sensitive areas;

SOP #9 *Inadvertent Discovery of Archaeological Remains*, which establishes procedures to protect, evaluate, and mitigate adverse effects to archaeological resources, if necessary;

SOP #10 *Inadvertent Discovery of Human Remains* which establishes procedures to follow in the event of an inadvertent discovery of human remains, including NAGPRA consultation if necessary.

TRADITIONAL HAWAIIAN SITES AT KAMOKALĀ RIDGE

In addition to the general recommendations discussed above, Sites IA001-IA004, IA006-IA008, and IA010 at Kamokalā Ridge are associated with [redacted] in the upland areas of Kaua‘i during the Hawaiian pre-Contact or early post-Contact Period and therefore have the potential to provide information important for research on these activities. It is recommended that preservation action be taken that includes avoidance and protection. If there is the potential for use or impact of the area in proximity to the site, archaeological data recovery in the form of mapping, surface collection, and possibly excavation and analysis of any recovered materials should take place. Recommendations and treatments should follow guidance presented in PMRF's most up to date ICRMP and any general management plans for the installation, including appropriate community consultation as determined necessary. Based the information potential and cultural value of these sites, they are recommended for preservation. Therefore, a preservation plan in compliance with HAR Section 13-277 should be prepared and submitted to the SHPD for review and acceptance. This preservation plan should be incorporated into PMRF's ICRMP, and standard operating procedures in the PMRF ICRMP. If it is determined in the future that unavoidable impacts to any of these sites will occur archaeological data recovery should take place. Recommendations and treatments should follow guidance presented in PMRF's most up to date ICRMP and any general management plans for the installation, including appropriate community consultation as determined necessary.

SUMMARY OF RECOMMENDATIONS

Overall, eight sites were newly recorded (IA1001-IA004, IA006-IA008, IA010) at Kamokalā [redacted]. These are all likely part of a more comprehensive and integrated system of agricultural infrastructure that extends beyond the boundaries of the current project area.

All of these sites offer an important opportunity to understand the timing of Hawaiian settlement into interior landscapes on Kaua‘i, with this agricultural landscape having the potential to provide comparative information useful for documenting the trajectory of this process across the Hawaiian archipelago. The importance of expansion of agriculture from coastal settings into the upslope interior environments of Hawai‘i has been the focus of recent research projects (see Morrison et al. 2022; Quintus et al. 2023); however, the island of Kaua‘i has not received much attention. The results of surface survey and subsurface testing at these sites indicate that they have the potential to provide valuable information for comparison with studies that have been conducted on O‘ahu and Hawai‘i Island.

Therefore, these eight newly recorded sites are recommended as eligible for inclusion in the NRHP under significance Criterion D because they offer the potential to answer questions about the timing of use of Hawai‘i's interior areas, the expansion and intensification of agriculture and its relationship to political

economy, and the importance of aboriculture within the overall subsistence regime. These sites all retain the integrity of location, design, material, and setting to help convey the significance of the site's characteristics in relationship to the historic context of agricultural development in the Hawaiian Islands.

Archaeological data from Sites IA001-IA004, IA006-IA008, and IA010 offer the potential to answer questions about the historical trajectory of use of Hawai'i's interior areas, the expansion and intensification of agriculture and its relationship to political economy, and the importance of aboriculture within the overall subsistence regime. For this reason, these sites are also recommended significant under HRS Chapter 6E Criterion d. These eight sites are also recommended significant under HRS Chapter 6E Criterion e because they offer important value to the native Hawaiian people due to associations with cultural practices related to agriculture and other cultural practices once carried out at —at these sites. As a result of these findings, it is recommended that the information from this study be incorporated into PMRF's ICRMP and the boundaries for the re-located sites be updated in PMRF's and SHPD's records. Finally, a series of research questions about PMRF's inland sites should be integrated into a formal research design as part of PMRF's ICRMP and/or other management documents so that the importance of these inland resources can be acknowledged and further examined during subsequent archaeological investigations.

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GLOSSARY OF HAWAIIAN WORDS

Hawai‘ian Spelling*	Definition
‘a‘ali‘i	Hawai‘ian hopseed, *Dodonaea viscosa*; native shrubs and small trees
‘alae	mudhen or Hawai‘ian gallinule, *Gallinula chloropus sandvicensis*
`alaae	Water-soluble colloidal ocherous earth, used for coloring salt, for medicine, for dye, and formally in the purification ceremony called hi‘uwai; any red coloring matter.
ahupua‘a	land division usually extending from the uplands to the sea, so called because the boundary was marked by a heap (*ahu*) of stones surmounted by an image of a pig (*pua‘a*), or because a pig or other tribute was laid on the altar as tax to the chief
heiau	temple, shrine
hi‘aloa	small, downy, American weed, *Waltheria indica* var. *americana*; leaves and inner bark of root are very bitter and are used for tea or chewed to relieve sore throat
kukui	candlenut, *Aleurites* moluccanus; a flowering tree in the spurge family, Euphorbiaceae, the official state tree of Hawaii and considered a “canoe plant” brought by Polynesians during their voyages to different islands
kiawe	invasive species of mesquite tree, *Prosopis pallida*; a spreading bush or moderately sized tree with spines and spikes of greenish-yellow flowers, and long pods filled with small brown seeds.
koa	the largest of native forest trees (*Acacia koa*), with light gray bark, crescent-shaped leaves, and white flowers in small, round heads
konohiki	headman of an ahupua‘a land division under the chief
loko	pond, lake, pool
makaloa	a perennial sedge, *Cyperus laevigatus*
mauka	toward the mountain, or inland
moena makaloa	the fashioning of mats and other articles
neki	great bulrush
poi	a Hawaiian dish made from the fermented root of the taro which has been baked and pounded to a paste
pu‘uone	pond near the shore connected to the sea by a stream or ditch; sand dune

* Adapted from Mary K. Pukui and Samuel H. Elbert, 1986, *Hawai‘ian Dictionary*, University of Hawai‘i Press, Honolulu, unless otherwise noted.

APPENDIX A:
CATALOG LIST

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
EvZ001	[redacted]							Metal canteen	1	311.01	EvZ	11/30/2023 10:21:26
EvZ004								Basalt flake	1	101.7	EvZ	12/19/2023 12:36:28
GOF001	5							Ceramic insulator	1	277.1	GOF	11/8/2023 14:37:25
GOF002								Charcoal	-	0.96	GOF	12/13/2023 17:14:13
GOF003.01								*Aleurites moluccana* endocarp	-	21.51	GOF	1/18/2024 12:49:00
GOF003.02								Waterworn basalt pebble manuport	13	106.41	GOF	1/18/2024 12:49:00
GOF003.03								Vegetal remains	-	0.25	GOF	1/18/2024 12:49:00
GOF003.04								Ochre fragment	2	0.02	GOF	1/18/2024 12:49:00
GOF005								Basalt shatter	2	32.02	BVC	1/19/2024 10:03:33
GOF006								Charcoal	-	0.81	BVC	1/19/2024 10:03:33
GOF007								Charcoal	-	0.26	BVC	1/19/2024 10:03:33
GOF008								Charcoal	-	3.87	BVC	1/19/2024 10:03:33
GOF009.01								Charcoal	-	4.98	BVC	1/19/2024 10:03:33
GOF009.02								Seed	-	0.04	BVC	1/19/2024 10:03:33

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
GOF009.03	[redacted]							Echinoidea	-	0.19	BVC	1/19/2024 10:03:33
GOF009.04								Littoraria pintado	-	0.17	BVC	1/19/2024 10:03:33
GOF009.05								Faunal remains	-	-	BVC	1/19/2024 10:03:33
GOF009.06								Nerita picea	-	0.22	BVC	1/19/2024 10:03:33
GOF010.01								Faunal remains	-	-	GOF	1/19/2024 14:33:35
GOF010.02								Waterworn basalt pebble manuport	5	8.14	GOF	1/19/2024 14:33:35
GOF010.03								Volcanic glass fragment	1	0.3	GOF	1/19/2024 14:33:35
GOF010.04								Basalt flake	3	18.29	GOF	1/19/2024 14:33:35
GOF010.05								Basalt shatter	3	3.46	GOF	1/19/2024 14:33:35
GOF011.01								Bone fishhook fragment	1	0.1	GOF	1/19/2024 14:36:01
GOF011.02								Basalt point	1	13.8	GOF	1/19/2024 14:36:01
GOF012								Charcoal	-	105.24	GOF	1/22/2024 10:10:12
GOF013.01								Charcoal	-	1.86	GOF	1/22/2024 10:13:59
GOF013.02								Faunal remains	-	-	GOF	1/22/2024 10:13:59

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
GOF013.03	IA008							Echinoidea	-	0.05	GOF	1/22/2024 10:13:59
GOF013.04	IA008							Nondiagnostic gastropod	-	0.07	GOF	1/22/2024 10:13:59
GOF014 .01	IA008							Faunal remains	-	-	GOF	1/22/2024 10:15:57
GOF014 .02	IA008							Coral manuport	7	14.05	GOF	1/22/2024 10:15:57
GOF015	IA008							Charcoal	-	27.26	GOF	1/22/2024 12:55:06
GOF016.01	IA008							Faunal remains	-	-	GOF	1/22/2024 12:57:04
GOF016.02	IA008							Cypraeidae	-	0.25	GOF	1/22/2024 12:57:04
GOF016.03	IA008							Coral manuport	-	2.45	GOF	1/22/2024 12:57:04
GOF017.01	IA008							Charcoal	-	0.1	GOF	1/22/2024 12:59:17
GOF017.02	IA008							Faunal remains	-	-	GOF	1/22/2024 12:59:17
GOF017.03	IA008							Aleurites moluccana endocarp	-	0.1	GOF	1/22/2024 12:59:17
GOF018	IA008							Charcoal	-	0.44	GOF	1/25/2024 15:00:37
GOF020.01	IA008							Charcoal	-	0.08	GOF	1/25/2024 15:43:04
GOF020.02	IA008							Faunal remains	-	-	GOF	1/25/2024 15:43:04

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
GOF020.03	IA008						-	Coral manuport	3	3.76	GOF	1/25/2024 15:43:04
GOF020.04	IA008						-	Polished basalt flake	1	67.66	GOF	1/25/2024 15:43:04
GOF020.05	IA008						-	Basalt flake	1	1.53	GOF	1/25/2024 15:43:04
GOF020.06	IA008						-	Echinoidea	-	0.54	GOF	1/25/2024 15:43:04
GOF020.07	IA008						-	Fire-cracked rock	1	42.7	GOF	1/25/2024 15:43:04
GOF020.08	IA008						-	Basalt shatter	4	3.86	GOF	1/25/2024 15:43:04
GOF020.09	IA008						-	Volcanic glass flake	1	0.93	GOF	1/25/2024 15:43:04
GOF020.10	IA008						-	Volcanic glass shatter	1	0.03	GOF	1/25/2024 15:43:04
GOF021	IA008						-	Charcoal	-	1.57	GOF	1/25/2024 15:44:31
GOF022.01	IA008						-	Faunal remains	-	-	GOF	1/25/2024 15:46:12
GOF022.02	IA008						-	Charcoal	-	0.95	GOF	1/25/2024 15:46:12
GOF022.03	IA008						-	Echinoidea	-	1.16	GOF	1/25/2024 15:46:12
GOF022.04	IA008						-	Waterworn basalt pebble manuport	3	11.81	GOF	1/25/2024 15:46:12
GOF022.05	IA008						-	Basalt flake	6	4.17	GOF	1/25/2024 15:46:12

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
GOF022.06	IA008							Possible hematite fragment	3	4.93	GOF	1/25/2024 15:46:12
GOF022.07	IA008							Basalt shatter	15	51.64	GOF	1/25/2024 15:46:12
GOF022.08	IA008							Drupa morum	-	4.1	GOF	1/25/2024 15:46:12
GOF022.09	IA008							Cypraeidae	-	0.18	GOF	1/25/2024 15:46:12
GOF022.10	IA008							Coral manuport	5	2.67	GOF	1/25/2024 15:46:12
GOF022.11	IA008							Coral abrader	1	21.28	GOF	1/25/2024 15:46:12
GOF023.01	IA008							Faunal remains	-	-	GOF	1/25/2024 15:48:03
GOF023.02	IA008							Charcoal	-	32.89	GOF	1/25/2024 15:48:03
GOF023.03	IA008							Echinoidea	-	3.04	GOF	1/25/2024 15:48:03
GOF023.04	IA008							chinometra oblonga	-	0.07	GOF	1/25/2024 15:48:03
GOF023.05	IA008							Volcanic glass flake	1	0.05	GOF	1/25/2024 15:48:03
GOF023.06	IA008							Nerita picea	-	0.08	GOF	1/25/2024 15:48:03
GOF023.07	IA008							Terrestrial snail	-	0.01	GOF	1/25/2024 15:48:03
GOF023.08	IA008							Monetaria caputserpentis	-	1.94	GOF	1/25/2024 15:48:03

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
GOF023.09	IA008	09	[redacted]					Aleurites moluccana endocarp	-	0.59	GOF	1/25/2024 15:48:03
GOF023.10	IA008	09						Polished basalt shatter	1	0.14	GOF	1/25/2024 15:48:03
GOF023.11	IA008	09						Basalt shatter	2	11.18	GOF	1/25/2024 15:48:03
GOF024	IA008	09						Charcoal	-	2.17	GOF	1/25/2024 15:50:17
GOF025	IA008	09						Basalt shatter	1	54.52	GOF	1/25/2024 15:52:07
GOF026	IA008	09						Polished basalt shatter	1	92.02	GOF	1/25/2024 15:54:22
GOF027	IA008	09						Charcoal	-	18.87	GOF	1/25/2024 15:56:13
GOF028.01	IA008	09						Faunal remains	-	-	GOF	1/26/2024 10:36:07
GOF028.02	IA008	09						Basalt flake	1	31.68	GOF	1/26/2024 10:36:07
GOF028.03	IA008	09						Waterworn basalt pebble manuport	2	6.94	GOF	1/26/2024 10:36:07
GOF029	IA008	09						Charcoal	-	7.16	GOF	1/26/2024 10:40:49
GOF030	IA008	09						Charcoal	-	4.96	GOF	1/26/2024 10:49:05
GOF031.01	IA008	09						Charcoal	-	0.04	GOF	1/26/2024 11:03:19
GOF031.02	IA008	09						Faunal remains	-	-	GOF	1/26/2024 11:03:19

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
GOF031.03	IA008							Echinoidea	-	0.45	GOF	1/26/2024 11:03:19
GOF031.04	IA008							Waterworn basalt pebble manuport	5	43.17	GOF	1/26/2024 11:03:19
JMG001	IA003							Hematite octopus lure sinker	1	56.79	JMG	11/16/2023 7:35:56
JMG002.01	IA003							Cypraeidae	-	0.76	JMG	11/16/2023 7:38:39
JMG002.02	IA003							Drupa morum	-	20.89	JMG	11/16/2023 7:38:39
JMG002.03	IA003							Siphonaria sp.	-	0.3	JMG	11/16/2023 7:38:39
JMG003	IA003							Mercury dime	1	2.46	JMG	11/16/2023 7:40:57
JMG004.01	IA003							Basalt flake	1	86.2	JMG	11/16/2023 7:43:03
JMG004.02	IA003							Basalt flake	1	22.2	JMG	11/16/2023 7:43:03
JMG005	N/A							Waterworn basalt cobble manuport	1	204.47	JMG	11/17/2023 7:44:55
JMG008.01	N/A							Glass bottle	1	502.6	JMG	12/7/2023 15:08:01
JMG008.02	N/A							Glass bottle	1	754.3	JMG	12/7/2023 15:08:01
JMG009	N/A							Coral abrader	1	16.26	JMG	12/7/2023 15:16:07
JMG010	N/A							Glass bottle	1	95.43	JMG	12/7/2023 15:24:53

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG011	N/A	[redacted]						Waterworn basalt cobble manuport	1	276.39	JMG	12/7/2023 15:21:32
JMG012	IA003							Faunal remains	-	-	JMG	12/14/2023 15:47:05
JMG013	IA003							Possible Pandanus sp. mat fragment	4	2.48	JMG	12/14/2023 15:48:21
JMG014	IA003							Vegetal remains	-	0.09	JMG	12/14/2023 15:50:32
JMG015.01	IA003							Gourd fragment	10	2.28	JMG	12/14/2023 15:52:32
JMG015.02	IA003							Cocos nucifera endocarp	-	9.85	JMG	12/14/2023 15:52:32
JMG016	IA003							Basalt shatter	1	12.9	JMG	12/14/2023 15:53:57
JMG017	IA003							Volcanic glass shatter	1	0.34	JMG	12/14/2023 15:55:26
JMG018	IA003							Charcoal	-	7.34	JMG	12/14/2023 15:56:42
JMG019.01	IA003							Charcoal	-	1.16	JMG	12/14/2023 15:59:25
JMG019.02	IA003							Crustacea	-	0.02	JMG	12/14/2023 15:59:25
JMG019.03	IA003							Chiton sp.	-	0.34	JMG	12/14/2023 15:59:25
JMG019.04	IA003							Monetaria caputserpentis	-	3.71	JMG	12/14/2023 15:59:25
JMG019.05	IA003							Cypraeidae	-	14.53	JMG	12/14/2023 15:59:25

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG019.06	IA003	[redacted]						Echinoidea	-	2.67	JMG	12/14/2023 15:59:25
JMG019.07	IA003							Echinometra mathaei	-	0.06	JMG	12/14/2023 15:59:25
JMG019.08	IA003							Aleurites moluccana endocarp	-	45.78	JMG	12/14/2023 15:59:25
JMG019.09	IA003							Littoraria pintado	-	2.15	JMG	12/14/2023 15:59:25
JMG019.10	IA003							Nerita picea	-	0.73	JMG	12/14/2023 15:59:25
JMG019.11	IA003							Cellana sp.	-	0.95	JMG	12/14/2023 15:59:25
JMG019.12	IA003							Colobocentrotus atratus	-	0.25	JMG	12/14/2023 15:59:25
JMG019.13	IA003							Sistrum ricinus	-	1.4	JMG	12/14/2023 15:59:25
JMG019.14	IA003							Terrestrial snail	-	0.01	JMG	12/14/2023 15:59:25
JMG019.15	IA003							cf. Lagenaria siceraria seed	10	0.28	JMG	12/14/2023 15:59:25
JMG019.16	IA003							Siphonaria sp.	-	5.43	JMG	12/14/2023 15:59:25
JMG019.17	IA003							Nondiagnostic gastropod	-	0.76	JMG	12/14/2023 15:59:25
JMG019.18	IA003							Basalt flake	5	36.64	JMG	12/14/2023 15:59:25
JMG019.19	IA003							Basalt shatter	9	5.8	JMG	12/14/2023 15:59:25

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG019.20	IA003							Waterworn basalt pebble manuport	1	2.11	JMG	12/14/2023 15:59:25
JMG019.21	IA003							Gourd fragment	2	0.19	JMG	12/14/2023 15:59:25
JMG019.22	IA003							Modified gourd fragment	1	0.05	JMG	12/14/2023 15:59:25
JMG019.22	IA003							Cocos nucifera endocarp	1	0.34	JMG	12/14/2023 15:59:25
JMG020	IA003							Gourd stopper with cordage	1	4.43	JMG	12/15/2023 14:18:06
JMG021	IA003							Modified bone	1	1.28	JMG	12/15/2023 14:19:17
JMG022.01	IA003							Faunal remains	-	-	JMG	12/15/2023 14:21:25
JMG022.02	IA003							Echinometra oblonga	-	0.59	JMG	12/15/2023 14:21:25
JMG022.03	IA003							Volcanic glass flake	4	1.08	JMG	12/15/2023 14:21:25
JMG022.04	IA003							Gourd fragment	3	1.59	JMG	12/15/2023 14:21:25
JMG022.05	IA003							Volcanic glass shatter	2	0.57	JMG	12/15/2023 14:21:25
JMG022.05	IA003							Aleurites moluccana endocarp	-	0.08	JMG	12/15/2023 14:21:25
JMG023	IA003							Charcoal	-	2.2	JMG	12/15/2023 14:23:44
JMG024.01	IA003							Faunal remains	-	-	JMG	12/15/2023 14:24:49

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG024.02	IA003							Echinoidea	-	0.6	JMG	12/15/2023 14:24:49
JMG024.03	IA003							Charcoal	-	1.49	JMG	12/15/2023 14:24:49
JMG024.04	IA003							Chiton sp.	-	0.16	JMG	12/15/2023 14:24:49
JMG024.05	IA003							cf. Lagenaria siceraria seed	3	0.09	JMG	12/15/2023 14:24:49
JMG024.06	IA003							chinometra mathaei	-	0.11	JMG	12/15/2023 14:24:49
JMG024.07	IA003							Nerita picea	-	0.08	JMG	12/15/2023 14:24:49
JMG024.08	IA003							Cypraeidae	-	4.9	JMG	12/15/2023 14:24:49
JMG024.09	IA003							Monetaria caputserpentis	-	0.84	JMG	12/15/2023 14:24:49
JMG024.10	IA003							Siphonaria sp.	-	1.96	JMG	12/15/2023 14:24:49
JMG024.11	IA003							leurites moluccana endocarp	-	3.21	JMG	12/15/2023 14:24:49
JMG024.12	IA003							Nondiagnostic gastropod	-	0.22	JMG	12/15/2023 14:24:49
JMG024.13	IA003							Gourd fragment	4	0.13	JMG	12/15/2023 14:24:49
JMG024.14	IA003							Coral manuport	1	2.23	JMG	12/15/2023 14:24:49
JMG024.15	IA003							Nondiagnostic gastropod	-	1.74	JMG	12/15/2023 14:24:49

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG024.16	IA003	[redacted]						Basalt flake	3	21.25	JMG	12/15/2023 14:24:49
JMG024.17	IA003							Seed	1	0.04	JMG	12/15/2023 14:24:49
JMG025	IA003							Charcoal	-	17.04	JMG	12/18/2023 16:33:42
JMG026.01	IA003							Faunal remains	-	-	JMG	12/18/2023 16:37:59
JMG026.02	IA003							Charcoal	-	1.11	JMG	12/18/2023 16:37:59
JMG026.03	IA003							Echinoidea	-	1.3	JMG	12/18/2023 16:37:59
JMG026.04	IA003							Basalt flake	1	1.61	JMG	12/18/2023 16:37:59
JMG026.05	IA003							Cypraeidae	-	5.11	JMG	12/18/2023 16:37:59
JMG026.06	IA003							cf. Lagenaria siceraria seed	1	0.01	JMG	12/18/2023 16:37:59
JMG026.07	IA003							Aleurites moluccana endocarp	-	3.54	JMG	12/18/2023 16:37:59
JMG026.08	IA003							Brachidontes crebristriatus	-	0.08	JMG	12/18/2023 16:37:59
JMG026.09	IA003							Siphonaria sp.	-	0.37	JMG	12/18/2023 16:37:59
JMG026.10	IA003							Volcanic glass flake	2	0.22	JMG	12/18/2023 16:37:59
JMG026.11	IA003							Nondiagnostic gastropod	-	0.35	JMG	12/18/2023 16:37:59

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG026.12	IA003							Littoraria pintado	-	0.82	JMG	12/18/2023 16:37:59
JMG026.13	IA003							Basalt shatter	3	2.49	JMG	12/18/2023 16:37:59
JMG026.14	IA003							Seed	3	0.09	JMG	12/18/2023 16:37:59
JMG027.01	IA003							Charcoal	-	0.25	JMG	12/18/2023 16:41:01
JMG027.02	IA003							Nerita picea	-	1.01	JMG	12/18/2023 16:41:01
JMG027.03	IA003							Volcanic glass flake	2	1.1	JMG	12/18/2023 16:41:01
JMG027.04	IA003							Volcanic glass shatter	5	1.72	JMG	12/18/2023 16:41:01
JMG027.05	IA003							Aleurites moluccana endocarp	-	0.15	JMG	12/18/2023 16:41:01
JMG027.06	IA003							Cellana sp.	-	0.11	JMG	12/18/2023 16:41:01
JMG027.07	IA003							Drupa morum	-	0.3	JMG	12/18/2023 16:41:01
JMG027.08	IA003							Rapaninae	-	3.82	JMG	12/18/2023 16:41:01
JMG027.09	IA003							Faunal remains	-	-	JMG	12/18/2023 16:41:01
JMG027.10	IA003							Echinoidea	-	0.83	JMG	12/18/2023 16:41:01
JMG027.11	IA003							Monetaria caputserpentis	-	30.32	JMG	12/18/2023 16:41:01

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG027.12	IA003	[redacted]						Brachidontes crebristriatus	-	0.21	JMG	12/18/2023 16:41:01
JMG027.13	IA003							Echinometra oblonga	-	0.17	JMG	12/18/2023 16:41:01
JMG027.14	IA003							Littoraria pintado	-	1.04	JMG	12/18/2023 16:41:01
JMG027.15	IA003							Pearlshell fishhook fragment	1	0.47	JMG	12/18/2023 16:41:01
JMG027.16	IA003							Gourd fragment	5	1.15	JMG	12/18/2023 16:41:01
JMG027.17	IA003							Siphonaria sp.	-	0.34	JMG	12/18/2023 16:41:01
JMG027.18	IA003							Aleurites moluccana endocarp	-	33.51	JMG	12/18/2023 16:41:01
JMG027.19	IA003							Cellana sandwicensis	-	1.23	JMG	12/18/2023 16:41:01
JMG027.20	IA003							Nondiagnostic gastropod	-	0.49	JMG	12/18/2023 16:41:01
JMG027.21	IA003							Terrestrial snail	-	0.23	JMG	12/18/2023 16:41:01
JMG027.22	IA003							Heterocentrotus mamillatus	-	0.13	JMG	12/18/2023 16:41:01
JMG027.23	IA003							Cypraeidae	-	1.79	JMG	12/18/2023 16:41:01
JMG028.01	IA003							Volcanic glass flake	1	0.27	JMG	12/19/2023 15:06:17
JMG028.02	IA003							Echinoidea	-	0.15	JMG	12/19/2023 15:06:17

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG028.03	IA003							Monetaria caputserpentis	-	0.24	JMG	12/19/2023 15:06:17
JMG028.04	IA003							Cypraeidae	-	0.31	JMG	12/19/2023 15:06:17
JMG028.05	IA003							Nondiagnostic gastropod	-	0.11	JMG	12/19/2023 15:06:17
JMG028.06	IA003							Aleurites moluccana endocarp	-	0.09	JMG	12/19/2023 15:06:17
JMG028.07	IA003							Chiton sp.	-	0.08	JMG	12/19/2023 15:06:17
JMG028.08	IA003							Fire-cracked rock	1	10.01	JMG	12/19/2023 15:06:17
JMG028.09	IA003							Basalt flake	1	0.64	JMG	12/19/2023 15:06:17
JMG029	IA003							Charcoal	-	1.01	JMG	12/19/2023 15:07:53
JMG030	IA003							Basalt shatter	1	17.49	JMG	12/20/2023 14:52:08
JMG031	IA003							Basalt shatter	1	12.78	JMG	12/20/2023 14:53:50
JMG032	IA003							Retouched basalt flake	1	175.34	JMG	12/20/2023 14:55:24
JMG033	IA003							Basalt adze preform	1	28.23	JMG	12/20/2023 14:56:57
JMG034	IA003							Waterworn basalt pebble manuport	1	82.84	JMG	12/20/2023 14:58:13
JMG035	IA003							Basalt shatter	1	13.24	JMG	12/20/2023 15:16:56

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG036	IA003	[redacted]						Charcoal	-	31.52	JMG	12/21/2023 10:55:44
JMG037	IA003							Charcoal	-	4.42	JMG	12/21/2023 10:57:13
JMG038	IA003							Faunal remains	-	-	JMG	12/21/2023 11:08:52
JMG039.01	IA003							Basalt flake	7	155.94	JMG	12/21/2023 11:10:40
JMG039.02	IA003							Basalt shatter	16	125.07	JMG	12/21/2023 11:10:40
JMG039.03	IA003							Seed	2	0.06	JMG	12/21/2023 11:10:40
JMG039.04	IA003							Conus sp.	-	4.23	JMG	12/21/2023 11:10:40
JMG039.05	IA003							Isognomon sp.	-	0.23	JMG	12/21/2023 11:10:40
JMG039.06	IA003							Pinctada sp.	-	0.37	JMG	12/21/2023 11:10:40
JMG039.07	IA003							Cypraeidae	-	1.69	JMG	12/21/2023 11:10:40
JMG039.08	IA003							Coral manuport	1	2.23	JMG	12/21/2023 11:10:40
JMG039.09	IA003							Faunal remains	-	-	JMG	12/21/2023 11:10:40
JMG039.10	IA003							Charcoal	-	0.45	JMG	12/21/2023 11:10:40
JMG040.01	IA003							Chert flake	1	1.48	JMG	12/21/2023 13:16:04

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG040.02	IA003	[redacted]						Hematite fragment	1	1.42	JMG	12/21/2023 13:16:04
JMG041.01	IA003							Conus sp.	-	2.26	JMG	12/21/2023 13:24:14
JMG041.02	IA003							Seed	1	0.02	JMG	12/21/2023 13:24:14
JMG041.03	IA003							Basalt shatter	1	2.26	JMG	12/21/2023 13:24:14
JMG041.04	IA003							Basalt flake	4	30.13	JMG	12/21/2023 13:24:14
JMG041.05	IA003							Volcanic glass flake	1	0.39	JMG	12/21/2023 13:24:14
JMG042	IA003							Charcoal	-	8.83	JMG	12/21/2023 13:26:24
JMG043.01	IA008							Aleurites moluccana endocarp	-	37.33	JMG	1/5/2024 14:45:46
JMG043.02	IA008							Waterworn basalt pebble manuport	3	23.29	JMG	1/5/2024 14:45:46
JMG044.01	IA008							Waterworn basalt pebble manuport	1	131.13	JMG	1/5/2024 14:47:37
JMG044.02	IA008							Modified basalt	1	588.2	JMG	1/5/2024 14:47:37
JMG045.01	IA008							Aleurites moluccana endocarp	-	0.25	JMG	1/5/2024 14:49:55
JMG045.02	IA008							Waterworn basalt pebble manuport	2	8.11	JMG	1/5/2024 14:49:55
JMG046.01	IA008							Coral manuport	1	25.81	JMG	1/19/2024 14:36:20

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG046.02	IA008							Waterworn basalt pebble manuport	1	17.29	JMG	1/19/2024 14:36:20
JMG047.01	IA008							Faunal remains	-	-	JMG	1/19/2024 14:38:38
JMG047.02	IA008							Waterworn basalt pebble manuport	3	2.41	JMG	1/19/2024 14:38:38
JMG047.03	IA008							Seed	-	4.69	JMG	1/19/2024 14:38:38
JMG047.04	IA008							Waterworn basalt cobble manuport	1	55.88	JMG	1/19/2024 14:38:38
JMG047.05	IA008							Terrestrial snail	-	0.1	JMG	1/19/2024 14:38:38
JMG047.06	IA008							Charcoal	-	11.98	JMG	1/19/2024 14:38:38
JMG047.07	IA008							Coral manuport	5	16.21	JMG	1/19/2024 14:38:38
JMG047.08	IA008							Possible hematite fragment	7	4.26	JMG	1/19/2024 14:38:38
JMG047.09	IA008							Basalt flake	4	14.35	JMG	1/19/2024 14:38:38
JMG047.10	IA008							Basalt shatter	17	46.04	JMG	1/19/2024 14:38:38
JMG048	IA008							Charcoal	-	0.97	JMG	1/23/2024 8:35:03
JMG049	IA008							Charcoal	-	2.8	JMG	1/23/2024 9:52:16
JMG050	N/A							Glass ink well	1	100.43	JMG	1/24/2024 9:56:33

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG051.01	IA003							Echinoidea	-	0.37	JMG	12/13/2023 0:00:00
JMG051.02	IA003							Echinometra oblonga	-	0.01	JMG	12/13/2023 0:00:00
JMG051.03	IA003							Cellana sp.	-	0.42	JMG	12/13/2023 0:00:00
JMG051.04	IA003							Brachidontes crebristriatus	-	0.02	JMG	12/13/2023 0:00:00
JMG051.05	IA003							Littoraria pintado	-	0.52	JMG	12/13/2023 0:00:00
JMG051.06	IA003							Faunal remains	-	-	JMG	12/13/2023 0:00:00
JMG051.07	IA003							cf. Lagenaria siceraria seed	11	0.13	JMG	12/13/2023 0:00:00
JMG051.08	IA003							Aleurites moluccana endocarp	-	10.53	JMG	12/13/2023 0:00:00
JMG051.09	IA003							Volcanic glass flake	2	0.28	JMG	12/13/2023 0:00:00
JMG051.10	IA003							Gourd fragment	1	0.04	JMG	12/13/2023 0:00:00
JMG051.11	IA003							Basalt flake	1	3.71	JMG	12/13/2023 0:00:00
JMG051.12	IA003							Milled wood	-	107.71	JMG	12/13/2023 0:00:00
JMG051.13	IA003							Human fingernail	1	0.01	JMG	12/13/2023 0:00:00
JMG051.14	IA003							Volcanic glass shatter	1	0.05	JMG	12/13/2023 0:00:00

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG051.15	IA003							Basalt shatter	4	3.89	JMG	12/13/2023 0:00:00
JMG051.16	IA003							Seed	3	0.09	JMG	12/13/2023 0:00:00
JMG052.01	IA003							Faunal remains	-	-	JMG	12/18/2023 0:00:00
JMG052.02	IA003							Brachidontes crebristriatus	-	0.02	JMG	12/18/2023 0:00:00
JMG052.03	IA003							Cellana sp.	-	0.15	JMG	12/18/2023 0:00:00
JMG052.04	IA003							Echinoidea	-	0.12	JMG	12/18/2023 0:00:00
JMG052.05	IA003							chinometra mathaei	-	0.03	JMG	12/18/2023 0:00:00
JMG052.06	IA003							Crustacea	-	0.08	JMG	12/18/2023 0:00:00
JMG052.07	IA003							leurites moluccana endocarp	-	0.12	JMG	12/18/2023 0:00:00
JMG052.08	IA003							Volcanic glass flake	1	0.11	JMG	12/18/2023 0:00:00
JMG052.09	IA003							Basalt shatter	4	0.79	JMG	12/18/2023 0:00:00
JMG052.10	IA003							Charcoal	-	54.3	JMG	12/18/2023 0:00:00
JMG053.01	IA003							cf. Lagenaria siceraria seed	8	0.13	JMG	12/13/2023 0:00:00
JMG053.02	IA003							Cellana sp.	-	0.08	JMG	12/13/2023 0:00:00

Cat. No.	Site No.	Surface Fea. No.	Test Unit	Layer	Level	Depth	Subsurface Fea. No.	Contents	Count	Weight (g)	Recorder	Date
JMG053.03	IA003	[redacted]						Brachidontes crebristriatus	-	0.21	JMG	12/13/2023 0:00:00
JMG053.04	IA003							Echinoidea	-	0.59	JMG	12/13/2023 0:00:00
JMG053.05	IA003							Nerita picea	-	0.09	JMG	12/13/2023 0:00:00
JMG053.06	IA003							Sistrum ricinus	-	0.96	JMG	12/13/2023 0:00:00
JMG053.07	IA003							Cypraeidae	-	0.42	JMG	12/13/2023 0:00:00
JMG053.08	IA003							Volcanic glass flake	3	0.1	JMG	12/13/2023 0:00:00
JMG053.09	IA003							Basalt shatter	4	0.81	JMG	12/13/2023 0:00:00
JMG053.10	IA003							Charcoal	-	63.62	JMG	12/13/2023 0:00:00
JMG053.11	IA003							Faunal remains	-	-	JMG	12/13/2023 0:00:00
JMG053.12	IA003							Echinometra mathaei	-	0.02	JMG	12/13/2023 0:00:00
JMG053.13	IA003							Seed	1	0.05	JMG	12/13/2023 0:00:00

APPENDIX B:
RADIOCARBON RESULTS

The University of Georgia

Center for Applied Isotope Studies

RADIOCARBON ANALYSIS REPORT

May 7, 2024

Darby Filimoehala
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2081 Yong Street
Honolulu, HI 96826

Dear Dr. Filimoehala,

Enclosed please find the results of ^{14}C Radiocarbon analyses and Stable Isotope Ratio $\delta^{13}C$ analyses for the samples received by our laboratory on April 5, 2024.

UGAMS#	Sample ID	Material	$\delta^{13}C$,‰	^{14}C age, years BP	±	pMC	±
69177	IA202241.JMG023	charcoal	-11.03	410	25	94.99	0.29
69178	IA202241.GOF030	charcoal	-10.75	170	25	97.9	0.29
69179	IA202241.GOF018	charcoal	-10.71	250	25	96.92	0.3

The charcoal sample was treated following the acid/alkali/acid (AAA) protocol involving three steps: (1) an acid treatment (1N HCl at 80°C for 1 hour) to remove secondary carbonates and acid-soluble compounds; (2) an alkali (NaOH) treatment; and (3) a second acid treatment (HCl) to remove atmospheric CO2. Sample was thoroughly rinsed with deionized water between each step, and the pretreated sample was dried at 105ºC. For accelerator mass spectrometry analysis the cleaned samples were combusted at 900°C in evacuated / sealed ampoules in the presence of CuO.
The resulting carbon dioxide was cryogenically purified from the other reaction products and catalytically converted to graphite using the method of Vogel *et al*. (1984) Nuclear Instruments and Methods in Physics Research B5, 289-293.
Graphite $^{14}C/^{13}C$ ratios were measured using the CAIS 0.5 MeV accelerator mass spectrometer. The sample ratios were compared to the ratio measured from the Oxalic Acid I (NBS SRM 4990).
The sample $^{13}C/^{12}C$ ratios were measured separately using a stable isotope ratio mass spectrometer and expressed as $\delta^{13}C$ with respect to PDB, with an error of less than 0.1‰.
The quoted uncalibrated dates have been given in radiocarbon years before 1950 (years BP), using the ^{14}C half-life of 5568 years. The error is quoted as one standard deviation and reflects both statistical and experimental errors. The date has been corrected for isotope fractionation.

Sincerely,

Alexander Cherkinsky, Ph.D.
Senior Research Scientist

The University of Georgia

Center for Applied Isotope Studies

RADIOCARBON ANALYSIS REPORT

June 11, 2024

Darby Filimoehala
International Archaeology, LLC
2081 Yong Street
Honolulu, HI 96826

Dear Dr. Filimoehala,

Enclosed please find the results of ^{14}C Radiocarbon analyses and Stable Isotope Ratio $\delta^{13}C$ analyses for the samples received by our laboratory on May 21, 2024.

UGAMS#	Sample ID	Material	$\delta^{13}C$,‰	^{14}C age, years BP	±	pMC	±
69993	IA202241.JMG019.22	charcoal	-25.25	320	20	96.1	0.26

The charcoal sample was treated following the acid/alkali/acid (AAA) protocol involving three steps: (1) an acid treatment (1N HCl at 80°C for 1 hour) to remove secondary carbonates and acid-soluble compounds; (2) an alkali (NaOH) treatment; and (3) a second acid treatment (HCl) to remove atmospheric CO2. Sample was thoroughly rinsed with deionized water between each step, and the pretreated sample was dried at 105ºC. For accelerator mass spectrometry analysis the cleaned samples were combusted at 900°C in evacuated / sealed ampoules in the presence of CuO.
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The quoted uncalibrated dates have been given in radiocarbon years before 1950 (years BP), using the ^{14}C half-life of 5568 years. The error is quoted as one standard deviation and reflects both statistical and experimental errors. The date has been corrected for isotope fractionation.

Sincerely,

Alexander Cherkinsky, Ph.D.
Senior Research Scientist

APPENDIX C:
BONY ELEMENTS CONSIDERED FOR FISH TAXONOMIC IDENTIFICATIONS

Neurocranium	Branchiocranium	Appendicular	Vertebral Column/Caudal	Fins and others
Basioccipital	Articular	Basipterygium	Atlas vertebra	Dorsal spine
Parasphenoid	Ceratohyal	Cleithrum	Anterior vertebra	Dorsal spine and pterygiophore
Posttemporal	Dentary	Coracoid	Posterior vertebra	Pterygiophore
Vomer	Epihyal	Scapula	Antepenultimate	Ray
	Hyomandibular	Supracleithrum	Penultimate	Rib
	Maxilla		Ultimate vertebra	Scale
	Opercular		Hypural	
	Palatine			
	Premaxilla			
	Preopercular			
	Quadrate			
	Urohyal			

Scientific Name	Common Name	Element(s)	Average Number Per Fish
Acanthuridae	Surgeonfish	1st dorsal ptery. and spine	1
		1st ventral ptery. and spine	1
		Caudal peduncular spine	2–4
		Caudal peduncular keel (*Naso* sp.)	2
Anguilliformes	Eel	Premaxillo-ethmo-vomer	1
Balistidae	Triggerfish	1st dorsal spine	1
		2nd dorsal spine	1
		Pterygial carina	1
		Scale	?
		Teeth	14
Carangidae	Jack, Pompano, Jack Mackerel, Runner, and Scad	Scute	27
Diodontidae	Porcupinefish	Dermal spine (burr)	250
Elasmobranchii	Shark	Teeth, vertebra	100, 70
	Ray	Dental plate, spine	2, 2
Holocentridae	Squirrelfish, Soldierfish	Anal spine	1
Labridae	Wrasse	Lower pharyngeal	1
		Upper pharyngeal	2
Lethrinidae	Emperor	Teeth	48
Monacanthidae	Filefish	1st dorsal spine	1
Ostraciidae	Boxfish, Cofferfish, Cowfish and Trunkfish	Scale	150
Scaridae	Parrotfish	4th epibranchial	2
		Lower pharyngeal	1
		Upper pharyngeal	2
Scombridae	Mackerel, Tuna, and Bonito	Keel	2–3
		Urostyle (fused hypurals)	1

APPENDIX D:
EDXRF DATA

EDXRF Analysis Report

UHH Geoarchaeology Lab

Sample List: basalt vg and hematite
Analysis Technique: Linear
Method File: C:\...\Methods\10-21 Methods\10-21-Kauai PMRF KPGO IARII 202241.mth
Analyzed: 06/27/24 10:54:22
Last Calibrated: 10/01/21 09:15:16
Software version: 7.2 (Build 134)

Conditions

High Zb

Voltage	50 kV	Current	Auto
Livetime	250 seconds	Counts Limit	0
Filter	Cu Thick	Atmosphere	Vacuum
Maximum Energy	40 keV	Count Rate	Medium
Warmup time	0 seconds		

Mid Za

Voltage	16 kV	Current	Auto
Livetime	200 seconds	Counts Limit	0
Filter	Pd Thin	Atmosphere	Vacuum
Maximum Energy	20 keV	Count Rate	Medium
Warmup time	0 seconds		

Mid Zc

Voltage	28 kV	Current	Auto
Livetime	250 seconds	Counts Limit	0
Filter	Pd Thick	Atmosphere	Vacuum
Maximum Energy	40 keV	Count Rate	Medium
Warmup time	0 seconds		

Low Za

Voltage	6 kV	Current	Auto
Livetime	200 seconds	Counts Limit	0
Filter	No Filter	Atmosphere	Vacuum
Maximum Energy	10 keV	Count Rate	Medium
Warmup time	0 seconds		

Results

Element	Concentration	Peak (cps/mA)	Background (cps/mA)
JMG-001 PMRF site IA 003 Feature 01 surface polished and grooved hematite sinker 56.79g			
Na2O	1 %	-10	156
MgO	1.6573 %	604	348
Al2O3	10.2037 %	9360	-9
SiO2	39.6903 %	40835	-2080
P2O5	0.4044 %	3405	-52
S	1126.6 ppm	3106	443
K2O	0.2856 %	173	106
CaO	0.8407 %	357	109
TiO2	0.8034 %	1403	646
V	152.7 ppm	98	413
Cr	493.3 ppm	366	335
MnO	[-20.0] ppm	43	601
Fe	17.766 %	207917	3691
Ni	10.9 ppm	24	48
Cu	59.8 ppm	9	14
Zn	172.9 ppm	29	9
Rb	231.9 ppm	223	247
Sr	97.2 ppm	108	22
Y	0 ppm	0	56
Zr	88.3 ppm	104	94
Nb	6.2 ppm	7	147
Mo	0 ppm	0	241
Ba	32 ppm	5	87
La	0 ppm	0	119
Ce	[24] ppm	2	140

Pb	7.3 ppm	2	10

JMG-032 PMRF site IA 003 Feature 01 surface large unpolished basalt flake pa 175.34g

Na2O	3 %	-32	205
MgO	3.710 %	1019	509
Al2O3	14.7612 %	21293	-455
SiO2	51.874 %	111934	-5911
P2O5	0.7693 %	5567	-517
S	722.8 ppm	2143	1004
K2O	2.738 %	534	13
CaO	8.472 %	2729	-77
TiO2	3.1826 %	1815	53
V	166.5 ppm	34	344
Cr	0 ppm	0	79
MnO	1947.8 ppm	475	80
Fe	7.675 %	31284	409
Ni	10.0 ppm	7	24
Cu	19.6 ppm	10	22
Zn	140.7 ppm	60	19
Rb	60.17 ppm	154	58
Sr	1307.9 ppm	3825	43
Y	38.27 ppm	112	161
Zr	307.9 ppm	1030	799
Nb	88.3 ppm	292	342
Mo	3.0 ppm	10	624
Ba	863.2 ppm	518	227
La	109 ppm	34	338
Ce	216 ppm	53	389
Pb	5.52 ppm	5	18

JMG-019.18 PMRF site IA 003 Feature EVZ 002 TU1 Layer I-1 15-34cmbd basalt flake dense medium grained with some primary cortex qa 34.62g

Na2O	5 %	-51	257
MgO	3.109 %	995	613
Al2O3	15.970 %	26748	-923
SiO2	52.311 %	121639	-6807
P2O5	0.7305 %	5337	-518
S	717.5 ppm	2131	1260
K2O	2.5742 %	548	13
CaO	7.926 %	2779	-83
TiO2	2.9462 %	1835	53
V	154.5 ppm	35	364
Cr	0 ppm	0	85
MnO	1862.3 ppm	497	83
Fe	7.943 %	35229	450
Ni	8.4 ppm	6	25
Cu	23.8 ppm	12	21
Zn	126.6 ppm	57	17
Rb	55.50 ppm	150	62
Sr	1294.3 ppm	3992	45
Y	46.18 ppm	143	164
Zr	287.9 ppm	1013	844
Nb	84.3 ppm	294	361
Mo	[1.3] ppm	4	645
Ba	956.7 ppm	585	233
La	115 ppm	37	353
Ce	187 ppm	46	418
Pb	5.14 ppm	5	20

JMG-033 PMRF site IA 003 Feature EVZ 002 surface basalt small adze preform da 28.23

Na2O	2 %	-15	149
MgO	4.379 %	1541	306
Al2O3	12.9818 %	17417	-548
SiO2	48.253 %	97999	-5273
P2O5	0.5886 %	4496	-287
S	2289.5 ppm	5880	735
K2O	0.8127 %	172	33
CaO	10.905 %	3868	-162
TiO2	2.2153 %	1368	88
V	334.2 ppm	75	250

Cr	271.7 ppm	71	82
MnO	1655.0 ppm	441	94
Fe	8.897 %	38648	523
Ni	104.8 ppm	79	19
Cu	44.2 ppm	18	20
Zn	146.8 ppm	61	13
Rb	16.48 ppm	44	51
Sr	523.0 ppm	1470	49
Y	24.27 ppm	68	125
Zr	109.0 ppm	328	428
Nb	24.61 ppm	78	326
Mo	[0.8] ppm	3	552
Ba	307.4 ppm	160	230
La	46 ppm	13	322
Ce	90 ppm	19	378
Pb	1.70 ppm	1	16

GOF-020.04 PMRF Site IA 008 Feature EVZ 006 TU10 Layer I-1 7-20cmbd polished basalt flake pa 67.66g

Na2O	3 %	-35	227
MgO	4.747 %	1983	389
Al2O3	13.8259 %	23679	-800
SiO2	48.681 %	116722	-6033
P2O5	0.2682 %	2597	-140
S	263.5 ppm	1048	1524
K2O	0.5683 %	119	38
CaO	12.821 %	4545	-195
TiO2	2.1220 %	1300	86
V	289.0 ppm	64	244
Cr	261.7 ppm	67	78
MnO	1732.9 ppm	457	92
Fe	9.001 %	38747	489
Ni	106.5 ppm	80	20
Cu	22.9 ppm	11	21
Zn	118.3 ppm	49	13
Rb	14.91 ppm	42	52
Sr	547.4 ppm	1586	46
Y	24.26 ppm	70	127
Zr	114.2 ppm	356	439
Nb	24.57 ppm	80	334
Mo	[2.3] ppm	7	559
Ba	330.8 ppm	176	232
La	40 ppm	11	336
Ce	90 ppm	20	395
Pb	[0.02] ppm	0	18

GOF-026 PMRF Site IA 008 Feature EVZ 006 TU10 Layer I-2 19cmbd polished shatter da azdze turned to fcr 92.02g

Na2O	3 %	-22	151
MgO	8.031 %	1691	325
Al2O3	14.4726 %	16712	-477
SiO2	50.520 %	84240	-4283
P2O5	0.1224 %	1733	16
S	264.4 ppm	1050	1114
K2O	0.7071 %	106	34
CaO	11.979 %	3035	-125
TiO2	2.3903 %	1050	67
V	319.4 ppm	51	197
Cr	292.3 ppm	54	66
MnO	1695.7 ppm	321	81
Fe	9.187 %	28275	404
Ni	99.8 ppm	54	15
Cu	30.8 ppm	10	14
Zn	138.5 ppm	43	10
Rb	14.51 ppm	30	39
Sr	505.9 ppm	1084	34
Y	23.06 ppm	50	92
Zr	105.4 ppm	241	310
Nb	24.51 ppm	59	241
Mo	[0.2] ppm	1	419
Ba	290.4 ppm	126	198
La	[1] ppm	0	286

Ce	[37] ppm	7	334
Pb	[0.86] ppm	1	13

JMG-026.10a PMRF site IA 003 Feature EVZ 002 TU1 Layer I-II-3 44-54cmbd vg 0.1g small

Na2O	3 %	-14	130
MgO	3.0690 %	1123	153
Al2O3	12.1338 %	7442	19
SiO2	48.562 %	52417	-2354
P2O5	0.0430 %	1263	276
S	978.5 ppm	2753	721
K2O	0.4935 %	32	8
CaO	10.230 %	1116	-54
TiO2	2.3850 %	455	17
V	304.1 ppm	21	76
Cr	288.8 ppm	23	18
MnO	1574 ppm	130	19
Fe	8.156 %	11052	135
Ni	87.9 ppm	20	7
Cu	129.4 ppm	19	5
Zn	271.8 ppm	45	3
Rb	6.17 ppm	7	17
Sr	291.5 ppm	315	17
Y	27.06 ppm	29	49
Zr	137.5 ppm	163	124
Nb	14.0 ppm	17	133
Mo	[1.7] ppm	2	219
Ba	50 ppm	4	39
La	64 ppm	3	47
Ce	[29] ppm	1	54
Pb	1.54 ppm	0	5

JMG-026.10b PMRF site IA 003 Feature EVZ 002 TU1 Layer I-II-3 44-54cmbd vg 0.1g small

Na2O	2 %	-12	126
MgO	1.9671 %	656	183
Al2O3	11.0333 %	4591	176
SiO2	44.617 %	31403	-1160
P2O5	0.00570 %	1042	520
S	1312.4 ppm	3550	636
K2O	0.6460 %	30	5
CaO	9.223 %	710	-35
TiO2	2.3636 %	320	14
V	256 ppm	13	56
Cr	364.2 ppm	21	15
MnO	1524 ppm	89	20
Fe	7.951 %	7675	104
Ni	118.0 ppm	20	5
Cu	116.8 ppm	13	4
Zn	342.3 ppm	43	2
Rb	5.10 ppm	5	11
Sr	252.7 ppm	206	15
Y	24.75 ppm	20	36
Zr	122.0 ppm	108	88
Nb	10.0 ppm	9	100
Mo	0 ppm	0	164
Ba	71 ppm	5	30
La	0 ppm	0	40
Ce	[70] ppm	2	44
Pb	[0.32] ppm	0	4

JMG-040.02 PMRF Site IA 003 Feature EVZ 002 TU4 Layer I-2 49cmbd hematite fragment 1.42g

Na2O	0 %	0	83
MgO	1.4532 %	334	278
Al2O3	18.608 %	17909	-840
SiO2	47.657 %	43550	-2429
P2O5	0.03645 %	1224	86
S	555.9 ppm	1745	225
K2O	0.1002 %	18	34
CaO	0.9942 %	155	29
TiO2	4.3093 %	2272	87
V	316 ppm	60	395

Cr	670.9 ppm	148	96
MnO	2978 ppm	662	130
Fe	13.815 %	48929	721
Ni	113.6 ppm	73	12
Cu	199.2 ppm	34	11
Zn	134.2 ppm	26	7
Rb	27.14 ppm	33	52
Sr	158.5 ppm	209	24
Y	17.56 ppm	23	64
Zr	392.8 ppm	599	120
Nb	55.2 ppm	82	158
Mo	0 ppm	0	289
Ba	131 ppm	26	95
La	[32] ppm	3	130
Ce	103 ppm	9	151
Pb	9.57 ppm	4	7

JMG-041.05 PMRF Site IA 003 Feature EVZ 002 TU4 Layer I-II-2 45-55cmbd vg 0.39g

Na2O	2 %	-13	132
MgO	3.885 %	1330	203
Al2O3	12.5733 %	9576	-161
SiO2	48.805 %	61650	-3038
P2O5	0.0631 %	1382	216
S	613.4 ppm	1882	835
K2O	0.3952 %	36	17
CaO	9.807 %	1503	-59
TiO2	2.3902 %	642	35
V	298.4 ppm	29	114
Cr	356.3 ppm	40	36
MnO	1494.7 ppm	174	46
Fe	8.389 %	15946	224
Ni	125.6 ppm	41	9
Cu	115.2 ppm	24	9
Zn	187.3 ppm	43	6
Rb	7.25 ppm	12	23
Sr	280.1 ppm	426	25
Y	28.14 ppm	43	65
Zr	132.3 ppm	220	168
Nb	10.8 ppm	18	179
Mo	0 ppm	0	302
Ba	92 ppm	18	80
La	[28] ppm	3	109
Ce	[44] ppm	4	124
Pb	[0.85] ppm	0	8

JMG-047.08 PMRF Site IA 008 Feature EVZ 006 TU7 Layer I-1 12-30cmbd multiple poss hematite frags 4.26g

Na2O	1 %	-4	81
MgO	2.569 %	458	302
Al2O3	17.113 %	15666	-514
SiO2	52.915 %	64259	-3496
P2O5	0.0743 %	1448	95
S	381.8 ppm	1330	656
K2O	0.9198 %	155	21
CaO	1.7396 %	366	21
TiO2	3.4147 %	1686	75
V	407.2 ppm	73	293
Cr	983.7 ppm	204	74
MnO	665.9 ppm	151	129
Fe	11.138 %	37678	501
Ni	351.8 ppm	212	3
Cu	72.5 ppm	22	20
Zn	200.4 ppm	66	7
Rb	22.89 ppm	46	44
Sr	111.03 ppm	239	37
Y	21.39 ppm	46	93
Zr	190.9 ppm	463	169
Nb	21.77 ppm	53	238
Mo	0 ppm	0	423
Ba	109.2 ppm	41	167
La	[28] ppm	6	226

Ce	59 ppm	9	259
Pb	15.31 ppm	10	10

JMG-051.11 PMRF Site IA 003 Feature EVZ 002 TU1 Layer I-1 15-34cmbd basalt flake pa 3.71g

Na2O	5 %	-46	246
MgO	3.168 %	1181	487
Al2O3	15.039 %	22841	-650
SiO2	51.798 %	114563	-6216
P2O5	0.6973 %	5140	-475
S	622.0 ppm	1903	1029
K2O	2.4972 %	503	10
CaO	7.626 %	2523	-71
TiO2	3.0050 %	1772	50
V	184.4 ppm	39	334
Cr	0 ppm	0	76
MnO	1894.7 ppm	478	74
Fe	7.755 %	32648	411
Ni	6.6 ppm	5	24
Cu	20.7 ppm	10	20
Zn	141.5 ppm	62	16
Rb	57.01 ppm	150	58
Sr	1293.8 ppm	3864	46
Y	37.69 ppm	113	160
Zr	289.4 ppm	987	838
Nb	85.3 ppm	288	344
Mo	0 ppm	0	626
Ba	941.6 ppm	521	212
La	107 ppm	31	316
Ce	214 ppm	48	365
Pb	4.95 ppm	4	19

GOF-011.02tip PMRF Site IA 008 Feature EVZ 006 TU07 Layer I-1 12-80cmbd polished basalt file tip 5.1g

Na2O	2 %	-21	159
MgO	3.509 %	1280	288
Al2O3	13.7804 %	18111	-593
SiO2	50.420 %	102137	-5403
P2O5	0.2997 %	2784	-334
S	1540.7 ppm	4094	577
K2O	0.8258 %	153	25
CaO	9.962 %	3086	-137
TiO2	2.7739 %	1505	53
V	342.0 ppm	67	254
Cr	234.2 ppm	53	62
MnO	1482.8 ppm	349	72
Fe	7.910 %	30591	386
Ni	99.4 ppm	66	18
Cu	118.4 ppm	43	17
Zn	132.1 ppm	52	12
Rb	10.13 ppm	28	44
Sr	360.8 ppm	982	49
Y	33.73 ppm	92	113
Zr	144.1 ppm	431	336
Nb	15.27 ppm	46	309
Mo	0 ppm	0	530
Ba	126.8 ppm	59	217
La	50 ppm	13	291
Ce	55 ppm	11	349
Pb	1.91 ppm	2	15

GOF-011.02base PMRF Site IA 008 Feature EVZ 006 TU07 Layer I-1 12-80cmbd polished basalt file base 8.6g

Na2O	2 %	-19	150
MgO	4.946 %	1268	420
Al2O3	14.6793 %	21495	-727
SiO2	51.192 %	109600	-5787
P2O5	0.1527 %	1913	36
S	407.7 ppm	1392	1216
K2O	0.7832 %	142	32
CaO	9.970 %	3021	-127
TiO2	2.9421 %	1562	56
V	353.4 ppm	68	268

Cr	210.0 ppm	47	70
MnO	1650.4 ppm	378	80
Fe	8.205 %	30895	452
Ni	110.9 ppm	72	17
Cu	119.7 ppm	43	17
Zn	136.4 ppm	54	11
Rb	10.60 ppm	29	45
Sr	354.5 ppm	961	50
Y	32.57 ppm	89	114
Zr	142.5 ppm	425	331
Nb	14.16 ppm	43	314
Mo	0 ppm	0	533
Ba	127.6 ppm	61	220
La	42 ppm	11	304
Ce	71 ppm	14	359
Pb	2.21 ppm	2	15

GOF 020.09 PMRF Site IA 008 Feature EVZ 006 TU10 Layer I-1 7-20cmbd Hematite shatter qa 1.0g

Na2O	1 %	-4	75
MgO	3.184 %	625	222
Al2O3	15.315 %	13996	-231
SiO2	54.341 %	78134	-3888
P2O5	0.0289 %	1179	56
S	299.7 ppm	1134	914
K2O	1.0703 %	122	10
CaO	1.8168 %	262	12
TiO2	4.1159 %	1372	40
V	478 ppm	57	227
Cr	1447.6 ppm	202	44
MnO	294.6 ppm	51	95
Fe	11.301 %	25753	316
Ni	336.3 ppm	137	3
Cu	63.6 ppm	9	8
Zn	173.6 ppm	26	3
Rb	18.45 ppm	17	17
Sr	153.3 ppm	153	14
Y	17.40 ppm	17	42
Zr	201.0 ppm	226	84
Nb	23.1 ppm	26	112
Mo	0 ppm	0	195
Ba	149 ppm	20	58
La	[3] ppm	0	82
Ce	[62] ppm	3	91
Pb	17.96 ppm	5	4

GOF-022.06a PMRF site IA 008 TU10 Layer I-2 20-30cmbd poss hematite frag 2.5g

Na2O	1 %	-4	77
MgO	2.465 %	409	295
Al2O3	16.297 %	14315	-370
SiO2	50.869 %	56992	-3075
P2O5	0.1398 %	1836	102
S	556.4 ppm	1746	695
K2O	1.0871 %	184	18
CaO	1.8696 %	406	22
TiO2	3.3571 %	1661	68
V	371.8 ppm	66	289
Cr	1027.5 ppm	213	76
MnO	926.3 ppm	205	132
Fe	10.845 %	36866	456
Ni	339.0 ppm	205	4
Cu	84.2 ppm	25	18
Zn	173.5 ppm	57	8
Rb	19.95 ppm	41	42
Sr	130.96 ppm	287	37
Y	27.37 ppm	60	95
Zr	179.3 ppm	439	182
Nb	19.74 ppm	48	248
Mo	0 ppm	0	427
Ba	141.4 ppm	53	178
La	40 ppm	8	238

Ce	61 ppm	10	280
Pb	13.05 ppm	8	9

GOF-022.06b PMRF site IA 008 TU 10 Layer I-2 20-30cmbd poss hematite frag 1.8g

Na2O	1 %	-7	109
MgO	3.191 %	855	288
Al2O3	14.9710 %	15905	-486
SiO2	54.531 %	94334	-5078
P2O5	0.1887 %	2126	-149
S	482.2 ppm	1570	675
K2O	0.7579 %	139	21
CaO	1.7535 %	403	19
TiO2	3.4052 %	1828	84
V	417.8 ppm	81	314
Cr	1023.2 ppm	230	76
MnO	271.8 ppm	78	144
Fe	11.717 %	42895	519
Ni	303.8 ppm	199	3
Cu	57.7 ppm	16	18
Zn	263.0 ppm	79	7
Rb	25.42 ppm	45	43
Sr	95.37 ppm	185	35
Y	18.28 ppm	36	89
Zr	195.8 ppm	430	154
Nb	21.3 ppm	47	226
Mo	0 ppm	0	390
Ba	49.0 ppm	13	133
La	0 ppm	0	180
Ce	55 ppm	7	207
Pb	19.09 ppm	11	9

GOF-022.06c PMRF site IA 008 TU 10 Layer I-2 20-30cmbd poss hematite frag 0.5g

Na2O	1 %	-4	55
MgO	2.409 %	317	199
Al2O3	16.369 %	10941	-355
SiO2	50.567 %	42309	-2283
P2O5	0.03833 %	1235	138
S	385.2 ppm	1338	580
K2O	1.717 %	20	0
CaO	2.782 %	46	1
TiO2	5.357 %	181	4
V	527 ppm	6	31
Cr	1788 ppm	25	5
MnO	1164 ppm	17	11
Fe	16.769 %	3745	39
Ni	520.2 ppm	21	-1
Cu	89.5 ppm	2	1
Zn	424.1 ppm	11	0
Rb	13.7 ppm	2	2
Sr	132.2 ppm	23	2
Y	19.9 ppm	3	7
Zr	184.8 ppm	36	14
Nb	17.4 ppm	3	20
Mo	[0.3] ppm	0	34
Ba	171 ppm	4	10
La	[4] ppm	0	13
Ce	[72] ppm	1	15
Pb	14.9 ppm	1	1

GOF-023.10 PMRF site IA 008 Feature EVZ 006 TU 10 Layer I-2 Feature 1 19-32cmbd polished basalt shatter 0.14g very small

Na2O	3 %	-12	110
MgO	1.6196 %	376	197
Al2O3	11.5001 %	4286	101
SiO2	43.3155 %	21351	-746
P2O5	[0.00091] %	1013	488
S	904.0 ppm	2576	688
K2O	0.7035 %	25	6
CaO	10.305 %	608	-31
TiO2	2.3664 %	244	11

V	251 ppm	9	44
Cr	143.8 ppm	6	13
MnO	1554 ppm	69	13
Fe	8.001 %	5871	75
Ni	85.8 ppm	11	4
Cu	43.6 ppm	4	3
Zn	367.7 ppm	40	2
Rb	9.84 ppm	7	10
Sr	422.0 ppm	293	10
Y	19.1 ppm	13	32
Zr	90.5 ppm	66	93
Nb	16.7 ppm	13	85
Mo	[0.8] ppm	1	137
Ba	262 ppm	22	33
La	[3] ppm	0	47
Ce	[59] ppm	2	52
Pb	[0.57] ppm	0	3

BHVO-2 slab 6-11-24.1

Na2O	2 %	-21	172
MgO	6.789 %	2197	399
Al2O3	13.2749 %	18257	-486
SiO2	50.560 %	114518	-5956
P2O5	0.1841 %	2099	-5
S	463.2 ppm	1524	1208
K2O	0.5961 %	120	38
CaO	11.268 %	3795	-157
TiO2	2.7255 %	1598	73
V	351.1 ppm	74	279
Cr	275.9 ppm	68	79
MnO	1592.1 ppm	403	93
Fe	8.455 %	35032	422
Ni	110.4 ppm	79	19
Cu	112.4 ppm	43	18
Zn	118.2 ppm	48	16
Rb	10.87 ppm	31	48
Sr	386.0 ppm	1097	47
Y	25.70 ppm	73	127
Zr	181.4 ppm	576	357
Nb	18.60 ppm	59	329
Mo	2.9 ppm	9	576
Ba	143.3 ppm	74	233
La	34 ppm	10	317
Ce	78 ppm	17	366
Pb	3.06 ppm	3	16

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Cultural Impact Assessment

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Cultural Impact Assessment for Pacific Missile Range Facility (PMRF) and Kōkeʻe Park Geophysical Observatory (KPGO) Real Estate Environmental Impact Statement, Ahupuaʻa of Waimea, Kona Moku, Mokupuni of Kauaʻi

Volume I: Report



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INTERNATIONAL ARCHAEOLOGY, LLC

JULY 2026

CULTURAL IMPACT ASSESSMENT FOR THE PACIFIC MISSILE RANGE FACILITY (PMRF) AND KŌKE‘E PARK GEOPHYSICAL OBSERVATORY (KPGO) ENVIRONMENTAL IMPACT STATEMENT, AHUPUA‘A OF WAIMEA, KONA MOKU, MOKUPUNI OF KAUA‘I

VOLUME I: REPORT

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July 2026

EXECUTIVE SUMMARY

The Navy proposes to retain the use of 8,172 acres of State lands on Kauaʻi, Hawaiʻi, for operational continuity and sustainment (in support of continued military training, testing, and facility operations) at the Pacific Missile Range Facility (PMRF). The National Aeronautics and Space Administration (NASA) proposes to retain the use of 23 acres of State lands on Kauaʻi, Hawaiʻi, in support of continued operations including measurements of the Earth's rotation and local land motion at Kōkeʻe Park Geophysical Observatory (KPGO). The Proposed Action is needed because the existing real estate agreements for these lands are set to expire between 2027 and 2030. The Navy and NASA are considering two action alternatives and the No Action Alternative. Under contract to AECOM Technical Services, Inc., and at the request of Naval Facilities Engineering Systems Command Pacific, International Archaeology, LLC has prepared this cultural impact assessment (CIA). The purpose of this CIA is to analyze the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the Proposed Action to introduce elements which may alter the setting in which cultural practices take place.

This CIA occurred from October 2023 to May 2026 and was carried out in two phases. First, a cultural and historical archival literature review was completed. Next, an ethnographic study, including oral history interviews, was carried out. The collected ethnographic data and past oral histories were then analyzed for relevant patterns to learn and understand cultural practices and beliefs and ultimately to assess the potential that the Proposed Action and No Action Alternative could affect them. Five analytical categories were used to structure the interviews and subsequent data analysis including: (1) *Moʻokūʻauhau* [Genealogy] and *Pilina* [Connection] to *ʻĀina* [Land]; (2) *Meheuheu* or Hawaiian Cultural Traditions and Practices: (3) *Moʻolelo* [Stories] and *Wahi Pana* [Cultural Sites, Legendary Places, and Sacred Sites]; (4) Historic Period [Plantation and Military Era]; and (5) General Comments About the Study Area. Data analysis examined land resources, water resources and cultural practices and beliefs.

Twenty-three cultural consultants were selected to provide information about cultural activities and practices, beliefs, and resources within the study area and vicinity and to identify any potential effects to these activities and resources by the Proposed Action and the No Action Alternative. These individuals provided written consent to include their information in the CIA.

The primary potential impact of the Proposed Action is access to shoreline areas within PMRF for camping, fishing, marine resource gathering, and surfing. The cultural consultants also mentioned the importance of the preservation of *iwi kūpuna* [ancestral remains] on PMRF lands. During the interviews, they also raised additional concerns that may not be affected directly by the Proposed Action; these relate to lack of transparency in the activities carried out by PMRF, poor community relationships between PMRF staff and local community members, and the need to conduct remediation projects to clean up ordnance and contamination.

PMRF currently has guidelines in place for base access including protocols to access shoreline areas for various recreational activities such as fishing and gathering of marne resources. The PMRF Integrated Cultural Resources Management Plan (ICRMP) Standard Operating Procedure (SOP) #16 also provides guidance for public and cultural access permision. Additionally, the PMRF ICRMP describes numerous SOPs providing guidance for preservation, treatment, consultation, and disposition of *iwi kūpuna* across the main installation and State lands. Under the No Action Alternative, these federal protections would no longer be applicable and the State of Hawaiʻi and local community would be responsible for any

preservation, protection, enforcement, and access to cultural resources and/or historic resources including, iwi kūpuna, and any continuance of-monitoring of shoreline areas for natural resources, marine ecosytems health and their patterns.

ACKNOWLEDGEMENTS

The sharing of *ʻike* [recognize, knowledge] and *manaʻo* [thoughts, belief] between people is precious, and it is the *leo* [voice] that brings *ola* [life] to the *moʻolelo* [story]. It is the *leo* of the ethnographic consultants that is required to make this Cultural Impact Assessment [CIA] possible, and therefore *mahalo nui loa* all of you: Aunty Leinaʻala Compoc, Uncle Paul Compoc, Kipi Akana, Kaina Makua, Enoka Karratti, Hena Caberto-Raco, Uncle James Nakaahiki, Sean Andrade, Aʻalona Dela Cruz, Eben Manini, Billy DeCosta, Mike Faye, Christine Faye, Clisson Kunane Aipoalani, Daynette Dee Sumie Puanani Morikawa (Ah Puck), Keith Pomeroy Robinson, Elaine Kuʻulei Momi O Kai Kawaiola Gampong Keamoai, Ronald Dan Kouchi, Val Kane Turalde, C. Pualokelani Harada, Chandlyn Kielepuaalaokalani Harada, and Dennis Eguchi.

A very special *mahalo* to Keao NeSmith who scheduled all the interviews, participated in the interviews, conducted one inteview, and contributed valued pieces of work to the CIA. I greatly appreciated your *ʻike* and *manaʻo* throughout the whole process. *Nā Huakaʻi* [The field trips] and being on the *ʻāina* [land] was the best.

Mahalo to Lilia Merrin for your participation in the interviews, conducting of an interview, the ride to Waiʻawa, and contributing your photos and maps. *Mahalo* also to Hena for the ride to Puʻu ʻŌpae,would not have made it in the rental car.

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I. INTRODUCTION

Under contract to AECOM Technical Services, Inc., and at the request of Naval Facilities Engineering Systems Command Pacific (NAVFAC Pacific), International Archaeology, LLC (IA) has prepared this cultural impact assessment (CIA) to analyze the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices occur at Pacific Missile Range Facility (PMRF), Kaua‘i, Hawai‘i (Figure 1 to Figure 2). The Navy proposes to retain the use of 8,172 acres of State lands on Kaua‘i, Hawai‘i, for operational continuity and sustainment (in support of continued military training, testing, and facility operations) at PMRF. The National Aeronautics and Space Administration (NASA) proposes to retain the use of 23 acres of State lands on Kaua‘i, Hawai‘i, in support of continued operations including measurements of the Earth’s rotation and local land motion at Kōke‘e Park Geophysical Observatory (KPGO). The Proposed Action is needed because the existing real estate agreements for these lands are set to expire between 2027 and 2030. The Navy and NASA are considering two action alternatives and the No Action Alternative. The EIS will evaluate the potential environmental consequences of the Navy’s and NASA’s proposal to retain these State lands.

The Navy’s current real estate agreements with the State of Hawai‘i Department of Land and Natural Resources (DLNR) include 684 acres of leaseholds and 7,488 acres of easement lands, for a total of 8,172 acres. These existing Navy real estate agreements with the DLNR are set to expire between 2027 and 2030. The Navy’s current leases and easements are primarily used for passive encroachment buffers, as well as for mission operations, access, and utilities at the following five general locations: Main Base, Kamokalā Ridge, Mānā Water Well, Miloli‘i Ridge, and Mākaha Ridge. The Navy’s 8,172 acres of leaseholds and easement lands are part of the larger PMRF installation, which also includes 1,933 acres of federally owned fee simple land located adjacent to the State lands, and an open ocean offshore training and testing area comprising over 1,020 square nautical miles of instrumented ocean ranging from depths of 1,800 to 15,000 feet.

NASA currently leases 23 acres of State land for operations at KPGO that consist of collecting geodetic data that contribute to daily measurements of the Earth’s rotation and orientation in space, the terrestrial reference frame, and the motion of the Island of Kaua‘i. NASA issued the Navy a Use Permit in 2016 for portions of KPGO to conduct radar, telemetry, and communications services in support of PMRF activities. In addition to their mission operations, the Navy and NASA also conduct environmental management and protection activities on these lands.

Under Alternative 1 (Succeeding Current Real Estate Agreements), the Navy and NASA would apply to the DLNR to secure new real estate agreements with no change to the current uses in the existing agreements for a minimum duration of 25 years up to a maximum duration as negotiated with DLNR.

Under Alternative 2 (Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds), the Navy and NASA would pursue fee simple acquisition of 700 acres (684–Navy, 16–NASA) of leaseholds, and otherwise obtain use of the remaining acreage as described in Alternative 1.

Under the No Action Alternative, the State of Hawai‘i would not issue the Navy and NASA any real estate agreements for the State lands on Kaua‘i after expiration of the leases and easements between 2027 to 2030. The current real estate agreements for 8,172 acres with the Navy and 23 acres with NASA would expire. Existing infrastructure on Navy and NASA leasehold and easement lands could be removed

or remain in place as determined by negotiations between the parties pursuant to the existing real estate agreements.

PMRF lies in the area called Mānā in the traditional Hawaiian land area or *ahupua'a* [land division usually extending from the uplands to the sea] of Waimea in the district of Kona on Kaua'i. Kona is the largest district on Kaua'i, occupying the entire southwestern half of the island. The Mānā Plain was a clearly delineated geographical zone of human occupation during the prehistoric period. The coastal dune and back beach areas were the setting for temporary fishing camps that were linked to permanent communities at the foothills of the central mountain. Today the residents of the area live on Hawaiian Homelands in a close-knit community and manage vital resources, with schools to educate *nā keiki* [the children] and several cemeteries where the *kūpuna* [ancestors] are close at hand.

This document has been produced in support of Hawai'i Chapter 343 HRS. This CIA provides information that may be used by the Department of Land and Natural Resources (DLNR) to fulfill their Article XII, Section 7 of the Hawaii Constitution obligations. The "study area" of this CIA is the same as the "Cultural Practices Region of Influence" in the EIS. The conclusions of this study are based on the combination of ethnographic and documentary data relating to the study area. The ethnographic data, particularly the oral interviews with consultants completed for this study, demonstrate cultural beliefs, cultural practices, and specifically Native Hawaiian cultural ties to the *moku* [district] of Kona, Kaua'i. The town of Kekaha literally means "the place," and it is "the place" *kanaka* [people] on the west side like to be, especially at the *kahakai* [seashore] to gather and fish for marine resources. It is the westernmost town on Kaua'i with its calcareous sandy beach that runs prominently along its coastline. The westerly 15-mile long beach borders the Mānā Coastal Plain from Polihale near *Ke-one-kani-o-Nohili* [Barking Sands] a prominent area of PMRF to Kekaha (Clark 2002: 158). Figure 1 displays the location of the State land in consideration for retention by the Navy and NASA KPGO and Figure 2 shows the relationship of the larger CIA study area to the State land, PMRF, and NASA KPGO.

Preparation of CIAs, as explained in the State of Hawai'i CIA guidance document (Environmental Council 1997), involves the collection of ethnographic and ethnohistorical documentary information for the purpose of learning and understanding cultural practices and beliefs in order to assess the potential that a proposed action could affect them. The intent of this specific CIA is to present information about past and present cultural practices, beliefs, activities, and resource uses for the Mānā Plains extending to the broader Kona *moku* of Kaua'i. This information is used to analyze the potential effect of the Navy's and NASA's Proposed Action and the No Action Alternative. Twenty-three cultural consultants were selected to provide information about cultural activities and resources within the study area and vicinity and to identify any potential affects to these activities and resources by the Proposed Action. These 23 individuals provided written consent to include their information in the CIA (Volume II, Appendix B).

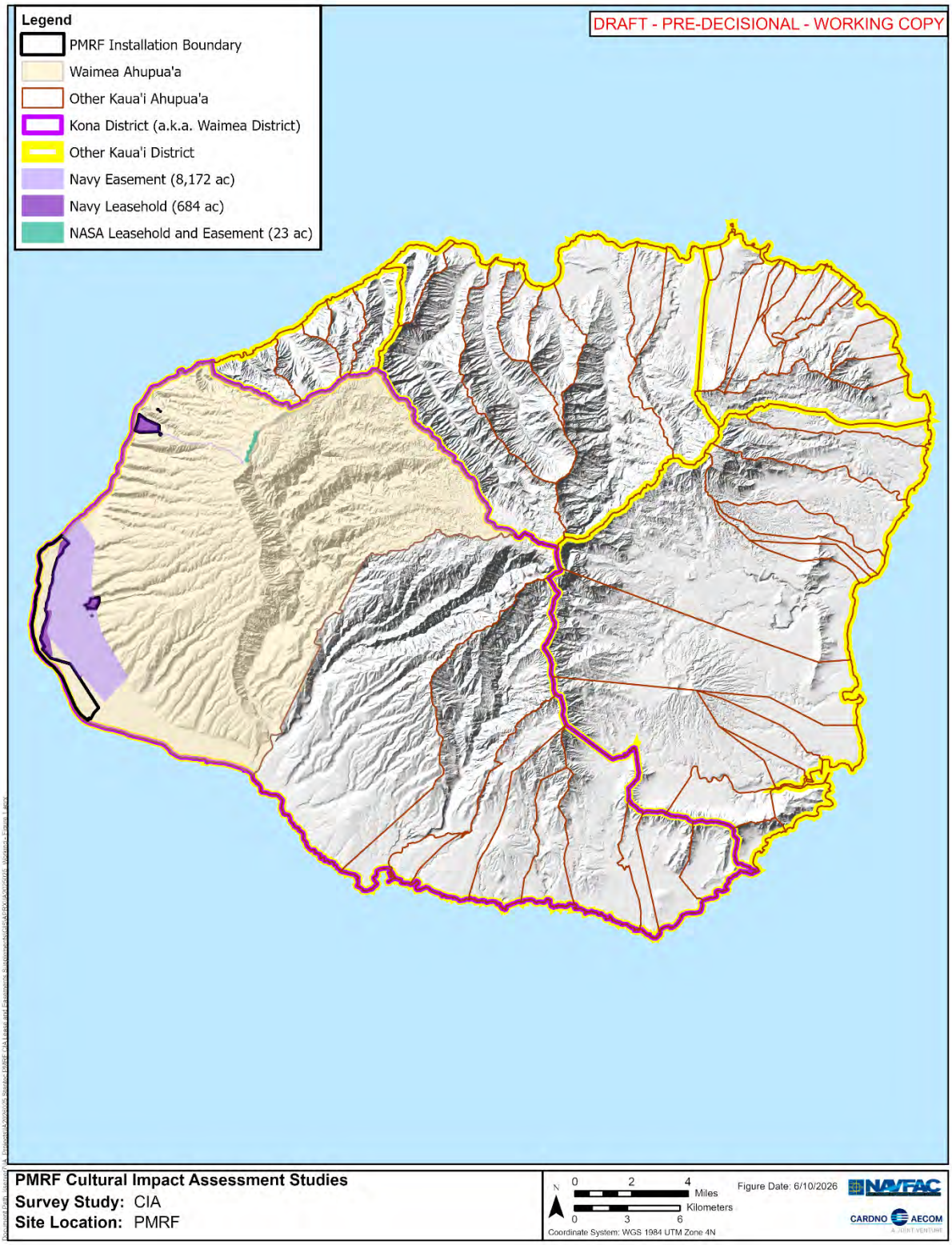


Figure 1. State land under consideration for retention by the Navy and NASA at PMRF and KPGO (respectively) on Kaua‘i Island.

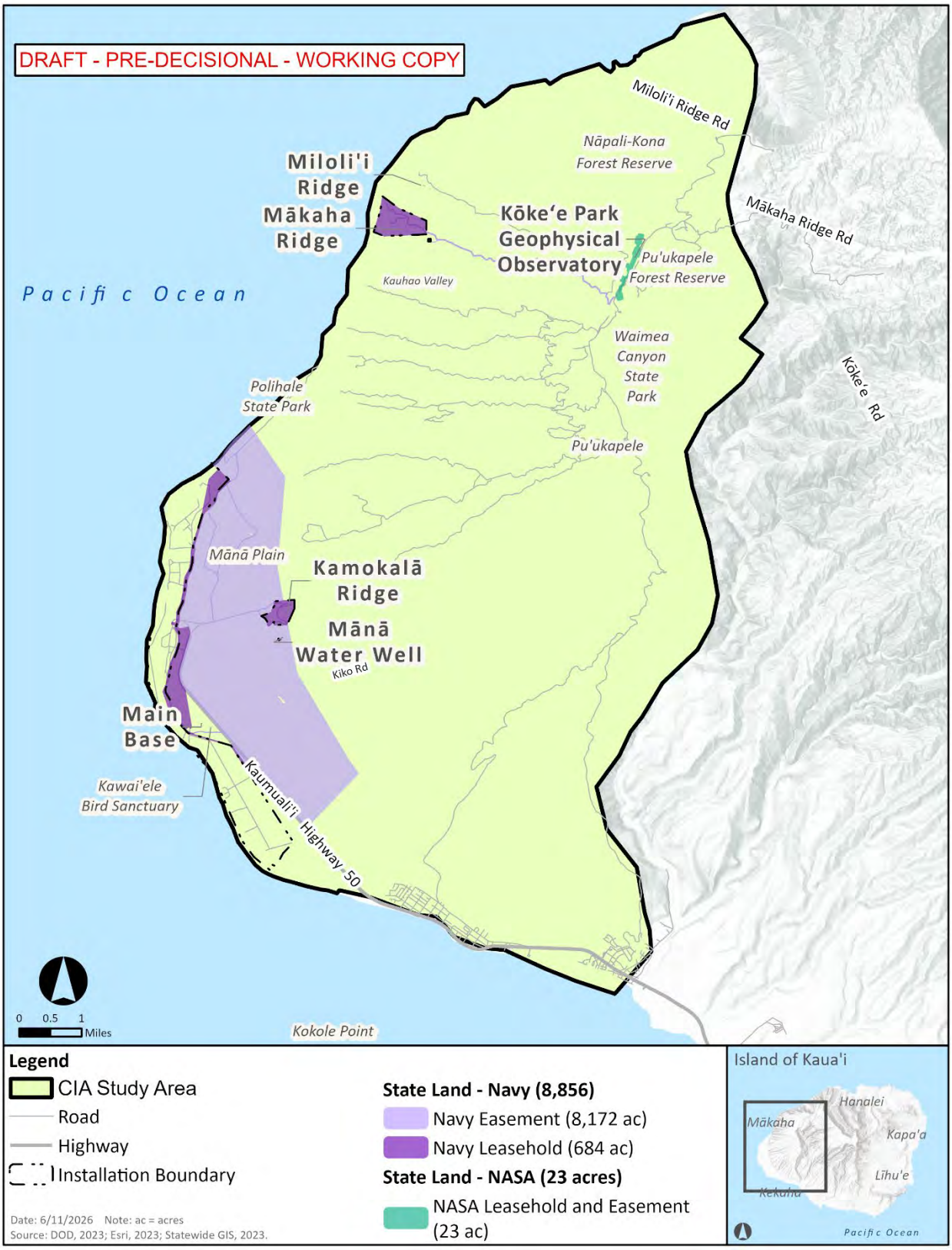


Figure 2. The CIA study area and State land under consideration for retention by the Navy and NASA.

STUDY AREA LOCATION

PMRF is located approximately 100 miles from the island of O‘ahu on the northwest coast of the Hawaiian island of Kaua‘i (see Figure 1). KPGO is located within Kōke‘e State Park on the island of Kaua‘i, at an elevation of approximately 3,600 feet above sea level near Waimea Canyon. The Project Area overview is shown in Figures 1 and 2. The Project Area consists of the following:

- Main Base: leaseholds (392 acres) and easement lands (7,267 acres), located adjacent to the fee-simple lands at the installation, used for PMRF operational support, utilities and flood control, and as safety buffers;
- Kamokalā Ridge: leaseholds (89 acres) and easement lands (179 acres) used for ordnance storage, utilities access, and tsunami evacuation;
- Mānā Water Well: leaseholds (0.29 acre) used as the primary potable water source for PMRF;
- Mākaha Ridge: leaseholds (203 acres) and easement lands (42 acres) used for missile tracking and surveillance;
- Miloli‘i Ridge: leaseholds (0.015 acre) used for radar and telemetry activities; and
- KPGO: leaseholds (16 acres) and easement lands (7 acres) used for surveillance and tracking, as well as NASA geodetic data collection and backup power generation.

The entirety of the study area is on the western edge of Waimea Ahupua‘a, Kona District, Kaua‘i Island. The CIA study area and archival research was applied to a broader area incorporating much of Waimea Ahupua‘a (see Figure 2) as a result of the need to collect more general information about the area’s resources, practices, and history.

ORGANIZATION OF THE REPORT

This document, Volume I, includes six sections. Section I introduces the project’s legal and logistical context. Section II presents the methods used to carry out the CIA, including a cultural and historical archival review, an ethnographic study including oral interviews, and data synthesis. Section III describes the cultural context for the study, including the results of geneaological research, place names, and a review of traditional and historical land and resource use near the study area. Section IV presents the ethnographic review, pertinent excerpts of the oral interviews, and subsequent data summary. Section V includes the data anlysis based on the archival literature and ethnographic information collected during the CIA. Specific assessments about how the Proposed Action and No Action Alternative may potentially affect the cultural resources, practices, and beliefs of the community members interviewed are discussed. Following Section V is a list of references cited in the document.

Volume II, Appendix A, presents the interview consent forms. Volume II, Appendix B contains the full interview transcripts, and Volume II, Appendix C is a blank copy of the consultant biographical data sheet.

II. CULTURAL IMPACT ASSESSMENT METHODS

The primary purpose of the CIA was to collect information relating to the practices and beliefs of Native Hawaiians and other community members who have expertise about the study area. This information was obtained through a combination of archival research, including Hawaiian-language sources, and an ethnographic study using oral history interviews. Information provided by knowledgeable stakeholders, such as traditional cultural practitioners and long-term residents of the area, was applied to the determination of cultural impact in conjunction with information from other sources, such as documentary research.

The area considered during the CIA was purposefully larger than the study area, to account for the locations of cultural resources, beliefs, and practices that may not be included within the boundaries of the project but are relevant for understanding the interconnectivity of resource use in the area (see *Guidelines for Assessing Cultural Impacts* [1997] protocol 1 below). To this effect, a large portion of the Mānā Plain inland from PMRF Barking Sands is included in the cultural impact assessment, but also are several areas from Nā Pali to the land or/and resources bordering the *ahupua'a*(s) of Waimea and Makaweli.

The assessment considered cultural resources, practices, and beliefs related to subsistence (e.g., fishing, gathering, and agriculture), habitation, commercial activities, access issues, recreation, and religious/spiritual activities and customs. The locations of places that are essential to these cultural practices and beliefs were documented.

During the study the methods and recommendations presented in the Office of Planning and Sustainable Development (OPSD) Environmental Review Program (ERP) formely the Office of Environmental Quality Control (OEQC)'s *Guidelines for Assessing Cultural Impacts* (1997) were followed and include:

> The Environmental Council recommends that preparers of assessments analyzing cultural impacts adopt the following protocol:
>
> 1. identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or ahupua'a;
>
> 2. identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;
>
> 3. receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;
>
> 4. conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research:
>
> 5. identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and
>
> 6. assess the impact of the proposed action, which in this case is administrative real estate actions and retention of land occupied by PMRF, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.
>
> In addition, the portion of the assessment concerning cultural impacts should address, but not necessarily be limited to, the following matters:

1. A discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained.

2. A description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken.

3. Ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained.

4. Biographical information concerning the individuals and organizations consulted, their particular expertise, and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or interviewed, their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area.

5. A discussion concerning historical and cultural source materials consulted, the institutions and repositories searched, and the level of effort undertaken. This discussion should include, if appropriate, the particular perspective of the authors, any opposing views, and any other relevant constraints, limitations or biases.

6. A discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site.

7. A discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area. affected directly or indirectly by the proposed project.

8. An explanation of confidential information that has been withheld from public disclosure in the assessment.

9. A discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs.

10. An analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.

11. A bibliography of references, and attached records of interviews which were allowed to be disclosed.

The CIA was conducted to provide information to be used to evaluate the Project for its potential to affect or impair valued cultural, historical, or natural resources--including traditional and customary native Hawaiian rights pursuant to Article XII, Section 7 of the Hawaii Constitution which obligates that the State and its agencies:

> … shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua‘a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.

The analytical framework created a three-part process relative to evaluating potential impacts, and requires specific findings and conclusions regarding (Ka Paʻakai o Ka ʻĀina v. Land Use Comm. 2000:25):

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

This CIA was conducted from October 2023 to May 2026, and was carried out in two phases. First, a cultural and historical archival literature review was completed. Next, an ethnographic study, including oral history interviews, was conducted. The collected ethnographic data and past oral histories were then analyzed for relevant patterns to learn and understand cultural resources, practices, and beliefs, and to assess the potential that the Proposed Action and No Action Alternative could affect them. Five analytical categories were used to structure the interviews and subsequent data analysis including: (1) *Moʻokūʻauhau* [Genealogy] and *Pilina* [Connection] to *ʻĀina* [Land]; (2) *Meheuheu* or Hawaiian Cultural Traditions and Practices: (3) *Moʻolelo* [Stories] and *Wahi Pana* [Cultural Sites, Legendary Places, and Sacred Sites]; (4) Historic Period [Plantation and Military Era]; and (5) Comments About the Study Area. Data analysis examined land resources, water resources, and cultural practices and beliefs. The following sections discuss the methods used during each of these stages in greater deatil.

STAGE 1: CULTURAL AND HISTORICAL ARCHIVAL LITERATURE REVIEW

During the first stage of the CIA, primary and secondary sources in Hawaiian and English were collected and examined for relevant information. These sources inclulded genealogies, oral histories, Hawaiian language newspapers, and other studies and reports that were collected and examined for relevant information. Secondary source material included previous ethnographic works and historical texts. Most of the cultural and historical archival literature review was conducted by Dr. Keao NeSmith who is a *kupa* or a Native Hawaiian well acquainted with the Kona *moku* [district]. The results of the cultural and historical archival research are presented in Section III.

STAGE 2: ETHNOGRAPHIC STUDY/ORAL HISTORY INTERVIEWS

The selection of consultants was initiated by delving through previous studies of the Kona *moku* or district. A comprehensive journal was completed by Flores and Kaohi (1992), "Hawaiian Cultural and Historical Survey of Nohili, Mānā, Kona District, Island of Kauaʻi, State of Hawaiʻi". From this literature and others, knowledge about the *āina* and family names were collected. Another source of collecting the names of potential consultants was finding names of multi-generational familes in nearby cemeteries. After a preliminary list was generated, Thomas Nizo and Dr. NeSmith added stakeholders to the list. Out of sixty potential consultants identified by IA, twenty-three consultants were selected for interviews. The selection process began by compiling a list of potential consultants. This list was then assessed to make sure that a diversity of opinions would be represented. Kekaha *kamaʻāina* [native born, one born in a place] Keao NeSmith, Thomas Nizo, PMRF Deputy Public Works Officer/Cultural Protocol Officer, and Kaulana Mossman, PMRF Community Liaison Officer, were consulted on the initial stakeholder list and it was

refined according to their recommendations. The selection process aimed to maximize diversity in points of view while maintaining expertise in knowledge of the area's cultural resources, practices, and beliefs.

In addition to the internal consultant list, on October 13, 2023, a letter requesting public input on the project was sent to Ka Wai Ola, the Office of Hawaiian Affairs Bulletin. No public comment was received after the publication of the Ka Wai Ola notice. Beginning in October 2023, phone calls were placed to potential consultants (Table 1). Consent forms were generally signed the day that the interview took place.

Each stakeholder filled out a Biographical Data Sheet (BDS) before the interview. It was the choice of the consultant to answer or not answer any questions on the BDS. The BDS included name; mailing address; phone number; email; year and place they were born; their past and present residence; gender; citizenship; ethnicity; spoken language(s); where they went to school; where they work; interests, skills, and hobbies; religion; community/professional organization involvement (past and present); parents names; the participant's place in the family (order of siblings); and maternal and paternal names of ancestors and where they lived. During the interview, they also talked about some of the information they individually recorded on their BDS. The BDS has the following positive results: (1) the BDS helps consultants think about the information they want to present about themselves and their family; (2) the BDS results in more time during the interview to concentrate on the gathering of additional information other than what is listed on the BDS; and (3) the correct data is collected and written, reinforcing what is heard and/or not spoken in the interview, and vice versa.

The *'ano hana kūkākūkā* [talk story, moral quality procedure] was applied to the structure of the interview which allowed for the consultant's *leo* or voice to be heard. This method is the conduit for a dialogue to ensue, thereby permitting the consultant to speak about a general topic in their own specific words. All the excerpts included throughout the following sections represents *nā hua 'ōlelo* [the spoken words] of *ka mea e 'ōlelo ana* [the one talking]. The excerpts used are in the exact words of each consultant or paraphrased to insert words that are "understood" or to link sentences that were brought up as bridged after thoughts or related additions denoted elsewhere in the interview. The interviews were recorded using an Olympus WS-823 Digital Voice Recorder.

MAKANA: GIFT OF APPRECIATION

Upon arriving at the meeting place for the interview, greetings to the consultants and their *'ohana* included *aloha* [love] and *mahalo* [thanks], a *lei* [necklace] (made personally by IA), and some form of compensation made to the consultants who contributed to the study. This was done by providing *makana* to individual consultants in the form of a gift certificate from Big Save, fresh *poke* [meal of raw fish and other ingredients] (made personally by IA), dried fish (personally prepared by IA), chocolates, and Japanese Sakura *arare* and *ume* candies.

Table 1. Consultants Interviewed.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Richard Keaoopuaokalani "Keao" NeSmith	Waimea/Kekaha, Kauaʻi	Hawaiian	Self-employed, freelance researcher	Keao is a *kupa* [native born and well-aquainted to a place] of Kekaha, and his maternal *moʻokūʻauhau* [genealogy] exists from the time of Hāloa. His father, Bill NeSmith worked at KPGO. His mother, Odetta NeSmith taught *hula* for 19 years in the community, and Keao was one of her assistants. Keao has his Ph.D. in linguistics, and is an educator. He is very knowledgeable about cultural and natural resources, cultural traditions/practices, *wahi pana* [storied/sacred places] including *moʻolelo* [stories] in the Kona district and broader Kauaʻi, and beyond. Keao grew up in Kekaha during the Plantation Era. He is part of the Nā Pali ʻOhana, Kaunalewa, and other groups.
Brad "Kipi" Akana	Waimea, Kauaʻi	Hawaiian	Retired Kaua'i Police Officer, and Department of Conservation and Resources Enforcement (DOCARE) Branch Chief	Kipi's father, Paul Compoc worked at KPGO. His mother, Leinaʻala Compoc worked at KPGO and PMRF. Kipi is knowledgeable about natural and cultural resources as a fisherman, hunter, gatherer, and working in the area as a DOCARE branch officer. He ia also a *lua* [Hawaiian martial arts] practitioner.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Sylvia Johnette "Leinaʻala" (Akana) Compoc	Waimea, Kauaʻi	Hawaiian	Retired from working for the Federal Government	Aunty Leinaʻala is the mother of Kipi and wife to Uncle Paul. She worked at KPGO and PMRF. She grew up in Waimea Valley during the Plantation Era. Aunty was a part of the Kaumualiʻi Hawaiian Civic Club. Her grandfather was the great Henry Kekahuna who is one of the first surveyors of Nohili and did prolific works of cultural preservation on Kauaʻi and the *Pae ʻĀina* [Hawaiian Islands].
Paul Compoc	Kahuku, Oʻahu	Filipino, Spanish, Chinese	Retiree from working for the Federal Government	Uncle Paul is father to Kipi and husband to Aunty Leinaʻala. He arrived in Kauaʻi during the ’70s, where he worked at Kentro and KPGO. Uncle Paul has knowledge about basic plantation life because he was raised in Kahuku during the Plantation Era.
Kaina Makua	Līhue/Waimea, Kauaʻi	*Kanaka Maoli* [Native Hawaiian]	Owner of Aloha Aina Poi. Executive Director of Kumano I Ke Ala	Kaina is a *kupa* [native born and well-aquainted to a place] and continues to steward the lands in the Kona district of Kauaʻi. He has fished and gathered at the shores of Nohili. He is knowledgeable about the Hawaiian language, culture, history and *moʻolelo* [stories] of the Kona *moku* [district] and beyond. Kaina is the model for the logo of the organization called Aha Kane. The following is a snippet on the Aha Kane website: "Kaina is a college graduate and *kalo* farmer from Kauaʻi, is recognized in the Hawaiian community as an exemplary representation of a modern *kāne* [man, masculine]: a culturally knowledgeable, educated, robust, ʻ*oluʻolu* [affable, gracious] family man."

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Enoka Chee Fook Karratti	Waimea/Kekaha, Kauaʻi	Hawaiian	Program Coordinator at Kumano I Ke Ala	He is a native, born and raised in Kekaha. Enoka is a fisherman and gatherer at the shores of Nohili and other areas. He has worked at PMRF, and gathered *lāʻau* [plants] to make lei at Kōkeʻe with his *wahine* [woman, wife]. Enoka is an officer on the board of Mālama Hulēʻia, a group who manages the Alakoko Fishpond in Nāwiliwili, and educates the community on cultural values, and the caring and management of cultural and natural resources. He also spends time coaching the Waimea High School girls volleyball team.
Treston "Hena" Caberto-Raco	Kauaʻi/Waiʻawa and Wailua, Kauaʻi	Hawaiian, Filipino, Chinese, Vietnamese	Foreman at Princeville Ranch	Hena has been endowed the *kūleana* [rights, privilege, responsibility] of Palakiko Farms at Waiʻawa passed down through his family. He is a hunter, gatherer, and a steward of Waiʻawa. Hena has knowledge of the *moʻolelo* [stories], and history of Waiʻawa and the surrounding area. He is a member of the organization, Kaunalewa.
James Kanohoanu Nakaahiki	Waimea/Kekaha	Hawaiian, Filipino	Firefighter for PMRF and the State of Hawaiʻi for 44 years, now retired	Uncle James was born in Waimea and is a native to his homeland, Kekaha, where he resides currently. His grandfather and father worked for the sugar plantation. James' mother worked for the pineapple cannery. He has a multi-generational connection to the area, and is part of the Aipoalani and Kilauano *ʻohana* [family]. James is a part of the organization Kaunalewa and is one of the stewards for the Kekaha Hawaiian Homestead Association (KHHA) Puʻu ʻŌpae Farm and Irrigation Project.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Sean Mokuonahiala Andrade	Waimea/Waimea, Lawai, and Kalaheo, Kauaʻi	Hawaiian, Portuguese, Chinese	Employed by Ferguson Enterprises, Inc. for 30 years	Sean was born in Waimea, and raised in the valley of Waimea and nearby Lawai and Kalaheo. He is the Chief Executive Officer for the organization Kaunalewa, and plays a large role in the KHHA Puʻu ʻŌpae Farm and Irrigation Project. Growing up he fished and gathered at the ocean and streams. Sean comes from a line of ranchers.
Edwin Ray "Aʻalona" Dela Cruz	Waimea, Kauaʻi	Hawaiian, Pinoy [Filipino male], Japanese, *Haole* [Caucasian]	Boat Captain for the Na Pali tours docked at Kikiola Harbor	Aʻalona is a native of Waimea. He is a waterman and cultural practitioner involved with the art of *lua*, *laʻau lapaʻau* (Hawaiian medicine taught by Kumu Levonʻ Ohai), and avid *lawaiʻa* [fisherman]. As a *lawaiʻa*, he has fished and gathered from Kekaha to Polihale and near other seashores. Aʻalona has knowledge of *moʻolelo* [stories] and history. He is a member of the Polynesian Voyage Society and the Nā Pali Coast ʻOhana.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Eben Kawaikea Manini	Waimea/Waimea and Puʻu ʻŌpae, Kauaʻi	Part Hawaiian	Tour Guide, Airport Mechanic	Eben is a native of Waimea and Puʻu ʻŌpae. He is the son of Paniolo Hall of Fame Inductee Joseph Punilei Manini Sr., who worked at the Gay and Robinson's Makaweli Ranch for 47 years, and Puʻu ʻŌpae Ranch, a ranch he and his family established. Eben resides at Puʻu ʻŌpae Ranch where he enjoys farming, ranching, and operating heavy equipment. He is knowledgeable of cultural sites of Mānā and other areas in the Kona *moku* [district] of Kauaʻi. He is a member of the Kauaʻi Master Gardner Program. Eben is a trained volunteer who assists the University of Hawaiʻi in its mission to deliver relevant, research-based, environmentally sound horticulture information to the public. He is involved with youth sports and youth outdoor education.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Bill Dan "Billy" DeCosta	Waimea/Pākala, Kauaʻi	Portuguese, Spanish	School teacher for 23 years and Kauaʻi County Council member for 3 years	Billy was born in Waimea and raised at Pākala's Camp. He is one of three or four generations of his *ʻohana* [family] who lived at the camp. His grandfather, John Costa, was Sheriff of Pākala, and his dad was supervisor at the Gay and Robinson's Makaweli Ranch. When *mauka* [uplands], he hunts for ungulates, and gathers *maile* (*Alixia stellata) and mokihana* (*Melicope hawaiensis*). He is a fisherman and gatherer when at the ocean. From a young age, he was taught by his grandfather conservation methods at the mountain and ocean when gathering and harvesting. He is continuing this tradition by teaching conservation methods to his children.
Michael "Mike" Andreas Faye	Waimea/Waimea and Waiʻawa	Caucasian	Kekaha Agriculture Association	Mike was born and raised in Waimea, Kauaʻi. In his teenage years he spent a lot of his summers with a hoe and file in the sugarcane fields of Waiʻawa. He comes from a legacy of sugar plantation and business owners who migrated here about 170 years ago from Norway. His grandfather's uncle is Valdemar Knudsen who arrived here in the 1850's and served as a *konohiki* [headman of an *ahupuaʻa* land division under the chief] for the Hawaiian Kingdom, collecting tax and ridding the mountain areas of cattle. Mike and his *ʻohana* [family] are owners of the Wrangler's Steakhouse and Waimea Plantation Cottages.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Christine Faye	California and Kauaʻi (various)		Curator (Kauaʻi Museum), executive director (Hui o Laka); graphic artist	Christine Faye is the curator of the Kauaʻi Museum and executive director of Hui o Laka, a nonprofit organization that manages the Kōkeʻe Museum and the historic Civilian Conservation Corps camp in Kōkeʻe State Park. Ms. Faye is a former chair of the Kauaʻi Historic Preservation Review Commission, a former member of the Hawaiʻi Historic Places Review Board, a former trustee of the Historic Hawaiʻi Foundation, and is affiliated with the Waimea Sugar Mill Museum. She is also a self-employed graphic artist and currently resides in Kekaha. Hans Peter Faye, Ms. Faye's great-grandfather, was born in Norway and migrated to Hawaiʻi to work in the sugar industry, founding the H.P. Faye & Co. plantation in 1884. Ms. Faye's great-grandfather, grandfather, and father all served as plantation managers at Kekaha Sugar, which extended into Kōkeʻe. As a child, Ms. Faye and her *ʻohana* maintained residences in all American Factors (later Amfac, Inc.) sugar plantations.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Clisson Kunane Aipoalani	Waimea, Kauaʻi	Caucasian	Kekaha Sugar Company; PMRF	Clisson Kunane Aipoalani is the President of Na ʻOhana Papa O Mana, a NHO composed of members of the Kilauano and Aipoalani families who are lineal descendants of *iwi kūpuna* (Native Hawaiian human skeletal remains) previously identified at the PMRF. Pursuant to Section 3002(a)(2)(B) of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. § 3002), Na ʻOhana Papa O Mana maintains rights of possession and control over *iwi kūpuna* identified at the facility. Mr. Aipoalani's *kūpuna* were among the earliest settlers of the Mānā Plain, and he and his *ʻohana* continue to maintain deep-rooted traditional customs and practices associated with the project area. He is able to recite his *moʻokūʻauhau* (genealogy) in Hawaiian to Kainoapuka, the first of his *kūpuna* to settle at Polihale after relocating from Kalalau Valley, and many of his *kūpuna* are also buried at Polihale. Mr. Aipoalani previously worked for both the Kekaha Sugar Company and PMRF.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Daynette Dee Sumie Puanani Morikawa (Ah Puck)	Honokaʻa, Hawaiʻi; Oʻahu; Kauaʻi		Personnel management (County of Kauaʻi); state representative	Dee Morikawa represents House District 17 (Niʻihau; portions of ʻŌmaʻo, Kōloa, Poʻipū, Lāwaʻi, Kalāheo, ʻEleʻele, Hanapēpē, Kaawanui Village, Pākalā Village, Waimea, and Kekaha) in the Hawaiʻi State Legislature and has served as House Majority Floor Leader since 2018. She worked as a personnel specialist with the County of Kauaʻi Department of Parks and Recreation from 1975 to 2010 and is a former Hawaiʻi Government Employees Association (HGEA) State Board director and Unit 13 negotiator and director. She attended Kapaʻa High School and Kahuku High School and graduated from Kauaʻi Community College with an Associate of Science degree in accounting. Representative Morikawa, along with Aunty Aletha Kāohi and other community members, raised funds to erect a statue of Kaumualiʻi at the Pāʻulaʻula State Historic Site (Russian Fort Elizabeth).

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Keith Pomeroy Robinson	Lihue, Makaweli, Kauaʻi			Keith Robinson is a member of the Robinson family, the largest private landowner on Kauaʻi and owner of the island of Niʻihau. His *ʻohana* has been on Kauaʻi for approximately 160 years. He was raised in Mākaweli in West Kauaʻi and learned to speak Hawaiian at a young age. Mr. Robinson holds a Bachelor of Science degree in agronomy and ranch management from University of California, Davis. He is an avid rancher and horticulturalist and operates private plant and wildlife preserves on Kauaʻi and Niʻihau. He is especially passionate about preserving endangered plant species on Kauaʻi, particularly those predating human contact. He is highly knowledgeable about plant life at PMRF, Kōkeʻe, and across the broader Kauaʻi *mokupuni*.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Elaine Kuʻulei Momi O Kai Kawaiola Gampong Keamoai	Waimea, Kauaʻi; Kauaʻi and Oʻahu		Project assistant (Hiʻilawe Construction); project administrator (Central Federal Lands Project)	Kuʻulei Keamoai was born in Waimea, Kauaʻi. Her *ʻohana* comes from Niʻihau: her father was a *paniolo* on Niʻihau who moved to Kauaʻi to work on the sugar plantation, and her mother was a native Hawaiian speaker who was one of the first teachers at Pūnana Leo. She has lived in several places across the island, including her current home of Kekaha on *ʻāina hoʻopulapula* (Hawaiian Homestead lands). Ms. Keamoai worked as a project administrator for the Central Federal Lands Project from 2017 to 2022 and has been employed by Hiʻilawe Construction as a project assistant since 2022. She is the Kumu Hula for Hālau Hula O Haliʻileo and enjoys composing music and volunteering as a cheer coach. She raised her *keiki* (children) with Hawaiian values and knowledge of *hula* traditions, teaching them the protocols of appropriate chants and dances, how to conduct themselves in particular spaces, what to expect during spiritual encounters, and the *haʻahaʻa* (humility) required to enjoy blessed experiences.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Ronald Dan Kouchi	Los Angeles; Hawai‘i island; Waianae, Kehaka, and Lihue, Kaua‘i		State senator	Ron Kouchi represents Senate District 8 (Kaua‘i and Ni‘ihau) in the Hawai‘i State Legislature and has served as Senate President since 2015. He previously served for 22 years on the Kaua‘i County Council, including 12 years as Council Chair. He is a former director of the Kaua‘i Island Utility Cooperative, the Koloa Neighborhood Center, the Kaua’i Chamber of Commerce, and the Kaua‘i Visitors Bureau. He has served on the boards of the Kaua‘i Veterans Memorial Hospital and the YMCA, and chaired the Wilcox Health Foundation capital campaign. As a student, Senator Kouchi spent summers at Kōke‘e cleaning trails for the Hawai‘i Department of Land and Natural Resources.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Val Kane Turalde	Kaʻalaea, Oʻahu; Waimea, Kauaʻi		Cultural educator, musician, security/law enforcement	Valentino Kane Turalde is a *Kānaka Maoli* currently living in Waimea Valley on Kauaʻi. Although he was born and partially raised on Oʻahu, his family has deep connections to the Waimea area dating to the reign of Kauikeaouli (Kamehameha III). His aunt, Mabel Navarro, who lived in Waimea Valley, cared for him as an infant and deeply influenced his life. The healers Emma De Fries of Oʻahu and Nui Keale of Niʻihau also shared some of their *ʻike* (perception and knowledge) with him as a child. Over the course of his life, Mr. Turalde has worked as a musician, taro farmer, security instructor for the Honolulu Police Department, Native Hawaiian educator, canoe-racing coach, and salt maker, having practiced traditional salt making since the age of seven. He currently serves as a co-representative for Kona Moku on the Kauaʻi Aha Moku Council.
C. Pualokelani Harada	Hāʻena and Wainiha, Kauaʻi	Native Hawaiian	Teacher	Pualokelani Harada was born and raised in Hāʻena and Wainiha in Hanalei moku on Kauaʻi, and has ʻ*ohana* from Polihale who are buried in the sand dunes along the north coast of the Mānā Plain. Pualokelani holds a Master's Degree in Education and works as a *kumu ʻōlelo Hawaiʻi* (Hawaiian language teacher) at Kula Aupuni Niihau A Kahelelani Aloha

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
				(KANAKA) Public Charter School in Kekaha. Pualokelani's paternal and maternal *kūpuna* were *kanaka mahi'ai* (farmers), *lawai'a* (fishers), community volunteers, *haipule* (pious people), *kahuna*, activists, and more. Her *tūtū wahine kualua* (grandmother), Rachel Mahuiki, was a *mānaleo* (native Hawaiian speaker) who taught her and twin sister, Kielepuaalaokalani Harada, a deep respect for the *mo'omeheu* (Hawaiian culture). Her great-grandparents, Tūtū Elizabeth Kapeka and Francis Elias Chandler, taught her how to be part of an *'ohana* and a community, including how to *hanai* (foster children), feed others, and provide resources to support local youth. Pualokelani and her sister were educated in the Hawaiian language immersion schools Pūnana Leo (preschool) and Kaiapuni (K-12), strengthening their ties with the west side of Kaua'i, where Tūtū Kahala and Anake Ku'ulei served as their *kumu hānai*.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Chandlyn Kielepuaalaokalani Harada	Kauaʻi	Native Hawaiian	Teacher	Kielepuaalaokalani Harada is a Kauaʻi native and serves as a Grade 6–8 math and science teacher at the Kula Aupuni Niihau A Kahelelani Aloha. The school's mission is to educate youth to become community leaders capable of guiding the future of the Niʻihau community, with an emphasis on student involvement in community-related activities and issues in order to foster informed and effective representation of the Niʻihau indigenous population. Ms. Harada holds a Bachelor's Degree in Social Sciences with an emphasis in Political Science and a Master of Education in Teaching.

Consultant	Born/Raised	Identified Ethnicity	Work	Connection
Dennis Eguchi	Kekaha, Kaua‘i	Okinawan, Japanese	Hawaiian Telephone, General Telephone and Electronics, fisherman	Dennis Eguchi was born and raised in Kekaha and has lived on the west side of Kaua‘i for more than 75 years. He descends from Okinawan and Japanese immigrants who settled on Kaua‘i more than a century ago; his mother was from Kekaha, and his father was born in Waimea Valley. As a child, Mr. Eguchi helped support his family through farming and charcoal making, and later worked for the telephone company before retiring. He has also been an avid fisherman and recreational diver for more than 40 years and continues to practice his “fire drill” *‘ōpelu* fishing techniques in waters ranging from Port Allen to the Nā Pali Coast. Mr. Eguchi is a member of E Ola Mau Na Leo O Kekaha, a group that works with PMRF to facilitate subsistence fishing access at the base and organize community events, including a recent Easter egg hunt

Upon completion of the interview transcripts in January and February 2024, IA sent follow-up email messages to these consultants asking them to review their comments, edit them if desired, and to consent that their responses could be reproduced in the CIA. IA also restated the nature and function of the CIA and emphasized that participation was voluntary. All 23 consultants provided written or verbal agreement that their original or revised responses could be included. The consent letters are reproduced in Volume II, Appendix A and the full interview transcripts can be found in Volume II, Appendix B.

The ethnographic study was designed so that information acquired during interviews would help determine if any cultural or natural resources or associated practices, including access to these areas, would be impacted by the implementation of the Navy's Proposed Action and the No Action Alternative to retain the use of State land at PMRF and NASA's proposal to retain the use of State land at KPGO. With this objective in mind, the following basic research themes were incorporated into the ethnographic contrivance: Consultant Background, Land Resources, Water Resources, Cultural Resources, and Comments of Past and Continued Stewarship by the U.S. Military. These research themes have sub-themes that were developed based on the ethnographic raw data (oral histories) or responses of the ethnographic consultants. The responses and collective information were then synthesized into supporting evidence for conclusions made regarding impacts on cultural resources and/or practices, including access to fishing areas, places for gathering marine resources, and camping locations. Interview questions were provided to PMRF staff and authorized before commencement of the interviews.

To ensure that knowledgeable stakehoders with the most potential for providing relevant information were chosen for the interviews, the following selection criteria were applied:

- Indiviudal had (has) a past or current *pilina* [connection] to the study area or vicinity.
- Individual is a known Hawaiian cultural or natural resource specialist.
- Individual is a known Hawaiian traditional practitioner.
- Individual was referred by another reputable person.

Many of the consultants were suggested, chosen, and contacted by Dr. Keao NeSmith, a *kupa* [Native Hawaiian] with a long-standing connection to the Kekaha area and the broader Kona *moku* [district]. Dr. NeSmith was also interviewed because he was raised and lived in the Kona *moku* and one of his family members worked close to the study area. Moreover, he retains *ʻike* [knowledge] of history and *moʻolelo* [stories] and has engaged in cultural practices within the project area and/or vicinity.

III. ETHNOHISTORICAL AND CULTURAL CONTEXT FOR THE STUDY AREA

This section presents cultural and historical context through a review of primary and secondary source literature. The information provided in this section incude *moʻokū ʻauhau* (genealogies), *wahi* (places), *moʻolelo* (traditional literature), traditional land use, and historical land use.

MOʻOKŪʻAUHAU [GENEALOGIES]

This section provides genealogy for important ruling chiefs of Kauaʻi. The genealogies, handed down by oral tradition and later recorded for posterity, not only give a glimpse into the depth of the Hawaiian culture of old, they provide a permanent record of the links of notable Hawaiian family lines. *Poʻe kūʻauhau* or genealogy *kahuna* [masters] were very important people in the days of old. They not only kept the genealogical histories of chiefs "but of *kahuna*, seers, land experts, diviners, and the ancestry of commoners and slaves … an expert genealogist was a favorite with a chief." During the time of ʻUmi-a-Līloa, genealogies became *kapu* [forbidden] to commoners, which is why there "were few who understood the art; but some genealogists survived to the time of Kamehameha and even down to the arrival of the missionaries" (Kamakau 1992:242).

There are several chants from Hawaiʻi and other Polynesian islands referred to as migration chants that expand on the travels of ancient Polynesians and not only explain why they traveled from place to place, and where they traveled, but also give their genealogy illustrating how families are connected from one Polynesian island-nation to another. Examples are the chants and stories by Kamakau and Kepelino about Hawaiʻi-loa, a famous ancient navigator and discoverer of the islands named after him (PVS 1999).

Surviving genealogies illustrate that the ruling families of each island were interrelated quite extensively. The chiefs of Oʻahu, Kauaʻi, Hawaiʻi, Maui, and Molokaʻi had common ancestry. Families branched out but conjoined several times in succeeding generations. Oʻahu's and Hawaiʻi's chiefs were linked as were Hawaiʻi and Maui chiefs, and Hawaiʻi's chiefs were linked to Kauaʻi chiefs (Kamakau 1991:101; McKinzie, 1983:xxv). Not only were the chiefs or *aliʻi* [ranked person] related to each other, they were also related to the commoners. In *Ruling Chiefs of Hawaiʻi*, Kamakau states that "there is no country person who did not have a chiefly ancestor" (Kamakau 1992:4).

The *mokupuni* [island] of Kauaʻi was once called Kamawaelualanimoku, the first child conceived by Wākea [Sky Father] and Papa [Earth Mother], two of the recognized Hawaiian progenitors. The islands of Kauaʻi, Niʻihau, Lehua, and Kaula were the only islands conceived by Papa, an account from the previous historian before Kamahualele. Kamahualele, a great prophet and historian, orates the story of Moʻikeha who left Tahiti for Hawaiʻi with his concubine, Luʻukia. They arrived on the shores of Kauaʻi (Fornander 1916–1917:18). Moʻikeha ascended from the chiefly line of Nanaulu and Maweke (Fornander 1917:70). After arriving in Kauaʻi he was enamored with the grace and beauty of Hoʻopoikamakanai and Hinauʻu, the daughters of chief Puna. After chief Puna was laid to rest, Moʻikeha became the *aliʻi* of Kauaʻi. Moʻikeha had at least five male children total with Hoʻopoikamakanai and Hinauʻu.

At least five generations later in the 1400's–1500s, Kūkona was born to father Luanuʻu and mother Kalanimoeikawaikai (Fornander 1880: 92). A Hawaiʻi Island chief, Kalaunuiohua invaded several islands in order to unify them under his control. After his victory in Waianae, on Oʻahu he set sail with Kauaʻi in his sights. Kūkona was the *mōʻī* [king, sovereign] on Kauaʻi during that time. A battle ensued at the coastal area of Koloa and Kūkona was victorious, capturing Kalaunuiohua and his fleet who surrendered. Kūkona released everyone but kept Kalaunuiohua for several years until a negotiation, and Kalaunuiohua returned

to Hawai‘i Island (Fornander 1880:68). Kūkona and his wife Laupuapuama‘a had a son named Manōkalanipō. It is known in Hawaiian culture of several *Mō‘ī* or *Ali‘i Nui* such as Mānōkalanipō whose reigns are said to be the Golden Ages of their societies as they were *hanohano* [glorious, magnificent] because of their *hana maika‘i* [good works]. He was noted for his ‘*ike* [wisdom] and energy he used to inspire agriculture and industry of which he carried out long and difficult works of irrigation, and consequently brought fields of wilderness under cultivation. Subsequently, no wars disturbed his reign. After his reign and to present day, Kaua‘i is known as “Kaua‘i-O-Manōkalanipō.” One of the sons he had with his wife, Naekapulani, is Kaumakamanō.

At least two to three centuries later, the parents of Chiefess Kamahelei, her father, Kaumehe‘iwa and her mother, Ka‘apuwai were living during the time Captain James Cook arrived on Kaua‘i in January 1778, and at that time Kamakahelei obtained a second husband, Kaeokulani. Kamakahelei’s first husband, Kaneoneo, died during the rebellion against Kahekili on O‘ahu about 1785–1786. Kaeokulani was the younger brother of Kahekili, *mō‘ī* of Maui. Kaeokulani and Kamakahelei had a son, Kaumuali‘i. Captain Vancouver mentions in his journal in 1792 that Kaumuali‘i was 14 years old, but he may have been two or three years older (Fornander 1880: 298).

***WAHI* [PLACE]: KONA *MOKU* [DISTRICT] OF KAUA‘I**

This section discusses the important *wahi* [place] within the *moku* [district] of Kona. The west Kona *moku* of the island of Kaua‘i lies between Nā Pali and the Waimea River where there are scores of valleys created by the carving and winding of waters flowing for several million years. Below these valleys are plains stretching out from the mountains to the oceans. The names of these places along with their meaning and sources, and location (if available) are presented in Table 2.

Table 2. Place Names and Cultural Sites Within the Kona Moku of Kauaʻi and Surrounding Area.†

Map Key #	Place Name	Meaning* and Source	Location
--	Ahuloulu	Peak. *Heiau*. Lit., altar of the *heiau* type dedicated for the prevention of epidemics, famine, and/or destruction. (Gay and Robinson 1891 map of Kauaʻi).	Located southeast of Kahālauaola Ridge.
13	ʻĀinaʻike	(Also ʻĀinaʻiki, Gay and Robinson 1891 map of Kauaʻi) Lit., land of recognition.	On the Mānā plains.
8	ʻAnaki	Ridge. Named in LCA 5944 to Papalena. Site of Manienie *heiau* in Miloliʻi Valley (Bennett site 201). (Gay and Robinson 1891 map of Kauaʻi).	In the *ahupuaʻa* of Waimea, Kauaʻi. Southeast of Keawanui.
9	ʻĀwini	Falls and Stream (USGS 1965). (Gay and Robinson 1891 map of Kauaʻi).	Waimea moku, Kauaʻi. Fall is at the Elevation 2280+ft. on ʻĀwini Stream at the NE corner of Puʻu Ka Pele Forest Reserve.
--	ʻElekuna	*Heiau* (ʻEle was sometimes referred to a certain type of priest). (Gay and Robinson 1891 map of Kauaʻi).	Bennett's Site 8. "…near the Barking Sands at Mānā, in a cove on the inland side of the dunes" (Bennett 1931:101). At Mānā, near Nohili.
--	Hāʻeleʻele	Valley. Ridge. Lit., blackish. (Gay and Robinson 1891 map of Kauaʻi)	Valley between Polihale Ridge and Hāʻeleʻele Ridge. Ridge between Polihale Ridge and Lapa Ridge.
14	Haleʻieʻie	Valley. Lit., shelter of the *ʻieʻie.* (Gay and Robinson 1891 map of Kauaʻi).	Valley above the midpoint of Kamokala and Niu Ridge.
--	Hoʻoneʻenuʻu	*Heiau*. Lit., to push ahead to a higher elevation	Bennett's Site 12. "…along the ditch line inland from the government road near the center of Kaunalewa ridge…Thrum…mentions that it was a heiau for circumcision." (Bennet 1931:102).
3	Honopū	(Gay and Robinson 1891 map of Kauaʻi).	Nā Pali. North of Nuʻalolo Ridge
2	Honopū Wai Akua	(Gay and Robinson 1891 map of Kauaʻi).	Along the Nā Pali coast.

Map Key #	Place Name	Meaning* and Source	Location
4	Honopū Wai Kanaka	(Gay and Robinson 1891 map of Kauaʻi).	Along the Nā Pali coast.
--	Kaʻanamahuna	Valley (Ulukau: Inoa ʻĀina Hawaiʻi, 2023-09-30)	Joins Kaluanamaulu Valley at about 2230 ft. to for, Nahomalu Valley.
--	Kaʻawaloa	Valley. Lit., the long *ʻawa* plant (Ulukau: Inoa ʻĀina Hawaiʻi, 2023-09-30).	Between Kamokala Ridge and Niu Ridge .
--	Kahālauaola	Ridge. Peak. Lit., the long canoe house of chief Ola. (Gay and Robinson 1891 map of Kauaʻi).	East of Mānā Ridge.
--	Kahamaluʻihi	Puʻuhonua, place of refuge for Kona *moku*. Lit., the sacred sheltered/protected place.	Unknown.
--	Kahelu	Lit., the enumeration. (Ulukau Inoa ʻĀina Hawaiʻi, 2023-09-30: USGS 1963). Heiau. (Gay and Robinson 1891 map of Kauaʻi).	Bennett's Site 10. "Kahelu heiau, at Kahelu near Mānā and described by Thrum as ʻA heiau of platform character at the base of the hill, about 6 feet high in front, not of large size'" (Bennett 1931:102). Ridge between Kahelunui Valley and Nahomalu Valley.
--	Kahelunui	Lit., big Kahelu. (Ulukau: Inoa ʻĀina Hawaiʻi, 2023-09-30: USGS 1963). (Gay and Robinson 1891 map of Kauaʻi).	Valley between Mānā Ridge and Kahelu Ridge.
	Kahoaloha	Valley. Lit., the friend. (Gay and Robinson 1891 map of Kauaʻi).	Valley between Lapa Ridge and Kolo Ridge.
	Kahuaapuʻu	Peak. Lit., foundation of (the) peak. (Gay and Robinson 1891 map of Kauaʻi).	The peak where Kaunalewa Ridge and Pulehu Ridge meet towards the east. East of Maiʻaloa Valley.
--	Kaihuulu	(Gay and Robinson 1891 map of Kauaʻi).	A place on the Mānā Plains below Pulehu Ridge. It sits between Kaunalewa to the north, Waiawa to the south, and Kapuaʻihalulu to the west.

Map Key #	Place Name	Meaning* and Source	Location
1	Kalalau Valley	Stream, valley, trail, land scetion, and beach northwest Kauaʻi. Returned by Kamāmalu, retained at the Mahele. No claims were awarded by the Land Commission but 18 Royal Patent Grants were issued in Kalalau and Honopu, 11 of which are unlocated. Lit., the straying. (MB 6, 231; IN 44; USGS 1965). (Gay and Robinson 1891 map of Kauaʻi).	Nā Pali.
--	Kalanamaihiki	Lit., the floating as though above the arising waters. (Gay and Robinson 1891 map of Kauaʻi).	On the plain of Mānā. Below Kahelu Ridge. Slightly northeast of Palaiholani.
--	Kalialaioa	(Gay and Robinson 1891 map of Kauaʻi).	On the Mānā Plain. Directly below Niu Ridge.
--	Kaluakauila	Peak. Lit., the *kauila* tree pit. (Gay and Robinson 1891 map of Kauaʻi).	East of and between Kamōkala Ridge and Niu Ridge. East of Kaawaloa peak or ridge, on or near the same ridge line.
--	Kaluanamāʻulu	Valley. (Ulukau Inoa ʻĀina Hawaiʻi, 2023-09-30: USGS 1963). (Gay and Robinson 1891 map of Kauaʻi).	Joins Kaʻanamahuna Valley at about 2230ft. to form Nahomalu Valley. Northeast of Mānā Ridge.
--	Kaluapele	Lit., the volcanic pit. (Gay and Robinson 1891 map of Kauaʻi).	North of Waiaka Ridge.
--	Kaluaʻuaʻu	Valley. Lit., the *ʻuaʻu/ʻuwaʻu* seabird nesting hole. (Gay and Robinson 1891 map of Kauaʻi).	Valley between Kamōkala Ridge and Niu Ridge.
7	Kamaile	Ridge. (Gay and Robinson 1891 map of Kauaʻi).	Nā Pali. Ridge south of Nuʻalolo Valley, and east at the coastal area of Nuʻalolo.
--	Kamao	Unknown. (Note: kāmaʻo is an endemic an endangered Kauaʻi thrush (*Phaeornis obscurus myadestina*).	Unknown.

Map Key #	Place Name	Meaning* and Source	Location
--	Kamapele	Peak. Lit., volcanic child. (Gay and Robinson 1891 map of Kauaʻi).	Peak east of Hāʻeleʻele Ridge. North of Puʻukapele.
--	Kamoʻokala	[Or Kamōkala.} Ridge. Lit., the ridge of the sun. (Gay and Robinson 1891 map of Kauaʻi).	Ridge between Kahelu Ridge and Niu Ridge.
--	Kamolehua	Peak. Lit., seed of the *kamole* plant. (Gay and Robinson 1891 map of Kauaʻi).	Peak at or near the same ridge line east of Kamahoa Ridge.
--	Kanaʻahaki	Gulch. Lit., broken divisions/apportions.	Unknown.
--	Kanahaweli	Beach.	Unknown.
--	Kapaʻula	There are two *heiau*. Lit., Red enclosure.	Bennett's Site 6. "…at Kolo near Mānā described by Thrum as ʻA large heiau said to be still standing, about 4 feet high against the hill. Class unknown.'" Heiau. Near Hāʻeleʻele Ridge. Bennett's Site 4. "…on the north side of Kaʻulaʻula Valley, about 100 feet above the base of the talus slope on Hāʻeleʻele Ridge about 100 feet above the base of the talus slope on Hāʻeleʻele Ridge."
--	Kapuaʻi	Point. Lit., the bubbling and flowing out of fresh water. (Ulukau Inoa ʻĀina Hawaiʻi, 2023-09-30).	Point along shore of Waimea between Polihale and Nohili.
--	Kapuaʻihalulu	Lit., the roaring/thunderings noise of bubbling and gurgling fresh water. (Gay and Robinson 1891 map of Kauaʻi)	A place on the Mānā Plains, south of Kaluapele and north of Limaloa.
--	Kapuahiaola	Valley. Lit., fireplace of chief Ola. (Gay and Robinson 1891 map of Kauaʻi).	Peak east of Kahelu Ridge. North of Ahuloulu peak.
--	Kaulakahi	Ocean channel. Lit., the single flame (streak of color). (USGS 1926, 1984).	Ocean channel between Kauaʻi and Niʻihau.

Map Key #	Place Name	Meaning* and Source	Location
--	Kaulanakiholo	Peak. (Gay and Robinson 1891 map of Kauaʻi).	Peak east of Hāʻeleʻele Ridge. East of Lonokoʻiuʻiu peak.
--	Kaʻulaʻula	Valley. Lit., the redness. (USGS 1965).	Valley between Haʻeleʻle Ridge and Lapa Ridge
--	Kaunalewa	Ridge once noted for its famous Coconut Grove (USGS 1965). Spring [Kaunalewa Shaft/Well] (USGS 1963); Former Plantation Camp/Village (USGS 1963). Lit., placed up high as near the heavens.	Ridge between Wailau Valley and Kuapaʻa Valley.
--	Kauwila/Kauila	Lit., kauila tree.	Unknown.
--	Kawaiʻeli	Swamp and *loko puʻuone* [fishponds], beach area, point, fish grounds, ditch, and pumping station. One of three large ponds drained and filled for sugar plantation (USGS 1963). Also written "Waieli" and "Kawaiele" (Tm 1-0-00 and USGS 1963). Lit., the excavated water. (Gay and Robinson 1891 map of Kauaʻi).	Along beach between Kokole Point and Moelaoa, ear south end of airstrip. On the Mānā plain. West of Niu Ridge.
--	Kealapiʻikamenehune	Trail. Lit., the trail of the Menehune.	Unknown.
--	Keālia	Pond. Lit., Salty or brackish.	Unknown
--	Keana	Lit., the groto	Unknown.
--	Keanapuka	Beach area. Lit., the tunnel passage. (Gay and Robinson 1891 map of Kauaʻi).	On the Mānā coastal area.
--	Keawanaiʻa	Beach area, fishing and hikilau area. Lit., the porpoise channel/passage. (Gay and Robinson 1891 map of Kauaʻi).	On the Mānā coastal area. South of Polihale. -
--	Kekiamanu	Lit., the bird catcher. (Gay and Robinson 1891 map of Kauaʻi).	On the Mānā plain. West of Kolohale.

Map Key #	Place Name	Meaning* and Source	Location
--	Kepapa	Spring boundary point. Elevation 1800 feet (USGS 1965).	Water enters Kaʻulaʻula Valley. Corner on Forest Reserve boundary.
--	Kinikini	Beach area, fishing grounds, ditch area. Name of the Chinese who was the caretaker of the Kawaiʻeli ditch which regulated the flow of water from the swamp to the sea, he lived nearby here. Surf site, windsurf site, and drainage cana at PMRF. Lit., abundant.	Pacific Missile Range Facility, Kauaʻi.Kinikini is the section of the shore that includes the drainage canal that empties into the ocean at the south end of the runway, also known as Airports.
--	Kipakea	(Gay and Robinson 1891 map of Kauaʻi)..	On the Mānā plain. Below Makahoa Ridge, and north of Kaunalewa..
--	Koenaha	(Gay and Robinson 1891 map of Kauaʻi).	On the Mānā plain. West of Kaunalewa.
--	Kohomahana	Beach area. (Flores and Kaohi 1992: 15 Map).	On the Mānā Plains, north of Mānā Point, and west of the PMRF Airport.
--	Kokole Point	[Lae o Kokole] (USGS 1963), lighthouse. Lit., any food crop stunted by weeds or drought; raw.	Light atop a pole approximately 58 feet above sea level on the dunes south of the Pacific Missle Range Facility.
--	Kolo	Ridge. (USGS 1965). Swamp; *loko puʻu one*, and possible village. Lit., crawl or pull. (Gay and Robinson 1891 map of Kauaʻi).	Ridge betweem Kahoaloha Valley and ʻŌhaiʻula Valley. *Loko puʻuone* located on the Mānā plain, south of Kolo Ridge.
15	Kolohale	Lit., house of Kolo. (Gay and Robinson 1891 map of Kauaʻi).	On the plain of Mānā between Niu Ridge and Makahoa Ridge.
--	Kona	Moku or traditional land district. Lit., leeward.	South side of Kauaʻi island.
--	Kuakiʻi	Stone, beach area. Lit., image of the back, referring to the image of a person's side view on a stone that is submerged in the ocean just off the reef area at the site. (Flores and Kaohi 1992: 15 Map).	Located in the ocean west of the Māna Plains, southwest of Moelola and northwest of Kohomahana.

Map Key #	Place Name	Meaning* and Source	Location
--	Kuapaʻa	Valley. Lit., firm back. (USGS 1963).	Valley between Kaunalewa Ridge and Pulehu Ridge.
--	Kunumao	Possible village. Lit., cleared-up cough. (Gay and Robinson 1891 map of Kauaʻi).	Located on the Mānā Plain, directly below and between Kamokala Ridge and Niu Ridge.
--	Laʻahia	Possible village. Lit., set apart for sacred purposes. (Gay and Robinson 1891 map of Kauaʻi).	On the plains of Mānā. West of Mānā Ridge.
18	Lāʻauʻōkala	Point, Boundry point.Lit., bristly tree. (BCT 1:140, USGS 1963). (Gay and Robinson 1891 map of Kauaʻi).	Point near Makaweli. "Boundary of Waimea commences at the beach at the mouth of the Waimea River at a place called Laauokala."
--	Lapa	Gulch, ridge, sand dune, and house sites. Lit., ridge. (USGS 1965). (Gay and Robinson 1891 map of Kauaʻi).	Ridge between Kaulala Valley and Kahoaloha Valley
--	Limaloa	Village, once the area of a famous coconut grove, swamp. Lit., long arm. Name of the god of mirages in Mānā, Kauaʻi, guardian of the sea. (Gay and Robinson 1891 map of Kauaʻi).	South of Kaunalewa nd Kaunalewa Ridge. On the plains of Mānā.
--	Lonokoʻiuʻiu	Peak. Lit., Lono of a faraway distance, so high as to be barely visible. (Gay and Robinson 1891 map of Kauaʻi).	Peak on the same ridge line as Hāʻeleʻele Ridge.
--	Lua	Reservoir and hill. Lit., crater or hole. (USGS 1965).	Reservoir near Puʻu Lua. "Puʻu Lua…is an eroded remnant of an ancient filled crater" in the Nā Pali formation of the Waimea Canyon Volcanic Series. Elevation 3476 ft. Lua Reservoir formed by a dam at the head of Hāʻeleʻele Stream, at the SE side of Puʻu Lua, and supplied by Kokeʻe Ditch. Elevation 3268 ft.
--	Mahamoku	Possible beach.	Unknown.

Map Key #	Place Name	Meaning* and Source	Location
--	Makaʻakiʻaki	*Heiau*. Possible Pāhula.	Bennett's Site 29. "…near the Waimea ditch line on the west side of the Waimea river, a little above the Menehune ditch…It is said that the hula was taught here." (Bennett 1931:107).
--	Maiʻaloa	Valley. Lit., long banana.	Ridge located between Niu Valley and Wailau Valley
--	Makahoa	Ridge. Lit., friendly point. (USGS 1965). (Gay and Robinson 1891 map of Kauaʻi).	Ridge between Niu Ridge and Kaunalewa Ridge.
--	Makahoe	*Heiau*. Lit., friendly point.	Bennett's Site 11. "Makahoe heiau and village site on Niu ridge, Kaunalewa. A small platform village shrine. Thrum describes the village as 'Four and one-half miles from the coast and at an altitude of 1200 feet…' Petroglyphs were reported for this area." (Bennett 1931:102).
--	Makuaiki	Unknown.	Unknown.

Map Key #	Place Name	Meaning* and Source	Location
11	Mānā	*Ahupua'a*, ridge, village, former plantation camp, reservoir, shaft (USGS 1965), point. (USGS 1963), and ditch. Dry western end of Kaua'i, where an older sister of Pele, Nā-maka-o-Kaha'i (the eyes of Kaha'i), introduced the *kauna'oa* dodder. Coastal plain from Kekaha to Polihale fronted by a calcareous sand beach approximately 15 miles long, one of the longest beaches in Hawai'i. The cliff along the inner edge of the plain is an ancient sea cliff and the composition of the plain is a combination of lagoon deposits, calcareous beach and dune sand, and alluvium. Mānā Plains Historic Ditch State Site no. 50-30-05-00754. Site consists of a ditch constructed either at the end of the 18th century or at the beginning of the 19th in order to drain Mānā Plain while it was still a marsh. Lit., arid. (OHA Kipuka Online, 2023-10-02, SHPD Library: K-00289). (Gay and Robinson 1891 map of Kaua'i).	On the Westside of Kaua'i.
--	Mānā J. Cemetery	Historic Site no. 50-30-05-00616. (OHA Kipuka Online, 2023-10-02, SHPD Library K-00215).	Site located beyond Kehaha, off Kaua`i Road, on grounds at PMRF at Barking Sands, approx 180.0m north of site 618; consists of Japanese plantation worker cemetery containing 60 graves; dates to 1901, at earliest.
--	Moelola	Ridge and valley. Lit., striped tapa. (Gay and Robinson 1891 map of Kaua'i).	Ridge between Ka'awaloa Valley and Niu Valley. Valley between Niu Ridge and Makahoa Ridge.
--	Namahana	Valley. Lit., warmth. (Gay and Robinson 1891 map of Kaua'i).	Valley east of Kamōkala Ridge.

Map Key #	Place Name	Meaning* and Source	Location
--	Niu	Ridge and valley. Lit., coconut. (USGS 1963 and 1965).	Valley and ridge between Kamōkala Ridge and Makahoa Ridge.
12	Nohili	Barking sand [Keonekanionohili]. Swamp, *pu‘u one*, ditch, point, beach area, sand dune, pond, house, and camp sites. (USGS 1965). Nohili Pond was one of three large ponds drained and filled for sugar plantation. See also Kawaiele and Kolo ponds. Lit., tedious or slow. (Gay and Robinson 1891 map of Kaua‘i).	Coastal area of Mānā.
--	Nohomalu	Valley. Lit., sheltered residence. (Gay and Robinson 1891 map of Kaua‘i).	Valley between Kahelu Ridge and Kamōkala Ridge.
6	Nu‘alolo	Valley, stream, land section, trail, Nā Pali Coast, north-west Kaua‘i, proposed as a State reserve area. The *iliau*, a relative of the silversword grows here. Nua‘lolo-kai is a small coastal flat protected by a fringing reef. It provided access to the sea for residents of hanging valley of Nu‘alolo-‘āina. (USGS 1965).	Nā Pali Coast, north-west Kaua‘i.
--	Ōhai‘ula	Ridge and Valley. (USGS 1965). Lit., red *‘oha* shrub.	Ridge between ‘Ōhai‘ula Valley and Waiakamo‘o Valley. Valley between Kolo Ridge and ‘Ōhai‘ula Ridge.
--	‘Ōpelu	*‘Ili ‘āina*, *ahupua‘a*, and beach. Not awarded. Testimony by Iona Kamo‘opōhaku. (Māhele Documets, Native Testimoney 11:241). Lit., mackerel scad, and also a variety of taro.	‘Ili ‘āina located in claim no. 6112 by Isaac Neck: “No. 3. An ahupua‘a called ‘Ōpelu beach; on Waimea side by ahupua‘a ‘Ōpelu 2; on makai side by sea; on Miloli‘i side by ahupua‘a Ka‘awaloa (q.v.). ‘Ōpelu 1 and 2 were probably ‘ili of the former ahupua‘a of Mānā, at the mouth of the Ka‘awaloa Valley.”

Map Key #	Place Name	Meaning* and Source	Location
--	Palaiholani	Beach area, boat landing, point. (Gay and Robinson 1891 map of Kauaʻi).	At the coastal area of the Mānā plain. West of Kahelu Ridge.
--	Papaʻalae	Peak. Lit., reddish flat surface. (Gay and Robinson 1891 map of Kauaʻi).	Peak east of Kolo Ridge.
--	Pāpiʻohuli	Lit., curled-over arch of the *ʻohai* blossoms. (Ke Alakai o Hawaii, Feb 4, 1932, p.4).	Located in the area of Polihale. Once the home of the Kua *kūpuna*. The descendants of the Kua *kūpuna* presently reside in Kekaha.
--	Papohale	Valley. Lit., deep/open enclosure. (Gay and Robinson 1891 map of Kauaʻi).	Valley located east between Mana Ridge and Kahelu Ridge. It runs northeast off of Kahelu Nui Valley.
17	Pawehe	(Gay and Robinson 1891 map of Kauaʻi).	On the coastal area of Waimea town. South of Waimea Plantation.
--	Piliamoʻo	Valley. Lit., adjoining the moʻo. (Gay and Robinson 1891 map of Kauaʻi).	Valley near Waiakamoʻo. (Pilimoʻo is also an ʻili in Makaweli ahupuaʻa). North east of Waimea Plantation. North of Kikiaola.
--	Pineʻi	Beach area, fishing grounds, and ditch area.	Unknown.
--	Pohakainapuaʻa	Stone. Lit., splotching/dotting on the pigs. (?–Pig destroying stone, Pōhākāinapuaʻa). (Gay and Robinson 1891 map of Kauaʻi).	East of Polihale Ridge. North of Puʻukapele.
--	Pōhakumanō	Stone, peak. Lit., shark stone. (USGS 1963). (Gay and Robinson 1891 map of Kauaʻi).	It is also a boundary point, and puʻu in Waimea *ahupuaʻa* at the 2600 ft. elevation. The point is on a Forest Reserve boundary above Mānā. On the same ridge line north of Kaunalewa Ridge and Pulehu Ridge. South of Ahuloulu peak.

Map Key #	Place Name	Meaning* and Source	Location
--	Polihale	Heiau, house site/lookout platform, cultural/lithic deposits and scatter, cutural/basalt scatter, spring (near end of beach), cliff, spring (in cliffs) (USGS 1965), ridge (USGS 1965), beach area, and state park. Polihale is famous for its seaweed [*pahapaha* or *līpahapaha*, a general term for sea lettuce (*Ulva fasciata* and *Monostroma oxyspermum*)] used in leis, a practice said to have been introduced by Pele's sister, Nāmakaokahaʻi. Lit., near the bosom is where the departing souls free secured and hospitable. (Gay and Robinson 1891 map of Kauaʻi).	Polihale Ridge is between Hikimoe Valley and Hāʻeleʻele Valley. Bennett's Site 1. "…a four-terraced structure on the seashore at the base of Polihale cliff…" (Bennett 1931:99; USGS 1963). Westside of Kauaʻi.
--	Poʻoahonu	House site, beach area, fishing village, canoe landing, swimming lagoon formed when sand shifts with heavy surf exposing protective outer reef and pond near the shore. Lit., head of the turtle. (Gay and Robinson 1891 map of Kauaʻi).	Along the coastal area of Mānā. West of Kolo.
5	Puanaiea	Coastal area. (Gay and Robinson 1891 map of Kauaʻi).	Nā Pali Coastal area at the foot of Nuʻalolo Valley.
--	Puʻuhalo	Lit., peering mound. (Gay and Robinson 1891 map of Kauaʻi).	Located on the Mānā Plains, east of ʻĀinaʻike also known as ʻĀinaʻiki
--	Puʻuheihei	Possible village. Lit., enchanged/ensared mound.	Unknown

Map Key #	Place Name	Meaning* and Source	Location
10	Puʻukapele	House sites and *heiau* platforms, house sites, peak. Voices from the Menehune at Puʻukapele could be heard on Oʻahu. Lit., the volcano hill. (AB 6:184, TMK 1602:76:11, Claim No. 6112:1 by Neck, TMK 1602:37). (Gay and Robinson 1891 map of Kauaʻi).	The peak is at the 3,657-4,000 ft. elevation of Waimea Canyon. East of Kolo Ridge.
--	Puʻulehu	Ridge. Lit., ash-colored hill. (Gay and Robinson 1891 map of Kauaʻi).	Ridge between Kaunalewa and Hauola Ridge.
--	Puʻulua	Peak. Lit., double hill. (Gay and Robinson 1891 map of Kauaʻi).	East of Polihale Ridge.
--	Puʻumoi	Peak. Lit., *moi* fish hill. (Gay and Robinson 1891 map of Kauaʻi).	Peak east of Kamōkala Ridge. South of Ahuloulu peak.
--	Puʻuohanalei	Peak. Lit., hill of Hanalei (Gay and Robinson 1891 map of Kauaʻi)..	Peak between and to the east of Kolo Ridge and Ohaiula Ridge.
--	Puʻuʻōpae	[Puʻu ʻŌpae] Reservoir. Ranch. Manini family ranch. Location of KHHA (Kekaha Hawaiian Homes Association) project. Lit., shrimp hill. (Marshall, 1914:39).	Triangulation station, Nā Pali at the 2,147 ft elevation.
--	Puʻuōpaeiki	Peaki. Lit., small shrimp hill. (Gay and Robinson 1891 map of Kauaʻi).	Above Kaunalewa Ridge.
--	Puʻuʻōpaenui	Peak. Lit., big shrimp hill. (Gay and Robinson 1891 map of Kauaʻi).	Above Kaunalewa Ridge.

Map Key #	Place Name	Meaning* and Source	Location
--	Saki Mānā	Village, plantation camp. "…ancestors on my grandma's side were residents of Polihale. That would be the Aipoalani and the Kilauano *ʻohana* [family]. They were descendants of Saki. Saki is a group of islands out in South Polynesia…I guess. Supposedly, they migrated from that area…Sakinese" (James Kanohoanu Nakaahiki, 2023-11-26).	Polihale.
--	ʻUwaluiki	Valley. Lit., slightly clawed or scratched. (Gay and Robinson 1891 map of Kauaʻi).	Valley along Mānā Ridge, south of Piliamoʻo Valley..
--	Waiakamoʻo	Valley. . (USGS 1965). Lit., water of the moʻo.	Valley is between ʻŌhaiʻula Ridge and Mānā Ridge.
--	Waiaʻoʻu	Peak. Lit., water of the *ʻoʻu* bird. (Gay and Robinson 1891 map of Kauaʻi).	Peak in the vicinity of Kaunalewa Ridge.
--	Wailau	Valley. (USGS 1963). Lit., many waters. (Gay and Robinson 1891 map of Kauaʻi).	Valley between Makahoa Ridge and Kaunalewa Ridge.
16	Waimea	Moku (judicial land district), canyon, kūlanakauhale, landing, river, and ditch. (USGS 1963). Lit., reddish water. (Gay and Robinson 1891 map of Kauaʻi).	*Moku* [judicial land district] extending from Nualolo to Hanapepe, inclusive. A ditch that takes water to Mānā from the Waimea River at about the 150 ft. elevation.
--	Waineki	Swamp and *moʻo*. (Māhele documents, Native Testimony 11:34). Lit., neki bulrush water.	Swamp in the mountain above Waimea town, home of the Menehune. The swamp has a stream joining ʻElekeninui Stream at about the 3540 ft. elevation to form Kōkeʻe Stream. "A moo of Waineki bounds the makai side of claim no. 6331:1 by Koolau (TMK 1601:19) in the ili of Halepua. TMK 1601:18."
--	Waiokapuaʻa	[Or Waiapuaʻa] Beach area, bay, point. Lit., water of the pig. (Gay and Robinson 1891 map of Kauaʻi).	Located on the coastal area of the Mānā plain. West of Makahoa Ridge.

Map Key #	Place Name	Meaning* and Source	Location
--	Waiolono	Beach area, point. Lit., water of Lono. (Gay and Robinson 1891 map of Kauaʻi).	On the coastal area of Mānā. West of Kaunalewa.
--	Waioluhi	Lit., water of Luhi.	Unknown.

Places of names sourced mainly from Flores and Kaohi 1992, and USGS maps unless otherwise noted.

* Adapted from Ulukau: Hawaiian Electronic Library (https://ulukau.org/index.php?l=en).

† Most of these place names were derived from: Flores and Kaohi 1992 with translations and other sources of information collected from Ulukau (Online): Hawaiian Dictionary (Pukui 1969), Hawaiʻi Place Names (Pukui and Elbert 1966) and Place Names (Clark 2002) unless noted in the Meaning and Source column. The Map Key# are places mentioned in the *moʻolelo*(s) translated by Keao NeSmith on pages 35-48, and depicted in Figure 4 (Gay and Robinson 1891 map of Kauaʻi).

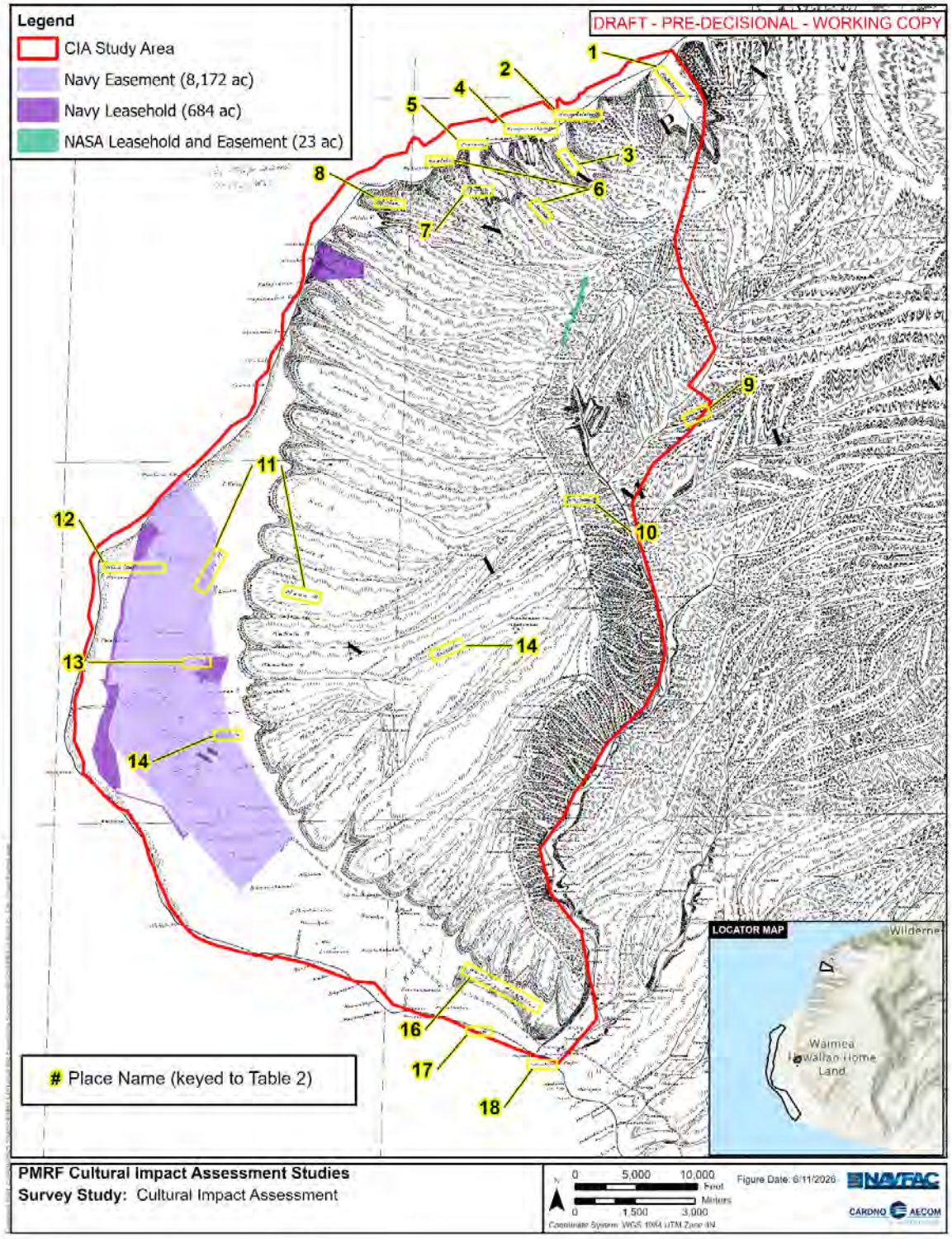


Figure 3. Gay and Robinson's 1891 map of Kaua'i with the locations of place names and cultural sites within the Kona *moku* of Kaua'i and surrounding area. These locations are described in detail in Table 2.

MOʻOLELO: TRADITIONAL LITERATURE

The ethnographic works of the late 19th and early 20th centuries contribute a wealth of information that comprise the traditional literature—the *moʻolelo*, *oli*, and *mele*—as well as providing glimpses into snippets of time, and a part of the Hawaiian culture often forgotten. The *moʻolelo* [stories] allow *ka poʻe kahiko*, [the people of old], the *kupuna* [ancestors], to come alive as their personalities, loves, and struggles are revealed. The *oli* [chants] and the *mele* [songs] not only give clues about the past, special people, and *wahi pana* or legendary places, they also substantiate the magnitude of the language skills of *ka poʻe kahiko*.

The following two *moʻolelo* or stories (Table 3 and Table 4) were contributed by Keao NeSmith who translated them (Table 3 and Table 4). *He Moolelo O Kaao No Papiohuli* [The Story of Pāpiohuli] was acquired from the Hawaiian Newspaper*, Kuʻu Hae Hawaiʻi*, July 4, 1913, pp. 5–7. *He Moʻolelo Hooni Puuwai No Ka Elu Kapunohuula* [*A Romantic Tale of the Hero* Kapūnohuʻula] was acquired from the Hawaiian Newspaper, Kuokoa Home Rule, Feburary 24, 2911, p. 4. Several of the names in this *moʻolelo* are places depicted on the (DAGS) 1891 Gay and Robinson Map of Kauaʻi (Figure 3). Both of the *moʻolelo* attest to the importance of the locations near Mānā, its shoreline, and marine resources.

Table 3. Kuu Hae Hawai, July 4, 1913, pp. 5–7.

HE MOOLELO KAAO NO PAPIOHULI Ke Kaupu Keehi-ale o na Ku-nalu o Awini, a o ka Ipo Aloha Hoi a ke Aliiwahine Kolohale, "ka Wahine Hele-La o Kaiona—Alualu Wailiula o Mana."	THE STORY OF PĀPIOHULI The Albatross Stepping Over the Waves of ʻAwini and the Lover of Chiefess Kolohale, The Woman Who Goes to the Sun at Kaiona—Chasing the Mirages of Mānā
p. 5 pu mai nei kona wahi e noho mai poo huna i ke ao uli, no keia mau la he kanaka kino ula he alii he olelo a Kuhoolapa ua huli like aku na poe apau o ka papa hulihonua a nana ma kahi e noho mai ana o Puanaiea ka makaula, eia nae aohe he ike aku o na poe apau, a koe wale no elua mea e ike nei, oia no, o Kuhoolapa ke kahuna, ame ke aliiwahine Mana, nokamea ua haawi mai la na aumakua poo o ka po i ka ike ia Mana no ia wa wale no e ike aku ai oia i ke kanaka kino ula ana i halawai uhane ai he elua manawa.	p. 5 [The section preceding this is missing and this text starts mid-sentence] . . . and everyone of the council of priests turned to look at where Puanaiea, the prophet, was sitting, but not everyone saw him; only two saw him: Kūhōʻōlapa, the priest, and Chiefess Mānā, as the leading family of deities of the night granted sight to Mānā alone when she saw the man in spirit form, with whom she met twice as spirits.
Ke kali nei ka papa hulihonua i ka manao pane o na alii ma ko laua aoao no ke noi a Puanaiea no ka lilo o ke keiki nana e hanai me kana wahine me Anaki ka mea nona ka puu o ahi kapu ia mau la, e o nei no ka inoa o keia wahine ma ua Puu o ahi e kaulana nei Anaki e ku kilakila nei i ke alo o Milolii.	The council of priests awaited the response of the two chiefs on their side regarding the request of Puanaiea about taking the boy to adopt, a request of his wife, ʻAnaki, as well, for whom the peak where firebrands are hurled is named, thus perpetuating the name of this woman on that

Oia kali ia o ka papa hulihonua a liuliu iki, ia wa i loheia aku ai ka leo o ke alii Kalanamaihiki i pane ana mai; Ae, ua manao no maua e aua i ka hanai ana o ke keiki na maua, a oia ke kumu o ka ululohi o ka maua pane ana aku i ka hua noi a ka Makaula Puanaiea no ka lawe hanai i ke keiki. Aka hoi, na ka ouli o ka manawa i ku hoaku mai nei, a ke aliiwahine nei hoi i ike aku nei, nana ma o ke aliiwahine nei la, i ao mai nei ia maua e ae aku maua i ka lilo ana o ke keiki e hanauia ae ana e ke aliiwahine nei na Puanaiea ka makaula e hanai, a oia ka maua e ae aku nei imua o oukou e ka papa hulihonua o ko maua alo alii nei. A eia wale no nae ka ke aliiwahine noi ia oe e Puanaiea, i ekolu hoi la o ke keiki a maua me maua e milimili aku ai a i ka eha no hoi o ka la e kii mai ai oe i ke keiki a lawe aku, ia wa koke no i ae mai ai o Puanaiea a o ka nalo aku la no ia o ke aka kino wailua o ke kanaka kino ula, a ke aliiwahine i ike ai i ku mai ma ko Puanaiea wahi e noho ana. A o ka pau ana iho la no ia o ka hui ana o ka papa hulihonua, a na ka Hoopaa Kahuna Hooneinei i ku mai i ka pule pani a hookuu i ka papa hulihonua. A penei ia pule a Hooneinei: E Ku, e Lono, e lono i kauweke, E uweke, e wehena ka pawa, Ka piliaiku o ka po e—a—e, He po kaakua po kinikini, I kinikini i ka lono i noa a— Enoa ka papaiaea, ka papakapu, Ka makohi makolukolu o ka ike, E ike i ka hoole akua hoole ma—na, E ike e ka paa iluna ka paa ilalo, E ko kela pea ko keia pea, a— E ke namu ke nawa hoi ea— Ua pau kikikaale o ko muli nei, Pau ka wa olelo a ka piha akua, E hainukai e kai olena ea, Ua noa, ua noa ka Papa Hulihonua, Amama lele wale aku la. A pau keia pule a Hooneinei ka hoopaa kahuna ia wa i hookuu ai na hana a ka papa hulihonua, a hoi	famous firebrand-hurling peak of ʻAnaki that stands so majestically in the face of Miloliʻi. The council of priests waited a little while, and at that time, the voice of the chief, Kalanamaihiki, replied, “Yes, we both thought to withhold the adoption of the child for us, and that is why we were slow to respond to the request of the prophet, Puanaiea, regarding taking the boy to adopt. “But when the omen appeared that the chiefess saw, it taught the two of us through the chiefess that we should agree that the boy to be born to the chiefess and Puanaiea, the prophet, should be adopted out, and that is what we agree to before the council of priests of our royal court. And this is the only request of the chiefess to you, Puanaiea, that our child remain with us for three days to spend time, and on the fourth day, you should come and take the child.” At that time, Puanaiea agreed to it and the apparition of the man in mystical form disappeared that the chiefess saw that stood where Puanaiea was sitting. And that was the end of the gathering of the council of priests, and Hoʻoneinei, the chanter of the priests, stood and offered the closing prayer and released the council. This was the prayer Hoʻoneinei offered: O Kū, Lono, Lono who opens the way Let it be open, break open the morning Having sat stiff through the night A night of dizziness, multitude of nights A multitude that Lono made free Let the council that elevated, the council placed under sacred restriction be set free Digging profoundly for knowledge Knowledge to deny the god, to deny the power Let those above and below see Those of the far extremities The Nāmū people, the Nāwā people Those at the rear are quick to appear The time for the throng of gods to speak is over Feed them the salt water, the ʻōlena water It is set free, the Priest Council is set free It is released

no hoi kela ame keia i kona hale iho, a o na alii no hoi i ko laua Halealii i hanaia a akoia me ka uluhe ame ke ka o ka maile a oloko ua hoonaniia me na nani like ole, elike me ke ano mau iloko o na hale o na alii o ke au kahiko o keia Paeaina, o ka moena oluna o ka hikiee moe o na alii oia no ka moena Ahunalii Pawehe o Niihau i ulana ponoia e Pahuihonu, ka wahine kino paee o Niihau, nana i ao mai i ka ulana ana o ka moena Pawehe o Niihau e kaulana nei i keia la, he moena e pahee ai o ko ili, ame ka nui o ke kala e loaa ai. A ua ulana puia no hoi iluna o keia moena o na alii Kalanamaihiki ame kana Aliiwahine Mana, ka Hulupue, o ka manu ula o Kaula.	When that prayer was over, Hoʻoneinei, the chanter of the priests, ended the event of the council of priests and each went to their own home, and the two chiefs went home to their royal home that was constructed and thatched with uluhe ferns and the inner bark of maile decorated with all sorts of beautiful things, as was customary for the homes of chiefs in the ancient days of these islands. There was a bed made that was raised, which was called a moena ahunaliʻi pāwehe of Niʻihau woven expertly by Pāhuihonu, the woman of mystical form of Niʻihau, who taught weaving of fine mats of Niʻihau that have become so famous today. It is a mat that is so slick to the touch and very colorful. And what was woven into this moena of the chief Kalanamaihiki and his chiefess, Mānā, was the feathers of the red birds of Kaʻula.
A pela no ka noho ana o na alii ai aina o Mana a ua noho no hoi ko laua mau makaainana elike no me ke ano mau e ikeia nei.	And that was the way the rulers of the land lived of Mānā, and the people under them lived in the usual way as we know it today.
A hala ae ana he mau anahulu la, a pela aku ana, ua ike maopopo loa ia ae la ka opu hapai o ke liiwahine a o ka eono paha ia o na ku ma ka helu Hawaii.	Several weeks passed and it was seen that the chiefess was soon to give birth, and it was the sixth period of the pregnancy according to the estimation of Hawaiians.
Ia wa i hoea mai ai o Puanaiea, a hiki ana imua o na alii, i lawe mai oia he laau na ke aliiwahine e ai mau ai mai ia manawa aku a hiki i ka hanau ana o ke keiki, a o keia laau mai ia manawa mai ka maa ana o ka lahuikanaka o Hawaii nei i ka hanai i na wahine hapai, a o ka inoa o keia laau he “makou,” he laau keia e hooi ae ai i ka ui o na helehelena o ke keiki, a he hiona hoi e kau ana o ke kanaka ui, a wahine ui maluna o na keiki i hanauia mai e na makuahine i ai i keia laau, a aole e pau ka ui a elemakule a luahine hoi.	That is when Puanaiea arrived and came before the chiefs in order to bring medicine for the chiefess for her to eat from that time until the birth of the baby, and the type of medicine at that time that was familiar among the people across Hawaiʻi to give women about to give birth was called *makou*, an herbal medicine to improve the beauty of the face of the child giving the child a beautiful appearance as a handsome man or beautiful woman after being born to a mother who consumed this medicine. They would not lose their good looks as they became an old man or woman.
Ia loaa ana mai o keia laau makou i ke aliiwahine Mana, ua hoomaka iho la oia e ai, a pela mau aku aia no ka pau ana a ka la e nahunahu hanau ai o ke keiki.	When Chiefess Mānā received this medicine, she started eating it up until the time drew close for her labor contractions to give birth.
A ua ana aku la no hoi na alii ia Puanaiea ka makaula e noho mai me laua a hana ke anahulu. He ana ana no hoi na na alii i aeia aku ai e Puanaiea.	The chief and chiefess pressed Puanaiea, the prophet, to stay with them for another ten days. It
A hala ae ana he mau anahulu la, a pela aku ana ke hookokoke loa maila ka wa hanau o ke aliiwahine Mana.	

Ia ka hiki ana he elima la wale no i koe a hanau ai ke aliiwahine, ua hoike e mai la na lani i na hoikena hai mua, ua kokoke loa mai e hanau ka hookalakupua, ke aiwaiwa ahikanana o na pali ku'iae ku'i iho o na Honopuwai akua Honopuwai kanaka, oia hoi ke ike aku nei ka lehulehu o na kanaka o ke Alii Kalanamaihiki i ka lele ino o ke ao kaalelewa a he ekolu manawa e ku'i pamalo ai o ka hekili i ka la hookahi, ke ui aku nei ui mai na kanaka; ea, heaha la hoi na hopena e hoea mai ana o keia mau hana a ke ao papanuu ke ao papalani? A me ia mau ano iho la ia mau la e hana mau ai, a ma na po no hoi, aohe i kana mai ua mea he hauwalaau o ka leo o ke kai, me he la e hoonakeke maoli mai ana no ka nalu i ka paala o kahakai, a ua ku a makau maoli ka poe hele lawaia hoomoemoe o ka po. A e uwaka mau mai ana no hoi ka leo o ka manu Noio aukai, a i ka ike ana o na kanaka apau i keia mau haawina ko ka lewaluna ame ko ka paa ilalo nei, ua hoomaka mai ka manao o na kanaka e pioo pioloke me ka piha pihoihoi, ano ku i ka weliweli, eia nae, ke ike mai la no ke kahuna nui Kuhoolapa i ke kumu mai o keia mau ouli kamahao, a oia kana i olelo aku ai ia Hooneinei ka hoopaa kahuna: "Ea, hookokohi kaumaha mai nei na paia lani, a akahi wale no ka po i kohakoha ai ika pukeia ana o ka paala o kahakai." Ia wa i pane aku ai o Hooneinei: "E nanalia aku no hoi ka ike aole e o ka noho nanea wale iho no a hoea mai ka la o ka pilikia oia ka wa e kukupau ai ke kai o Nualolo." p. 6 I keia wa e puka nei keia mau olelo ia Hooneinei aia ke lo'u iki la ka Kuhoolapa aka, me ka ike ole mai o ka hoopaa kahuna, me ka manao nei o Hooneinei aole la i ike o Kuhoolapa ke kahuna nui, i na ano o keia mau ouli ana i hoomaoe aku nei A o na ano no i loaa i ke kahuna nui, oia mau ano no kai ike pu ia e Puanaiea ka makaula iaia e noho	was an accommodation that Puanaiea allowed the chiefs. A few more weeks passed and the time was close for Chiefess Mānā to give birth. When five days remained for the chiefess to give birth, the heavens revealed the first signs that the time was close to give birth in magical fashion, in mysterious ways giving birth to a warrior of the succession of cliffs of Honopū Wai Akua, Honopū Wai Kanaka. The multitudes of the people of Chief Kalanamaihiki witnessed the clouds racing across in the sky and three cracks of dry thunder in the same day, and the people asked each other, "Wow, what are all of these happenings on the earth and in the sky going to lead to?" And along with these events that happened in those days, at night, there was much racket of the sea as if the waves were rattling the boulders of the seashore and the fishermen who planned to lay nets at night became very afraid. The noio birds chattered noisely, and when the people saw these signs taking place in the skies above and on the earth here below, they began to worry with fear and excitement, terrified. But the high priest Kūhōʻōlapa knew the reason behind the marvelous omens and that is why he said to Hoʻoneinei, the chanter of the priests: "The walls of the heavens are greatly troubled with pain. This is the first night that the boulders of the beaches are cracked together loudly." At that time Hoʻoneinei answered: "Pay attention to what is known. Don't sit relaxed until the day the day of troubles. That is when the sea of Nuʻalolo will become violent." p. 6 While Hoʻoneinei was speaking, the shadow of Kūhōʻōlapa was hovering, but the chanter of the priests did not see it thinking that the high priest, Kūhōʻōlapa, did not know the meaning of the various omens that he spoke of in vague ways.

kamailio pu ana me Honopuwaiakua a o Honopuwaikanaka no ia hookahi kino elua inoa. E pono paha maanei e hoakaka pokole aku ka mea kakau, i kekahi mau mea e pili ana i keia luahine ano kupua, i akaka e ai ia oe ke ano o keia wahine ma ka nee ana aku o keia moolelo, oia hoi, penei: O keia wahine he elua ona kino lau eepa, oia no he kino makani nona ka hapa mua o kona inoa Honopu oia no ka inoa makani i loaa like ai ia Kuapakaa iaia i paha ai i na makani o Kauai, e olelo ana penei: “He Honopu ko na Honopuwai.” O ka ikaika o kela kumu makani me keia kumu makani ame ko ikaika o kela welelau makani me keia welelau makani, eia iloko o keia kino eepa o Honopuwaiakua, a o ka lua o na kino eepa, oia no, he kino wai, a nona ka hapa hope o ka inoa keia wahie eepa o Waiakua. O ka ikaika o na kumu wai ua apau o ka lewa ame na welelau wai ua apau loa o ka lewa, ame ka ikaika o na kumu waikahe apau, me na welelau waikahe apau o lalo nei eia iloko o keia kino eepa o keia wahine, a pela i holo loa ai keia inoa kupua eepa o keia wahine o Honopuwaiakua, a e o nei no keia mau inoa ma kekahi mau aina owawa pali kahako o “Na Pali” o Kauai, a ke makemake keia wahine e noho oia iloko o kona mau kino lau, alala e hoi ana oia a noho ma Honopuwaiakua, a ke makemake no hoi oia e noho iloko o ke kino ano kanaka, alaila e hoi no oia a noho ma Honopuwaikanaka, a pela iho i pili pu loa ai keia mau awawa aina elua i kahi hookahi, nokamea he hookahi no mea nona ka puana o na inoa oia wahi i hele a noho kaulaaa i na keiki aloalo makala o ua mau hulaana la o na Honopu elua o ka mokupuni o Kauai a Manokalanipo (Kamawaelualani i keia wa). A o kekahi mau mea kupanaha i ikeia no keia wahine makuahine o ka Makaula Puanaiea, oia no, ma kona mau maka elua he hookahi maka he maka ano kupua oia ka maka akau he ike loa ia maka i ka nohona ame ka hana ana a na eepa kupua o ka lewa iluna ame ko ka paa aina ilalo nei, a o kekahi maka hoi he ike loa i ka nohona, ame ka hana ana a na kanaka o ka paa aina o lalo nei, a o keia mau ano ae la no elua na mea i loaa	What the high priest did understand, however, is that what Puanaiea, the prophet, did see as he was talking with Honopūwaiakua and Honopūwaikanaka, was that they were one and the same. It is probably necessary here for this writer to explain a few things briefly about this old woman who was also a demigod, that you may have already gathered about this woman as this story has progressed: This woman has two physical forms, a wind form, which is the first part of her name, Honopū, the name of the wind that Kūapāka‘a did not get for the names of Kaua‘i winds, and it was said, “the wind name of the two Honopūwai valleys is the Honopū wind.” The strength of the various origins of wind and the origin of the various winds are contained in this mystical form of Honopūwaiakua and the second mystical form is a form of water, and that is the back part of the name of this mystical woman, Waiakua. The strength of the source of all waters of the sky and all rain water of the aky, and the strength of the source of all flowing waters and flowing waters on the ground are held in the body of this woman of mystical form, and that is how the demigod name of this demigod is rendered as Honopūwaiakua, and these names live on in some of the cavernous valleys of Nāpali on Kaua‘i. And when this woman wants to live in her supernatural form as a native crow, she goes back to live in Honopūwaiakua, and when she wants to live in the form of a human, she goes to live in Honopūwaikanaka, and that is why these two valleys are together as one because there is one whose name is spoken of as belonging to that place, who became famous among the children who dared swim the rocky points of the two Honopū valley of the island of Kaua‘i of Manokalanipō (Kamawaelualani in these days). Among the amazing things known about this woman, who was the mother of the prophet, Puanaiea, is that of her two eyes, one eye, her right eye, is able to see mystical beings, their nature, and what they do, both mystical beings of

ma ka lolohe o na pepeiao o keia wahine kupua Honopuwaiakua me Honopuwaikanaka.	the air and those down here on the land. The other eye can see the nature and actions of people here on the land. These two abilities are gathered from what people talk about this demigod woman, Honopūwaiakua and Honopūwaikanaka.
Eia nae, me keia nui ike, nui ikaika nui mana, i loaa i keia wahine a na kauna, na kaau na lau, na mano ame na kini a ka eepa nui wale i noho ai aole loa iloko ona a oia mau mea paha i loaa iaia ka manao e hana ino wale mai i ka noho, ka hana ana a na kanaka oia wa, aia wale no a hooheuia aku alaila e oni auanei ua kaikamahine ihupani laeoo la o na Honopu ilaila e ike pono aku ai oe e ka mea heluhelu i ka pili o keia mele ku'i o ka wa kahiko:	But with these abilities, these strengths and powers that this woman has in abundance, and then some, as a mytical and powerful being, there is no intention to cause harm to anyone, which is what people of the day would do, unless trouble was brought on, and then this wise and knowledgeable young woman of the two Honopū valleys would realize, dear reader, the meaning of these lyrics of attack below of the ancient days:
Na ka Ia la i oni po-ia ke ku'i, Kapeku ka hiu o ka Ia la, Lewa ana i ke kai e, Ua nape ha e ka maha, Ke api mai nei la, He Ia nui no ka'u, Ua paa la ma ka hiu, Ku oe la i ka e-o, He pipi no ka akoa, Ku wau la i ka pahu, Moku oe la i ka ohe, Hoi mai.	The fish moves to strike with a hit The tail of the fish strikes It knows the ways of the sea all too well The gills flair They throb I have a great fish I have caught it by the tail You have been speared and are defeated A clam of the coral reef I have been stabbed You are torn by the bamboo Come back to me
E hoi ae kaua e ka mea heluhelu ma ke kuamoo o ka kaua moolelo.	Let us return to the backbone of our story, dear reader.
Ae, ua ike ae nei kaua ma ka wa o kela mau hiohiona kuapaianaha i ikeia ai e ke kahuna nui ame na kanaka apau o na Alii Kalanamaihiki ame Mana kana aliiwahine oia no ka po ekolu mamua mai o ka hanau ana o ka mea nona keia moolelo aiawai nui wale, a ma ia po hookahi no aia o Puanaiea ke u kamailio pu la me kona makuahine hookalakupua nona kahi moolelo kupanaha i hoikeia ae nei, nana i alako loa mai nei ia kaua e ka mea heluhelu, a kaawale loa mai ke kuamoo mai o ka hele ana o ka moolelo ma kona alahele pololei.	Yes, we have seen that when the high priest witnessed those events and all of the men of Chief Kalanamaihiki and Mānā, his chiefess, that was on the third night before giving birth to the one whose amazing and great story this is, and on that same night, Puanaiea was talking with his magical mother, whose story is itself spectacular, as was shown above. She is the one who diverted our attention away from the main story being carried on here on this straightforward path.
O ke kumu o kela hiki ana o Puanaiea a hui kamailio pu me kona makuahine, no kana wahine no Kamaile i kena aku iaia e hele e hui kuka pu me ka luahine no ka mea e pono ai ka laua hanai alii, a ma ia hui kamailio pu ana o Honopuwaiakua Honopuwaikanaka me Puanaiea kana keiki i hoike mai ai ua luahine la penei:	The reason Puanaiea went to talk with his mother was because his wife, Kamaile, told him to go and consult with the old woman regarding what they should do regarding adopting the young chief that

“Ia olua ka inoa kahu hanai o ke Keikialii a o ka hanai ana ma na mea apau e pono ai kona noho ana aku o keia mua aku, o kakou apau ke hanai, e hanai olua ma na mea hiki ia olua, a pela no hoi au ma na mea hiki iau ke hanai, a na ka hopena no auanei e hoike mai i ka puana a ka moe, oia aku ana ke aiwaiwa a ke ahikanana, e o ai kona inoa apuni na moku, e lilo ai i mea na na kanaka e keha ai. O ke Kaupu keehi ale nana e hee ke ku nalu o Awini.” (A e koho pono ai nono keia mau lawena olelo ana a ke mele):	was to be born, and in that conversation of Honopūwaiakua Honopūwaikanaka with Puanaiea, her son, the old woman said the following: "You two have the adoptive name of the young chief and you two will raise him in all things having to do with his life from now on. We all will raise him. You two will raise him in the ways you can, and I will raise him in what I can, and the result will reveal itself when his sleep in spoken of, amazing things the warrior had done, and his name shall live on across the islands to become something people will aspire to surpass. He will be the ka‘upu bird that tramples over and surfs the waves of ‘Āwini.” (And they will guess that the words of this mele will pertain to him):
He aloalo kuaua au no Hanalei, He hueu he eueu no ka manomano, He laau lala ole ia no luakini, He laau milolii ia no ka naele, He koa hoopakipaki wai ua no Kahilikolo, He okaa, oniu, owala laau no Puukapele, He kilohana no Kauai loa no apuni.	I challenge the rough waves of Hanalei I raise a great ruckus A tree without branches in the temple A tree of curled grains of the forest A koa tree upon which the rain splashes at Kāhilikolo A club that twirls and swings of Pu‘ukāpele A vantage point to view all of Kaua‘i
A olelo hou mai la ua luahine nei ia Puanaiea, “Eia ke hoomaka mai nei na alelo o ka ino eia la ua hele ka lewa luna a haakokohi, a he elua wale no po i koe a oili mai ka hanai alii a kakou a hoomakuakau anei olua i ka hale,” i ninau mai ai ua luahine nei ia Puanaiea.	And the old woman said further to Puanaiea, “The tongue of the storm approaches. The skies have become threatening and two nights remain before our adopted chief emerges. Have you two prepared the house?” the old woman asked Puanaiea.
Ua ae aku la no hoi o Puanaiea, “Ae, oia no ka mea i noho aku nei o Kamaile, a ua makaukau no hoi ke kapa e wahi mai i ke alii ma ko maua la e kii ai oia ka eha o ka la iwaho, a mai ia la aku no hoi e lilo mai ai ke keikialii na kakou e hanai.”	Puanaiea said yes, “Yes, that is why Kamaile stayed behind. The tapa sheets are prepared to wrap the chief in on the day we go and get him when the pain comes out and from that day onwards when he becomes the prince that we raise.”
Ia wa i pane mai ai o Honopuwaikanaka, “Eia ae keia kapa a o ke kapa ia mawaho loa a olua e wahi ai i ke alii.”	Then Honopūwaikanaka answered, “Here is a tapa that you two should wrap around him as the outer covering when you wrap the chief.”
O ka wehe mai la no ia o ua luahine nei i emo o ka Hokeo waiho o na kapa i hoopunaheleia a lalau iho la ua luahine nei, i kekahi kapa i kukuia me ka noeau loa, a ua kapalapalaia a hooluu paiulaia no me ka wai aala o na pua aala o ka nahele, e laa ka na-u, ke kamakahala, me ka heu o ka hinano o na hala o Mapuana, a pela aku.	The old woman then took out a container of tapa that she treasured. She took out a tapa that was beaten with great expert skill that was stencilled and dyed with red patterns with scented liquid of the sweet-scented flowers of the forest, like nā‘ū,
A ua olaniia i ka uwahi o ka iliahi ame ka naio i na la ame na po he umi anahulu, a ina e kaulaiia	

keia kapa i ka la ua like kona ano me he makaihuwa la i ka po pouli. Ua kapaia ka inoa o keia kapa ia wa o Kaahumakanoelani a na Honapu, a na Honopuwaiakua maoli no i kuku i keia kapa, mamuli no o kona ike e ana i ala honua me kela make ike ona i ka mea e hoea mai ana oia hoi he hanai alii nui aiwaiwa aku ana o Puanaiea kana keiki, ua ae aku la no hoi o Puanaiea i keia mau olelo a kona luahine makuahine, a opeia mai la no hoi ua kapa nei a paa, a lalau aku la no hoi o	kamakahala, and the fine hairs of the hīnano flower of the hala tree of Māpuana, and so on. It had been held over the smoke of sandalwood and naio wood flames over a period of ten days, and if this tapa were hung out it would glow like the phosphorescent sparkles of the waves in the dark night. The type of tapa was called at the time Ka‘ahumakanoelani by those of the Honopū valleys, and it was Honopūwaiakua who actually pounded this tapa after having seen a way for this chief to become adopted by her sone, Puanaiea. Puanaiea accepted these words of his elderly mother and folded up the tapa nicely and
p. 7 Puanaiea a kuiee ae la, haawi ke aloha anoai o ke keiki ka makuahine, a hoi mai la o Puanaiea ia po pouli eia nae he mea ole wale no nae ia pouli nui i ka mama lelepali o ua makaula Puanaiea nei. Ia hiki ana aku o Puanaiea i ko laua hale me kana wahine aia hoi e pulehu Uhi Punapuna mai ana o Kamaile, a kani ano ka ia nei hoe ia komo ana ku, a olelo mai la o Kamaile e liuliu aku nei oe a ma’o ae la no la hoi na wahi puuku Uhi a kaua o ko’u hookolo aku no ia ia oe eia nae ua hoea e mai la no hoi oe e paiina kaua, ilalo aku nei au o Koholanui a loaa no hoi ka’u mau wahi pilipili Hee pali a na wahi opuu Ina, a o ko i’a ono no hoi he manini naonao, ua koala iho nei au a ua moa a ua wali iho ei no hoi na wahi mana awa, o ka hoka wale aku o ka mea i koe, ia wa i olelo aku ai o Puanaiea, “Nau hoi ia e hoka aku e hooponopono io mai oe i ka kaua mau mea ai, ua hele no au a ha’eha’e i ke kukahekahe wale iho no me kela luahine, i na mea e pono ai ka hanai alii a kakou, a ua olelo pu mai nei ka hoi ua luahine nei a kaua o kakou pu no ke hanai i ke alii opio.” Pane mai la o Kamaile iaia e hooponopono i na mea ai, ua pono loa mai la ua ae mai la ka makuahine o kaua e hanai pu no kakou i ke alii.	p. 7 carried it under his armpit. He said goodbye to his mother and Puanaiea came home that dark night, but the darkness was nothing to him as the prophet, Puanaiea, was quick at jumping cliffs. When Puanaiea reached the home of his wife’s and his, Kamaile was grilling uhi punapuna yams and his paddle made a serene sound as he came in. Kamaile said, “You were away a long time and there was cooked uhi for us two, and I would have taken the food to you, but you came in time for us to eat. I went down to Koholānui and got some squid and some ‘ina urchin, as well as your favorite fish, manini naonao. I broiled it and it’s ready, and I even prepared some ‘awa, it only needs to be strained,” and Puanaiea said, “Go ahead and strain it and get all the food ready. I went all the way east to talk with the old lady about everything we need to do to take care of our little chief. The old lady told me that all three of us would help raise this little chief.”
A pau o hoi ka awa i hoka a hee no hoi a loko o na apu o laua nei, holoi na lima apau ua makaukau no hoi na mea ai o ka papaaina ia Kamaile. Ia manawa i ku iho ai o Puanaiea i ka pule poloai, penei: E Ku kane e Ku wahine, E na poo huna i ke ao uli, E ka ohu kolo mai uka, E ka ohu kolo mai kai,	Kamaile told him that she would get all the food ready and that it was well that their mother agreed to help raise the little chief. When the ‘awa was strained and poured into the coconut cups for the two of them, they washed their hands and the food was ready and laid out on the table that Kamaile prepared. At that time, Puanaiea gave the prayer of appeal:

O kike ala o piikea, O na akua no apau ou kupuna, A i ou makua no apau, Ia Honopuwaiakua, A ia'u ia Puanaiea, Me ka'u hoolu-e kanaka, Eia ka ai he ai ola, Homai ua ola nui ua ola iki, E hainukai e kai oki'a, Amama ua noa, no—a.	Male Kū, female Kū The secret heads of the cosmos The creeping clouds from the highland The creeping clouds from the coast Strike the boulders of the early morning light All of the gods of your ancestors And all of your parents Including Honopūwaiakua And me, Puanaiea And all that comforts mankind Here is the food, here is life Grant us life, great and small Let us be satisfied with drink Let the prayer be released
A pau keia pule a Puanaiea o ko laua nei awala mai la no ia i na apu awa o laua nei, a pupu mai la ka puna ko kea, o ko laua ai ia a o ka maona ae no hoi koe malu ana ko laua nei ipuka i alo mai ka laua hana e kolo aku ana ko laua makuahine, a i mai la i lohe ae nei au i ko pule palo ai ana i na nana mai nei ko'u hana he papaaina makolukolu maoli ka olua i a mea ono, a holo ae nei no ke ala o Uhi pulehu ame ka manini koala, a ono mai nei no hoi i kahi awa, a nolaila au i hiki mai la e ai pu kakou apau, a hooaumoe pu me olua e au mau keiki, a ua pau loa ae nei anei ko olua awa?	When Puanaiea finished his prayer, the two drank their 'awa and ate their food until they were satisfied and they noticed that their doorway became darkened, and when they turned to look, their mother was coming up and said, "I heard your prayer that I should come and look over your table so nicely set with all this wonderful food with the broiled uhi and grilled manini and the 'awa, so delicious, and that is why I showed up so that we can all eat together and so I can stay over with you and your children. Did you two finish your 'awa?"
Hoole aku o Puanaiea aole i pau e kii aku au e uwi hou mai a lawa oe.	Puanaiea said no, they weren't out yet and that he would go and strain more 'awa.
Emo ole no ia alu ana ae o Puanaiea ku ana ka apu awa o ka makuahine a inu ae la o hoi ua luahine nei apau haawi mai la o Kamaile i puna ko kea ua pau i ke aki ia. Hoole aku la ua luahine nei a olelo aku ia Kamaile i Uhi pulehu kau wahi pupu a loaa no hoi ka Uhi pulehu, o ko lakou ai ia a maona, apau na mea o ka papaaina i ka hookaaweleia pau no hoi na lima o lakou nei i ka holoi.	In an instant, Puna got a cup of 'awa ready for his mother to drink, and when that was done, Kamaile gave her some food to eat. The old woman refused the food and said to Kamaile, "I would like some broiled uhi," and they all ate until they were completely full. And when they had cleared the table clean they all washed their hands.
Ia wa i pane aku ai ka luahine Honopuwaikanaka i kana mau keiki, "E, auhea olua, i ke kupono ana o ka la i ka lolo o ka la apopo, e ike ana olua i kekahi mau haawina ano e he hoailona hikimua hoi no ka hanau o ke keikialii e haaheo ai ke kini o Mana, a o ua mau hoailona la oia no e uhi paaia ana ka aina e ka ua koko, a hele mai ana ka wai aole owawa e koe, aohe hanuu pali e nele ka ikeia aku o ka wai, a ma ke kai hoi e owala lua mai ana ka haki ana a ka nalu, a e hele ana ka hua o ka nalu i ka akulikuli a i ke one maloo o ka hoomaka ana keia o na la kupilikii o na kanaka, he kupilikii ola nae i ka la mahope aku, aohe e hiki ke hele i kahakai i ka la apopo o ka mea ua hoalaia ke kaiuli mau kupueu a e hookokoke mai ana lakou	At that time, the old woman, Honopūwaikanaka, said to her two children, "So, when the sun reaches its highest point tomorrow, you will see some of the signs of the emergence of the young chief, and everyone all over Mānā will be so proud, and the omen will be a rainbow-colored cloud covering over the land, and no valley would be left without water. No cliff will be left without water, and at sea the waves will crash with a surge and the sea foam will reach all the way up to

ma na makalae na kuono kai ame na wahi kai halula apau, e huli e o i ka kahiaka nui i na mea ai i onoia a ke mahiki loa ae no ka la o ka pau no ia o ka wa pono, a ua lohe olua e au mau keiki, a e hiamoe kakou i keia wa.”	where the ‘ākulikuli grows on the dry sand, and this will be the beginning of the troubles of the people, but everyone will survive it on the next day. You will not be able to go to the beach tomorrow because the spirits of the open ocean have been awakened and they have been brought close to the coasts, the bays and all of the calm spots. Go and gather food at the beach early in the morning. That will be the best time to go. You’ve heard me, my two children. Now let’s go to sleep.”
I keia po a Honopuwaikanaka e moe pu nei me Puanaiea ma, kana mau keiki, ia wa pu aia ke aliiwahine ame Kalanamaihiki, ua u hoihoiia e ke kahuna Kuhoolapa iloko o ko laua hale i akoia me ka Ieie, a i kukuluia hoi makahi no e ikeia nei i keia wa o Haleieie. A maloko no o ua hale ieie la i moe ai na alii elike me ia i oleloia ae nei, a ka luahine e moe pu la me kana mau keiki.	This night when Honopūwaikanaka was sleeping with Puanaiea and his wife, her children, was when Kūhōʻōlapa took the chiefess and Kalanamaihiki into their house thatched of ʻieʻie in a place that to this day is called Haleʻieʻie. And it was in that type of house thatched of ʻieʻie that the chiefs slept, where the old woman slept with her children.
A ma ia po a ke aliiwahine Mana i moe ai ua hui hou aku la kona uhane me ka uhane o ke kanaka kino ula a ua aliiwahine nei no i halawai uhane ai he elua manawa mamua aku elike me na mea i ike mua ia ae nei ma keia moolelo, a ma keia hui hou ana o ka uhane o ke Aliiwahine Mana me ka uhane o ke kanaka kino ula, ua olelo mai la ua kanaka nei ia Mana, “He elua wale no la i koe a hanau mai oe i kau mau keiki a elike no hoi me ka’u i olelo aku ai ia oe mamua, o ke keiki e hanau mua mai ana he keikikane ia a o ka olua keiki no hoi ia, a ma ka wa a Puanaiea, ka Makaula, e lawe ai i ua keiki nei oia auanei kou wa e kapa aku ai i ka inoa o ua keiki nei au o Papiohuli, a penei no ke ano o keia inoa: Pa he mea oiwi kino nai aia la i ka lipolipo o ka moana, a he pau ka mano a kini iaia (oia no ka Pa Hiaku); Pio, na keia hapa o ka inoa o ko keiki e hoike mai iaia ame a’u, aia la i ka lewa mawaena o ka lani me ka honua he mea me kona mau waihooluu nani ehiku (oia no ka pio o ke anuenue); Hu, oia no he ikaika lua ole me he hu ana la no ka waikahe ika ika ame ka makani Kona; Li, e lilo no auanei ka inoa o keia keiki i mea e kauia ai o ka weli, a e li ai ka io o na ikaika e ae mai na kupua ame na kanaka no apau o keia ae la na wehewehe ano ana o ka inoa o ke keikikane, a o na ouli hiki mua o ke au o ka manawa elike me ia au e ike nei i keia mau la e hooi ia ae ana ia ma kou wa e nahunahu hanau ana, a pela, mau aku ana ka nohoana aia no ka hoi mai o ka lai me ka malie a hiki i ka lima o ka la oia hoi he elua la mahope iho o ka lilo ana o ke keiki na Puanaiea e hanai. A oia ae la na mea e pili ana no ka olua keiki. A hemo ke keiki mua iwaho a mamua o ka moku ana o	And that night, when the chiefess Mānā slept, her spirit met with the spirit of the man of spirit form that the chiefess met with in spirit two times before, just in the way it was described in this account above, and in this meeting of the spirit of Chiefess Mānā with the spirit of the man in spirit form, the man said to Mānā, “There are only two days left before you give birth to your children as I explained to you before. The first will be a boy, and that will be the child of you both, and when Puanaiea, the prophet, takes that child, that is when you will call the name of that child, Pāpiohuli, and this is what that name will mean: ‘Pā’ (mother-of-pearl shell) is a physical form from the dark depths of the ocean, and it will catch a numerous fish (a fishing lure made of mother-of-pearl shell for fishing aku); ‘piʻo’ (arch) this part of the name of the child is to show him and me that in the sky between the sky and the earth is something with its seven colors (the arch of the rainbow); ‘hū’ (overflow), which is the immense strength of the rising of flashfloods accompanying the Kona wind; ‘lī’ (to hang), the name of this child will become one that strikes fear and will cause flesh to be hung up at a level of strength apart from that of demigods and all men. It is a type of description of the name of the boy, and the first signs of the time, like what you’ve seen these days, will be greater when you

kona piko e hemo hou mai ana mai a oe mai he mea ano huihui a na ia ano auanei e kono mai ia oe e nana aku i keia mea huihui ano e, a oia wale iho la no kou wa e ike ai i ka lua o kau keiki i hanau ai, a o ia keiki no hoi au he kaikamahine ia, a e like no hoi me ka'u i lelo ai ia oe mamua na'u a na makou hoi ia keiki, a e lilo aku ana no nae oia i mea hoomanao mauia i na hanauna o keia hope aku, a ma ka hihio ameka moeuhane e halawai ana no kou uhane a pela ka uhane o ke aliikane me ka uhane o na kaikamahine nei a olua, a o kona inoa oia no o Nohili a o Mahinakehau hoi kahi inoa ona. "A eia hou," wahi a ka uhane o ke kanaka kino ula, i ka uhane o ke Aliiwahine Mana, "ma ka la e hanauia ai keia mau keiki e hooulu ia mai ana he mau laau pua hookahi laau he ulaula ano nuku iwi kona inoa." (Aole i Pau.)	have your contractions up until you see a return to your normal life in calm weather up until the fifth day, two days after the child is taken by Puanaiea to raise. And that is all to do with your child. And when the first child emerges, and before the umbilical cord was cut, another will emerge and will be rather cold, which causes you to look at this cold thing and that is when you will see that it is your second child who is born, and that child will be a girl, and just as I said to you earlier, that child will be mine and ours (not yours), and that child will be remembered from now on. In visions and in dreams is where your spirit and the spirit of the chief will meet with the daughters of you two, and her name will be Nohili, and Mahinakēhau will be another name for her. "And one more thing," said the man in spirit form to the spirit of Chiefess Mānā, "on the day these children are born, multiple flowers will grow out of a single plant. They will be red with a reddish tendril and will be known for that." (To be continued.) [This was the only issue of Kuu Hae Hawaii.]

Table 4. Kuokoa Home Rula, February 24, 1911, p. 4.

HE MOOLELO HOONI PUUWAI — NO KA EUEU — KAPUNOHUULA KA HELE ANA O KAULUHINALO MA KE ANA—KA HOAO ANA ME KAEWEOLAOKALANI MA KEAWAULA, MAKUA, WAIANAE	A ROMANTIC TALE — OF THE HERO — KAPŪNOHU'ULA THE JOURNEY OF KAULUHĪNALO TO THE CAVE—THE MARRIAGE KAEWEOLAOKALANI AT KEAWA'ULA, MAKUA, WAI'ANAE
E ka makamaka heluhelu, e hoakaka iki aku kou mea kakau no keia kanaka e akena ia nei oia o Ainaike, ka ike ame ke akamai i ka hee-nalu. Ua olelo ia, o keia Ainaike, oia kekahi kanaka helu ekahi ma keia hana o ka hee-nalu, a he hiapaiole ame ke aiwaiwa, i ikeia iluna o ka nalu i hele a pali kahako, ua hiki oia ke ikeia aku e kaha ana iluna o ka nalu me he iwa la, a ua hee ia no	Dear reader, allow me your writer about this man who excelled, 'Āina'ike, who was the most knowledgeable and expert surfer. It is said that this 'Āina'ike was the best person at the sport of surfing, he was an expert and marvelous at it, who knew how to ride from the top of the steepest waves; he could be seen riding

hoi e ia na nalu o keia mau kai, mai Kaula Lehua, a Niihau. A ua olelo ia no hoi o keia Ainaike, ke kanaka i hee pu me ka mano, aohe he mea e puka ae mamua o keia Ainaike.	from the top of the wave like a frigate bird, and he surfed the waves of these seas from Kaʻula, Lehua, and Niʻihau. It was also said that this ʻĀinaʻike was the man who surfed together with sharks, and no one could defeat this ʻĀinaʻike.
Aka, ua olelo ia nae, he ekolu ko lakou nui i kaulana i ke akamai i ka hee-nalu, oia hoi o keia Ainaike ae la, o Lohiauipo ko Haenamae, a o Kaleipalaoa, ko na pali o Kalalau, o lakou nei ekolu na keiki i kaulana i ke akamai i ka hee-nalu i na kai mapu i ke ala o ka hinano ame ka lauae, a iwaena o lakou, o Lohiauipo ka mea o lakou i loaa ke mele i ka pae ana i Mahamoku i ke one o Makauea, oia iho keia:	But it was also said that there were three who were famous for their cleverness at surfing: this ʻĀinaʻike, Lohiʻauipo of Hāʻenamaʻe, and Kaleipalaoa of Kalalau, Nāpali, Kauaʻi. These three boys were famous for their cleverness at surfing the seas, where the sweet fragrance of hīnano flowers was strong together with lauaʻe, and among them, Lohiʻauipo who had a mele for when he surfed all the way to shore at Mahamoku on the sand of Makauea, as follows:
Kuu aikane mai ka papa-alaia hee nalu o Hawaii loa, Ke kai uwe pu me ka leo hanehane, Aia no ka pae i ke one Makauea i Mahamoku, Ke lei ia mai la na limu pehu, pakika pahee o Mahamoku, I lei hoi no na keiki hee-nalu o Hawaii loa, Ke kuku ae la na pae kapu hailona a Hihimanu Ka manu lei lehua o Kaunuape- a inu —e, Ke inu mai la i na mala awa ona o Kawaipuolo, O Koukou (w) o Alala (k), O Pikoiakalala, Ke keiki pana iole o Kaukoopua, Auwe kaua—e, E kuu ipo—o—Lohiauipo	My dear friend of the narrow surfboard of all Hawaiʻi The sea that cries with a ghostly voice Surfing in all the way to the sands of Makauea at Mahamoku The garlands made of plump, slippery seaweed of Mahamoku are being worn For all surfer boys across Hawaiʻi to wear The sacred ensigns of Mt. Hīhīmanu are standing The bird adorning a lei of lehua of Kaunuʻape drinks Drinking up the intoxicated ʻawa gardens of Kawaipūʻolo Koukou (f), ʻAlalā (m) Pīkoiakaʻalalā The boy who shoots arrows at rats of Kaukaʻōpua Oh, the two of us My dear lover, Lohiʻauipo
Nolaila, e kau hou ae kaua maluna o ke ala pololei, ma ka manawa a kahi kukini i hoea ai imua o na alii, ua ninau mai la ua poe alii nei i ka manao o Kalanialiiloa, ua hoike aku la ua wahi kukini nei ma na olelo mama wale no, oia hoi ko Kalanialiiloa ae ana.	So, let you and I return to the correct path. When the messenger reached the presence of the chiefs, the chiefs asked what Kalanialiʻiloa's council was and the messenger revealed his message in brief summary only, which was Kalanialiʻiloa's approval.
Ma ka wehena kaiao o ka la e hee-nalu ai ua mau moho nei, ua lana aku la ko Kalanialiiloa waa i kahi kahu ona ia Lauuokala, iloko o ke kai, a i ua wahi kahu nei no hoi e kali ana, hoea aku la o Kalanialiiloa a kau aku la no hoi iluna o ka waa, a hoomaka aku la kahi kahu e hoe i ko laua waa.	At the break of dawn on the day the competitors were set to surf, Kalanialiʻiloa steadied his canoe where his guardian Lāʻauʻōkala was at sea, and as his guardian waited, Kalanialiʻiloa swam up and climbed onto the canoe, and his guardian began to paddle their canoe.

Ia laua nei e holo aku ana, ike mai la o Ainaike i ko laua nei waa e holo aku ana, oiai ua Ainaike nei e lana ana me kona waa, a ia wa o ko lakou nei holo like aku la no ia a hiki ko lakou mau waa i kahi kupono o ka nalu e pae ai, hoolana iho la ko Aianike ma mau waa, kali mai la i ko Kalanialiiloa ma mau waa, o ka hoea aku, oiai no laua e kaupe malie aku ana no mahope.	As the two went, ʻĀinaʻike saw their canoe going, while ʻĀinaʻike sat with his canoe steadied, and that is when they all paddled together to a good spot where the surf breaks, and ʻĀinaʻike's and the other canoe steadied themselves, where they waited for Kalaniali‘iloa's canoes, which arrived as they were gently paddling their canoes.
Ia Kalanialiiloa ma i hiki aku ai, ua pane mai la o Ainaike ia Kalanialiiloa, "E kahi keiki a ka ukulii e hoonahoa mai nei i ka ulu i paki kepau, e hoolohe mai i ko'u leo."	When Kalaniali‘iloa reached them, ʻĀinaʻike said to Kalaniali‘iloa, "So, son of the little flea daring the ʻulu maika stone that smashes metal, pay attention to what I tell you."
"Ae," wahi a Kalanialiiloa, "he aha ka olelo"	"Yes," said Kalaniali‘iloa, "what do you have to say?"
"E kahi keiki a ka ui ame ka nani, ke puokooko mai la ka ula ahi, me he punohu-ula ala i ka moana, o ke poo ohuia i ka la o makalii, ke ko'a huki a'hi a Luaiopea, ka lawai'a nui a Kalokaa, ke ahi kapu o Panaewa i ke one o Luhi—e.	"You are a strong, handsome boy. The fire is getting really hot as a red, hot glow on the ocean like a great swell on the day the constellation, Makali‘i, rises, the coral that pulls the file all the way Luai‘ōpe‘a, the great fisherman of Kaloka‘a, the sacred fire of Pana‘ewa at the shore of Luhi.
"E hoi e keiki opio ai waiu no uka o ka aina, aole o'u makemake o oe ko'u hoa pili e kahi keiki opiopio, he opiopio loa kou ano, a minamina au ia oe, ina e oluolu mai ana kou manao, e hoi no ka aina kahi maloo, i ai i kalo mo'a, e ke keiki. I kanaka makua ko'u hoa e kohu ai i keia lealea ana, aole hoi o oe, ke minamina nei au ia oe aole e pono o oe ko'u hoa e hee ai i keia mau nalu i hele a pali kahako no au e ike ae la. Aole oe i kupono.	"The suckling young boy should go home to shore, I have no desire that you should be my competitor, young boy. You are way too young and I pity you. If it is alright with you, go home to dry land and eat some cooked taro, boy. I prefer a mature man as a competitor for amusement, not you. I pity you and you should not be my companion to surf these waves that grow to towering as I see them. You are not worthy."
Ia manawa i pane mai o Kalanialiiloa, "Aole ka hoi i pa kuu poo i ke kai, ke hooiloilo e mai nei nae oe ia'u. Malia nae paha no ko ake mai i kuu opiopio, a manao iho la oe no ko kanaka makua ana, pela iho la oe i manao ai nau ka lanakila o keia la. He lohe wale no ko'u la i ka olelo ia, he puali wale no ka hau nui i ka hau iki.	At that time, Kalaniali‘iloa said, "My hasn't been struck by the sea. You curse me too soon. Maybe it's because you wanted me because of my youth, but were thinking about grown men. That is why you thought you would end up winning today. I have heard it said the large hau tree is like an army to a small hau tree.
"I lohe mai oe, aole au e hoi i uka o ka aina elike me kau i olelo mai nei, eia kaua i ka moana nei no ka hooko ana i ka pili a kaua, a owau nei o kaua ka mea ilihune a he mau iwi makee keia i lono ia ae e ke kanaka i kaulana i ke akamai i ka hee nalu, o ka lapawai o Waimea nei, a owau ke keiki i a-a mai la e make keia mau iwi i keia hana he haee-nalu. A oiai ea, eia i ke keiki opio nei au i olelo mai nei ka pahu holo o kaua, a ia oe ka pahu eo o	"Just so you know, I have no intent to go back to shore as you suggest. Here you and I are out on the ocean to make good on the bet between us, and I am the poor one of us two, and mine are the bones that have been talked far and wide at surfing the river mouth of Waimea. I am the boy who dared to let these bones die at the sport of surfing, and the finish line will be won by this

kaua. Nolaila, aohe ou kuleana ma kahi o ka pahu holo o kaua, ma kahi a'u e manao ai e holo kaua he hooko wale mai no kau ka ke kanaka ike hee-nalu o Pawehe nei.	young boy that you are talking about, and you will come out behind, the loser of us two. So, you have no business at the finish line, where I intend we should strive for, and you will fulfill what the real expert surfer of Pāwehe here intended.

TRADITIONAL LAND USE

Traditional land uses include settlement, resource collection and subsistence, burial, and transportation. PMRF lies in the area called Mānā in the traditional Hawaiian land area or *ahupua'a* of Waimea in the district of Kona. Kona is the largest district on Kaua'i, occupying the entire southwestern half of the island (Figure 1). The Mānā Plain was a clearly delineated geographical zone of human occupation during the pre-Contact period. The coastal dune and back beach areas were the setting for temporary fishing camps that were linked to permanent communities at the foothills of the central mountain. The area was characterized by abundant marine resources and a readily accessible sandy shoreline. Archival research regarding the traditional land uses near the study area was also conducted.

SETTLEMENT ON THE MĀNĀ PLAIN

Wichman (1991:12), in relaying the story of a *konohiki* chief, describes the Mānā area in pre-Contact times as:

> … a land that stretched from the western cliffs of Na Pali to the eastern boundary shared with Waiawa. Mānā is a land of long white beaches with the ocean on one side and a large swamp that teemed with birds on the other. Inland of the marsh was a fertile strip of land where sweet potatoes and gourds were grown. Above these fields, cliffs rose stiff backed, broken wide by valleys down which constantly flowed fresh spring or rain water. The ridges, covered with sandalwood and *koa* (*Acacia koa*) trees, stretched into the mountains wreathed with cold and misty rain.

Small fishing communities, possibly limited to temporary camps, were scattered along the coast, concentrating near optimal localities such as breaks in the reef where canoes could be launched or where reefs provided rich habitat for near-shore marine resources. Some camps were located on the protected, lee sides of the high dunes from Nohili Point to Polihale. Bennett (1931:102) observed house sites marked "by single rows of stones … or by low walls" along the inland side of the dunes. Flores and Kaohi (1992:44) suggest that the sites on the inland side of the high dunes may have been permanent homes for:

> Those families whose time was mostly occupied with fishing … [The dunes] provided them protection from ocean storm waves, flood waters, and strong on-shore winds—yet, still close enough to easily access the ocean resources. Taro was cultivated in portions of Kolo Swamp that were adjacent and *mauka* of these house sites.

The newspaper snippet below (Table 5) translated by Keao Nesmith, documents the Kua family as residents of Pāpiohuli, which is near what is known as Queen's Pond today. Pāpiohuli was once an old fishing village located to the north of PMRF. The Kua family later moved to Kekaha, where they presently reside. From the inland edge of the plain, the Mānā community could access the forest resources of the upland mountains, and was in easy reach of the wetlands where taro and fish were cultivated and wild resources such as ducks and birds were hunted. Eighty-one Hawaiian families still resided in the Mānā area

through the mid-1800s. They area was known for abundant marine resources, melon and sweet potato cultivation, and small taro patches fed by freshwater springs (Tomonari-Tuggle and Yoklavich, 2005).

Table 5. Ke Alakai o Hawai‘i, February 4, 1932, p. 4.

NA ANOAI O KA WAIULAILIAHI ME KA WAIKEA E KAULANA NEI	GREETINGS FROM THE WATERS OF WAI‘ULA‘ILIAHI AND WAIKEA WHOSE FAME SPREADS
Mr. Lunahooponopono o ka nupepa Ke Alakai o Hawaii Aloha, ka uwila makeneki e anapa hele nei ma na Kai Ewalu o ka Moana Pakipika.	Dear Mr. Editor of the beloved Ke Alaka‘i o Hawai‘i, the electric magnet sparking all across the Eight Seas of the Pacific Ocean.
Aloha kaua a nui loa:	Great greetings to you:
E oluolu mai kou ahonui i wahi lumi kapena no na Anoai o ka Waiulailiahi me ka Waikea e kaulana nei.	Will you kindly allow a bit of cabin space for a few greetings from the waters of Wai‘ula‘iliahi and Waikea, whose fame spreads widely.
Ma ka home noho o Mr. ame Mrs. Kua, o Papiohuli, ua malamaia ka la hanau o ka laua moopuna, i ka la 23, o Jan. 1932. A ua kono aku laua i na poe a pau o ua mau Wai kaulana nei. A o kou mea kakau pu kekahi ia kono hookahi ia ana mai, me he mea ala ma ka ike aku a kou mea kakau o Manookalani holookoa.	At the residence of Mr. and Mrs. Kua of Pāpiohuli, a birthday was held for their grandchild on the 23rd of Jan. 1932. The two invited everyone from around the famous waters. Your writer was also invited to come alone as if your writer was a witness for all of Manookalani.
Maluna o na pakaukau i hoohiwahiwa ia me na lau lipolipo o ke kuahiwi. Aia maluna o laila na ono like ole a ka Hawaii i hoomakaukau ia e na ui o ua mau Wai kaulana nei.	The tables were decorated with verdent, lush leaves of the mountains. Upon that was place all kinds of delicious dishes known to Hawaiians prepared by the lovely youth of these famous waters.
Puaa laulau, Pipi laulau, Kulolo, Haupia, Opihi, na ono no a pau a ka Hawaii, ke hoonuu ala na mea apau i na ono like ole. E iho ana ka hema iho ka akau, ilali la holo hoi o hanale, kuonoono pono iho la ka lua o Kuhaimoana Keonibulu.	Pork laulau, beef laulau, kūlolo, haupia, ‘opihi, all the delicasies of the Hawaiian people. Everyone gorged themselves on the wide range of delicasies from left to right, chasing hunger away, and the layer of Kūhaimoana, the bully, was stuffed full.
Noho mai o Kaula i ka mole olu ka home pohai a na manu. Ua ai a lawa, ua inu a kena i na ono like ole o ua mau ui nei o na Wai kaulana he ui mai hoi kau.	Ka‘ula stood on the horizon, the home full of birds. Everyone ate until they were full and drank to their content on all that these lovely youth of the famous water prepared.
Aia hoi kou mea kakau e walea ana i ka ui ame ka nani a ua mau ui kaulana nei, hone ana ka leo o na kaikamahine o na Wai e kaulana nei, hui pu iho hoi me na kaula eono o uwe honehone hele loa i ka nani maoli.	Your writer enjoyed a lovely time with these well-known beautiful people. The voices of the girls of these famous waters chattered pleasantly combined with the six cords pleasantly talking away all around in such a lovely setting.

Me na ai hoolewa kino he nani mai hoi kau, ke hele loa ae la i na hora o ke aumoe. Aia no kou mea kakau ke walea ala i ka nani o na Wai kaulana. O ia ka wa o kou mea kakau i lohe aku ai i keia mau leo nani. Na pua Lei o Kahelelani, Ka Momi o ke kai me mura o uka Alukauwea, Mr. ame Mrs. D. Wailiula. A ia i Niihau kuu pawehe ka Moena e pahee ai ko ili.	There was so much lovely food for the body to enjoy all the way to the late-night hours. Your writer thoroughly enjoyed relaxing in the beauty of the famous waters. That is when your writer heard the beautiful voices of the musicians, the lovely children of Kahelelani, the pearl of the sea and myrrh of the uplands of ʻAlukauea, Mr. and Mrs. D. Wailiʻulā. There on Niʻihau rests my mat spread out wide, so silky to the touch.
Pahee loa iho la kou mea kakau i ka ui ame ka nani ke hele loa aku la i ka pili o ke ao hoomanao ae la kou mea kakau i kahi pili koolua o ka hoomakaukau iho la no ia no ka hoi, ko malie mai la ka makani ame Waipao, ke huli hoi nei ke kaikamahine o ka makani moeahua.	Your writer eased along in the beauty of the occasion to the early morning hours, and your writer reminisces on spending time with a loved one making ready. The breeze caressed us gently from Waipao, and the daughter of the Moeāhua wind returns home.
Ke haawi nei kou mea kakau i na hoomaikai palena ole i na makua Mr. ame Mrs. N. Kamai Jr., ame na kupuna, ke kama hoi nona ka la me na hoopomaikai o ka makua mana loa e ola ke kama a kau i ka pua aneane.	Your writer gives boundless thanks to the parents, Mr. and Mrs. N. Kamaʻi Jr., and the grandparents, the child of the sun, with the blessings of the most powerful father. May the child live on until a great, old age.
Kauai Beauty, MRS. P. PALEA Kekaha, Kauai	Kauaʻi Beauty, MRS. P. PALEA Kekaha, Kauaʻi

RESOURCE COLLECTION AND SUBSISTENCE

The people of Mānā were noted as fishermen, taking advantage of the rich waters of the channel between Kauaʻi and Niʻihau. Fishing was not confined to the ocean and shoreline of Mānā, but also included the swamps and ponds on the coastal plain. The swamp areas of Limaloa, Kawaiele, Nohili, and Kolo were utilized as brackish water *loko puʻuone* (Kikuchi 1987:5, 9; Kilauano 1991).

The Mānā Plain ponds were formed by water accumulating behind the dune berms with the natural ponds enhanced by excavation of channels through the dunes to allow the flow of ocean water into the ponds during high tide (Kikuchi 1987:9). The wetlands were also a place where wild resources could be collected. Taro, sweet potato, bananas, and other food crops were grown in and at the mouths of the narrow gulches that fed onto the plain; however, the aridity of the plain limited the amount of farming. Pukui (1983:271) writes of the proverb "*Ola i ka ʻai uwahi ʻole o ke kini o Mānā*, the inhabitants of Mānā live on food cooked without smoking." She says that in ancient days, the people of Mānā "did very little *poi*-making, except in a place like Kolo, where taro was grown" (see also Kilauano 1991). Handy (1940:61) notes that "wet taro has been grown at the northern end of the Mānā swamp, near the Barking Sands." However, most Mānā people exchanged fish and dryland products (like gourds) with taro producers from

other parts of the island. Thus, because "all the taro cooking and *poi*-making was done elsewhere, the people of Mānā were said to live on 'smokeless food" (Pukui 1983:271).

The coastal plain was a source of natural resources that were collected and used for a variety of purposes. These included *'a'ali'i* (*Dodonaea viscosea*) shrubs for firewood, *hi'aloa* (*Waltheria indica*) and other plants for medicine, *makaloa* [a perennial sedge (*Cyperus laevigatus*) and *neki* [great bullrush; also *'aka'akai* (*Scirpus validus, formerly called S. lacustris*)] for weaving; formerly the plants were valued in Hawai'i for making the fine Ni'ihau mats. The *neki* and *makaloa* were used in plaiting mats and other articles, the fashioning of which was called *moena makaloa*.

BURIALS

The coastal dunes of the Mānā Plain were the burial grounds of ancient Hawaiians. Human skeletal remains have been found in the sands of PMRF Barking Sands as well as in mixed sandy soils nearly 3,281 feet inland, from the north end of the installation to Waiokapua Bay and Kokole to the south. References to burials in the Nohili area appear in oral traditions and literature (e.g., Fornander 1917) and have also been documented in the archaeological record (TEC: 2011: 3–31).

TRANSPORTATION

There were two primary traditional land routes across the Mānā Plain: one along the shoreline and the other along the base of the cliffs and ridges. Other trails ran inland from the coastal plain to the mountains. People also traveled by canoe, particularly going to and from the valleys of the Nā Pali coast, by launching from beaches with unobstructed reefs and passageways such as at Palaiholani, Keanapuka, Po'oahonu, Keawanai'a, and Polihale (Tomonari-Tuggle and Yoklavich 2005:82).

An unusual means of travel in this area is noted in historical accounts that describe the Mānā Plain after heavy flooding from Kona storms. These accounts note that one could travel by canoe from Waimea to Kolo through Mānā swamps and marsh lands. Faye (1981) recalls that "in a low bottomed canoe you could row for miles on this lake.… The canoe would tip over and if you were very short you wouldn't be able to touch bottom, but if you were taller, you could sort of tread over." (Tomonari-Tuggle and Yoklavich 2005:82).

HISTORICAL LAND USE

While historical (circa early 1800s to 1974) land uses in this area were many, two primary uses included agriculture and U.S. military activities.

AGRICULTURE

Early Western explorers were not particularly interested in the Mānā Plain, which was described as a hot and dry place with large sections of marshland (Portlock 1789:170–171; SEARCH 2012). The inhabitants of Mānā largely lived in the traditional ways of their ancestors until the 1848 Māhele, which brought wide-ranging social changes and provided for private land ownership. Shortly after the Māhele, commercial agricultural practices were brought to the Mānā Plain by leases on crown lands to Archibald Archer and eventually Valdemar Knudsen (Photo 1); these practices included grazing cattle, timber

harvesting, and cultivation of crops such as tobacco, coffee, fruit, rice, and sugarcane (Jones 1992:6; Sweeney 1994:10; SEARCH 2012).

As commercial crop cultivation increased, so too did the number of agricultural workers needed to tend the crops. The majority of these agricultural workers came from China, Japan, and the Philippines. With the influx of agricultural workers, the need for workers' housing increased, and according to Smith (1989:4), the first camp for housing agricultural workers dates to 1852. As agricultural production on the Mānā Plain expanded, much of the marshland was filled in or drained to provide more space for crops, with increasing amounts of land being converted to sugarcane cultivation, primarily as part of Kekaha Sugar Company, Ltd., which was formed in 1898 by Knudsen and L'Orange and continued operations through the 20th century (SEARCH 2012).



Photo 1. Eric Knudsen residence: Mānā, Kaua'i, ca. 1915. https//digitalarchives.hawaii.gov/item/ark:7011/2kJc.

Rice and sugar cultivation were contemporaneous agriculture in the late 1800s. Rice was planted in the marshy areas of Mānā not suitable for sugar cultivation. The two Chinese who produced the most rice were Pah On and Ah Hoy. As in most places in Hawai'i, sugar eventually took over the rice growing areas of land, and in 1922 Kekaha Sugar Company gained control of the rice lands leased by Pah (Flores and Kaohi 1992: 115). The Hawaii Territory Survey Mānā Lots December 1907 map (Figure 5) indicates the majority of lands were either still under rice cultivation, undrained swamps, or sugarcane land.

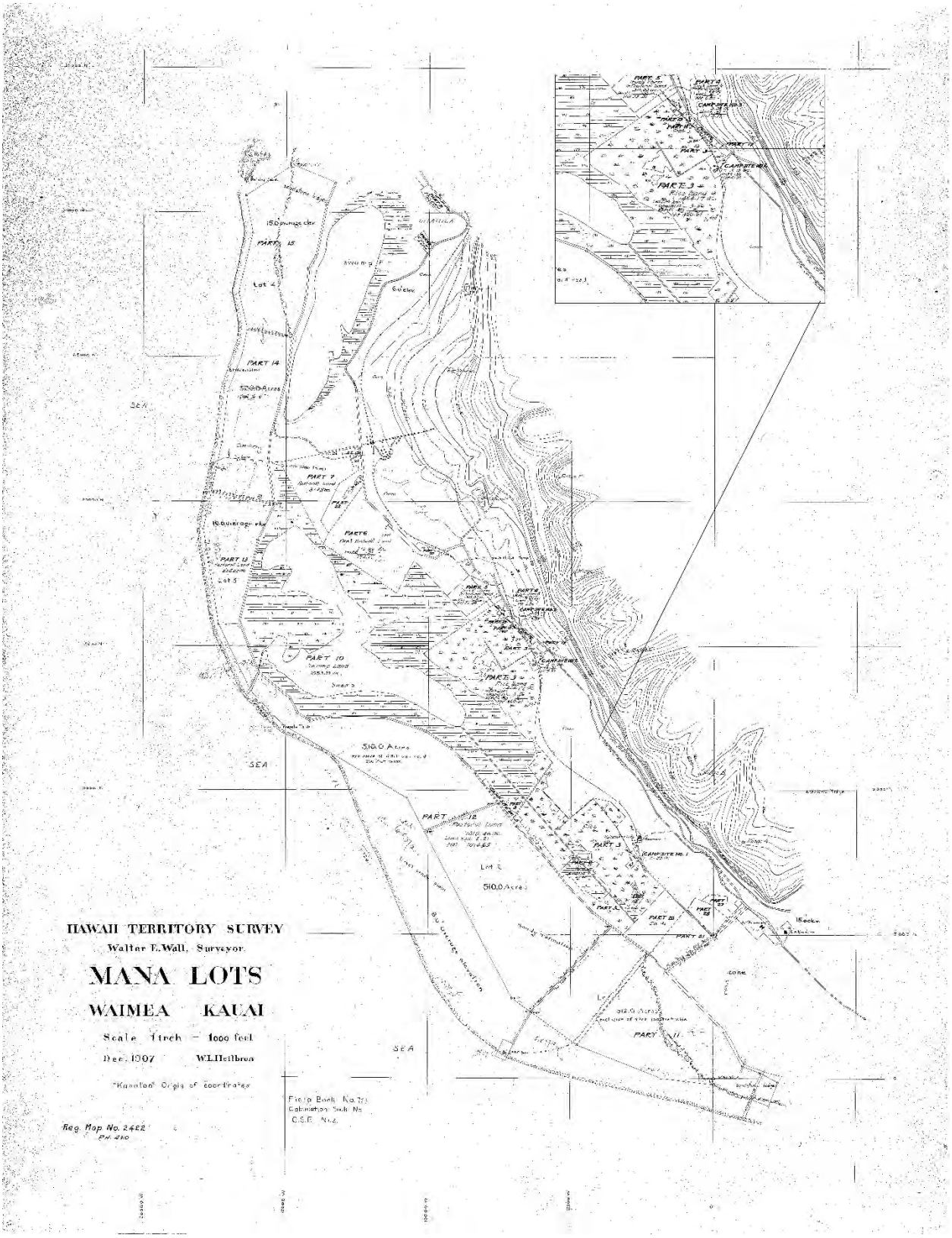


Figure 4. Hawai‘i Territory Survey Mānā Lots Waimea Kaua‘i.

U.S. MILITARY

Military use of the land that would one day become PMRF Barking Sands began as an airstrip, established by the Territory of Hawaii in 1921 and completed for use by 1928 (SEARCH 2012). During the first half of the 20th century, it was one of numerous landing fields in the Hawaiian Islands maintained by the U.S. military, the government of the Territory of Hawaii, and commerical airlines. The landing field at Barking Sands was not intended to be a commercial airport due to its distance from Waimea but was considered a good location as a stopover for transpacific flights. However, the airfield was seldom used and poorly maintained. Photo 2 shows the location of the landing field in 1935.

In 1940, the U.S. Army requested that the 550-acre Barking Sands airfield be set aside for military use. Soon thereafter in 1941 (Photo 3), before U.S. involvement in World War II (WWII), the airfield was expanded to the north and south by 2,058 acres. In May 1942, the airfield was designated as Barking Sands Army Air Base and was used primarily for flight training and aircraft refueling. Photo 4 shows the landing field in 1943 after the expansion and improvements were completed. Also, in 1943, 10 tunnel magazines, some with monorail transport, were built into the cliffs at Kamokala Ridge for bomb storage. In late 1944, Barking Sands was established as a Combat Crew Replacement Center, with the goal of checking, repairing, and maintaining aircraft and housing and training crewmen prior to deployment to the forward area of the Pacific Theater. Activity at the base increased with the end of the war in Europe in May 1945 and began to gradually decrease with the official surrender of Japan in September 1945 (SEARCH 2012).

In the years immediately following WWII, military activity at Barking Sands declined and the installation was turned over to the U.S. Air Force and renamed Barking Sands Air Force Base (AFB) in 1948 (Clark et al. 2015). In 1953, the base was redesignated as Bonham AFB in honor of a Hawaii Air National Guardsman who was killed during training exercises. The U.S. Navy became a tenant at the airfield in 1956 for the purpose of training with the Regulus missile, and the Navy named their operations the Pacific Missile Range Facility in late 1958. During the early 1960s, the Kauai Test Facility (KTF) was created, operated by Sandia National Laboratories for the Atomic Energy Commission with the mission of high-altitude atmospheric sampling during nuclear tests in the Pacific. The installation was officially transferred to the Department of the Navy in 1966, and later renamed as the Pacific Missile Range Facility at Barking Sands. Between 1966 and 1970, the Navy constructed radar and telemetry facilities at Mākaha Ridge and many additional structures at Barking Sands (SEARCH 2012).



Photo 2. Photograph of Mānā Airport (also known as Barking Sands Landing Field), looking south, 1935. Courtesy of the National Archives and Records Administration. (SEARCH 2012: 82).



Photo 3. Aerial photograph of what would become Barking Sands Army Air Base, September 1941, looking north. Courtesy of the State of Hawai‘i Deparment of Transportation. (SEARCH 2012: 84).



Photo 4. Barking Sands, March 5, 1943. Courtesy of the National Archives and Records Administration.

IV. ETHNOGRAPHIC DATA

Ethnographic studies are fundamental for determining how a proposed action will affect and/or limit access to culturally sensitive places, resources, and practices. This section contains the results of the cultural consultations carried out for this CIA. The oral histories collected through interviews were used to document culturally important resources, beliefs, and practices in the area, including specific sites and/or structures, localities or areas, landscapes, individual and social activities, and natural or environmental features.

DR. RICHARD KEAOOPUAOKALANI "KEAO" NESMITH

Dr. Keao NeSmith (Photo 5) was born Richard Keaoopuaokalani NeSmith in 1966. He is the sixth of seven children in his family and the fourth to be born in Waimea, Kauaʻi. Dr. NeSmith was raised on Hawaiian Homestead land in Kekaha, the most westerly town on Kauaʻi. The village of Mānā, further west, stood in his childhood years, and he had one grand-aunt who lived there, a sister of his maternal grandfather, but the village was abandoned while Keao was in his teenage years. Keao's parents were Bill NeSmith and Odetta Kapuaonalani Kauhane NeSmith. His father was from Gainesville, Texas, and his mother was born in Keaukaha, Hilo, on Hawaiʻi Island and raised there and in Kāneʻohe, Oʻahu. Odetta was taught *hula* [Hawaiian dance] on Oʻahu in her growing years and her parents were Hawaiian music entertainers, and she would dance for them at events.



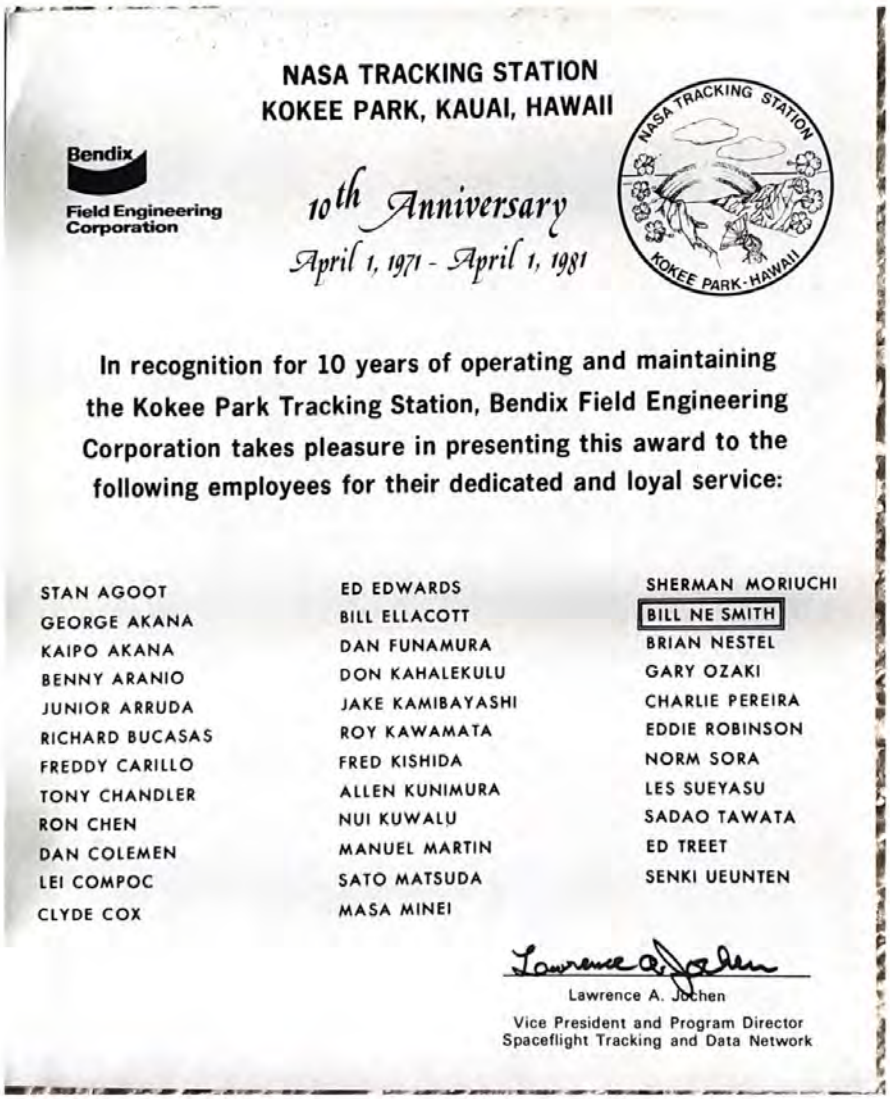
Photo 5. Dr. Keao NeSmith. Photo taken above the *kūlanakauhale* [town] of Waimea in the Kona *moku* and *mokupuni* of Kauaʻi.

Bill and Odetta arrived on Kauaʻi in the '60s, as Bill had obtained work there, and in the early 1970s, Kekaha native Margaret Aipoalani, a *hula* practitioner and well-known musician, recommended that Odetta teach *hula* to Kauaʻi communities under the auspices of the Foundation for Culture and the Arts. Odetta taught some of her children, including Keao, *hula*, and used them as assistants in her 19 years of teaching *hula* across Kauaʻi. She worked as an educator at Waimea High School and Kula Aupuni Niʻihau A Kahelelani Aloha, a public charter school that serves the families of the Niʻihau community living on Kauaʻi. Keao's father, Bill, worked at the National Aeronautics and Space Administration (NASA) Kōkeʻe Tracking Station from the late 1960s to 1991, and received awards for recognition of his service.

Keao's parents were firm believers in the value of education and encouraged him to pursue high academic achievement (Figure 5 and Figure 6). Keao's maternal grandparents were Samuel Kalola Kekuawela Kauhane of Honolulu, Oʻahu, and Annie Kealoha Kaaialii Kauhane of Kaʻū and Puna on Hawaiʻi Island. Keao lived with his grandmother Annie in his late teens, where he acquired Hawaiian language from her as the two only spoke Hawaiian with each other, and whenever home on Kauaʻi, he

would only speak Hawaiian with members of the Niʻihau community on Kauaʻi and elderly Hawaiian-speaking Kauaʻi acquaintances.

Keao's paternal grandparents were William R. NeSmith Sr., and Georgia Belle O'Brien NeSmith. Originally from Gainesville, Texas, they married and in Bill's early life, the family relocated to California for a few years before moving to Kāneʻohe, Oʻahu, where Bill met Keao's mother, Odetta, at high school, where they graduated in the 1950s. Keao is the sixth great-grandchild of the last king of the Kauaʻi Kingdom, Kaumualiʻi, a contemporary of Kamehameha of the Hawaiʻi Kingdom, through the lineage of his grandfather Samuel. Keao posed as the model for the statue of Kaumualiʻi at Pāʻulaʻula State Historical Park in Waimea, Kauaʻi.



NASA TRACKING STATION
KOKEE PARK, KAUAI, HAWAII

Bendix
Field Engineering Corporation

10th Anniversary
April 1, 1971 - April 1, 1981

NASA TRACKING STATION
KOKEE PARK-HAWAII

In recognition for 10 years of operating and maintaining the Kokee Park Tracking Station, Bendix Field Engineering Corporation takes pleasure in presenting this award to the following employees for their dedicated and loyal service:

STAN AGOOT
GEORGE AKANA
KAIPO AKANA
BENNY ARANIO
JUNIOR ARRUDA
RICHARD BUCASAS
FREDDY CARILLO
TONY CHANDLER
RON CHEN
DAN COLEMEN
LEI COMPOC
CLYDE COX
ED EDWARDS
BILL ELLACOTT
DAN FUNAMURA
DON KAHALEKULU
JAKE KAMIBAYASHI
ROY KAWAMATA
FRED KISHIDA
ALLEN KUNIMURA
NUI KUWALU
MANUEL MARTIN
SATO MATSUDA
MASA MINEI
SHERMAN MORIUCHI
BILL NE SMITH
BRIAN NESTEL
GARY OZAKI
CHARLIE PEREIRA
EDDIE ROBINSON
NORM SORA
LES SUEYASU
SADAO TAWATA
ED TREET
SENKI UEUNTEN

Lawrence A. Jochen
Vice President and Program Director
Spaceflight Tracking and Data Network

Figure 5. Letter of recognition for 10 years of operating and maintaining the NASA Tracking Station, Kōkeʻe Park, Kauaʻi, Hawaiʻi, awarded to Bill NeSmith, Keao's father, for his dedicated and loyal service.

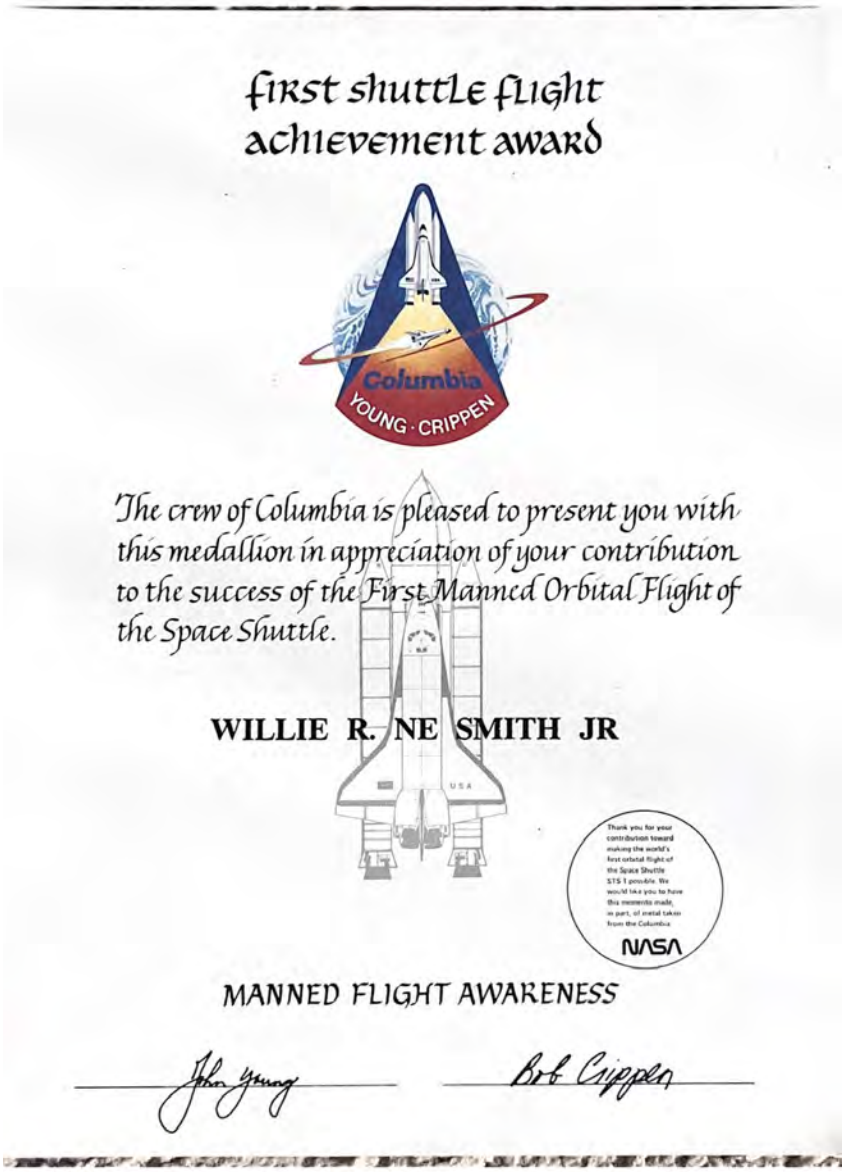


Figure 6. First Shuttle Flight Achievement Award recognizing Willie R. NeSmith Jr., Keao's father, for his contribution to the success of the First Manned Orbital Flight of the Space Shuttle.

Keao attended Kekaha Elementary School, Waimea Canyon Intermediate School, and Waimea High School for his ninth-grade year, and he finished high school at Kamehameha Secondary School in Honolulu in 1984. He started his undergraduate studies at Brigham Young University–Hawai'i Campus and completed his Bachelor of Arts in Hawaiian Studies at the University of Hawai'i at Hilo. He completed his master's degree in Pacific Islands Studies at the University of Hawai'i at Mānoa. He also did one year of his M.A. program at the University of French Polynesia on Tahiti. He earned his Ph.D. in Applied Linguistics at the University of Waikato in New Zealand in 2012. He taught Hawaiian language, Hawaiian Studies, and Tahitian language at the University of Hawai'i at Mānoa for 17 years, English and History at Waimea High School, and Hawaiian language at Hawai'i Preparatory Academy on Hawai'i Island, and is

currently self-employed as a freelance researcher and consultant. He has translated and published several well-known titles in Hawaiian, including *The Hobbit*, *Alice's Adventures in Wonderland*, *Harry Potter and the Philosopher's Stone*, and other titles, and he has completed the translation of other titles that remain to be published, such as the entire Chronicles of Narnia series and five of seven of the Harry Potter series. Keao is also a frequent lecturer on the Aranui cruise ship across French Polynesia. He also frequently teaches at the University of French Polynesia. Besides Hawaiian, Pidgin, and English, he speaks Tahitian, Marquesan, and French. On Kauaʻi, Keao is known for his research work and membership in local groups that focus on the maintenance of Kauaʻi's ancient sacred and communal sites and the perpetuation of traditional Kauaʻi and Niʻihau language and culture. During the interview for this study Keao notes:

> More as I became an adult, I became very fascinated with history. History and culture. So, I devoted lots and lots of time, years, into digging into the historical records, and the lore, and the cultural records of the area of Mānā, growing up. And then recently, in the past several years, I got into composing original *mele* [song] in Hawaiian for performance for *hula*, and for chants and stuff with Leināʻala Jardin's *hālau* [school of *hula* called Hālau ka Lei Mokihana o Leināʻala]. That's been like over 20 years now, doing that kind of thing. But digging into the *moʻolelo* [stories, history] in order to keep those *moʻolelo* alive, because they seem so many years ago; centuries ago. That to me anyway, it would be more than unfortunate if people today in our generation never really heard those stories. So, one way to go about it is to turn them into *hula*, *mele*, chants. To make people aware that these things continue even today. So that's really, I don't know … summarizing my experience with Mānā.

Keao recalls his experiences as a child growing up in Kekaha, Mānā, and the areas around the PMRF facility as fun, adventuresome, and a catalyst for his continuous curiosity and search for answers:

> Well, my first-hand personal experience growing up in Kekaha, there used to be a village up by Mānā side, right. You go on the highway all the way till you gotta make the left turn to go Polihale to the beach. On the right-hand side of the road, there at the turn off, was a village…old plantation houses. And there was a big community swimming pool there. And it was a nice swimming pool, so we used to go as kids, rarely to that swimming pool. I remember because it had the high diving board, 'cause we had a swimming pool in Kekaha too, but it didn't have a high diving board—but that one did. And uh, I have a grandaunty who used to live in that village over there. And, uh, only once though did we ever go visit her at her house over there. And I remember she had *lauhala* [pandanus leaf] mat covering the floor. Um, but that village closed down in the… '80s maybe into the '90s, is when people left that village permanently and then all the buildings got torn down.
>
> So that's a big memory of Mānā side. Other than that, Polihale for sure … camping, spending time on the beach, picking *puka* [hole] shells on the beach. As a kid, we used to make our own *puka* shell *lei(*s) [necklaces or garland made of flower, leaves, feathers and/or shells etc.]—spending time on the beach over there picking *puka* shells. And I remember the rest of the coast 'cause we know Polihale really well but when you keep going on the beach around the point, Nohili way, around there to me always was *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of a mystery because it's not an area we used to go. Uh, Queen's Pond, close to Nohili is about as far as we would go, but the area around used to seem like a real mystery to me … almost spooky *kine*. But, um, I came to learn later on that those sand dunes had all the bones inside. And I wasn't aware of that as a kid…we came to learn that over time. Um…but I used to … I don't know, because it was overgrown with *kiawe* [algaroba tree (*Prosopis pallida*), a legume from Peru, first planted in 1828 in Hawaiʻi trees] and bushes … the sand dunes, over there. So, I remember feeling *kine* of scared of that place, and then I came to learn later that that's where had the bones … Then I made the connection, "Oh, no wonder I used to be so scared of that place … " But I'm not afraid of that place anymore. It's not a … there's nothing spooky about it.
>
> And then growing up in the church [Church of Jesus Christ of Latter-day Saints (LDS)], we used to have church camping stays for days at a time. Not at Polihale but more around the point, which was good 'cause that was part of the area that I used to be scared of, because it was such a mystery to

me. But camping in those areas as a group, and all these people that I knew all my life, made it feel safe to me. And uh, so lot of fond memories … Yeah, the memories my era was the plantation days. So, it was always sugarcane. Even now today, it's weird to me not seeing sugarcane, because it seems so recent that the sugarcane fields were done away with. Because it's such a big part of my growing up years, yeah? But going through all the dirt roads, through the different sugarcane fields as a kid, one of the really awesome things about growing up on the west side was to be able to just roam freely. There were never gates on the roads. The dirt roads going between the sugarcane fields, that came later, I guess starting in the '90s.

Because my two best friends, we were very tight and after school we would rush home and finish our homework, and then we would meet up again at the spot at the beach because we would spend at least a couple hours fishing in Kekaha, on the reef, and stuff like that. So that's why it was so important that we had the fishing lead! So, to us it was a big deal. And uh … we would, uh … if we weren't exploring up *mauka* [toward the mountain] on our bikes, then we were on the shore fishing … doing a lot of fishing … stuff like that. So, we were real tight.

So that was my firsthand experience. Rarely did we go to PMRF, the facility there. They would have special events like the Blue Angels. They would come and do their air show, and we went to go watch them perform a couple of times, as we were growing up. They would have fireworks displays, Fourth of July … Uh, the military was heavily … When we were growing up, our community was very tight. There was a community…Kekaha Community Association (KCA) … were very active. They always had … was very reliable. Very reliable during, um, New Year's. There would be a big fair. Bazaar, fair at the local park, Kekaha Park, with all the booths. It was a regular fair, carnival atmosphere … And then Christmas time, there would be like a mini fair. A big gathering at the park. The military would come fly helicopters, Santa Claus would come down and throw all this candy and stuff like that.

So, the military were supportive of those events … those Kekaha events. And then Fourth of July was a big, uh, the same type of event, Fourth of July. So, three times a year, very reliable. There was the Fourth of July Carnival; it was a big event you know, easily ten thousand people would show up. Then New Year's again, the same type of event. Then the Christmas Santa Claus Drop … that was a big deal because it made us kids think that really was Santa Claus, 'cause he came down from the sky. [Chuckling.] But it was a military helicopter that would come. And um, the military would also provide doctors once in a while. They would set up a tent in town, in Kekaha. They would provide doctors to look people over … dentist … so that was the involvement of the military back then. Then over at the Navy housing, just past the landfill, there's a housing area where the military families would stay. And they had an outdoor movie theater, so there was an outdoor movie screen and then you can sit on the grass. It was available for the public back then, so we used to go there and watch movies under the stars. That was a lot of fun.

My mom used to teach *hula* [Hawaiian dance], as a kid growing up, at community centers around Kauaʻi. And she also would teach *hula* there at the Navy Base for people, usually moms from the Navy families who wanted to learn *hula*. And my mom used to go… So, she would take me along with her sometimes. And so that was our exposure to the military families. In our church [Church of Jesus Christ of Latter-day Saints (LDS)], some military families would come to our church too…so that was the engagement we had with the area. Children of military families were my classmates at Kekaha Elementary School. I remember one particular friend I had whose family lived on the base and my mom took me on a couple of occasions to his house for a couple of hours to play with my friend and then she would come and pick me up.

When asked about the fishing in the area, Keao explained fishing techniques and bounty:

Moi [threadfish (*Polydactylus sexfilis*)], *āhole* [an endemic fish (*Kuhlia sandvicensis*) found in both fresh and salt water], *manini* [common reef surgeonfish (*Acanthurus triostegus*)], *ʻōʻio* [ladyfish,

bonefish (*Albula vulpes*)], *pāpio* [young stage of *ulua* (crevally) fish] … that's the kind that you catch with the fishing pole.

When you throw net, you get the *āhole*, you get the *manini*, you get the *ʻōʻio* … Um, the kind you spear fish on the reef, you get the *uhu* [parrot fish (*Scarus perspicillatus*)], you get the *mū* [(*Monotaxis grandoculis*), known as the bigeye emperor or humphead bigeye bream], you get the *kūmū* [goatfish (*Parupeneus porphyreus*)].… Um, you get the *palani*, [surgeonfish (*Acanthurus dussumieri*)], *pākuʻikuʻi* [a long fishing net; specifies a net laid in coral reef, into which fish were driven by beating the water] we call 'em. All this kind, that's all the favorite fish. *Kala* [Surgeonfish, unicorn fish], that's all the favorite kind fish to eat. And that's the reef fish.

And then you go outside on the boat, if you fish off the boat, then that's where you get the … you can either get the deep sea *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] … So, you get the *kawakawa* [mackerel tuna], and you get all the different kinds of snapper, yeah? And then you get the *ono* [large mackerel type fish (*Acanthocybium solandri*)]. Of course. you going get the barracuda, you cannot help [chuckling] … And then you get the marlin, and you get the *mahimahi* [dolphinfish (*Coryphaena hippurus*), a game fish]. Plenty *mahimahi* outside on the boat.…

Actually, we get pretty good on the *heʻe* [octopus] side, especially if you go where get plenty reef, like … and then the lobster too, yeah. But if you go Nā Pali side, choke *heʻe* on that side.

When asked about the gathering of *limu* [seaweed], he recalls fond memorires of *lūʻau*(s) [Hawaiian feast, party], and other:

I wasn't so on it with the *limu*. Like I not so good at pointing out the different kinds but like my aunty who just called, her mom when she was alive, when we were kids, she used to come pick us up early in the morning, 4 o'clock, 4:30 on her truck, and take us, because a *lūʻau* [Hawaiian feast, party] was coming up and many people would call her to make the food. So, she would have her certain families that she would hit us up to go help her go harvest, yeah. So, I remember going with her out to Mānā side, Kinikini Point side. Um, she knew the spots to go, so we would just go with her and she just point to us on the reef, on the coast … tell us go pick this limu, stick it in the bag. It was *limu kohu* [small seaweed (*Asparagopsis taxiformis*), with densely branched furry tops that are tan, pink, or dark red], *ogo* [Japanese term for *limu,in the same family as Manauea* (*Gracilaria coronopifolia*), a small red seaweed]and also sea cucumber. She would have us grab *loli* [sea cucumber (*Holothuria spp*.)] and she would sit on the reef and she would scrape 'em and then cut the two ends, squeeze out the guts, and then scrape 'em some more, and chop 'em into pieces and throw 'em in the big mayonnaise jar. And it would attract all these eels, and they would come eat up all the stuff and that used to make us scared. But we used to grab the *loli*, throw 'em to her, and she would just sit on the *papa* [reef] where the water would just come up to her, and that's where she would sit there and scrape, scrape, scrape, and then cut it up. And then we would help her prepare the foods for the *lūʻau*. I remember those memories ….

And Kekaha Beach was a huge beach, and now it's only waves crashing on rocks right now. But it was a huge beach. In fact, there used to be the big kind, the old school canvas tent, the military kind, and I remember going to at least one or two, at least two different big *lūʻau* on the beach in Kekaha, where it was like that … With the long tables, everything was on the sand … Or, or up *mauka* [toward the mountain], you know? Different locations … Waimea, Kekaha … Yeah, many *lūʻau*. I always, always did love that.

Throughout his life Keao lived and loved the Hawaiian culture. His grandmother, Annie had many *ʻōlelo noʻeau* [wise and traditional sayings] and all of them were treasured by Keao. He shared two:

She would say stuff like, "*ʻĀpōpō aku nui ia lā*", "leave it up to tomorrow." In other words, you gotta have faith and you gotta be confident that what you did today was good enough, that tomorrow

you going see the result. And she would say stuff like, when somebody pass away, "*Hā'ule ka 'ulu malalo*," 'the breadfruit fell down.' Uh, *'ulu* [breadfruit], is the *'ulu* ah, growing in the tree? And *ulu* is to grow. So, our whole life, we growing just like one *'ulu* tree. But there comes a point when we produce fruit and that's the things that we do that are good and that everybody can see … that everybody can enjoy … that everybody can benefit from. And then you work so hard, and then one day comes that the 'ulu fall down from the tree … and that's the end. So that's, "*Hā'ule ka 'ulu malalo.*" And I thought it was a beautiful way to describe a person's life.

Keao tells of his grandma and her use of *lā'au lapa'au* [Hawaiian medicinal plants] and his thoughts about sacredness of Hawaiian elements:

My grandma would use for herself and with me, certain types of *lā'au lapa'au*. I have this scar over here on my arm. Used to be a boil when I was young, maybe 10 years old or something like that… My grandma was visiting with us in Kekaha and I had this boil on my arm, it was nasty. And my grandma would go outside in our yard and grab *laukahi* [broad-leafed plantain (*Plantago major*), a Eurasian stemless weed] and she would steam it to wilt it, and then she would pile it on top of the thing and wrap it. She said that was to bring the boil to a head so that it could drain out. And when I would be sick, she would give me…well, she would give me *māmaki*, [small native trees (*Pipturus spp.)* with white-backed leaves and white mulberry-like fruit], *koko'olau* tea [a class of small plants of the genus Campylotheca employed as remedies, sometimes called the Hawaiian tea plant] on a regular basis, especially when I was living with her. A typical day living with grandma was for me, 'cause I was going to school and working, I would wakeup say 5:30 am in the morning, she was already up, already cooking, and she would make cowboy pancake with honey and butter and *māmaki* tea. Was always *māmak*i tea. If she never have, then would be *ko'oko'olau* tea because she said it was good for my *'ōpū* [stomach]. And, uh, when I was sick with a cold or something, she would make … *ha'uōwī* [a weedy kind of verbena (*Verbena litoralis*)]. And she would talk about when she was growing up, ah …. That thing was yuk. [(Chuckling.]) She said was *'ono* [delicious] for you … I mean it's good for your sickness but I used to not like, 'cause it was so bitter ….

She went someplace and found 'em and then she would … Like I would tell her I wasn't feeling good and she ask me, "What kind not good?" Then she would go… Next thing you know, there was this pot boiling on the stove, so … I never really knew where she got it from but … She was, uh, she used to explain to me, uh, *ha'uōwī*, *ko'oko'olau*, *kīnehe* [(*Bidens pilosa*); young plants, just before flowering, are cooked for tea], *māmaki* … Uh, one time she talked about something having to do with *mai'a* coming out of the banana. I didn't pay attention. Now I regret, I didn't pay attention. I was, "Oh yeah, whatever grandma …."

Lā'ī [ti leaf (*Cordyline terminalis*)]] is special … we know it's special … we know it's sacred, we know it offers protection. So that's always in our consciousness at some point. So, we'll integrate it when we think it's called for, either at the house, or … Same for *pa'akai* [rock salt]. *Pa'akai* is for protection, for cleansing, forgiveness … And so that incorporates into what we do. Um, making *lei* [necklace or garland made of flowers, leaves, feathers and/or shells, etc.] for particular reasons … And then, why we give *lei*. Why we make *lei*. Why the type of leaves, or flowers, or plants we use in *lei* … There's a reason why we chose what we chose, and that all goes back to traditional understandings of the *mana* [spiritual/esoteric power; strength] inside those things. So, all of these things conveying *mana* is part of the, you know, centuries old understanding of how energies play an important role in our environment, the surroundings … um, the energy of those things that are unseen around us. I don't know if you consider that religion, but it definitely plays into our consciousness as a family, as a community, um … and definitely um, something that we still do, even today, even despite the fact that our family was raised in the Mormon Church, these things still played into these things. And the appreciation and understanding of what is an *'aumakua* [personal or family gGod] … things like that. So even though we don't know the specific name of our family's *'aumakua* from the past, we know that, that's an important thing. It's not just when you cite an animal, and in our family, it was always understood to be *pueo* [owl], that's how come I have this tattoo over here … But you cannot just say every pueo is your *'aumakua*. There's one particular

> *pueo* and it has a name, and that name is somebody, is one of our *kūpuna* in the past, or that name is lost and we don't know that story attached to that name and that *pueo*. But it's a *pueo*. And so, you kind of keep it at that super general kind of space. We wish we knew …we want to know … there's a good chance we'll never know, but the memory of it, we preserve. So even though we grew up in the Church, from the western American sense, these things were always there, and they're always kind of in the background, or in the foreground, actually.

Keao voices his concerns about the military bombing and strafing of Kaʻula Island and its sacred, well-storied sites; missile launches at Nohili; threats of arrest for boaters off Kauaʻi's west coast or those accessing the shoreline near the PMRF facility; ambiguity of military activities; the accountability of the United States making Hawaiʻi—and Kauaʻi in particular—targets for international hostililities; education, or lack thereof, in Kauaʻi schools regarding the sovereign status of the Hawaiian Kingdom since 1843; the continued US military occupation since 1893 despite a lack of a bilateral treaty of cession between the Hawaiian Kingdom (HK) and the US; and the need for the end of the U.S. occupation to allow the HK free exercise of its continued sovereignty:

> Uh, having to do with the military, yeah, so there's been a happy slash, frustrating slash, irritating relationship with the military, yeah? First of all, the Hawaiian Kingdom achieved international recognition as a sovereign state in 1843 with status equal to the U.K., France, the US and other recognized states through bilateral treaties of friendship, commerce, et cetera. In 1893 the U.S. lands their troops in an illegal occupation, military occupation, that continues until today. The United States has no business being here. This is the Territory of the Hawaiian Kingdom. The United States has mutual treaties of friendship, recognition, commerce with the Hawaiian Kingdom and those are still valid, even until today. There exists no bi-lateral treaty of cession between these two equally sovereign, equally independent nations—the Hawaiian Kingdom and the United States, just a unilateral declaration of annexation on the part of the U.S. There is no treaty of merger of these two countries. So, the United States has no business being here and the rights of the HK of its territory are continually violated every day of the occupation. This is an international crime, a war crime. The perpetuation of US propaganda making Hawaiʻi residents and people around the world think that Hawaiʻi is a state of the US is perpetuation of the crime.
>
> So, there's that. Now, within this capacity as an illegal entity, military entity, here in the Hawaiian Kingdom, now we're using Niʻihau as part of their advanced technology, radar communications technology, spy technology … You know, to further the U.S. agenda for illegal purposes, is terrifying. Because that creates us … We exist as a nuclear target, not because of the Hawaiian Kingdom but because of the U.S. presence here. So then, there's that. So, this uncomfortable, sometimes awkward relationship today with PMRF, has a lot to do with emotions that are stirred among locals. And are we educated in our elementary schools, middle schools, high schools, locally about these issues and exactly what the position of the United States is? The relationship between the Hawaiian Kingdom and the U.S.? It is not part of the curriculum. It is not part of this, so the fact that there's a lot of speculation going on and really charged emotions among locals that are many times unspecific, just ambiguous, charged up, frustrated emotions among locals having to do with the U.S. military, is no surprise to anyone because it is not part of the formal education that we get in our schools. And I am not a conspiracy theorist, however, it is no surprise that, that kind of ambiguity leads to either mistaken or confusing positions among locals, about the relationship between our Hawaiian people, the local people and the U.S. military. So, don't be surprised about any of this. Obviously, it isn't our fault that we're not being educated properly about these relationships.

AKANA-COMPOC ‘*OHANA*

Aunty Leina‘ala (Photo 6) was born Sylvia Johnette Leina‘ala Akana (Compoc) in 1945. Her father was John W. Akana and her mother was Ella (Kekahuna) Akana. She is married to Paul Compoc (Photo 7) who is from Kahuku, O‘ahu, born in 1947; he moved to Kaua‘i in the 1970s. Brad Kekipiaki “Kipi” Akana (Photo 8) was born in 1968 and is one of several children born to Aunty Leina‘ala. The interview for the CIA took place at the home of Aunty Leina‘ala and Uncle Paul in Hanapēpē. Kipi lives in Kāhili, Kaua‘i, on a 107-acre property where he occupies 15 acres with his family and his horses.



Photo 6. Aunty Leina‘ala Compoc. Photo taken at her residence in the *kūlanakauhale* of Hanapēpē in the Kona *moku* on the *mokupuni* of Kaua‘i.



Photo 7. Uncle Paul Compoc. Photo taken at his residence in the *kūlanakauhale* of Hanapēpē in the Kona *moku* on the *mokupuni* of Kauaʻi.



Photo 8. Brad Kekipiaki "Kipi" Akana. Photo taken in the living room of his his mother and father's residence in the kūlanakauhale of Hanapēpē in the Kona moku on the mokupuni of Kauaʻi.

Henry Enoka Palenapa Kekahuna, Ella's father and the grandfather of Aunty Leinaʻala, was a gifted Hawaiian surveyor who was born in 1881 and passed in 1969. He worked at the Bishop Museum and wrote extensively about the preservation of Hawaiian cultural sites. His work included the mapping of over 60 *heiau* [temple, place of worship] across the Hawaiian Islands, including three in Kauaʻi. Kipi says he worked with brushes. His visionary work is the blueprint for today's restoration efforts of Kāneiolouma" (Hui Mālama O Kāneolouma 2024). Henry assisted the anthropologist Kenneth P. Emory for many years. Henry E. P. Kekahuna's memories were recorded on audio tape by Dr. Emory in the Museum's Hawaiian Hall in December 1956 (Bishop Museum Library and Archives/Institute of Museum and Library Services 2024). He accomplished prolific enduring works in academia.

During the interiview Kipi informs about his great-grandfather's recordings in Bishop Museum, and his work on the west side of Kauaʻi (Photo 9):

> Even like … you go to Bishop Museum, you go downstairs, and you can hear … they even get recordings of him teaching classes … in half-Hawaiian and half-English … On this side, he did plenty stuff at Polihale and Barking Sands too, he … mapped out.

Leinaʻala recalls visiting with her grandfather when she and little baby Kipi went to Henry's home in Pālolo:

> Two years … two years after you were born, because he scolded us when I named him Kekipi. He said, "Why did you name him Kekipi?" I said, "I don't know, the father wanted his name Kekipi … I just went along." "You know what this is?" "No." "That's the rebel … and kids turn out to be like their names."

Hawaiians have a strong belief that the names given to a child is important, especially when having positive expectations for the child. But Kipi was successful. He retired as a police officer and also a Department of Land and Natural Resources Division of Conservation and Enforcement [DOCARE] Kauaʻi branch chief.

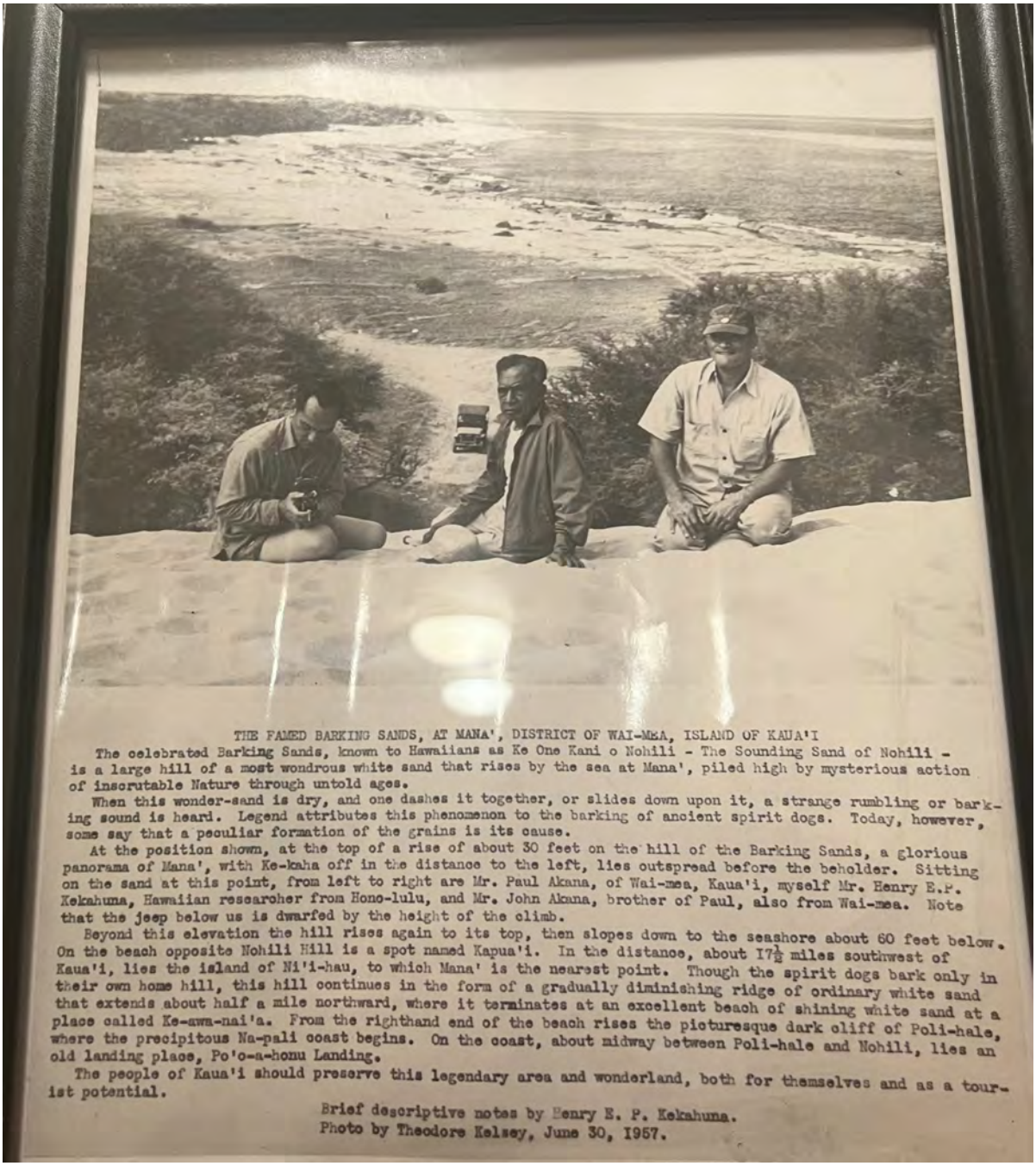
Aunty Leinaʻala grew up in Waimea Valley, Kauaʻi, where her father's (John Akana) family had land. She can remember her great-grandmother, grandmother, and dad raising their families there in Waimea from at least the 1920s. She describes growing up in the valley:

> It was wonderful …. I mean … You know … when I go up there now, it's a whole different town. It was very low key, everybody knew each other, everybody helped each other, all the kids played together … you know … That doesn't happen nowadays. It was very low key, Waimea Valley was very low key. But I think … it was a very loving town, because no matter if you were Japanese or you were Filipino, Hawaiian, or whatever, it didn't matter … you know … you just … everybody was one person.

Aunty Leinaʻala and Uncle Paul worked at the NASA Tracking Station at Kōkeʻe Park. There is an award recognizing several people, including her and Bill NeSmith (Keao NeSmith's father) on April 1, 1981. The award marks the 10th Anniversary of the NASA Tracking Station. After working at the tracking station, Aunty Leinaʻala went to work at PMRF. Aunty Leinaʻala and Uncle Paul shared some memories. Aunty Leinaʻala explains:

> And I worked there [referring the the NASA Tracking Staton at Kōkeʻe Park] from … 1971 … I worked there until 1983. And then I started down at the base [referring to PMRF] in 1985 … I worked in the department called, 'Air Operations'. And I handled all the scheduling of the aircrafts, the pilots, the crew. Made sure we were in budget …. of course … it's the main thing … and I did whatever other clerical work that had to be done. I was the only woman in the whole department, among six officers, and 20 sailors. I was the only woman and the only civilian … at times when we

had worldwide missions … and then they would come here … I think …. it was like every other summer … and we would have people like from Japan, from China, from Portugal … just from all over the world … They would do their part of the mission that was … like the Japanese would do like their part of what that mission was going to be for that time of the year … Kōkeʻe was very interesting because it was something that was new to the world, more or less, because we did like aerospace that's when aerospace was in … you know … in full bloom … I guess at that time. And we were the only Pacific Tracking Station. And we tracked the, ah … You tell her, Dad …



THE FAMED BARKING SANDS, AT MANA', DISTRICT OF WAI-MEA, ISLAND OF KAUA'I

The celebrated Barking Sands, known to Hawaiians as Ke One Kani o Nohili - The Sounding Sand of Nohili - is a large hill of a most wondrous white sand that rises by the sea at Mana', piled high by mysterious action of inscrutable Nature through untold ages.

When this wonder-sand is dry, and one dashes it together, or slides down upon it, a strange rumbling or barking sound is heard. Legend attributes this phenomenon to the barking of ancient spirit dogs. Today, however, some say that a peculiar formation of the grains is its cause.

At the position shown, at the top of a rise of about 30 feet on the hill of the Barking Sands, a glorious panorama of Mana', with Ke-kaha off in the distance to the left, lies outspread before the beholder. Sitting on the sand at this point, from left to right are Mr. Paul Akana, of Wai-mea, Kaua'i, myself Mr. Henry E.P. Kekahuna, Hawaiian researcher from Hono-lulu, and Mr. John Akana, brother of Paul, also from Wai-mea. Note that the jeep below us is dwarfed by the height of the climb.

Beyond this elevation the hill rises again to its top, then slopes down to the seashore about 60 feet below. On the beach opposite Nohili Hill is a spot named Kapua'i. In the distance, about 17½ miles southwest of Kaua'i, lies the island of Ni'i-hau, to which Mana' is the nearest point. Though the spirit dogs bark only in their own home hill, this hill continues in the form of a gradually diminishing ridge of ordinary white sand that extends about half a mile northward, where it terminates at an excellent beach of shining white sand at a place called Ke-awa-nai'a. From the righthand end of the beach rises the picturesque dark cliff of Poli-hale, where the precipitous Na-pali coast begins. On the coast, about midway between Poli-hale and Nohili, lies an old landing place, Po'o-a-honu Landing.

The people of Kaua'i should preserve this legendary area and wonderland, both for themselves and as a tourist potential.

Brief descriptive notes by Henry E. P. Kekahuna.
Photo by Theodore Kelsey, June 30, 1957.

Photo 9. Photo taken of a photo hanging in the hallway of the Compoc home. The photo from left to right is Paul Akana from Waimea, Henry Kekahuna, and John Akana. The photo was taken on the very high dune of Nohili.

Uncle Paul notes:

> We track all the big ships … you know…the Apollo … We were the only station in the U.S. or in the world in fact that could catch certain part of the orbit when the thing pass over. So we can track it, and take all that data, and send it straight to Houston … I worked there. That's how I first came to Kauaʻi. Before Kentron. 1971 … I like say … until 1978.

Kipi grew up and worked in Waimea and the surrounding area. His extensive knowledge is telling when he describes the large amounts of water feeding the plains from Waimea to Mānā, and the diversion which accounts for a less swampy place:

> Used to be all water, and they used to grow taro and rice. If you drive on the west side and you see all that valleys coming out … all those valleys was cut by water. And basically what they did when all those cane companies came, they dug out one ditch line on the top, and it catches all the water that used to feed all those valleys coming down, and then they shift the water … transports the water to one place. And they use that water … and it went to Puʻu Lua Reservoir up in Kōkeʻe, the big reservoir … and down to Kitano Reservoir, that's where they distributed all the water to Kekaha Sugar and stuff. But all … I mean was swampy that place …. Got drained and then they would stop the water from coming down the valleys … Basically, if they let the water down again, Kekaha town would be flooded.

Aunty Leinaʻala speaks about the different types of agriculture in the area:

> I remember as a really young child … I remember the rice paddies that we had going up to Waimea Valley on the right hand side. It's a subdivision now, but that was rice paddies in there. And then, but before long, it was gone. And everybody had their own *loʻi* [taro pondfield] as far as taro … you know … for taro. Sugar … I mean … I don't know when sugar came but … I mean … that was just the biggest employer here on the islands at one time … was sugar. And then … of course … pineapple too. Mainly on the east side of the island. We had one, two … we had three pineapple factories here on Kauaʻi … one was in Lawai and two in Kapaʻa. One in Kapaʻa tTown where Pono Kai Hotel is right now, and the other one was up on … pass Kapaʻa High School. Three, and was very, very good … we had during the summer that would come from the outer islands that would be housed by the … cannery owners to work in the fields.

Growing up in the area, Kipi remembers his grandfather gathering *limu kohu* [a soft, succulent, small seaweed (*Asparagopsis taxiformis*)], fishing in the ocean and streams, and ultimately harvesting the following:

> *Limu kohu* … Once in a while, yeah. My grandpa used to. *Pāpio* [the young stage of growth of *ulua*, a fish], *moi* [threadfish (*Polydactylus sexfilis*)], *ʻōʻio* [ladyfish, bonefish (*Albula vulpes*)]. Cast, throw net… I catch *ʻoʻopu* [general name for fishes included in the families Eleotridae, Gobiidae, and Blennidae] in the river too.

Back in the '80s Aunty Leinaʻala was one of the directors of the Kaumualiʻi Hawaiian Civic Club in Waimea, Kauaʻi. The club was a place where members honed their skills of *lei* [necklace or garland made of flower, leaves, feathers and/or shells etc.], making, *poi* [a thick paste of *kalo* (*Colocasia esculenta*)] pounding, procuring sea salt, sewing *kapa* [tapa, as made from *wauke* or paper mulberry [(*Broussonetia papyrifera)* bark], playing of Hawaiian instruments, modeling of *pāʻū* [woman's skirt, sarong; skirt worn by women horseback riders], stringing of Niʻihau shell *lei*(s), and *lauhala* [pandanus] weaving (Association of Hawaiian Civic Clubs, 1981). These cultural practices were taught to school children and many throughout the community.

When asked about cultural practices and Hawaiian family traditions, Kipi mentioned that he and his brother practiced the art of *Lua* or Hawaiian martial arts:

> I do *lua*. In the class. I never go long time … but get one right now with Alan Arquette … in Waimea Valley. Started west side. Now, we was practicing at…the last time we went … Kōloa Park … in the dark … The public county park. We get one big *papa* [class] maybe 100 people. We shake that park up…yeah. My brother is one *ʻōlohe* [skilled, especially in *lua* fighting] too, the ʻ*ōlohe* on Maui. And then Alan is the *ʻōlohe* over here.

Aunty Leinaʻala also adds that her grandpa Henry composed the *ʻoli* or chant used by all *lua* practitioners througout the *Pae ʻĀina* or Hawaiian Islands.

The Akana-Compoc *ʻohana* share favorable memories and stories about the plantation and military:

Paul explains:

> In the ’70s, I not seeing no difference. The only difference is, when the plantations started closing down, everything went down hill. Nothing. Before, Kekaha was a striving … When I came down, I was impressed … everyday, every weekend you could see stuff happening with the community. They had a swimming pool … everything. Then when all of that close … that’s what I’m talking about now…everything went downhill. By the time I came back again for visit in the ’70s again, was different, was like nothing … zero. It was like a big family, everybody take care of each other. You know … when they … I was from Kahuku now, plantation life … when something went wrong, like they had strikes, and all that *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stuff like that … nobody had to feed us, we all feed each other. Soup kitchen, you tell somebody to go to the soup kitchen now, they going like, “Haaaa.” They going say, “What is that?” That’s how used to be when we had hard time. That’s the same thing with Waimea, I think. All of a sudden that place went down…Kekaha. To me, no more nothing for the kids like before. Every weekend you could see stuff going on.
>
> The military was still there. To me … in my honest opinion … without the military being there, that place would turn to crap. They took care of the place. Really, look at how they keep the place. Oh I guess they have the money, they can do it. Tough…they keep the place going and…all that buildings and … Like now you go through there, it’s like it’s a different world. To me … when people talk about them … They want the land for what? Look at Barber’s Point … what they did with ‘em? That’s what gets me … you know.
>
> This side of the island … but they helped everybody [referring to the military after Hurricanes Iwa and ʻIniki].

Leinaʻala adds:

> Plus too, their the biggest employer of the island [(referring to the military]. I worked directly with them. The very next day after the hurricane, I went down to the base…you know … to see. I went in my office … it was all changed … the desk was here, and now it was there. And I said, “What’s going on?” And the Captain was in the office, and he said, “I’m using your office, and it has to be the central office.” Because we are right there on … the airstrip … right next to the tarmac.
>
> The hurricane time. What happened was … I think it was couple of days after because my boss asked me…my boss was the head of the air operations … he said, “Is there anything I can do for your family.” I said, “Yeah, my husband is on Oʻahu, and he and my son bought things for us …” Because we lost this whole place. So I said, “They have things but they can’t get it here.” He says, “Okay.” And I said, “My mother is here …” My mother was very sick … you know. And I said, “I want her to go to Honolulu, but we can’t get her to Honolulu,” He says, “Get her ready, bring her down here, I’ll take her to Honolulu, as long as someone is there to meet her. And then I’ll pick up your husband and your son, and Iʻll bring them back here. They can unload what they have for you, and I’ll take them back again.” And so from Hickam, he flew my mother with them yeah … was with them yeah? Was with them. He came back … he and my son came here, dropped off stuff for

us, took my mother back on the plane … the little C-26 … small plane yeah. And they took them back to Honolulu to Hickam. If wasn't for him, I don't know …

Brad "Kipi" notes:

I think … the military, the jobs was more high paying than the sugar industry. And plenty people don't like the military, plenty people didn't like the plantation mentality either but…I like the military here. They take care the place, and what else we going do with the land? All these guys think they going farm, they not going farm. They ain't farming … And then the sugar industry was good because it gave a lot of jobs, but bad because they stopped a lot of water. But the benefits of stopping all that water, coming down and making one swamp is the Mānā Community, the Kekaha Community … you know … get some some benefits. And of people always call me, "Plantation mentality." But those guys work hard for what they got … those plantation guys.

I think a lot of people think that the base is not transparent with stuff they do because a lot of stuff is like 'hush-hush'. But some stuff got to be 'hush-hush' because it's just that … you know … like sometimes they shoot one missile like without telling nobody … and everybody is freaking out, don't know what the hell is going on. Sometimes they tell you that the thing went off. And I know sometimes they cannot say, but I think a lot of people are like conspiracy theorists think that stuff going on out there that people don't know. But they are probably right because there are a lot of stuff out there that people never ever going to know what's going on … that's part of life. I don't know why you gotta know everything. You cannot tell everybody what's going on. They … out of all this little corporations and stuff … they are probably the only people that help the community more than … guaranty if the base shut down, Kekaha town shut down, because a lot of people work out there, and they support the community. Some of the plantations … they don't help the community at all. I rather have … This road [referring to the road from Kōkeʻe to PMRF], it's all paved down to Makaha. I work State for 30 something years. They shouldnʻt get any more land back because they cannot handle what they get now … All these places in yellow … All these places [referring to the map] are maintained nice. I can see all of this, I know exactly where all of this … I work this side of the island for years. I know.

And they did … when the hurricane came. They brought in plenty supplies … Iniki … Iwa … they brought in a lot of supplies, the military. Yeah.They brought in plenty supplies. I love the base … Yeah. And this is another story too. You know when my son was born, he was … premature, and then … but he was born that same week as … the air ambulance crash on Maui, and so they never have one plane … and they couldn't medevac him because never have the *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] … so the Coast Guard came and … Coast Guard, before they couldn't land at the regular airport because was too small … so the Coast Guard when actually land their big C-130 on the thing, and take him on the ambulance all the way to the C-130 … and they took off from the base. So I love the military. And they brought the plane in becuase nobody … the air ambulance was down … they wasn't flying … they were grounded, but he had to go to Kapiolani (Oʻahu children's hospital) … and so we had to wait. And the Coast Guard actually sent one big C-130, the big plane … landed at PMRF, and the ambulance took him to PMRF … jump on the plane, and then … it's different from air ambulance because I couldn't go on … I mean … I could go on the air ambulance with my son, but their protocol and stuff is like, "There is no passengers." So he went by himself. I showed up at the airport, and caught the last plane out, and went to Kapiolani. And the C-130 landed at Barber's Point and because they couldn't land in Honolulu International Airport, and then they transported him over there.

If wasn't for the base we wouldn't have gotten my grandma out, we wouldn't have gotten food in, because never have storage … nothing … and my son wouldn't have gotten medevac to Honolulu … Personal ties … to why we love the military …

KAINA MAKUA

Kaina Makua (Photo 10) was born in 1984 at Wilcox Medical Center in Līhuʻe. He has two other siblings, and is the second child within the order of his siblings.



Photo 10. Kaina Mākua. Photo taken in his office at the Aloha Aina Poi Factory in the *kūlanakauhale* of Waimea within the Kona *moku* and *mokupuni* of Kauaʻi.

Kaina received his M.A. in Secondary Education from the University of Hawaiʻi at Mānoa [UHM] (Teacher Standards Board-Teacher's License) and a B.A. in Hawaiian Studies at UHM. He is a fluent Native Hawaiian speaker who has danced *hula* (10 years ago), is a *kalo* [taro] farmer, educator, paddler, a *hale* master builder [a master builder of Hawaiian traditional house or building], and a really dynamic individual who wears many hats.

As a well-recognized leader in the Hawaiian community, he is skilled in the *pāʻani* (game) *of hāpai pōhaku* [boulder lifting], an upright *kāne* [man, masculine] who modeled for the ʻAha Kāne organization logo. The organization pays tribute to him in the following (ʻAha Kāne 2022):

> The logo for ʻAha Kāne as an organization depicts a *kane*, a *kanaka maoli* [Native Hawaiian], shouldering the second of three stones that must be lifted by a single individual to start *nā pāʻani* [the games] at the ʻAha Kāne conferences. In this competition called *hāpai pōhaku* [boulder lifting, the first heavy stone must be lifted onto the shoulder]. The second stone, unwieldy and awkwardly shaped, must also be heaved onto the shoulder. The last stone, largest of the trio, must be raised from the reclining state of Hina to the upright state of Kū. If no one is able to lift all three stones, then the games cannot be played. At the 2010 and 2012 conferences, Kaina Makua was the sole *Kāne* who tried to and succeeded at lifting the stones. Kaina, a college graduate and *kalo* farmer from Kauaʻi, is recognized in the Hawaiian community as an exemplary representation of a modern *kāne*: a culturally knowledgeable, educated, robust, ʻ*olu*ʻ*olu* [affable, gracious] family man. But *hāpai pōhaku* is not simply a demonstration brute strength. *Kāne* must also lift *pōhaku* comprised of intangibles like family responsibility and commitment to bettering the community and be fully

> dedicated to bearing the weight of these important *kuleana* [responsibility, privilege, right]. Focus, discipline, strength of character—in addition to physical prowess—enabled Kaina to lift stones. ʻAha Kāne seeks to build up the positive image of *kāne* in modern-day Hawaiʻi by providing cultural and educational experiences to help them become better fathers, husbands, sons and community members who are grounded in their culture.

There is a true connection between Kaina and the *ʻāina* [land], and when asked during the CIA interview where he conducts his Hawaiian spiritual practices and gathering of *lāʻau lapaʻau* [Hawaiian medicine] he replied:

> A lot of ʻem is at *kai* [sea], and up *mauka* [towards the mountain]. Sometimes in Kōkeʻe, and also in Nā Pali. You know … *pule* [prayer], *ʻoli* [chant], and always for the betterment of our people. Trying just to recenter ourselves, and keep us sane … you know … in this crazy world.
>
> *ʻUhaloa* [a small, downy, American weed (*Waltheria indica var. americana*)] and *kaunaʻoa* [a native dodder (*Cuscuta sandwichiana*)] is all good stuff for your skin. Even the sand though. *One* [sand] is one big one. If you looking for one detoxing, external detox and internal detox, it's the *one* ... it's the biggest one. The whole 17 miles of Mānā that's all *lāʻau* [short for Hawaiian medicine, plant] that. You dig one hole maybe a foot deep, however deep you gotta go to bury yourself. You let it dry out. When it's dry, you get inside, and then whoever is there cover you up, and then you sit in that thing for six hours … half-an-hour is brutal. :Clean everything out, pull everything out, open up your pores, push out all the toxins that you have. Pretty much, going dehydrate you. And clean you internally. I've done it couple of times this year, and it's brutal, especially in the summer. You know … mentally, spiritually is like taking one…what is that call…half-an-hour is hot … It's like … what they call that … when you gotta the *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] … cleanse. One external and internal cleanse. Yeah, *one.* That's all *lāʻau*, 17 miles of *lāʻau*. I mean, you can go to the *koʻa* [coral, coral head] and all the reefs in Mānā, when low tide and summertime, you going find *paʻakai* [rock salt]. All the *poho* [depression, hole], all those *puka*(s) [holes] in the *koʻa* on the *papa* [reef] they all fill with ocean water, and in the summer, three weeks, it turns into salt. So we used to go gather … you know … we feed ourselves. Get plenty of *limu* [seaweed] … all kind *limu* … *līpoa* [bladelike, branched, brown seaweeds *(Dictyopteris plagiogramma and D. australis*)], *limu kohu* [a soft, succulent, small seaweed (*Asparagopsis taxiformis*)]. That's all *lāʻau*, *kohu* is used for rebuilding…what do you cal that … some kids get 'em … your thyroids. I think my son get some thyroid issues. But *limu kohu* is *lāʻau*. Anytime you talk about *lāʻau*, it's everywhere. *Kaunaʻoa* [a native dodder (*Cuscuta sandwichiana*)] is one big one. Yeah. Cancer. Yeah, even your *mimi* [urine]. ʻOhai was one good teacher. And he's from Kauaʻi.

As a master builder of traditional *hale*, Kaina gathers his materials from Kōkeʻe. His concept is to eradicate invasive plants by using them to build the *hale*, and to *kanu* or plant natives. He also restores *pā pōhaku* [stone walls] used in *heiau* [temple, place of worship] and fishponds. He helps to restore the Kapalawai fishpond located between Waimea and Pākala, and also the Heʻeia Fishpond in Koʻolaupoko, Oʻahu, where he has been helping since 2004.

Kaina is the Program Director of Kumano I Ke Ala and owner of Aloha Aina Poi Company based in the Makaweli Valley, but which also has an operation in the *kūlanakauhale* [town] of Waimea. The organization is described in the following (Aloha Aina Poi 2024):

> Aloha Aina Poi Co. is a community based social impact organization producing *poi* [*poi*, the Hawaiian staff of life, made from cooked taro corms]. The founders of this enterprise is heavily committed to community enrichment and empowerment work focused on West Kauaʻi. Our sister organization, Kumano I Ke Ala (a 501(c)(3) non-profit organization) shares a common vision and mission to rebuild a sustainable West Kauaʻi for future generations. Our partnership with Kumano I ke Ala is heavily focused on engaging youth and growing the next generation of farmers.

> Kumano I Ke Ala projects that we support are the Mālama Waimea River Project (Community Volunteer Program), Aloha ʻĀina Afterschool Program (Middle and High School), ʻIke Outreach program (K-12), and the Noke Mau Mentorship Program (At-Risk Youth and Adults). The Kilohana Canoe Club is also a community partner that provides youth activities and mentorship.

On the webpage, one can also find a snippet about the logo of the company: its source, the Hawaiian Newspaper; the non-use of diacritical marks in their name; and how valuable the over one million pages are coming from the words of the *kūpuna* [ancestors, elders] "enlightening the new generations." Caring for his community is valued by Kaina, from the *keiki* [child] to the *kupuna* [elder]. Living his life as a Hawaiian *kāne*, it is reflective in his values and teachings. He teaches the children Hawaiian language, Hawaiian *moʻolelo* [Hawaiian stories], *hoe waʻa* [canoe paddling], *mahiʻai kalo* [taro farming], and more. He has a program that feeds the *kūpuna* and delivers meals to their homes. He also reminds people that the land is the *kūpuna* as well, so we must *mālama* [care for] the *ʻāina* [land] because it feeds everyone. With his taro products, Kaina feeds people throughout Kauaʻi and the world through the website, merging ancient practices in the modern world.

Caring for the *ʻāina* has been a focus for Kaina, and Malama Waimea River is one of the initiatives he endorses. In 2017, through Kumano I Ke Ala and the help of over 650 community members utilizing the practice of *laulima* [many hands], they managed to remove over 25,000 buckets and a million pounds of silt from the river. They are all responsible for the success of the free flowing Waimea River (Kumano I Ke Ala 2021). Kaina speaks passionately about caring for the resources and the negative effects companies invested in renewable energy have on Waimea's natural resources:

> So, the water is … KIUC like do their thing, and they work with AES [Applied Energy Services], who is this global … renewable energy corporation … claiming that they finding better ways for energy, but they just making money … you know … and solidifying their funding for longevity. And so, people like myself, the rest of the farmers in Makaweli, Waimea..you know … we against that. But through the years of them taking water, we starting to, not starting to … we been seeing the aftermath of that in our river. I mean we no more as much *ʻoʻopu* [general name for fishes included in the families Eleotridae, Gobiidae, and Blennidae] anymore … We get silt all in the river, the riverbed has gotten four, five … who knows … eight feet higher. And so, now it becomes a hazard for the people living next to the river. When it floods, like how it did last night, it's brutal. I seen one picture from 1950 and 1980, the river actually *wen'*[Hawaiian Pidgin language meaning went or when] flood and came over that big berm … you know the one they built, it's like 20 feet. Water came over. So, if that was then, it's not if, it's when? When going flood hard again, people going be in jeopardy with their lives … losing their lives. But if they return the water, it's going to clean the river, going dredge the river itself. It's going to be natural dredge like it used to be. And so, our natural resources gotta be observed better. Like seriously observed better, and maintained better.

When asked about his familiarity with the Mānā and PMRF area, he expresses his concern for the natural environment. He also recounts a harrowing encounter he experienced with the military personnel, but recommends a solution to prevent such negative experiences:

> Yeah. The water being pushed out to Kinikini. The water that they taking going out in Kinikini. That eco system there for *kai* [sea] stuff was pristine … you know … but where the river going out where it shouldn't be going, going ruin the reef. And we no more reef Waimea, but that was normal, that was hundreds, thousands of years they was doing this. Mānā it's going to be a problem soon. If it already isn't, it's going to be.
>
> When we was young, we could go anywhere … Nohili Point, *holoholo* [term used to go fishing], Kinikini, Kokole … we go anywhere and *lawaiʻa*, go fish. What year was it? Might have been 2014 … I think so … but I went go *holoholo*, and they went close all those beaches, you couldn't'go..but you could go Polihale. So, I went Polihale, and I went walk because I know where get *ʻopihi*

[limpets], I know where get *i'a* [fish]. So, I took my thrownet, I took my bag, I wen' get one *'opihi* knife, and I wen' go get *'opihi*. And I was in the water, and then two of these soldiers from PMRF came with AK47s, telling me for come out of the water. But me, I know, I not stupid … you come out of the water, they get rights *fo'* [Hawaiian Pidgin language meaning for] take you in. So I just stood in the water, and they had their hand on the trigger. And I was like, "What's up guys?" And they said, "Ah you gotta come out, we like talk to you, just come cruise." "Negative, I know I safe in the water, but you should take your hand off of the trigger." And so, I just kept pounding *'opihi*. And for one solid 10, 15 minutes they stood there trying to get me go on the sand, so they could take me in. I just kept walking, pounding *'opihi*, and doing my thing. But that *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stuff, no can have.

You know what I mean? If you … whoever going be patrolling the beach, for whatever reason they going close 'em down and have all these frickin' securities, shouldn't be somebody that is not from here. Everybody is from Kauaʻi, especially from west side, they know the *braddah* [Hawaiian Pidgin language meaning man, boy or brother], they know the people. One random dummy, because his finger was on the trigger, had two of them … I was over there … I no scared one gun, but I not going get out of this water. And any random … white guy, who was treated wrong from America, would have pulled one trigger. Guarantee, because they never get their way. We see 'em on Instagram, social media, on Facebook. They dummies, they like shoot people because they was raised wrong, unfortunately. Or they was picked on and bullied. So, that is one big concern.

We need to have local people, unfortunately, to regulate what needs to be regulated on PMRF. You need people that know the people. Yeah, because *pilina*, relationships are very important here. And that's something they forget or something they never learned, but we are here to remind them and teach them. Yeah, that's one big concern. They should open the beaches to the people, because the people going regulate for them, guarantee. The right people going regulate. We've always regulated … you know. We get stories that everybody who is not from Kalaheo to the west … yeah … everybody all the way northshore never used to come west side, because they was all scared … as they should be … because we take care our own. We get plenty of *kanaka* [Hawaiian person] on the west side because we did that for years, our people have done that for years. Guys come over here and act up, all of us guys lick 'em. They go surf with us Pākala, if you one white-skinned guy you get kicked out or beaten up, because that's how you regulate dummies coming west side. And I think, we missing more of that. Unfortunely, it's the truth, we missing more of that. 'Cause they going keep coming in and thinking they infiltrating, and start putting up … giving us problems in our community, because it is not the way they want to live. "Oh, this guy parking on my yard." "What, you just got here … you COVID, fricking freak." "2020, you just *wen'* [Hawaiian Pidgin language meaning went or sometime when] move here. Just because you get money on hand, and you just bought one house, and you going tell me, who's been living here my whole life, how *fo'* [Hawaiian Pidgin language meaning for] park and where *fo'* park, that's not your place." We cannot have that *kine* stuff happen. And PMRF has a lot of those *kine* people. So they gotta regulate the guys they bring also. If they not going regulate 'em, send them to places like my non-profit who can teach them … build relationships within the community so the people can understand. Then you can understand why we are, the way we are. Education going be the key to everybody's success. And if we can build more people like ourselves, that going be on PMRF, but not from here … when they do leave after their three years of service here on Kauaʻi at PMRF, they going take what they learn from us wherever they go, and then we building one better world.

With humble pride, Kaina tells of pristine Waimea Valley written in the journals of Captain Cook in 1778, and through his lens, as a *Kanaka Maoli* [Native Hawaiian] envisioning the present and future of *nā keiki*, the children:

So … being on the west side … when Captain Cook came in 1778. In his journals, he writes about how Waimea was pristine, and about how it was the bread basket of the Pacific. Not anywhere else. And this guy came here after traveling the world, and said that. If he going say that, it's gotta have some *ʻiʻo* [truth, significance] to what he's saying. And we see it, there is so much land on the west

side, that's why everybody wants to be here. Everybody who farm commercial production of any type of food, because it's sun year round, so why not? Now, because of our natural resources being utilized in the wrong ways, we fail or have failed to effectively and efficiently feed our people. But it's *ʻike* [know, recognize], *mea ʻai* [food] … all those levels of being *kanaka* [Hawaiian person], we failed just for one dollar. I not going on tangents now. So how do we remedy that? We start with our youth. Here, we start with our youth. I run one non-profit called, "Kumano I Ke Ala" on the west side. We have … we educate roughly 3,000 kids to 5,000 kids a year. I do all *kine* Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stuff. I help coach paddling … So our kids, use the river all the time, and they know about everything … from farming that I do to water theft … Everything on the west side … from plantation … the Fayes the Robinsons … ADC [State of Hawaiʻi, Agribusiness Development Corporation] … We try to educate all of them. They know it's not just one place fo' [Hawaiian Pidgin language meaning for] us enjoy, we gotta take care of our resources. And what better way to start, than educating the youth. And we not hitting 'em all from the perspective or the *kahua* [foundation, background], foundation of farming, but a lot of them we are. At least a thousand of ''em. And the rest is sporadic and centered around *Makahiki* [year; ancient festival beginning about the middle of October and lasting about four months, with sports and religious festivities and taboo on war]. But we touching them in different areas so that they can be interested to do the kind of work we do. And even if it's just one time, I think it's going to be beneficial. It has been beneficial in the last 10 years we been doing it. We also serve about 150 kids in the paddling community on the west side. Rebuilding our foundation is what "Kumano I Ke Ala" is. And so, we here doing that.

Kaina was one of many in his family lineage who were raised in Waimea, Kauaʻi, although his father comes from the Mahi *ʻohana* in Keaukaha, Hawaiʻi Island. The Mahi *ʻohana* is known in Hawaiʻi for their musical talents and are great singers. He traces his *moʻokūʻauhau* [genealogy] to the Kauaʻi *aliʻi* [chiefly] line of Kūkona and son Manōkalanipō who lived in the 1400's to 1500's. He claims Manōkalanipō as his biggest influence:

Kūkona had one son, Manōkalanipō. You know Kauaʻi, it's Kauaʻi-o-Manōkalanipō. But Manōkalanipō(''s) years of reigning on Kauaʻi wasn't really one … he never reigned like one normal *aliʻi* [chief], because everybody had eat the same, everybody had drank the same, everybody lived the same as he did, sat on the same table. They referred to his time as the Golden Years. And so …. going on one tangent … what we do in Waimea, on the bridge …. all the way west, is trying to rebuilt that mindset of 'we all should all be equal' no matter how much we all have. Because if we can do that, we can live like they did. I was asked once, "Who is your biggest influence?" And it is Manōkalanipō. Not my (modern) family, not nobody else, it's the *moʻolelo* hear from him, because that is *kupuna* [ancestor, elder] for me. My oldest is Kūkona, my boy.

He shares a *moʻoleo* [story] about the ancient chiefs Kūkona and Manōkalanipō and relates it to contemporary issues:

So … you know … you may not know, but Kamehameha wasn't the first guy to take over Kauaʻi and the rest of the islands. He was actually the second. Kalaunuiohua was the first. Kalaunuiohua was also from Hawaiʻi Island. He was successful all the way until he came up to Kauaʻi. And Kūkona and Manōkalanipō stood in the way. So, the story I know is…Kalaunuiohua('s) men made it to Poʻipū. They settle at Kaleinapuaʻa … if I not mistaken. So, they land over there, but Kūkona and his son, Manōkalanipō was so intelligent, that … when they landed, nobody was there on the beach. And so, they probably had four times the amount of people, than Kauaʻi had, but they wasn't in the *moʻolelo* [story] that I know. But they wasn't as strategic and well … Foundationally, they wasn't great warriors. Because we get one place Hanako on Kauaʻi that they go and they train. Anyways, they made it there, never see nobody. The batallion leader was looking *mauka* [towards the mountains] and he seen Manōkalanipō on one peak. Half to three-quarters of their guys run and follow. So they went far into the valley and they just kept going. And the further they went, the further they found that Manōkalanipō would just go to every peak, and pretty much taunt them. By the time they got all the way in … you know … they were already tired. And so, they got ambushed

> and died. And the war was won. But that's … you know … strategically, if we looking from a strategic lens … those are the type of things, normal human beings forget about. Like, we going take water from the river, and we going push it to Mānā to farm sugar, 50 million gallons of water going be taken from our normal flow. So you screwing up one ecosystem for the benefit of nobody else, yeah? For the benefit of corporation. Yeah, and so, I think in the 1900's when Robinson *wen'* [Hawaiian Pidgin language meaning went or sometime when] … the Fayes decided to create this industry of the sugar plantation, they failed to recognize how it was going to affect our natural resources. They wasn't strategic enough to ensure that our normal ecosystem flow was going to be maintained in the same way through that effort that they wanted for their corporation. For me, as long as we are fair, yeah … and we not being overly greedy or greedy, our *ʻāina* going find it's way to heal. But when we are selfish and greedy, it's going to be very hard for that to happen. No more balance. And it's happening already. I mean, KIUC [Kauaʻi Island Utility Cooperative], the water … Lahaina, and water … everybody dealing with this on west side, the Leeward side of every island … they just dealing with the water theft. And we doing it again, here on the west side. KIUC like build all of their hydros trying to make money for who? Not for the people, but they going tell the people that.

Kaina shares another *moʻolelo* of Chief Ola and the *Menehune*(*s*) [legendary race of small people who worked at night, building fish ponds, roads, temples; if the work was not finished in one night, it remained unfinished]:

> Ola brought … Ola, was one key component to why Waimea became very fertile and rich in food. So he had one idea to bring water on this side of the peninsula of the river. So get Waimea River, Makaweli, and way deep in Waimea. So everywhere had *loʻi* [taro pondfields], but never have *loʻi* on this peninsula because they couldn't get the water here. So he had an idea to bring one *ʻauwai* [ditch, canal] from the river that was 15 feet below, 15 feet higher and feed one peninsula so they could get more *kalo* [taro]. And if you go to my shop, my apparel shop in Waimea, right down the road, you going find all these pictures of Waimea, and you can see in the 1900's, 1800's get all *loʻi*. This whole side of this left peninsula. That was due to him believing that he could build one *ʻauwai* or at least get the right people to build the *ʻauwai*. And he did, he asked some *Menehune* to build one *ʻauwai*. "I need it to get around this corner, and from there, I take it." [r(Reflecting what the words might have been from Ola to the *Menehune*]). So they went agree to build ''em. And the only thing they didn't agree on is, every single *Menehune* would get fed the same fish. Everybody had to get fed equally. Just like Manōkalanipō. So he was like, "Okay." And unfortunately, he was put into like this coma under the water, until the job was done. And if the job was interrupted, like how it was at ʻAlekoko [Menehune Fishpond], they just going leave, as they did in ʻAlekoko. Night time not supposed to make noise…anyways, you know how they get all these superstitions yeah …" Oh, no brush your hair at night., ." "No cut your nails at nigh." "No sweep in the *hale* [Hawaiian grass house]." No make noise, because those buggas' over there was working. It wasn't one superstition because they doing one job, and if you make noise when you go outside and play, the job not going get done. That's why get all these superstitions. The hair and the nails was because *kahuna ʻanāʻanā* [sorcerer who practiced black magic]. Take away your stuff … So, they did the job and got ''em done, and now we get water on this side of the peninsula. And every single *Menehune* was given one *ʻōpae* [shrimp] … little … *ʻōpae*. So the deal was kept, the agreement was kept.

It is obvious that Kaina is no doubt a person who works hard and has earned all the accolades he is noted for. An important *ʻōlelo noʻeau* [Hawaiian Proverb] is told here by Kaina which he fervently repeats:

> *ʻŌlelo noʻeau* … in today's time, the most important *ʻōlelo noʻeau* I believe…is no be scared to work. Your work ethic cannot be taken away from you, everything else that you have can. If you willing *fo'* [Hawaiian Pidgin language meaning for] work, nobody can stop you.

ENOKA CHEE FOOK KARRATTI

Enoka Chee Fook Karratti (Photo 11) was born in 1978. He is the third child of six children in his *ʻohana* [family]. His parents are Steven and Phyllis Karratti. His maternal ancestors are from Hana and Keʻanae on the island of Maui, and they are from the *ʻohana* of Kala, Kaʻaihue, and Ng. His paternal ancestors are from Oʻahu and Hawaiʻi Island, and they are from the *ʻohana* of Nihoa, Keawe, and Karratti.



Photo 11. Enoka Karratti. Photo taken at the Aloha Aina Poi Factory in the *kūlanakauhale* of Waimea within the Kona *moku* and *mokupuni* of Kauaʻi.

His father, Steven, was from Oʻahu and raised in Makiki. There is a Karratti Lane off of Pensacola Avenue. His father grew up there. His grandfather also lived in a house on Lemon Drive in Waikīkī, the house is still there, surrounded by many tall buildings. His father was a graduate of Farrington High School and grew up at Lanakila Housing in Kalihi. Although the family later moved to Waimānalo, he still attended Farrington, and hitchhiked to school. After graduating, he attended the Church College in Lāʻie [now called Brigham Young University–Hawaiʻi]. He studied electronics and was recruited as an electronic technician at the PMRF (Pacific Missile Range Facility). Steven and his friends moved to Kauaʻi with their girlfriends, eventually married, and settled in Kekaha in the early ’70s. Initially, he worked on one of the radars up on Makaha Ridge, then another radar on Mānā, and then he became a civil service worker. As a civil service worker, he worked for a detachment for the Navy that came out of Keyport, Washington, but they had a station on PMRF. They installed underwater targets. Steven went from an electrician technician in the shop

to becoming a quaility assurance specialist, and eventually was the supervisor at the shop. He worked at PMRF for approximately 30 years and retired in 2018.

Enoka was born in Waimea at Kauaʻi Verterans Memorial Hospital in 1978, and raised at the first Hawaiian Home Lands in Kekaha on Hoʻomau Street. Enoka and his wife, Denise Karratti, have three children ages 10, 8, and 4. He and his *ʻohana* live on Alawai Road in Waimea. They have lived there for 12 years. He expressed how he feels living away from where he was raised, which has been a major change for him:

> So leaving Kekaha was kind of trippy for me. All I knew was Kekaha. I mean I been to Waimea, we play through Waimea. Living in a different town, for me was kind of a trip. Even moving across the park from where you grew up … is kind of trippy. When me and my wife got married, we was living in Kekaha, she was teaching in Kekaha. So just that kind of new experiences for me was kind of trippy.

While growing up, he and his *ʻohana* camped on PMRF near his father Steven's shop located next to Nohili Ditch. They fished with throw nets in the ditch, and fished through the opening in the reef. They swam in the area where the ditch emptied into the ocean. As he got older, he would go diving throughout that area with his daughter and her friends when the base allowed access. He names the fishes they would catch:

> *Nenue* [chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus, K. vaigiensis*)], *pāpio*(s) [named for the young stage of (crevally) fish], *ulua*(s) [certain species of crevalle, jack or pompano, an important game fish and food item], *moi*(s) [threadfish *(Polydactylus sexfilis*)]. If we in the ditch, then talapilas.

Enoka attended Kekaha Elementary School, Waimea Canyon Intermediate, Waimea High School, Brigham Young University–Hawaiʻi, and the University of Hawaiʻi at Mānoa. In the early to mid-2000s, he worked as a security guard at PMRF, and later moved to the supply ground, working there until 2018. He is an educator who has taught Hawaiian Studies, and was a Stewardship Project Coordinator at Chiefess Kamakahelei Middle School in 2018–2021. Presently, Enoka is the Education Coordinator at Kumano I Ke Ala, an organization "building a foundation of Aloha ʻĀina through culturally-based Native Hawaiian education programming to grow self-aware, self-determinated and self-directed critical thinkers for a sustainable West Kauaʻi"[1] (Kumano I Ke Ala, 2021). He tells of his work at Kumano and teaching the *haumāna* [students]:

> Well … for us … for Kumano I coordinate education outreach for the schools at Kumano … and this current year, we are using Ola's *moʻolelo* [story] with Kekaha School's Fourth Grade. We get on continuous … for the fFourth gGrade lLevel. Long story short, we been talking to them about Ola. We go to the school, we give one little blurb about Ola, then they come visit our farm … now we in the space of Ola. We can connect their brains and their eyes with what they heard. So I think, for us … for me sharing Ola, and his *moʻolelo*, and what he did … and everything that led to Waimea becoming Waimea … we try to instill on the kids … those different values. Anyway, just highlight those values of self-sacrifice of the bigger picture … you know like the importance of water, the importance of taking care of each other. For me, I was focusing on … taking care of each other … having them understand that Ola did this for his people, you can do something similiar in your classroom, or in your family … something like that. It's easy for me, for us to relate to Ola because of the space we in … so welcoming the kids in that same space, trying to open up their minds eye

[1] Kumano I Ke Ala (n.d.). *Our Mission*. Kumano I Ke Ala. Retrieved December 20, 2023, from https://kumanoikeala.org/

> to what all of this means or could mean to them is important. The *mo'olelo* or the value in caring for others is what I try to share with them.

He is an officer on the board of Mālama Hulē'ia, a group who manages the Alakoko Fishpond in Nāwiliwili, and educates the community on cultural values, and the caring and management of cultural and natural resources. Enoka has assisted in the development of the web-based virtual field trip to the Hulē'ia project. He dedicates his time to the Waimea High School Athletic Department and coaches the girls varsity volleyball team. His wife, Denise, is the Vice-Principal at Waimea High School. Denise also dances *hula* and so do their children. Enoka fondly speaks about his wife gathering for her *hula* adornments and places they like to go:

> She enjoys Kōke'e and pretty much wherever we go. I remember in the beginning part, when we first got married. I took her behind Berry Flats. So she never been up there before without me. She never been there before I took her there. I used to be like, "You nuts, at least get your bearings straight, you can get lost in here, people get lost." You 20 feet from the road but you wouldn't know it because you just walking in a circle … right? I know Berry Flats was one special place for her. For our family as a whole…it's either *mauka* [towards the mountain] or *makai* [towards the ocean]. And *makai* typically, Kekaha … it's where I grew up, and it's what I know. But now my kids they *ma'a* [accustomed] to Waimea, here … the river mouth … the river mouths. My wife is more like … she likes to see the ocean but she don't like being in the ocean too much, but she enjoys it … she don't enjoy being cold.

Enoka's favorite *'ōlelo no'eau* [Hawaiian proverb] is *'A'ohe pau ka 'ike i ka hālau ho'okahi'* [All knowledge is not taught in the same school] (Pukui 1983: 24), and he explains why he favors this particular *'ōlelo no'eau*:

> I like it because …. of course you not going learn everything in one place. You gotta be able to be in that space, in yourself that you can be open to, and seeing what get for learn, and using what you learn from different spaces, and making one space for yourself for be able to hone all those things you learn.

He would like access to PMRF again and speaks about his thoughts:

> I think Mānā when I used to work security for them [PMRF], we used to drive through Nohili … all the dunes … and I drove through there as a kid, as a high school student. Back in the day, we could drive all through there. But being on the government side of the fence and going through that space, I used to think, "Whoa, too bad the community cannot see or be back here." You know obviously you going get the bad that come with the good, you not going be able to cover it all, but we used to go from Kekaha Elementary … up to the dunes … and the whole *mo'olelo* ... slide down and listen to the dogs bark. But I think, that's a special place … that whole stretch, but obviously there are a lot of special places in Hawai'i, but growing up on the West, and knowing like that's Ni'ihau … no can even go … like that kind of vibe, I think … that gotta change. We gotta … accessible … got to get more easy access to the space. You know …. something got to give.

TRESTON "HENA" CABERTO-RACO

Treston Michael "Hena" Caberto-Raco (Photo 12) was born in the year 1989 on the island of Kauaʻi to parents Michael Caberto and Terry Raco. Hena is the oldest of four children. He is married to Kalia Caberto, and they share three children. Hena is currently employed at Princeville Ranch where he is a ranch foreman.

His father, Michael and grandfather, Mr. Kahiamoe were born and raised in Kekaha, but the Kahiamoe family originated from Kohala, Hawaiʻi Island. His mother's family, the Palakiko(s), originated from Lahaina, Maui.



Photo 12. Hena Caberto-Raco. Photo standing in front of the *pā pōhaku* [stone wall] he and others built including Keao NeSmith at the lands under a lease from DHHL held by Hena's *ʻohana* at the *ahupuaʻa* of Waiʻawa, Kona *moku*, and *mokupuni* of Kauaʻi.

Through his mother's Palakiko family he inherited the lease for the land he cares for in Waiʻawa. The land is part of the Department of Hawaiian Home Lands (DHHL), and the Palakiko family has had the lease since 2008. Hena relays how his family acquired the lease, contamination, and his tenure on the *ʻāina*:

> This is Hawaiian Home and we have a lease; we had a lease since 2008. But my grandpa, when the plantation was closing down, they were going into diversify ag. He teamed up with this other guy, Wally Johnson, and they had a company called, Far West Ag. And they were growing all the sweet corn and watermelon going out to Kekaha. All before these corn companies came in, they was growing real food. You know like, they had sweet corn and watermelon. My summers were spent in the mango orchards, and in the watermelon fields, and sweet corn fields, picking all that kind stuff. I never wanted to become one farmer.

Yeah. [Chuckling.] So and then, 2005 or something like that, he ended up not … There was a little thing and he ended up selling his part of that company, Far West Ag. So, we lost all the *ʻāina* [land] because we weren't part of the business. Then somehow, DHHL (Department of Hawaiian Home Lands) came back to my grandpa because Wally Johnson wasn't *kanaka* [Hawaiian native] and this was all Hawaiian Homelands. My grandpa was Hawaiian, so they asked him if he was interested in taking over inside Waiʻawa Valley; we got that lease in 2008.

When I got in here in 2009, I was 19-years-old out of high school. I was *pau* [finished] with KCC (Kauaʻi Community College) and I had the opportunity to go to Hilo with my class and everything. I registered and transferred to go to Hilo. I was like well, I get *kuleana* [right, responsibility, privilege]; if we learning about *kuleana* and what it is to do, you know like, that was just my calling to come back to *ʻāina* [land]. Yeah when Keao came up, all of this was … we didn't have the machines that we have now. Over time, it just takes a lot of time. Now we working with the non-profit, hopefully we can start moving things faster. But this kind work is just taking so long. And with the opportunities ahead of us in this generation, we can just go make money easily; go work construction and do all that kind stuff. And I did, to provide for my family in the beginning. Then when the opportunity came up to be on the ranch, I was like, "I think I going go that direction." It's hard; hard learning one style of living and going back to Western style. Yeah, money is important and we gotta sustain ourselves but we can have balance. There's balance now. You can make money, provide for your *ʻohana* [family] and still *aloha ʻāina* [love of the land or of one's country] while doing that. It's just painting a picture so that they can see it; the image that you see.

I *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of roughed it for a while and cleared everything with one weed whacker and chainsaw. At first, I never even had weed whacker; had machete and what not. This place, this orchard was just almost like how you see it now [chuckling]; but was just covered. Only thing you could go through these trees was just pig tunnels, like this. At first we cleared it by hand, when I first moved in here and I was just living in one tent. This is my first *loʻi* that I dug by pick and shovel. All these rocks, not all of these rocks, but that big seat rock that you see right there was all by *ʻōʻō* [digging stick] and pick and shovels that we would do everything with.

We have 20 acres on this side, and eight acres in the back over there, behind the Poison House. I think part of our lease is in the Poison House but after all of the test and everything done like that, it's still under our responsibility. We just don't do anything with that until we can do the remediation, proper remediation and cleanup of that valley. We've teamed up with another nonprofit, Kaunalewa, who is working towards doing brownfield cleanup in the Kekaha community.

One of the things that we battling here in Waiʻawa is the growing practices that they were using for the plantation times. Our community calls this place, Poison Valley, as opposed to Waiʻawa Valley, because of the contamination that's in this valley. Waiʻawa Valley is one of the contaminated sites, brownfield sites, for our community. With the regenerative farming practices, we want to do here, it's *kine* of perfect collaboration between the farmer and the EPA [Environmental Protection Agency] cleanup. If we can do regenerative practices to the *lepo* [dirt, soil], the soil, and feed the community, and do all this cultural revitalization for our community, you know … This *wahi* [place, location] is really, really a big player right now for the future of this westside community, I feel, in my *naʻau* [bowels, gut; mind, heart affections]. They used to house their pesticides and herbicides, and even they had, you know the telephone post. I guess they would dip the telephone post in that kind crazy chemicals over here. So, when they shut that down in 2000, DLNR [Department of Land and Natural Resources] just left, put up a chain link fence and labeled it a brownfield and said, "Nobody enter." But the problem with that is, is one state agency was labeling it as a brownfield while another agency was listing it as ag; leasing it out to my *ʻohana* [family]. So, in 2010, I brought this to the Hawaiian Homes Commission and I said, "What is the deal with this contamination on our side? We growing mangoes, we growing *loʻi kalo* [taro pondfield] we get *ʻuala* [sweet potato (Ipomoea batatas)] all planted in the ground, gardens …"

We had deer, goats, pigs, cows, *ʻalae ʻula* [Hawaiian mud hen (*Gallinula chloropus sandyicensis*)], *kolea*(s) [Pacific golden plover (*Pluvialis dominica*)], we get the *ʻūlili* [wandering tattler (*Heteractitis incanus*)], we get … *ʻaukuʻu* [black-crowned night heron (*Nyticorax nyticorax hoactli*)], *ae'o* [Hawaiian stilt bird (*Himantopus mexicanus knudseni*)], *pueo* [Hawaiian short-eared owl (*Asio flammeus sandwichensis*)], we get … with the cliff birds, what is that? *Koaʻe* [white-tailed tropic bird (*Phaethon lepturus dorotheae*)], *koaʻe kea*, *koaʻe ula*. Invasives are all the parrots. The parrots are a new nuisance that we have come in over the last five years, I say. You know, when we first came in, I would see them high, maybe one or two flying over. I'm like, "Oh crap, they stay coming on this side, that's weird." Then the next year, would be little bit lower. And the next year, we see them all in the plain. The seed companies got all the grants to chase away all the parrots, like that. We would drive into seed company fields and they would be playing all kind high pitch sounds (making a sound) trying to scare the birds. They went chase the birds right into the valley. The parrots weren't even interested in the mangoes until maybe about three years ago.

We have about eight acres planted. We have about 12 varieties of mango that we growing and we're trying to do more diversified ag. We had about 15 *ʻulu* [breadfruit (Artocarpus altilis)] trees planted in this orchard right here, and then the *pipi* [beef, cattle] came in and ate 'em. Oh no, we had 15 planted and KAA (Kekaha Agriculture Association), the irrigation guys, when Landis Ignacio was still here, told us that they were going to shut off the distribution line for one week; but it was shut off for about a month and a half. All of our *ʻawa* [kava (Piper methysticum)], *loʻi kalo* [taro pondfield], everything just went *make* [died. Um, so over here we had *koa* trees [the largest of native forest trees (*Acacia koa*)]; we have some *ʻōhiʻa* [tree of the *ʻōhiʻa lehua,* which is the flower (*Metrosideros macropus, M. collina subsp. polymorpha*)]. In our nursery we had 'em. But we definitely planted them out and they grow, it's just that water situation. But we planted a lot of *wiliwili* [a Hawaiian leguminous tree (*Erythrina sandwicensis*)]. We did a … the guy, Rick from Hui Kū Maoli Ola did a study up at Pu'u ʻŌpae and he found some *ʻiliahi* [Hawaiian sandalwood (*Santalum spp*.)] up there, and yeah, there's a lot of stuff inside the valley that's growing.

It's been a year to year battle with the state agency that controls the water because we're such a small farmer. We're on Hawaiian Homelands and they manage Kekaha Ag, which is in front, so they have all the seed companies that they manage. But because we on DHHL (Department of Hawaiian Home Lands) land, we cannot be a part of their association because we not one ADC, Agrobusiness Development Corporation. By not being a part of their association, we kind of don't have a voice. And being on DHHL, we have first to water rights. These guys, they understand the law. They know that we as *kalo* farmers [taro farmers] get first to water rights but at the same time, we don't have enough community to voice for us.

And that's the thing with Kekaha … Before used to be a lot different because everything was open. The gates were all open and the community could just roam, pretty much. And everybody would take care. But now with the thing being locked up, people no *mālama* [to take care of] They come in and out, they take what they like and they leave. When before, it was a different thing when everybody would take care. Everybody would take care the ditch lines, everybody would take care the watercress patches and what. They would grow their own pumpkin patches and people could come and eat. But now it's like, "Oh, the farmer stay back there … oh, the farmer no stay. We go take his stuff and we going leave." We raising pigs, they going come steal the pigs, or if not, they get their hunting dog.

As a Hawaiian and a *mahiʻai* [farmer], Hena understands the value of water and offers his thoughts of how the mindful distributation and maintaninance of water can be beneficial to the ecosystem and humans alike:"

It would make it smart if we let the water go back into Waimea and uncap the wells because we have our own *wai* [water] over here. All the taro farmers and the ecosystem, the Waimea River is the lifeline. That is what feeds everything … ecosystem. When you take water away from that, everything suffers from that. So, when the water commission came down, we said, "We the furthest

one west, before all these … guys came in started farming taro … we the furthest one west farming taro and we benefit from the Kekaha Ditch. But if you were to ask us what we would like, we have our own well water here in the valley. We could run our *kalo* [taro] and stuff like that off of our own well systems and we look at the larger picture; hrow the water back into the Waimea River …" So, I'd support that. There's a big balance between it. How do we manage the water situation? I think they're going to be piping it. One of the ideas was to pipe it from Waiʻawa Valley to Mānā Plains. And you see, when we walked over there, you see how much animals and life run off of this ditch line? If we were to pipe this land, or this water, all of this land going go dry and barren. Everything going *make* [die], all of our community that sustain ourself off of this wild game and stuff like that. That's how our community is raised. We're rural over here.

Yeah, so whenever they turn off the whatever, we have the well. We can put one storage tank inside here so we not just constantly draining the well. Whenever that storage tank comes low, it just kicks back on and sucks up water so we can sustain ourselves off of that. But that's the biggest problem that we have when they turn off the water. As a farmer in Mānā, that's the hottest place in Kauaʻi. You go two days planting anything, especially when you plant a new crop; one or two days without water is going to wipe out your whole thing. Even mature tree; I get one mature tree, they went shut 'em down for two, three weeks. You see that tree? *Make* [dead]. 'Cause the place get crispy in the summertime. It's so hot, all this grass is all new grass from the last rains we got the last two months. But before that was all brown, crispy … especially the west sides. West Maui, West Oʻahu 'cause they dry, the dry side.

With passion, Hena speaks about his experience with *ʻāina*-based education in Waiʻawa, and his wish to connect children with the land through education:

We were bringing up *hāumana* [students] from Kekaha Elementary School. At the time we were linked up with the fourth-grade program; it's like a leadership program. They were coming up every week. We had Boy's and Girl's Club coming up and Nā Pua Noʻeau kids' camp and stuff … So, we're questioning, you know, if we're bringing up our *hāumana* … The problem is, why does our west side community have to go all the way to the North Shore to learn about our *ʻāina* [land] and cultural resources, when we have our own history on the west side. Why we gotta go all the way Waipā for go into *lo'i kalo* [taro pondfield]? Why we gotta go, you know, Limahuli and learn about that stuff? We have all of this stuff in our backyard right over here. But our *keiki* [children] in Kekaha isn't connected. And when they are connected, maybe they connected for … I don't want to say the wrong reasons … you know … recreation. But to share the oral history of the *moʻolelo* [stories] of place, connecting them to place. The name you know, and everything like that, that is what we gotta plant in them so they get grounded into this community. Learn all the *moʻolelo* [stories] of our history. This goes back, Waiʻawa's history goes back from the original inhabitants of Kauaʻi to the *Menehune* [race of people, and/or legendary race of small people] time. They get one *heiau* [temple, place of worship], Hauola Heiau, inside over here. Get many, many stories about it but one of the stories is that they talk about of … was an *ali'i* [chief, ruler] and I guess he had collaboration or, had little rule over the *Menehune* people. He was able to have them build part of the *heiau* when his son Ola, came up with the idea of Kīkīaola Ditch … I feel the Kekaha Ditch replicated the Kīkīaola Ditch, how they brought the Waimea River water to the Waimea Plains to irrigate the *loʻi kalo* [taro pondfield] over there. The Kekaha Ditch is the same thing, they just brought it all the way to the Kekaha Plains. So, this valley is all related back to ag, from before times with the *heiau*, all the way back to ag with Kīkīaola Ditch system, and then you have plantation time with the maybe not so *pono* [correct or proper procedure] practices. We get Poison House inside here, and now with the contamination where we gonna bring our people to next as far as agriculture and sustaining ourselves?

Hena shares his fishing and gathering experience, educational knowledge, a cultural inventory of the land, and views of the Mānā and Kōkeʻe project areas:

Um, from early childhood memories are, you know, visiting family in Kekaha. We would be living in Kōloa and Līhuʻe when I was a child but all of my *ʻohana* [family] lived out over here. So, every weekend or week days, we would come out and spend our time with the family in Kekaha. So, whether we be up *mauka* [towards the mountain] Kōkeʻe, in these hills along these valley sides hunting, or going *makai* [towards the ocean] surfing and fishing all on the base, the military base. Before the base used to be open so we could drive from Kekaha Beach all the way to Polihale. And just go drive right on the base, just go around and then go into Polihale. We spent a lot of time camping out there on the base and fishing picking *limu* [seaweed]. Ah, *limu kohu* [One of the best liked edible seaweeds; (*Asparagopsis taxiformis*)] mostly, and we would be picking ʻ*opihi* [limpets], throwing net catching *nenue* [chub or pilot fish (*Kyphosusbigibbus, K. Vaigiensis*)], diving, lobster … Oh, it's a beautiful reef out over here. But my childhood fondest memory was camping on the base.

Yeah, so one of the stories is that she would visit with the Knudsens—the Knudsens had the ranch, Waiʻawa Ranch at the time. I'm not sure what the time period was when they were doing the sugarcane but yeah, he would lead her up from Waiʻawa, up the trail to go up to Kōkeʻe. And a lot of that history has to go back into the Queen Emma Festival that they have in Kōkeʻe, where the *wahine* [woman, lady] would ride in on horseback and everything, so … You know, that would be interesting to uh, maybe do a ride with everybody one day … [chuckling]. It's just cow trail.

We have native plants, a lot of *ʻaʻaliʻi* [native hardwood shrubs or trees (Dodonaea), all species] and *kukui* [candlenut tree (*Aleurites moluccana*)] that you go through. There's really the dry forest on this side so you won't see a lot of the native big trees that you would see further up *mauka* [towards the mountain]. But you would see *ʻilima* [small to large native shrubs (all species of Sida, especially S. fallax)], *ʻaʻaliʻ*i… This place is known for having the *peʻapeʻa* [Hawaiian bat (*Lasiurus cinereus*)] too, yeah. You know, growing up it's just someplace that we go for recreation. And then as we got older, you know, like camping and hunting and picking *maile* [a native twining shrub, (*Alyxia olivaeformis*)] and learning about our *mauka* [towards the mountain] land and native plants and stuff like that. And as I got older, it came more of a *kuleana* [right, responsibility, privilege] to *mālama* [to take care of]. I just start learning about the native plants, I got into Hawaiian Studies at KCC (Kauaʻi Community College) so I get little bit more *maʻa* [accustomed, used to] with your *ʻāina* [land, earth], you know … We learning about all this in school but I actually grew up with all of this stuff, so it came natural to me to be *maʻa* to all of that stuff. Further up *mauka* [towards the mountain] we see snails. And I'm sure we do, down in these lower lands too. Definitely in our *loʻi* [pondfield, especially for taro] we see certain snails but we're not too *maʻa* [accustomed, used to] with the native snail species. But when we started opening up *loʻi* right in the valley, the first thing we noticed was all the *hinana* [young of *ʻoʻopu,* a fish]. Baby *ʻoʻopu* (or *hinana*). And it's funny that they are in the downstream because what would have happened is they got diverted all the way from the Waimea River, go through all the way Kekaha Ditch, go down that crazy waterfall or through the pipe, and then get spit out into the ditch line over here. That ditch line is controlled or managed by Kekaha Agriculture Association. They manage from Waimea River all the way to Polihale and into the base.

We get to go and ride, you know. We do all these kind of things …and we go hunting, we see the *ʻāina* [land, earth] but we know the stories. But you know, the relationship is only within the people that is going, is doing that. So, people that is outside, they don't really recognize all the history that we have back in these hills. They only know outside … seed companies, the landfill, PMRF, they don't really know the *mauka* [towards the mountian] sides. All the different bunkers that we have up on the ridges and the *heiau*(s) [temples, places of worship] … Saki Mana, get Polihale…get few other *heiau* on this side.

Hena provides insight into the water and land use in Mānā before and after the Plantation Era:

I don't think that had rice but in the old *moʻolelo* [stories], you would hear the stories of the Mānā Plains having floating rafts of *kalo*. So, kind of like the Peru guys with the chinampa bed and stuff like that, you know. So that was really interesting, to hear all the … I guess they dredged a lot of

this; this is all wetlands. Was all wetlands and you know … when we talk to our friends that's involved with the fishponds they said, "This is the biggest fishpond on Kauaʻi." Right here was all wetlands where you have, you know … Some places you could sail canoe inside. It was navigable, they said, inside along this *pali* [cliff]. So, occasionally when the thing rains, I say, "Oh yeah, it does." We would see that it could do that. But with the plantation times … that's why we have the most pristine *lepo* [soil] over here. From turning wetlands into dry, of course your *lepo* is going to be super good. Over time yeah, they drained the whole wetlands and then, you know, sugar plantation of course came in and their farming practices was ridiculous. You look at all the plastic they used to lay down for drip irrigation. At first, they never had that; they would just grow the *kō* [sugarcane], the sugarcane, on raised beds, kind of like flooded … pretty much like *māla* [garden] style, like *lo'i kalo*. Like *māla*, with the ditch around the whole field, and it would be irrigated that way. And then they came up with the drip irrigation; and then they had the heavy equipment where they would just till all that stuff in. So those are all the ag practices that has come about in the area they went plant. And then corn is there, and they were still doing that kind of same practices. What are we taking the next generation to, you know? How are we going to be feeding our people and sustaining ourselves off of this same *ʻāina* [land]?

We are currently irrigated from the Kekaha Ditch. Kekaha Ditch comes down the hill, right over there and feed into the hydro. Hydro was the first electric on Kauaʻi because … And I guess the first traffic light, was right over there where you pulled in; right over there on the paved road. That was a cane truck crossing over there, so they had a traffic light. And I guess this hydro is also running all the pumps, to pump out all of the water out of the … 'Cause we had all kind wells, yeah. Kekaha is filled with wells. The plantation capped all those wells so they can grow their sugarcane and stuff like that.

Yeah, and to create the model is what we're working for. We start at *paʻa ka piko* [the nexus or steadfast center which is the piko or navel] then we can go from here, and out. They can see this and maybe we can get little bit more acreage … then little bit more and we work ourselves all the way to the *kai* [ocean, sea]. We work ourselves all the way *mauka* [towards the mountain]. It's so slow. I no see that, that piping project is *pono* [correct or proper procedure] in anyway. If they going do that, leave Waiʻawa out of it 'cause I no like any pipes inside here. If there's anything they can say is key to my fight like that, we no like pipe any of this water. You see how much animals live off of this? And this goes all the way to Polihale.

In Waiʻawa, south of Hena's farm, there are the lands managed by Kekaha Agriculture Association. Hena explains the use of land and water by the companies who occupy the land:

That ditch line [referring to Kekaha Ditch] is controlled or managed by Kekaha Agriculture Association. They manage from Waimea River all the way to Polihale and into the base. This water from the olden times was for the plantation. Now days would be these seed companies and uh, but not too many … maybe the base? I think the water gets thrown out at Kinikini. I not entirely sure. It's all for their test corn. I think they producing seed for the mainland. Yeah, for the corn. And they were growing soy beans at one point; alfalfa, they tried to grow, but mostly corn. A lot of the seed companies they kind of disappeared; not too many … I think they … right in front they trying to do a starter program …You see all the taro farmers? I think they get awarded an acreage of land and if they do good, they going get awarded more land. But I also hear that Aloun Farms going be coming in over here. It's kind of bitter sweet. You like to see food, but at the same time farming practices is everything. And what is the difference between monocropping farming practices between these commercialized guys who's growing real food? They still using synthetic fertilizer, they still spraying, so … Yeah, we might be seeing food that you getting, but what is the growing practices, yeah?

Hauola Heiau is in Waiʻawa Valley below the Hauola Ridge, not too far from Hena's farm. He gives some details about the ancient site:

> Yes, in this place. There's caves inside here … both sides, actually. I was educated on that when Aunty … when we did that meeting with the Aipoalani and Kilauano *ʻohana* [family]; they are direct descendants. When you guys have your interview with Aunty Gwen, she can share more about, and how much she wants to share about that. But there's definitely *iwi kūpuna* [bones (of the) ancestors] inside here. Yeah, and a lot of the spiritual stuff connected with that side.

Hena educates by explaining the meaning of Waiʻawa, a *moʻolelo* [story] based in Waiʻawa, why Waiʻawa is the most desecrated *ahupuaʻa* [land division usually extending from the uplands to the sea] on Kauaʻi, how the *ahupuaʻa* should function in modern day, and his thoughts about community funding for the betterment of the *ʻāina* and *kanaka:*

> So, it literally translates into 'bitter water', Waiʻawa. I think, I don't know if that goes into the *manaʻo* [thought, belief] of Kane and Lono sharing *ʻawa* [kava], up over here. Some *moʻolelo* [stories] I've read have had that. And then others share, you know like the Knudsen's more forward, say it was because of the stream 'cause it was dirty, or something like that. There's different interpretations of it but we know that within this well, that we have our own fresh water inside there … life can sustain itself inside here. It's amazing when you're in a *kīpuka* [opening in a forest] like this and you feel so isolated but at the same time, you can survive. You get water…it's like one oasis inside here. You get taro patches but people no see that from the outside looking in and they just think it's *kiawe* [algaroba tree (*Prosopis pallida*)] forest. And then when they come inside they say, "Oh, this place is green … oh, get food!"
>
> Waiʻawa, can go back to the days of Kualu-nui-pauku-mokumoku [Kualu of the broken rope, he is the son of Kualu-nui-kini-akua; mentioned in the "Legend of the Mū People"], tracing it back to the *Menehune* [race of people, or/and legendary race of small people] times, when Ola was in here. That's one of my favorite stories of Ola on the west side, the *aliʻi* [chief] Ola and Kualu, because it brings it back to when that was the original peoples that was here. So, imagine living on Kaua'i where you have this barren land and how are you going to sustain yourself in this *ʻāina* [land]?
>
> Waiʻawa, this is the name of this *ahupuaʻa* [land division usually extending from the uplands to the sea] right here, Waiʻawa is the most desecrated ahupuaʻa on this entire island. We have all these seed companies, the largest landfill on Kaua'i, the only landfill … everybody's *ʻōpala* [trash, rubbish] comes to Waiʻawa. You talk about resource management, if anything should be awarded in this community for hosting the landfill in this community, it should be projects like this that is bringing back life into the land. This is one contaminated place; this is one heavy cultural spot. Why not throw money into this kind of place? But you know, there's groups in our Kekaha community that say we going blow $80,000 in one night for Fourth of July. And I was like, you know what I can do with $8,000. Give me $10 you know, we can do a lot. There are those kind of things that I feel, oh my goodness … Waiʻawa, the name of the valley is Waiʻawa. This ahupuaʻa is Waiʻawa. We gotta put in more *mana* [spiritual energy, divine power] inside this place.
>
> Also, there's a lot of burials on the base that I know of. You hear it all the time of stories that, "Oh, we want to put up one post there, one light post there." But they dig three feet. And they find *kupuna* (referring to *iwi* [bone] of *kupuna* [ancestor]. So, there's that kind of stuff. And yeah, I don't know … I no really feel really good about it but if it's here we have to plant seeds to make it good for us. What are the things that we going say that they can implement that'll be more cultural sensitive, or resource management sensitive? If we doing these *mauka* [towards the mountain] works, everything that happen that we doing *mauka*, if we doing work Pu'u Ka Pele Forest Reserve, they are connected. So, having the relationship between these entities, whether it be state, the military, DHHL (Department of Hawaiian Home Lands), ADC (Agrobusiness Development Corporation), Kekaha Ag, DLNR (Department of Land and Natural Resources) … we just need more collaboration within this, from Kekaha to Polihale. Whatever entities, these seed companies, everybody is doing their own thing but that's not how it works in *ahupuaʻa* [land division usually extending from the uplands to the sea] style.

JAMES KANOHOANU NAKAAHIKI

James Kanohoanu Nakaahiki III (Photo 13) was born 1955 in Waimea to parents Ramona and James Nakaahiki. He is named after his father and grandfather, and is the third child of six. He comes from a line of Native Hawaiian multi-generational families who lived in the Kona *moku* [district]. He has lived in Kekaha all of his life, and o has most of his family. James and his wife, Gail, still reside in Kekaha on Hawaiian Homestead Land, a spot on the list transferred by his father. Gail originates from Līhuʻe, Kauaʻi. They have two children.



Photo 13. Uncle James Nakaahiki. Photo taken in front of the *loʻi kalo* up at Puʻu ʻŌpae, in the Kona *moku* on the *mokupuni* of Kauaʻi.

He informs about his distant ancestors coming from a place in Polynesia called the Sakinese Islands:

> As far as I know, according to genealogical records, I believe some of my ancestors on my grandma's side were residents of Polihale. That would be the Aipoalani and the Kilauano *ʻohana* [family]. They were descendants of Saki. Saki is a group of islands out in South Polynesia … I guess. Supposedly, they migrated from that area … Sakinese. There is a place called Saki Mana. There is a settlement out there where they arrived by canoes … They were … dark, dark people. Uncle Andy was really dark-skinned.

His grandparents, parents, and other *ʻohana* [family] members are all buried at Kekaha Hawaiian Cemetery. James Kanohoanu Nakaaahiki I, his grandfather, loved nice new cars and was a steam locomotive operator. His grandfather drove the train that carried the sugarcane during the old plantation days, while James Kanohoanu Nakaahiki II, his father, was a crane operator, who loaded the cane on trucks. James expounds about the Nakaahiki family being warriors; although they were not foremen, they were

hardworkers, and all his uncles as well as his father helped to propel the locomotive his grandfather operated:

> My *ʻohana* [family], the Nakaahikis they weren't *luna*(s) [formen, overseers], we were warriors, we were workers … you know … My *tūtū* [grandparent] man, if anything, was a locomotive driver. So he used to drive the train that carried the cane, so I guess, that was a pretty high up job driving one train … you know. All his sons, my dad, Uncle Benny, and all them … they shovel all the coal in the fire box to keep the train going. They all had to shovel the coal for him so he could drive the train and create steam, steam train … yeah, that was my *tūtū* man. But he was [chuckle] a "happy go lucky" guy.

James and Keao recall growing up when James' *ʻohana* [family] had one or two horses. James also speaks about life during the Plantation Era when there were a little community that had two swimming pools, and when everything evolved around the mill:

> We had horses. I mean it's not like a whole pasture full of horses, but maybe one or two. (Keao NeSmith: Tie ''em in the bush yeah. They used to break away sometimes come inside our yard. We used to go feed ''em. That was good fun). Yeah, Keao remembers. We used to tie the horse in the back before never had houses … yeah … in the homestead. Yeah, that was back in the days.
>
> Was hard work and poor times. Oh, the community was … yeah. They did provide for the community. Everything was evolved around the mill. Sugar was king. Although it wasn't the best interest for the people. But they … that's all they had. It raised a lot of families. Yeah, so they had swimming pool. They had two pools actually, one in Mānā. I don't know if Keao remembers that one. (Keao NeSmith: That's the only one had the high dive). It was down the road, yeah.Water was like … I think … it was spring water … right above … higher. Exactly. (Keao NeSmith: Cold too. You think Kekaha was a dessert, but had cold water from the spring.). On the bottom of the ridge. Plantation had a ranch. Yeah, had one arena. (Keao NeSmith: So, we would be in church, and we could hear in the distance, you could hear the rodeo going on.), Was thriving at one time. What ever happened? (Kaumaka Anae: There was a lot of ethnic cultures) and camps during the Plantation Era) … Filipino Camp, Japanese Camp, Chinese … Puerto Rican … Budinkies [Puerto Rican]. One of my uncles was a Budinky.

Ramona, James' mother, was a home maker who raised him and his siblings, and she also worked in the pineapple cannery as well because pPineapple was a major crop. He attributes half of his Filipino descent to his mom who was full-blooded.

His Uncle Benny, his father's brother, was a noted fisherman throughout the Kona *moku* [district], possibly the entire *mokupuni* [island] of Kauaʻi, and beyond. Uncle Benny also made some of the best *lūʻau* [feast, party] and *kālua* [to bake in the underground oven]. He did not get to know all his dad's brothers, but James and Keao enjoyed sharing stories about James' Uncle Benny:

> I had an uncle, he was a fisherman. We call him Uncle Benny. His real name is Benjamin. That's one of my dad's brothers. My dad had one, two, three … big family … five brothers … I think … and couple sisters. But never get to know all of them because we were like babies when some of them passed, and moved away. (Keao NeSmtih: He would fish) all over..a lot at Polihale, on the base … yeah. He was a net fisherman. He used to surround *akule* [big-eyed or goggle-eyed scad fish (*Trachurops crumenophthalmus*)]. Thrownet fisherman. My Uncle Benny, yeah. He always brought the family together to go *akule* fishing. He go surround and *hukilau* [a seine; to fish with the seine. *Lit.*, pull ropes (*lau*)], or they pick up with the boat if no can bring it to shore. Then we all used to go to his house and *hemo* [unfasten, loosen] fish. What ever you *hemo* is yours. He never did sell one fish … not one fish … it was all given away. But he used to do it often, every weekend if he could. Yeah, he had the eye. *Nenue* [chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus, K. vaigiensis*)], *moi* [threadfish (*Polydactylus sexfilis*)] … *kala* [surgeonfish, unicorn fish,

> Teuthidae], *palani* [a surgeonfish (*Acanthurus dussumieri*)] … (Keao NeSmith: Even right now, all his nets still stay hanging at Uncle Benny's house. Yeah, still hanging in his whole garage. All the time, if he wasn't fishing, he was fixing net, making net, sitting in his garage going. Pass the house he was always like that.). Couple of my other uncles used to go too. But my dad wasn't so much fisherman.

James Kanohoanu Nakaahiki III worked as a firefighter for 44 years on PMRF (Pacific Missile Range Facility) and for the State of Hawai'i. Now James is retired and enjoys farming, fishing, and hunting. He is part of Kekaha Hawaiian Homestead Association (KHHA) Pu'u 'Ōpae Farm and Irrigation Project . James tells of his time working and fishing around PMRF, mentions the land during the Plantation Era, and also discusses the work he and others are doing at Pu'u 'Ōpae:

> I was an employee of PMRF in the '70s to late '80s. I was a firefighter out there for the PMRF Missile Range Facility. We used to do a lot of fishing. Shoreline fishing, thrownet fishing, gathering *'opihi* [limpets], *hā'uke'uke* [an edible variety of sea urchin (*Colobocentrotus atratus*)], and all those shell-like things on the shoreline … abundant, they were very abundant. *Limu* [seaweed], yes. I cannot tell you the name, the flat one, the *limu kohu* [a soft, succulent, small seaweed (*Asparagopsis taxiformis*)]. Yeah. I don't know the exact name.
>
> As for I know, to my knowledge … in a nutshell, they were called the Mānā Plains. All the land below us [relative to the interview location up the mountain at Pu'u 'Ōpae](we are located up the mountain at Pu'u 'Ōpae), was all rice paddies, and it was all marsh land. Before the base and everybody else came about, then the Sugar Plantation …I guess … came in. They drained the whole plains to grow sugar.
>
> Right now pretty much, I am into *mālama 'āina* [caring for the land]. We are trying to grow *kalo* [taro], and raise some live stock. Sheep. We are experimenting with sheep right now. There is a lot of wild cattle roaming around, but we haven't gone that far into ranching and stuff. Basically, right now, it's just *lo'i* [taro pondfields] and maintaining the irrigation system. [(Referring to the plantation]) they were the ones maintaining all these roads and reservoir … the plantations … because they had sugar(cane) all up here. They had sugar(cane) at one time. Trying to maintain the ditch and irrigation system for future followers, whoever wants to be part of the land, work the land, and grow food. We have a lease for 231 acres, but right now it's only maybe five acres that we actually fenced in. That's just our shed, our storage and work shed. People prior to us were trying to raise protea. We just *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of took it over, and whatever survived. It seems to be thriving right now. Basically, we are going to do canoe crops, so right now, we get one *'ulu* [breadfruit (*Artocarpus altilis*)] tree over there that we trying to grow. *'Uhaloa*, yeah. There is some the *kine* too, it grows wild, what's the name of that … *'a'ali'i* [Native hardwood shrubs or trees (Dodonaea, all species)] … yes. It *kine* of grows wild here for whatever reason.

In Kekaha he has driven on the beach to Barking Sands and also gone on to PMRF to fish. In the late '70s, James camped by the Nohili Ditch and in front of Sandia when his children were little. He and Keao remember camping at Kinikini for church camp:

> My sons remember camping. In fact, my sons ask, "Can we go fish Kinikini?" My oldest son, still goes on the base and still goes fishing. He said, "Well you cannot drive there anymore, you gotta walk." You gotta park outside, and then walk in. Yeah, you can get on to the base, but there is actually a blockade on the beach. They put a berm over there, right by where the rifle range is. That would be … Nohili … no, not Nohili … what point that is … Kokole. Yeah, they blocked that area off … you cannot … drive further pass that.

As a youngster, James remembers the big U.S. military presence in the area. He also recounts a terrifying incident Joe Manini, a *kupa* [native born, long attached to a place] experienced with the military at Joe's home in Puʻu ʻŌpae:

> But I remember when I was little, they had maneuvers right in Kekaha, right outside Kekaha, Second Ditch. They had landing crafts, you know the kind you see in the World War II movies? This barges, flat barges come in, and then the gate drops down. Yeah, they landed right there in Kekaha. They even had paratroopers. Jumping parachutes in the air. Mānā stretch, there were alfalfa fields, the plantation was raising alfalfa for the cattle. They used to raise cattle before. Yeah, the military made a big presence. In fact, the biggest presence that people remember is Uncle Joe Manini up here. His … I don't know if you guys remember passing that Quonset hut? Yeah. So when they would do … when they coming on shore … can you imagine, all these big ships out there, all these landing crafts … you probably could see it clear from here … I can see 'em … they would bring in their aircrafts, helicopters 46s, H-1s, whatever … and they would do maneuvers up here … the military, a lot of things they would do was coastline and ridgeline, yeah … that's their mission and objections, yeah … The Chinooks, yeah …the 53s, 46s, and 47s. So they were landing troops up here on Hawaiian Homes Land. Uncle Joe Manini, he wasn't for that, he did not agree, and he actually went to … I don't know if you guys know that … he went to battle with them. He had his rifle with him, and he told them to get off of his land.

James shares his own knowledge added to the learning and experiences of several cultural traditions and practices taught by Aunty Mahilani Poepoe (Keao and Kaumaka add a few comments):

> *Menehune* [legendary race of small people who worked at night, building fish ponds, roads, temples] … this tribe of people … they not that small though from what they researched. The legend is that they were little people, but they weren't that little. They were hard workers, they don't work in the day, and they only come out at night … for whatever reason. I'm not sure, Eben Manini, Erna's brother knows exacly where it is. There is a formation of a *pahale* [enclosure in front of a house], supposedly it's a canoe *hale* [house]. I know Aunty Mahi once told us that on these ridges of Polihale, they used to dig out those canoes up on top the ridge. They select the tree, fell the tree, dig out the canoe … they used to just slide 'em down the ridge, and launch it at Polihale. (Kaumaka Anae: Used to have Kahālauaola canoe house, and it was … in the valley of Kawaʻahiki at Puʻukapele…) Yeah, Puʻukapele, right. That might be it, but I'm sure there are more. That would be the ridge, but Polihale is couple ridges over … Polihale Ridge. That might be it, I'm not sure. Makahoa, Kaunalewa, this is all up here … Wailau. Puʻu ʻŌpae, Shrimp Hill, I didnt know that. ʻŌpae … Gotta have had shrimp, if not, gotta bring 'em back. (Keao NeSmith: That was the favorite food of the *Menehune*. They love the *ʻōpae.* Puʻukapele that's the homestead of the *Menehune*).
>
> I know that Polihale is house also spirit, yeah? *Poli* is spirit, *hale* is house. Aunty Mahi did mention it to us. (Kaumaka Anae: *Poli* can be bosom too yeah). (Keao NeSmith: When you go … especially when you come from the ocean … you come on the boat..you coming into Polihale … get the two ridges … this side get Hāʻeleʻele … look like … One bosom. Yeah. And everybody live down here, so that was the *hale* [house] … so it's like when you carry one baby like this [gesture like cradling a baby] … so that is the *hale* of the baby … and then down the beach is all the … *poʻe* [people]. But that is true because as a *leina* [or leina-*a-ka-ʻuhane* or place where spirits leap] that's where the spirits jump. They follow the sunset. they come from the east side, Anahola side, they pass cross the top over here, they end up over there at Polihale, and that's where they go in the ocean.That's why one of our friends, you remember, Dana Olores. He wen' go *make* [to die] yeah, he had cancer, he knew he was dying, he drove his truck all the way to Polihale, he took his dogs, tied up his dogs, and sit down …) House of bosom, yeah … make sense. That's why all the Polynesians … the people from Polynesia would come here with there canoes. Because there is a *hula* [Hawaiian dance] platform over there. Aipoalani, they were *hula* masters. Well, it's over grown, but if you go climb up, there is a platform. (Keao NeSmith: But get some more along Nā Pali and some of the valleys, like Miloliʻi, get one other *heiau* [temple, Place of worship], one *papa* [flat area], one flat one, and that's a *pahula* [place where *hula* is danced and ancestors are recognized]. So the Polihale one is a

pahula and the Miloliʻi one is another *pahula*. Aunty Margaret when she was young, they used to go along the rocks, to that one, that *pahula*. That's how she was educated in *hula*, was Polihale and over there. But that's for Kunanae tell. Get some more *pahula* along the way, Nā Pali, all the whole way).

I was reminded by a great aunty of ours, not even blood related but we call her aunty, Aunty Mahi Poepoe. She was from Molokaʻi. She was a pretty powerful lady. She could … believe it or not … she could see, she could feel, she could … yeah … we learned a lot from her. She came over and she made it her mission to bring awareness to the *ʻohana* [family] what needs to be done. She pointed out a lot of places to us like Polihale, Waimea, Kōkeʻe … so yeah. Actually, when we went down to Polihale over there by the Queen's Pond, she made us do a protocol. You offer prayer and then you throw *paʻakai* [Hawaiian salt, rock salt]. She said the *paʻakai* is part of the earth it opens up the portal … as they would say … to get in touch with the spirits. Ask for permission to enter, and … what your intentions are … why you are here. Then when you leave you do the opposite, you give thanks, and give *paʻakai* again to close the portal …

Aunty Mahi used to tell us some stories. She had some great stories, or knowledge … I remember one time she was telling us that … there's a lava tube that is connected to the west … and I'm not sure where it comes out … but that's where they used to escape from the north shore or whatever, if they were trapped in by enemies … and today that's the Wet Caves in Hāʻena. There is a passageway that comes out I forget where, Polihale probably.

With minimal comments from Keao, James apprises a story told to him by his Uncle Benny about the Leper Koʻolau (Photo 14):

Koʻolau the Leper. Supposedly, he is family to us. The story is that Koʻolau refused to go to Molokaʻi for whatever reason, and he fled to Kalalau Valley. I don't know why but they sent soldiers to go get him, but they could never capture him. Piʻilani, the wife of Koʻolau, she helped him escape. I am not sure if they escaped to Niʻihau or whatever but yeah … the Legend of Koʻolau and Piʻilani. They eluded the soldiers, he was never caught. But one story my uncle, who was a fisherman, Uncle Benny … he told us when we were visiting sites and places with Aunty Mahi … Koʻolau is buried on Kauaʻi in Kekaha. Right by the intersection. (Keao NeSmith: That's where their homestead was, Piʻilani guys). Get one *papa* [flat area] over there, it's a sand dune, and it's in line with Poheo. So it's Poheo Point on Kauaʻi and Poheo Point, Niʻihau. That's what she told us. Uncle Benny told us, if we find his rifle, we going find him … supposedly, that's where he was buried. I believe he told us that this is all grave sites. They used to do … I not sure if you guys familiar with this … *kīlua*(s), *kīlua* would be mass *imu* [underground oven]. I guess, when they had a plague or something, they would burn all these bodies so the disease don't spread. So he said that's what they did over there. I don't know if they burned him or he was buried. They said, "If you guys find his rifle over here, that's where you guys going find him, you going find his bones." Supposedly, that's where he was buried. Yeah, so there was one big open pit over there Uncle Benny told us about. I guess, as a child, he had seen.



Photo 14 Home of Kaluaikoʻolau (aka Koʻolau the Leper) at Mānā, Kauaʻi: Kaluaikoʻolau, 1862–1897. https://digitalarchives.hawaii.gov/item/ark:70111/0cXk.

When James' dad would gather *puka* shells to make *lei*(s), his father would also drive an old Willy's jeep on the beach to get to his destination, Queen's Pond at Polihale. Polihale has a lot of cultural significance and sacred spiritualism which James and Keao discuss in the following:

> Yes, I do know of some (burials). It's right by the area going to Queen's Pond. Queen's Pond Beach used to be where only the Queens used to go back in Royalty days, they were the only ones allowed to swim in that pond. It was a saltwater pond specifically for queens. On the road to Polihale, you can't miss it. There is a Monkeypod tree that's there. There is an intersection in the road that splits off, you take a left, you go up for about a quarter mile, before you climb over the dunes before you get to the beach, to the right of that, they are marked graves over there. There is *iwi* [the bones of the dead] in those dunes over there. Supposedly, they belong to the Kilauano *ʻohana* and Aipoalani, I believe.

One of the concerns James spoke about was the taking away of all the cultural significance and practices. When asked about the good and bad changes of the military occupation and sugar industry, including the land, James replied:

> The good was, it provided jobs for families to raise their families, jobs and opportunities in the work force. But the bad would be taking away all the cultural significance and practices. The *āina*, whoo…drastic changes…I cannot say if it's good or bad … I cannot tell right now.

He voices his concern about the county landfill as well:

> One bad thing is the landfill. Yes, it wasn't that high. [Laughing]. But then again, there wasn't that much people on the island … from 30,000, 40,000, 50,000 … now, I don't know what it is, 60,000 probably. More people means more trash generated. And then we had couple hurricanes that really built up the landfill …you know. Why would you want to put a landfill on a flat piece of land? By

the ocean. And it has grown significantly. It's 70, 80 feet up in the air now. Puʻu ʻŌpala [trash hill]. Puʻu ʻŌpala we call 'em. And then there has been a lot more urban development, but that's progress … population.

SEAN MOKUONAHIALA ANDRADE

Sean Mokuonahiala Andrade (Photo 15) was born in 1969 to parents Joseph and Lusalle (Yorkman) Andrade. He was born in Waimea and raised in Kalaheo, where he presently resides. He raises livestock, following the footsteps of his father and others who came before him. Sean is the eldest of three children in his family. He is of Hawaiian, Portuguese, and Chinese descent. He and his wife, Jeannie, share four children together.

Lusalle, Sean's mother, is from a Native Hawaiian family living in the Waimea Valley for at least a century. Lusalle was born and raised in Waimea Valley. Sean's grandmother Ruth Luka (Hoʻopai) Yorkman came from Oʻahu and was *hānai*(ed) [fostered, adopted] by the Aana family and lived in Waimea Valley. She is the daughter of Agnes Kanui (Haili) and William Hoʻopaʻi, the first Honolulu Police Department Chief with Hawaiian ancestry. Sean's maternal grandfather, Craddock Yorkman, was from Maui, and was Kauai's first Fire Chief. Craddock was the son of Annie Paahao (Maiuu) and O Tom Yoke Man of China.

Joseph Andrade Jr., Sean's father, is from Kalaheo where he had a homestead and grew up helping his grandparents raise cattle. Rosaline Loke (Chandler) Andrade, his paternal grandmother, was a homemaker of the Kanialama lineage raised on Kauai's North Shore. His paternal grandfather, Joseph Andrade Sr., worked for the Board of Agriculture and Forestry (Territory of Hawaii). Sean's paternal great-great-grandfather Manual Andrade of Portugal was a luna [foreman, overseer] and cattle rancher for the Robinson Ranch at Makaweli where his great-great-grandparents lived. Sean's great-great-grandfather was also a Hawaiian saddlemaker.



Photo 15. Sean Andrade. Photo taken in front of the *loʻi kalo* up at Puʻu ʻŌpae, in the Kona *moku* on the *mokupuni* of Kauaʻi.

Sean spent his elementary school years at Holy Cross Parish and Sacred Heart Mission in Kalaheo. His intermediate and high school years were spent at Waimea High School. Having been born in Waimea and raised in Kalāheo, he recounts memories of his childhood:

> Growing up in our younger years, having the springs accessible … you know … remembering of the Māna Camp … their own spring water swimming pool. Plantation Era. And the springs was all Plantation Era when they tried to control it and utilize it, and eventually everything shut down. Today they capped all of that stuff. That is something I would like to see come back. But of course, the Mānā area is a flood zone, it's a swamp. Capping off the springs and doing all that stuff, will help to keep it drier. I'd like to see it come back. I'd like to see what it once was. Back in the old days, they could actually canoe from Waimea River all the way to Mānā. Of course, today that would be probably hard to do, but I would like to see that happen. In the '70s, early '70s. We were camping. Our whole family was camping. My Uncle Kamaile, and my Uncle Gilroy took me and a couple of my other cousins, and we were all swimming that day, we jumped in the jeep, we drove through PMRF (Pacific Missile Range Facility), went to Queen's Pond, jumped in the ocean there again, and drove back out straight to the spring water. We actually rinsed off and swam there for a little bit. So that was nice as a youngster. But today, I really don't know the difference because I haven't … I don't like going in there, so I stay away from PMRF. It seems like it's so hard to get in. It just seems that way. I don't think it is, but it just seems that way.
>
> We grew up throwing net all over the place. We grew up throwing poles and laying net. The places we'd lay is not by the reef, would be by the sand. Would be more *pāpio*(s) [the young stage of growth of *ulua*, a fish]. *'Ōio* [ladyfish, bonefish (*Albula vulpes*)], some *moi* [threadfish (*Polydactylus sexfilis*)] … just travelers, those sort of fish. We go crabbing too actually, a lot off of the Waimea landing. The *haole* crab [orr *kūhonu* crab, An edible spotted-back crab (*Portunus sanguinolentus*)], the white crab. That used to be choke … Going prawning up Makaweli and up Waimea River. When I was a young kid, there were so many of them that we'd come back with bags full. Even *'o'opu* [general name for fishes included in the families Eleotridae] back in the day. It's definitely not like today. Once at Makaweli, I was a young child, I was able to swim with *hinana* [young of *'o'opu*, a fish, formerly caught in nets and greatly relished] by the millions, in the river, Makaweli side. You could see them everywhere. I went underwater, opened my eyes, and I could see this shimmering all around me. I'm lucky to say that I have experienced that. I don't think that anyone has seen *hinana* in that amount since I can think, I don't know. *'Ōpae* [shrimp] too, Waimea River. My mom loves to eat *'ōpae*, with little bit of Hawaiian salt *pa'akai* [Hawaiian salt], round onion, and little bit of chili pepper. All you had to do was … My grandmother's house was in Waimea Valley, the break water was right across, all you had to do was walk over, walk down the break water, to the river, align with buffalo grass … walk at the edge of the buffalo grass, where it is in the water, go with the scoop net, reach over, just scoop it in the grass, and you would have like a good handful of *'ōpae*. This is like Waimea River, you just saw Waimea River that close to the ocean. Just a lot yeah. My mom would sit at the kitchen table, and eat it live. I know get. There is still *'ōpae*, quite a bit in Wainiha, that side of the island for sure. Some people are saying, there are still some here too. I havent gone up the valley in a long, long time. I talked to cousin Johnna Aona, "I want to take my kids up to Makaweli." She said, "Just go. Just tell them who you are if anybody questions you. Just tell them who you." . Mullet we used to throw net at the river mouth. Blind throws and catch mullet when we were teenagers.
>
> Kalaheo, in Kalaheo. I've always enjoyed raising animals. So the farming part, I have always enjoyed. Doesn' 't matter the animal, I have always enjoyed that. As far as the farming part, I have been growing up, watching *'ohana*, my *tūtū* [grandparent] man, cousins from both ends of the island, from Wainiha Valley to Makaweli Valley all raising *kalo* [taro]. I have always been asked to help in the *lo'i*(s) [taro pondfields], but as a young kid, you don't want to work in the *lo'i*(s). For one, I was *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of afraid of toads at a young age.

Sean relays some of the information he learned about the Mānā area:

> Yeah, I did a little research myself about Mānā … but I read stories … Back in the early days, of course, the floods would come through Mānā, and they had to find a way to keep the *kalo*. So they did it on rafts. They had trees, weaved it together, anchored it down so it wouldn't float away. I did hear of that story. They canoeing it over from Waimea to Mānā. I've read stories of migrating birds, geese, and ducks landing here by the thousands up until it dried out. I have read that. I would love to see it happen again.
>
> I've read a little bit about it. I actually want to go find where it is. I want to go find some of those spots. There is stories here about *heiau*(s) [temples, places of worship] in this area too. There is supposed to be three in this area. According to old maps there are two on this side. I know they found one on this side, up this way. There is supposed to be two up this way, but I think both of them got bulldozed when Plantation Days … I think

When Sean's family would meet together, they would spend time gathering resources for food and preparing special dishes, and he reminisced about those special moments and realism:

> When we going have one party or we are going to get together, going be, we going catch crab, we going catch prawn, *ʻōpae* [shrimp], *ʻoʻopu* [general name for fishes included in the families Eleotridae] that's the kind of stuff our family was gathering. Of course, had *kalo* [taro], other family members that was raising *kalo*, that was easy to get, so we didn't have to. So that was *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of our family gathering on this side…actually raising animals too…*kālua* [to bake in the ground oven]…did a lot of that … *laulau* [wrapping, wrapped package; packages of ti leaves or banana leaves containing pork, beef, salted fish, or taro tops, baked in the ground oven, steamed or broiled; any cloth, net, or leaves used as a wrapper or carrier; to wrap or carry in such bundles], making *laulaua*(s). ʻ*Opihi* [limpets] was the favorite. As a child, growing up, picking *ʻopihi* was pretty easy.
>
> We would get family get togethers. As a young child, at some point in the get together at my grandmothers … eventually the kitchen door would close, and all the kids would have to stay out. We would all try to listen to try to see what they were talking about, and everything would be spoke in Hawaiian, but it could never be passed. My mother's generation could understand Hawaiian, but cannot speak. My grandmother, they all could speak, but they never ever passed it down. A lot of that stuff died out, I guess.

For over 30 years, he has been employed at Ferguson Enterprises, Inc. in Līhuʻe. His interests and skills are coaching and farming. He raises sheep, cattle, and chickens; plants *kalo* [taro]; and is an aquaponic farmer raising tilapia. Sean is the Chairman and President of an organization called Kaunalewa. One of the projects of Kaunalewa that he heads is the Kekaha Hawaiian Homestead Association Puʻu ʻŌpae Farm and Irrigation Project [KHHA]. Sean shares his passion for farming and how the project became an important part of his life and his vision for future generations:

> We've been with Puʻu ʻŌpae anyway, I'm also with Kekaha Hawaiian Homes Association, and I am the chairperson for this project, and we have a lease with DHHL [Department of Hawaiian Home Lands] for 231 acres total. My Uncle Gilroy Yorkman, Kawai Warren, and a bunch of others who were part of KHHA back in the day, got this lease and started the process in 2010. Overtime there was a lot of red-tape dealing with the State. A lot of challenges. As you can see there is a challenge with us getting here…you know…trying to be here. With our project here, it *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of opened up my eyes on where I wanna be, and what I wanna do. This section here is called the nursery, Kawai guys called this the nursery. This is where a lot of learning was taking place to *kine* of understand the land. The land is bare, it's not very high in nutrients so we are trying to keep things organic as possible, as natural as possible. We still have a lot of work to do with reforestation. We got 75 acres of reforestation. We got 50 acres pastoral which we will do cattle, sheep, and chickens. We've got 50 acres of orchards which will be probably fruit trees and stuff like that. 10 acres in the front or so is a cultural center. We got a mix of another 20 something acres of more *loʻi*(s) that we want to do.

So, this is just the testing and beginning stages of what we trying to get to. This is the place where … Our deal with DHHL, with Hawaiian Home Lands, the deal they made back in the day was, this is where we gonna help rehabilitate Hawaiians for the day that their put on their lands. If you don't know how to farm and you want to farm, you can come here and learn. If you're gonna be here to do pastoral, we can teach you that too. That is *kine* of the area why we are here in a way, in this area.

In Kalaheo we have sheep, chickens, we got egg layers. We have tilapia which tilapia is actually going to be part of the system too where we going to put them into ponds, and have that water, tilapia water help nourish the ground and the plants in the area. So, that's our game plan. I also raise cattle myself. And also, I just recently stopped … there are new owners to this lease I had in Kalaheo, and they said we could be month to month, but I wasn't comfortable with the month to month because I had 30 mother cows. Now finding 100 acres to put 100 mother cows next month is not going to happen. Instead of being stressed out about that stuff, I decided to find some place else. Everybody knew I was looking, so people started offering to buy my herd too. So I decided, it might be best if I did sell the herd. I kept all my equipment and stuff for this up here. The idea up here on the pastoral part was to upkeep, that was going to be my section until … My Uncle Gilroy passed away, and Kawai Warren *kine* of passed it on to me. Now, I'm doing the overall, the whole thing. My thing was going to be the 50 acres pastoral, and I was all good with that. But now I'm learning how to plant *kalo* [taro], take care of the Earth itself, the *ʻāina* [land] itself. There is just a lot to do. We are trying to do it with … our cCharter sSchools … with those students, the *haumāna* [students] from the cCharter sSchools.

When asked about his opinion about the positive and negative impact of the military's presence on the west side, he replied:

PMRF (Pacific Missile Range Facility), the benefits maybe one of the few benefits or the only benefit there would be is, there is a military presence for Hawaiʻi. The negatives, where do we start … we know that they are pumping water out most of the time to keep the area dry and not in such a swamp zone. There is a lot of negatives of being in that location, the closure of the swamp area, that's one. What I would like to see, my own personal opinion, I would like to see, maybe the base, PMRF not be here. My vision always go back to what it was. I am searching for my culture because I have been … I guess … denied that in a way. Yeah, so I'm trying to find, and get it back to what it once was, back in the day. I wish I lived in that era. I would like Mānā to be, what Mānā once was, a swamp area, raising *kalo* [taro] on rafts again. Hopefully bringing back the swamps and the migrating birds and all that stuff. Just what it once was. Open up the springs, let it flow. The other thing negative with the plantations is, all of the pesticides that is within the ground, and within the ditch ways … within the ground, ends up in the ditchways, and naturally ends up in the ocean which kills everything there too. There are still remnants of that. I don't know how we get back to what it once was but it's going to take us removing things that's here, that was placed here years after. PMRF unfortunately, would be one to remove. I don't know why they put it there anyway to begin with. I don't know but that is my own vision. I'd like to see it removed, but I don't know if it's ever going to happen. What would be the outcome of that, I don't know. Even with all the radars and stuff … I don't know … all eye-sores. Who know what type of radiation or whatever is being put off too. I don't know. There is a lot of stuff I don't know. I do know, it's not what it once was. That's where I am with PMRF. I know that it employs a lot of our locals, I know a lot of funding comes to Kauaʻi, Hawaiʻi, but is it all worth it? Is it all worth it for our people especially. Because we are the ones that are losing out, not any other nationality that comes here because they don't know, but we're the ones.

EDWIN RAY A‘ALONA DELA CRUZ

Edwin Ray A‘alona Dela Cruz (Photo 16) was born in 1973 at the Kaua‘i Veterans Memorial Hospital in Waimea, Kaua‘i to parents, Edwin Ray Dela Cruz and Lorna J. (Shepherd) Dela Cruz. He is the eldest of five children. His father is a native of Waimea, Kaua‘i where A‘alona grew up.

A‘alona’s paternal grandmother was born in Makaweli, east of Waimea on the Robinson property. His great grandparents were from Hiroshima, Japan. His paternal grandfather was born in the Philippines, but dad was born in Waimea or Makaweli, and also worked for the Robinson family. His mother, Lorna was born in Jacksonville, North Carolina at Camp Lejeune, but moved back to O‘ahu when she was three-years-old. His mom moved to Kaua‘i in the ’50s.



Photo 16. A‘alona Dela Cruz. Photo taken on the grounds of the County of Kaua‘i offices, in the *kūlanakauhale* of Līhu‘e, within the Puna *moku* on the *mokupuni* of Kaua‘i.

His father is an avid fisherman, and A‘alona has inherited his love for the ocean and fishing. He started fishing with his father, uncles, and ‘*ohana* [family] at a very young age. He and his *‘ohana* fished off the shorelines of Kekaha to Polihale, Nā Pali, and Ni‘ihau far back as he can remember. In his youth, A‘alona planned fishing trips with his friends. He recalls gathering resources, shoreline fishing, throw net, and diving with his father and uncles and collecting the following bounty at the shorelines of Kekaha to Polihale:

> *Wāwae‘iole* [*Codium edule*, is a green seaweed], *limu kohu* [a soft, succulent, small seaweed (*Asparagopsis taxiformis*)] … we would pick *‘opihi* [limpets], *hā‘uke‘uke* [an edible variety of sea urchin (*Colobocentrotus atratus*)], *wana* [sea urchin, as (*Diadema paucispinum*) and (*Echinothrix*

diadema)] … I mean we did all aspects of fishing over there. *To'au* [black snapper; blacktail snapper] … I trying to remember what kind fish had over there, but I know the … *āholehole* [young stage of the *āhole*, Hawaiian flagtail] … and then … we would catch the *nenue* [Chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus, K. vaigiensis*) and *kala* [surgeonfish, unicorn fish, Teuthidae] … the *palani* [a surgeonfish (*Acanthurus dussumieri*)] …

Palani [a surgeonfish (*Acanthurus dussumieri*)], *kala* [surgeonfish, unicorn fish, Teuthidae; *Naso hexacanthus*, *N. unicornis*, *N. brevirostris*] … we used to catch with the *līpoa limu* [bladelike, branched, brown seaweeds (*Dictyopteris plagiogramma and D. australis*)] … put 'em on the hook throw 'em out when I go with my dad them guys. *He'e* [octopus (*Polypus sp*.), commonly known as squid], lobsters … *Pāpio* [the young stage of growth of *ulua*, a fish], *'ō'io* [ladyfish, bonefish (*Albula vulpes*)], *moi* [threadfish (*Polydactylus sexfilis*)], *ta'ape* [blueline snapper, bluestripe snapper] … I remember when I was probably about seven or eight-years-old, I caught one nice, big *kūmū* [goatfish (*Parupeneus porphyreus*).

I just went go Nā Pali … go kona crab. Some big *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit]. We got some big *kine*. We went last year … I think we caught … 30 something pieces, half-day … three sets … three strings … three sets … pull 'em up, go home. And then this last one we went, we got 65. Oh yeah. And the kūpe'e [an edible marine snail (*Nerita polita*)]. Nā Pali get couple places, but I get more on this side, the south side of the island. Yeah. You know … thinking now about the areas where we used to camp by Nohili Point … we used to camp there … as long as it was the weekends and they didn't have operations … from Friday 6:00 p.m. until Monday 6:00 a.m. we could camp. But the shoreline over there is perfect *kūpe'e* grounds. And I never did … I never know it at the time … my father guys never did go get that. Another thing over there is the … I cannot think of the Hawaiian name … sea cucumber … *loli* [sea slug, sea cucumber, beche-de-mer, trepang (*Holothuria spp*.)] was the sea cucumber in general. Nā Pali get plenty of that. Yeah. My dad … makes it, and I love it. Lemon juice and shredded *daikon* [pickled raddish, Korean/Japanese dish], and he just *sashimi* [Cut in thin pieces, Japanese style of slicing] the *loli*. Oh, I get one small container left, I rationing 'em. [Laughter.]

Having the *pu'uwai* [heart] of a true *lawai'a* [fisherman], A'alona explains how he does not like to sell his catch, but rather to share it with others:

My mom's neighbor, I would always offer him fish … certain *kine* fish he like … he's particular. So, we give him and he would always give us smoked meat and smoked sausage. Whatever … too much I had would go to my family first and then to *kūpuna* [elders, ancestors], yeah.

So we fill up the cooler. And my *wahine* [woman] at the time … at work they asking, they like buy. I told her, "Give 'em." She came back and she told me, "He gave me $60, $70." I told her, "No, give 'em back, I don't want the money." He said, "No, go put gas, go buy hook." I said, "Oh, in that sense, I guess, I don't feel so bad, okay." Then one of her Tongan friends, I guess he found out … the *nenue*, the *humunukunuku'ele'ele* [blue striped or black durgon; variety of the *humuhumu* (*Rhinecanthus aculeatus, R. rectangulus*)], he wanted them all, and he gave me one … bag *'awa* [the kava (*Piper methysticum*)] … so he gave me couple pounds of *'awa*. You know this I don't mind.

A'alona has fond memories at Polihale camping in the summer and on the weekends with his father and friends of his father such as Uncle Paddy Boy Mālama, and the *'ohana*:

Yeah, so my dad and his friends … like Uncle Paddy Boy Mālama, we would camp there in the whole summers … the last day of school to the first day of school … and then more on the weekends. We would just … I don't know how they pulled it off, camping that long. My brother and I try now, we can hardly pull off a week. Whenever they went to work, we would stay back and watch everybody. All the boats was on the beach, if too big to be on the beach, it would be anchored

> offshore. In the morning we eat breakfast and everybody just start loading up on the boats, and we go shell hunting, hunting, fishing … anything and everything you can imagine. That was a typical summer at Polihale.

Growing up Aʻalona remembers the Mānā Plains having a lot of sugarcane. Sugarcane and plantation life surrounded he and his family. Aʻalona describes the interpersonal relationship the community shared among each other:

> Yeah. Now days not as much, but same thing … everybody so busy working. A lot of … even *hānai* [foster, adopted] family … just the community getting together … every community is family … don't need to be blood related … like *hānai* … the Hoʻokanos … you know … the Okadas … I mean the names go on and on in Waimea … Waimea Town, Waimea Valley … you know … the Setos, the Kagawasthat was one other close family. My dad and his friends played baseball. My dad and my uncles were all fishermen … owned boats and stuff like that. We always got together a lot. A lot of *akule* [big-eyed or goggle-eyed scad fish (*Trachurops crumenophthalmus*)] fishing, but it would be from shore. We would be out to the schools [reeferring to schools of fish]. We would meet at Polihale, and *hukilau* [a seine; to fish with the seine. *Lit.*, pull (huki) ropes (*lau*)]. We used to go out on the boat at night and hook *akule*.

Aʻalona is very familiar and experienced with fishing at Polihale, and reveals his awareness of the spiritual and sacred value of Polihale Heiau:

> I know the *heiau* [temple, place of worship] is there, the last valley … right where the spring is at … the spring where they tapped, to provide the water for the … What I was told by archaeologists and historians, that was the most sacred water out of the island of Kauaʻi, and that was what they use for the showers and bathrooms at the State Park area. That's the valley right there by the *heiau*. The story I was told … They call it like the stairway to the Heavens [referring to Polihale Heiau] … it was a five tier *heiau* … all the departing points for the *ʻuhane* [spirit] … Kaʻena Point, Oʻahu … they would come to Kauaʻi, go to the *heiau*, and jump off the Pōʻāina [Pō is the realm of the *akua* or god, and *ʻāina* is land]. And then … there is supposed to be an underwater mountain range, out at sea, straight out there, that they consider Pōʻāina.

Aʻalona is an active waterman and member of the Polynesian Voyaging Society (PVS). He had missed oppotunities to engage in long voyages. As a boat captain, he operates daily tours for Makana Charters from the Kīkīaola Small Boat Harbor. He has been in the boating industry for at least 31 years. On his tours, he narrates a *moʻolelo* [story] about the *ʻōahi* [hurling firebrands, as from a cliff for ancient Kauaʻi spectacle; flashing lightning. *Lit.*, projecting fire. Nā pali ʻōahi o Makana, the cliffs of Makana, where fire was hurled forth]. When asked about his personal experiences and encounters when boating at PMRF and/or fishing in the Mānā side, he replied:

> All and all it's pretty okay encounters. When they have missile launches, they hold us up for like an hour, and I understand why they do it in general …. But they stop us one hour prior to the launch, and it only takes me 15 minutes to get across the range. A lot of the times, people that I know who work on the security side of it or on the base, they know me, they know the speed of my boat, and they let me through. A lot of times, no matter what they do, the Navy is like, "No, shut it down." So it *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of impedes us and my job. But also, days where I'm not working, I have never been stopped, just because…lucky, lucky…I guess. There was one incident where I was coming North back to Kīkīaola … over from Nā Pali back to Kīkīaola … and I saw the security boat standing by off of Makaha. And I maneuvered to see if they would give chase. They didn't give chase, so I kept going, and when I got to Nohili Point … Navy police, blue lights, 50 caliber … yelling at me, scolding me for not answering my radio, telling me the Coast Guard was trying to get ahold of me. So, I went up to the Coast Guard, same thing … blue lights, 50 caliber … a little confrontation there about them pointing it somewhere else versus at me. He kept it, and I said, "Can you please point

> that somewhere away from my 16 American passengers?" And at that point someone told him not to point it at me so … They asked for my documents, my Captain's license … documents, the boat documents … handed it over to them … and they looked through … gave me back my documents, and I went on my way. And … this was like 2005, '06 maybe, maybe even '07, somewhere around that time. And in 2008 I moved to Oʻahu and was working doing the shuttle from Sand Island to Pier Four for the Coast Guard. And in the original exam center one day someoe asked me … because I go by my Hawaiian name … they asked me, "Aʻalona what is your English name? What is your legal name?" I said, "Oh, Edwin Dela Cruz. They go, "Oh." I go, "Why?" Before they had a chance to answer I go, "What PMRF?" And they go, "Yeah." They said the CO, XO, whoever is in charge of the base trying to get my license revoked, because I ran through the range, and shut down a multi-million-dollar operation. Needless-to-say everybody was pissed off, which is fine, but they didn't do their job, I just did what … So they told me that the Coast Guard told the Navy that it was their fault, they messed up so they had no reason to pull my license. That's the hard part of … me with the Navy, is stuff like that. Other than that … besides not providing beach access for us like it used to be … you know. Throughout my life we would go fishing over there. We used to fish from Kekaha Beach along the shoreline.

The Nā Pali ʻOhana is described as "A circle of friends, who share common goals and values. This commonality defines the Nā Pali ʻOhana. In 1997, the Nā Pali Coast ʻOhana Foundation officially formed as a 501(c) (3) non-profit corporation. In early 2000, the successful volunteer work of the ʻOhana was acknowledged by the Hawaiʻi Deparment of Land and Natural Resources (DLNR). An exclusive curator agreement was granted to the ʻOhana to *mālama*, care for, maintain and preserve, the cultural sites within Nuʻalolo Kai." (Nā Pali Coast ʻOhana, 2024). Being a member of the Nā Pali ʻOhana for many years, Aʻalona recounts his start:

> I been in the industry since 1992, and I worked for a company called Nā Pali Explorer. We were one of the three companies that were allowed to land at Nuʻalolo … picnic on the beach, do a narrated walk through the remains of the village at Nuʻalolo, and snorkel from the beach. Part of that permit was, we would provide transportation I guess for Nā Pali ʻOhana, and while they were out there, we would bring out ice and any kinds of supplies they needed. They would make a call to whoever, and they would bring it down to the boat, and we would bring it out. At the end of the camping trip, we would load up the boat, and I mean … the boat was full … with cargo net and … I was young, I was 19. So from that point, I worked for that company years and years, and just *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of built up … got really close with Sabra and her husband … Randy, and Vicky … all the *ʻohana* [family]. I think Randy guys are from North Shore, and Sabra is from Līhuʻe side, I'm not sure what parts of the island everybody came from … but a lot of them was North Shore people. We had Aunty Lu Koerte from Kekaha, David, Nalani … But over the years I built up a relationship with them, and just became a part of them. My day off, if they camping … I go out on my boat, work, hang out, *walaʻau* [talk story], and just enjoy. Most times, I couldn't stay over night, so I would leave. When I could stay over night, then I would. I would stay away from them because part of the permitting, and everything like that. So, I technically wasn't there but yeah.

There are several accounts of the *moʻolelo* [story] of Barking Sands or known to Hawaiians as Ke-one-kani-o-Nohili, Aʻalona shares the story he was told as a youngster:

> The one that I learned when I was really young is … There was a fisherman, who lived at Nohili Point or that area, and he was one of the first, if not the first *kanaka* [Hawaiian person] to have dogs as pets, instead of for food. He really loved his dogs. Everyday he would tie up his dogs before he would go out and fish. He would play with his dogs, tie 'ʻem up, and go. This was a regular thing. One day when he went out *holoholo* [another term used for "to go fishing"], a storm had blown over. It was raining so hard, he couldn't see the island. Essentially, he didn't know where he was, he never had his bearings, but he could hear his dogs barking. So, however long the storm was, finally the storm passed, and his dogs barking kept him close to home. When he came in to shore, the first thing he wanted to do was untie his dogs, and love them up because they saved his life. And he couldn't

find them. He looked around, and looked around, could not find them, he heard barking, and he could not find them. And he never found his dogs ‘tiltill today, that is why you can hear the dogs barking.

Although A‘alona and his *‘ohana* [family] are prominent *lawai‘a* or fishermen, his parental paternal grandparents, Flor and Mary were *mahi‘ai* or farmers. He recalls them planting the following:

> My grandpa Flor and grandma Mary, on the Dela Cruz side, we had string beans, bush beans, radishes, egg plant, okra … we had *‘uala* [sweet potato] … A lot of the vegetables and stuff … I don’t remember what the names were … but there was like the big rooted vegetables, my father called them, “Ccandy.” Like one potato … you peel ’‘em, you cut, and you eat. I cannot remember the name of ’‘em though.

There are several members in A‘alona’s *‘ohana*, including himself who were creative at making seashell and seed *lei*(s) [necklaces or garland made out of shells, seeds, flowers, leaves and/or feathers, etc]. There is much *aloha* [love, affection] put into these necklaces they sew for memebers of their family, and it is transparent in the way A‘alona speaks about it:

> My mom gather shells. My grandmother always … My grandmother was raised with the Ni‘ihauan(s) too yeah, or she had a lot of contact with them working with the Robinsons … And so, she went to Ni‘ihau when she was young, because she was the caretaker for the old lady. She would pick shells or even seeds, like the black-eyed suzies and the … the sheep’s eye … So she would collect all these … but never had enough to make a full *lei* of the seeds. But…my mom would collect shells, not really to make *lei*…just for decorations…arts and crafts *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stuff. My dad would pick *puka* shells from Polihale. And he made a *lei* for my mom with the Triton’s Trumpet as the centerpiece, and three gray shells representing the three of us … my mom, my dad, and me. My mom gave me that *lei* when I was 18 … it was after I graduated. I have always been into picking. My mom picks *puka* shells at Polihale, Queen’s Pond area, and towards Nohili Point. And now it’s more scarce, unless you know where to go. And now that they opened up access to Nohili Point, more people are going and picking so … For me … I used to pick and sew. *Kūpe‘e* [an edible marine snail (*Nerita polita*)], I have a few *kūpe‘e lei*(s) that I made for my kids when they were younger … the smaller shells … the bigger shells for me … and then my daughter’s mother at the time. I haven’t sewn *lei* in a while … shell *lei*.

A‘alona may not have been a *mahi‘ai* [farmer], but he is a cultural practitioner in many aspects of the Hawaiian culture, including *lā‘au lapa‘au* or Hawaiian medicine. He studied under the direction of Kumu ‘Ohai. He calls to mind some of the medicinal plants and experiences around them:

> I worked with *kauna‘oa* [a native dodder (*Cuscuta sandwichiana*), belonging to the morning-glory family, a leafless, parasitic vine, growing densely on other plants], more of the *kalika* [garlic], *nī‘oi* [cChili pepper]. *Nī‘oi* and *kalika* is the strongest warriors … for fight any kind of illness … yeah. *‘Ōlena* [the turmeric (*Curcuma domestica*, also incorrectly called *C. longa*), a kind of ginger distributed from India into Polynesia] … one of the things I learned, it was good for the immflammation but specifically, my son would go surfing, and he would come home with an ear infection or his ear stay sore. So, we would put some in his ear with the cotton, and we would take it out, and the next morning he’s back in the water again. We would juice it. If I couldn’t get the root, I would use the tumeric [(powdered) tumeric] and just dillute it down. And even ‘tiltill today, I keep some in my icebox for my son. He old enough to go get his own, but if he cannot, I have … my daughter, my grandson. My mom always has, and she has her little patch in her back yard. If we need, we can always go get, yeah. I never made *kukui* oil nut [Candlenut tree (*Aleurites moluccana*)], but I do use *kukui* oil just on my skin, because I on the ocean all the time, and it comes dry. And then, the *‘inamona* [relish made of the cooked kernel of candlenut (*kukui*) mashed with salt]. I made *‘inamona* once before with a friend of mine on O‘ahu. Roast ’‘em, yeah. That was a pretty cool experience to make the *‘inamona.* The *pōpolo* [the black nightshade (*Solanum nigrum*,

> often incorrectly called *S. nodiflorum*) a smooth cosmopolitan herb], the *pōpolo* berries, my mom always … The weeds in the yard, I lawn mower ''em when I was younger. My mom, "Don't lawn mower that, that's the *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit], that's the medicine." We also went and harvested *māmaki* [small native trees (*Pipturus spp.*)] and *'awa* [the kava (*Piper methysticum*)]. Two of my *lua* [Hawaiian martial arts] brothers would go hike up behind Blue Hole Ka'āpoko, and get one area up there. So we would go and harvest the *'awa* and then we would replant. And had one area up on the *pali* [cliff], all *māmaki*.

A'alona voices his thoughts about adequate accessibility for him and his *'ohana* in the area of Mānā and PMRF for fishing, harvesting resources and camping. He also explains the behavior of the sea life in the area with and without human activity.

> Definitely better access. I guess … you know … we had it so good back then. And back then being pre-9/11 … up until that point. They closed the base, and we couldn't even dive off shore, couldn't anchor offshore for couple of years or however it was. All the *manō* [sharks] got a little bit more frisky, because no more boats chasing them, so it's like they took over. They [referring to the sharks] took the area back. When it first opened … you shoot one fish, the sharks all over you already. So to be able to go back to how it was … not that it's our space, but they were not as frisky as they were before. They more frisky than they were before and now they getting back to that not so frisky because people are utilitzing the area.
>
> The main thing is … I don't want to say lenient, but get more lenient on the access like … it's an unenforced law, you are not supposed to drive on the beach. I'm in the … I'm not quite *kupuna* [elder], but yet for me to lug all my gear to go fishing … the parking area is … the shore … you like go more down … you going have to walk in the soft sand. You know, stuff like that … or open up the end so we don't have to come through the base, we can drive from the side and come in … to have access to all these spots to fish. I remeber my dad … get all my dad's lobster holes and everything too. We went from shore with one scuba tank. We swim out on the surface, get to the spot, turn on our air, dive down, we clean the hole, come out, and fill our cooler with lobsters from couple t-bars. Now we cannot. We cannot drive to that area anymore.
>
> Gathering, camping … actually I would love to camp at Nohili Point again … on the Flats, at the grassy area before the gates and stuff. I like take my kids there, my boys like … because all my family like to go *holoholo* [another term used for "to go fishing"]. Go camp on the beach at Majors Bay like we used to and stuff like that. We lost 'em, we lost all of that because of 9/11.

EBEN KAWAIKEA MANINI

Eben Kawaikea Manini (Photo 17) was born in 1964 to parents Beverly Ann Curtis Manini and Joseph Punilei Manini, Sr. He has seven siblings and is the second youngest of them. He was born in Waimea, lived in Līhuʻe, Kalaheo, and currently Puʻu ʻŌpae. He has been living at Puʻu ʻŌpae Ranch for approximately 20 years, and it is his permanent address.



Photo 17. Eben Manini. Photo taken at the Kekaha Neighborhood Pavillion in the *kūlanakauhale* of Kekaha within the Kona *moku* on the *mokupuni* of Kauaʻi.

Eben's mother, Beverly Ann Curtis Manini was born on the island of Oʻahu. Her family was from Maui. On her Hawaiian side, there were actually known to be from the island of Nihoa. Kealohanui, was the name of her grandfather from Nihoa. On her fatherʻs side, they were from Tennessee. Beverly's father, Luther Curtis was part of the United States Navy, was blown off his ship in Pearl Harbor, lived, and survived througout the entire war. He was swimming in the water the entire time trying to survive, and he had PTSD (Post Traumatic Stress Disorder) for the rest of his life. Luther fought in World War I, and he and his brothers also fought in World War II. Eben's uncle and father fought in the Korean War. Eben come from a family of healers. His mother's grandfather was a well-known hearler. His paternal grand uncle, Herbert Manini was a healer using herbal medicine and the healing art of *kāhea* [to invoke, cry out]. His uncle Herbert would attend the Church of Jesus Christ of Latter-Day Saints in Kekaha. He is buried on the Temple

grounds in Lāʻie, Oʻahu, and died in the ’80s. His grandfather Benjamin Pinihakapunilei Manini, Sr., is buried in the Kekaha Hawaiian Cemetery along with Eben’s brother Hōkūlani, who died as an infant.

Eben’s father, Joseph Punilei Manini, Sr. is part of a mulit-generational family from the island of Kauaʻi, and was actually born in a private house located at Olokele Valley which is related to Makaweli Valley in this day and age (O’Malley 2006). He was a cowboy and cattle rancher for over 50 years, and was inducted into the Paniolo Hall of Fame Hawaiʻi in 2005. He worked for the Gay and Robinson’s Makaweli Ranch for about 47 years. On the ranch he drove cattle for slaughtering, rounded up and branded cattle, fixed fences, and cleared and watered patures. He watered the pastures by syphoning water from the ditch for the large sprinklers. During one experience while gathering cattle at Na Pali, it was very dangerous, a bull slid down the 400-feet cliff drop, landed on the reef, and died. The Robinsons were also part of the Sinclair Family, and they owned the plantations, and sometimes the plantation borrowed him from the ranch to operate the ranch tractor to plow the cane fields when the big tractor was broken. He describes the work of a cowboy as being harder than that of a taro farmer. On the ranch there was a Japanese beekeeper and the beekeeper taught him how to maintain bees, colonies, hives and harvest honey. Joseph retired from Makaweli Ranch in December of 1994 at the age of 64 .He acquired a Hawaiian Homestead lease at Puʻu ʻŌpae and started his own ranch in 1968. He and his *ʻohana* [family] installed fence around the entire 285-acre parcel, and smaller pens at about 20 acres each.The fence posts wer dug with pick, shovel, *ʻōʻō* stick, and spam and tuna cans. On the weekends, after acquiring a post hole digger, he would set out to excavate 50 post holes a day with the installation of the accompanying posts. Joseph also was a kalo or taro cultivator at Puʻu ʻŌpae Ranch. He was a fisherman and hunter as well. He also found time to manage his business shoeing horses for the island of Kauaʻi. The business was called, Joe’s Saddle and Repair Shop. After fixing a broken saddle in 1952, he became a self-taught Hawaiian saddle maker.

While growing up in Waimea, in his youth Eben engaged in sports [little league throuhout the west of Kauaʻi], delivered newspaper, and is a continued member of the Church of Jesus Christ of Latter-Day Saints in Kekaha. The Church offered many activities for the youth and their families which he enjoyed through his teens. He and his family attended the rodeos near the sugar mill’s location in Waimea. His dad would rope and his siblings would join in a lot of different activities in the arena. On occasion, especially on Saturdays, they would go horseback riding all the way out to Mānā Camp, where they had a swimmining pool there. They used the old government road adjacent to the backdrop of the mountain range from the Mānā Plain Flats, and rode all the way down. They would swim in the pool, then ride all the way back on the highway pass PMRF (Pacific Missile Range Facility). Eben also remembers going swimming in all the freshwater swimming holes in the back section where there were many mango trees at the Kekaha wayside, instead of the Polihale wayside. Eben remembers some of the plants in the area, and describes them. He explains the area in more detail and adds other activites he experienced as a youngster on PMRF which includes harvesting *kiawe* wood for firewood and the wooden posts to secure the fencing on their Puʻu ʻŌpae Ranch:

> More towards … they call it now, the Magazines … where the Magazines are for the military. The Pacific Missile Range has their bunkers possibly in there … it’s all fenced off, so it is private there, but that would be the location. Also going to Polihale for family picnics and ah … celebrating some of the holidays … maybe Easter at times. I remember driving back to Queens Pond as well. I was never a very good swimmer back when I was younger, so I was not allowed to go into the rough ocean, when at times, Polihale can be rough, and then Queen’s Pond would be a lot calmer, and little bit safer to swim at that location. So I remember seeing a lot of the … the old Kauaʻi where we still had a lot of *kaunaʻoa* [a native dodder (*Cuscuta sandwichiana*), belonging to the morning-glory family, a leafless, parasitic vine, growing densely on other plants] growing all along side the roadway going to Polihale on the dunes, the sand dunes. Where now it’s a whole lot different with invasive species. As far as the base, the Pacific Missile Range Base Area, we would go on base with permitting to cut *kiawe* [algaroba tree (*Prosopis pallida*), a legume from Peru, first planted in 1828 in Hawaiʻi, where, in dry areas] posts, which is an introduced species of trees to make fence posts

for our ranch up in Puʻu ʻŌpae. So we have permits to gather wood posts from the base in areas where they needed to cut back some of the invasive species encroachment on their facilities where they would be near the fuel farm or closer to the airstrip. This is again, when I was very young, and remember it going all the through almost my teenage years. Also, in the back of Kekaha where the Hawaiian Homes now has homes there, the latest improvement location, we would also cut firewood in that area. Near that location too, there used to be a firing range … right now, I think the County calls it MacArthur Park … would be just *mauka* [towards the mountain] of the MacArthur Park. So from that location back to the Old Kekaha Plantation Slaughter House, in that range we would be cutting a lot of fence posts as well. My dad would say had cultural significant areas that we would not cut in those areas for respect of what is there … whether it would be burials or it would be *heiau*(s) [temple place of worship] in that areas, or special locations where he would *pule* [pray] a lot, and we would be inspired, or you would have locations passed down through you, through generations prior. My grandfather, Benjamin Pinihakapunilei Manini, Sr., he would go on the flatlands all in back of … from Waimea to Kekaha when there still used to be swamp lands. And they would oar down with a flat-bottom boat where they would actually catch *ʻōpae* and some of the brackish-water fish that would be present in the area. So the water clarity was clear because the land is lower than sea level with the outside sand build up from the ocean. So I was told that the water used to be brackish, and there used to be even salt solidification sometimes on the dried off dirt areas during summertime. But there was a lot of interior freshwater springs that eventually the plantations capped to allow sugarcane to grow in this very marsh area so they dug canals to dry out the land mass so it could be cultivated. Of course, this is just new generations, new ideas, new development and building. I was told through *kūpuna* [elders, ancestors] in the past that there were certain varieties of *kalo* [taro] that could grow in brackish water. And then they'd build up mounds on higher locations within this marshy, boggy area where they would actually grow *kalo*. So at least there would be food and sustainable for the people who would live adjacent to this region alongside the mountain area. Not necessaryy *pali* [cliff] but higher elevation, up along the whole mountain range from Waimea to Polihale. My stories that was passed down through my family, my grandfather would say … had a lot of native Hawaiian ducks in the area, possible had *nēnē* [Hawaiian goose (*Nesochen sandvicensis*), protected and rare on Maui and in Hawaiʻi uplands (down to 40 at one time and about 1,000 in 1978)] back in the day too because they like to eat the swamp … the grown wheats.

As a youngster while waiting for his newspaper delivery in the early morning near the laudromat at Hofgarrd Park in Waimea, he observed the following military activity:

So we would have to wait for delivery to come in before we could distribute papers throughout our zone where we deliver, and then we would see the flatbed trailers hauling the exposed test fire or dummy torpedos … it would be exposed, and they would just haul it right on the road. And that was a normal thing as was back in the day … a lot of the things they would do, is not like the regulations we have now. Occasionally now, if it is hauled on the road, it's on the same trailer, but it is contained. It's usually blocked off, so you cannot see what it is. So we would see the propellor on the back and the thing was … you know … well over 30 feet long … and sometimes there would be two or three in back on the trailer hauling back towards the base. And sometimes I think they would pick it up at Port Allen which was retrieved after shooting. And then, I don't know if they rebuild it or ship it out, but that's all classified, but it is all part of their trainning exercises that they do possibly year round or during RIMPAC when they have numerous … On Niʻihau possible the early '80s where they had to install radars to see any encroaching enemy from the backside of Niʻihau due to the curvature of the Earth. The satellites was not as great as it is now, so I don't think they need that feature anymore … unless, the satellites should be disarmed, and you may have to go back to traditional ways … with scanning the radar. Also, I recall a lot of our area out here … although it's classified, there is a lot of submarine activities in our waters around Kauaʻi, but usually around Nihoa and Niʻihau. On occasions we would be fishing back in the '80s and '90s on the fishing boat in the channel between Kauaʻi and Niʻihau, and we would see submarines that would surface. Occasionally there would be retrievels of test fire torpedos that they would retrieve that is all a part of their trainning that they go through whether it's weekly, monthly, or whenever it's called upon for doing.

Eben recalls another story passed down in his family about the *ʻōpae, Menehune* [legendary race of small people who worked at night, building fish ponds, roads, temples]:, and artifacts once used by the *Menehune* and the physically larger statured men who came on the voyage to Kauaʻi with Hawaiʻi Loa, and also the spiritual energy or mana which he felt in certain areas. He also pointed out a site to archaeologists:

> Another story would be linked to all the *ʻōpae* that was linked to the whole region of this flatland, marshy areas would be … if you look *mauka* [towards the mountains] where we are located to the north, there is a big hill, it is called, Puʻu ʻŌpae. The reason for the name Puʻu ʻŌpae is that this is the location where all of this *ʻōpae* shrimp flourished in this lowland was gathered, and exchanged on the top of that mountain … with the mountain people … *Menehune* or other people that were there. Some people say, "*Menehune* is small." They're not small … I would say, "They were maybe smaller than the migration that came with Hawaiʻi Loa which they may have been seven or eight feet tall." But I believe the *Menehune* would stand about my height, which is a little bit over six feet tall, and not little minaiture dwarfs … that's my personal opinion. They would be small yes, smaller in stature, yes. But I found some of the artifacts up our property from ancient times, and they would fit in my hand a certain way … so knowingly … probably the person using it would be similar to my stature. Also, my brother has found very large adzes in the past … kind of showing that the person that had carried it must have been very large, maybe close seven to eight feet tall and well over 300 pounds. Artifacts that I knew about, would be nearing the *puʻu* [hill, peak] I mentioned … Puʻu ʻŌpae. Yes, about five miles inland from our location. Some of the archaeological sites in the museum, in the Kauaʻi Museum would show villages near this mountain range that I talk about. There is this specific energy that some people may admit to or some may not, but definitely there is different energies you would feel at times in this location where you can almost feel welcomed or almost denied to be in the location at that period of time. And I relate it more towards moon phases that can change the outcome of your presence. At times it can be very uncomfortable when you just know, "I have to leave." I have experienced that in numerous places on the island. This whole region that we are discussing today, and also in the deep Alakaʻi Swamp near the summit I've felt these energies as well, because I have worked in conservaton professionally for 12 years. Working with rare and endangered plants, and invasive species. That I was doing during my age of '40s, right now, I'm shy of 60 years old. As far as more artifact down lower, there is still some of the old, ancient walls where the people may have had homes or may have had *hale* [house].
>
> I pointed out one of the *hale*(s) [grass houses] where archaeologists came down about a year and a half ago with the Department of Hawaiian Homes for their project for the hydro-electric. They measured it out, and they claimed to have found, or what we have identified as canoe *hale* where they would build canoes. As a little boy, I would ride my bicycle and walk a lot in this mountain range up here, and there was a lot more walls back in the day. But over the years the plantation needed to make more sugar for their expenses … to be more profitable, so some of the walls that were there, were eventually removed and sugarcane was planted in the areas. I did go with a few archaeologists to try and find the locations that they had actually recorded on the GPS mapping, but all of the sites were sort of leveled down. But I will explain what I would have seen back in the day, this would have been back in the early '70s. And then now … of course … it's not present anymore.

Eben was a mechanic on the island of Kauaʻi for at least 25 years for Sears and Napa. Now he is a mechanic at the Līhuʻe Airport and a tour guide. Among his many interest, he enjoys the outdoors, hiking, farming, ranching, and operating heavy equipment. Eben is an active member of the community who does volunteer work for several different organizations dealing with youth sports, and outdoor education. He is a member of the Kauaʻi Master Gardener program (MG). The Kauaʻi Master Garderner (MG) is a volunteer program andministered by the University of Hawaiʻi College of Agriculture and Human Resources (CTAHR) Cooperative Extension Service (CES). "Kauaʻi Master Garderners are trained volunteers who assist the University in its mission to deliver relevant, research-based, environmentally sound horticulture information to the public. Through community outreach and education, they strive to promote sustainable gardening practices and environmental stewardship on Kauaʻi (Keach, 2023). He also is an active member of the Kōkeʻe Resource Conservation Program (KRCP), a program near and dear to Eben. "KRCP is a

volunteer based alien species control program sponsored by the Garden Island Resource Conservation and Development, Inc. Service learning projects connect all ages to nature by working in Kauaʻi's magnificent but fragile native forest." (Kōkee Resource Conservation Program, 2023).

As an avid outdoors man, Eben experienced many wonderous and somewhat interesting archaeological sites and places where *kūpuna* [ancestors, elders] onced lived in his travels on the *ʻāina*, and recounts some of them:

> So one of them … [referring to the valleys of be Haleʻieʻie or/and Hāʻeleʻele] there are actually terraces in that valley where looks like people either lived or farmed. That is the location Iʻm pretty sure if it is the valley I am thinking about or referring to … that's where the plantation back in the day piped the water that came out of the springs and out of the mountain past these archaeological remains … where I was told that people lived there, but eventually they had no water because they took that water for the Mānā Camp which house the plantation workers. So there are still walls that are in there that were from the people back in the day. There is also another link … in the split in that … I believe in the Mahana Valley. In there … there were also archaeological sites that I remember seeing back in the day when I would walk all the mountain looking for military bullets … chuckle] … and also, the miltary ammo cans we would find, and my dad would use it as little tool boxes … the 30mm and 50mm cans that the Vietnam and Korean War Era … they left a lot of this debris back on the property. As it comes lower, there is still some fruit trees, some Native Hawaiian orange fruit trees that are in some of these valleys that is still present till this day. A lot of them died off due to the cattle that was raised all in the same land area that the plantations raised for almost a hundred years, they had the area doing ranching. We do ranching above it in a different section of this property. There's another area that … it's alot right now, that's why I'm trying to think … Kaunalewa, the Valley of Kaunalewa … where it comes out … that particular area has walls in that valley too. On the ridge line where the plantations used to do sugarcane … as a little boy I remember seeing walls … and then some of the walls in this day and age is gone. It may have been pushed back or removed for planting sugarcane. But I recall seeing numerous walls in the area in the '70s, and now maybe there's just a few left. I pointed it out to some of the archaeologists and at least one of them said it was a canoe *hale* [traditional Hawaiian house or building] up on the hill. I would think there is more along the way. In my opinion, I would think there is more because different ridge lines we would find a lot of the old artifact, the adze … used to dig out the canoe or harvest the wood from the forest. We had back in the day, large *koa* [the largest of native forest trees (*Acacia koa*)] forest. There's areas where there's quarries, where they would make the adze with the basalt rock. So you would see all of the chippings piled up where they would actually shape the stones, the artifacts. They would turn the stone into an artifact, mostly adze for digging. And at times, we would find some unfinished, then some fully finished, and some then broken or damaged from being used, and maybe it would crack. But all of these are still present up on the *ʻāina* [land], in these hills, and in the valleys..

Among the places he has been, is an intriguing spiritual realm, a warning told by his father, he has seen the phenomena only twice in his lifetime (although it was not a grass hut), and is fortunate to live and share his sighting. (Keao Ne Smith had an aunt, Aunty Maha who also shared a very similar experience with him):

> In Kaunalewa was a story that my dad told me about a grass hut that's supposed to be on the plains … on the flatter area, not on the hill. And he would say … if I see the *hale* [traditional Hawaiian house or building], not to go to the *hale*. I never saw the actual grass *hale*, but I did in my lifetime twice, see another structure that is near where this *hale* should be. The house that I saw was very large, like a mansion. And it was two stories. … I was between 18 and 19, the first time I saw it. And then the second time, I was near 50 years old. I saw it at least twice. The house still looked the same, yet if you come another day, the whole area back when I was 18, was sugarcane. I would tell my dad, I saw like a manager's house or something … in the middle of a field. And it's all cane. It's just back to cane again. In the modern time when I was about 50, it was corn. But that's the thing … you see it … And it was there. And I couldn't understand, but I remember my dad saying don't

> go to it, because if it disappears, you may disappear with it. What I remember seeing that area which is on the plains and heading back towards that mountain range we are relating to … I think …I touched on everything on what I saw, and how I felt, and what I heard in the past … as far as the grass hut, I never saw the grass hut, it was always a modern structure that was magnificent … really, really beautiful. I mean it's almost like very attracting where one would want to go, but when I was young … it's like you should't go, because it is like we don't live in that kind of location, and so you're not welcomed to go … but it was welcoming when I saw it.

Eben shared another story shared by his father about the singing of spirits, *heiau*, invocation enlisting the help of Heavenly Father, disturbed burial caves, and he expresses the mindfulness people should have regarding where sacred sites are or would be although they may not exist visually, they may have a spiritual existence:

> Another place I want to relate to is further back here more where the traffic lights was back in the day. So there was a *heiau* [temple, place of worship] on that hill as well …. one of the Pō *heiau*(s) was back there. Hukipō is there too, I remember my dad sharing a story … There's a lot of big old trees that are still present there. There was burials in that backside hill mountain range over there, and I believe there are still some today, *iwi* [human skeletal remains] inside the mountain there … in the *'āina* [land] … in the tunnels or caves that might be there. So that particular area … I remember my dad sharing a story that after they buried one of the *kūpuna* [elders, ancestors] or men, that lived in this area, he passed away … what they did was, they buried him there, and they would always hear him singing. He would sing regularly and it would be so loud, that a lot of people in Kekaha Town could not sleep because it would be that loud. Echo through the valley and then come on out. So … according to my dad, they took his body or his *iwi*, and then they moved him up into Waimea Valley. I cannot tell you the exact name of the location where they buried him, but I know if I was to drive up there or walk up there, I could tell you exactly what valley it is in. In the location, till this day, if you go up there … occasionally you would hear singing in the location … Hawaiian. Acapella … You can hear him, just singing. You can hear this language, just going. And you can be thinking like, "I'm hearing something." But I was told … Singing or chanting … it's a combination. And you can still hear him, and according to my dad, it's the person they moved from Kekaha to that location. It didn't happen before. Now there's also another location near where I grew up alongside the mountain, where it's right under Panini's, which is a *heiau* up there as well. There's also singing … just below the houses … That *heiau* [temple, Place of worship] is present in one of the people's yards. It may not be approachable how the property lines are … it supposed to be a flat right by the cliff. It looks almost like a little putting range. But that what I was told is the *heiau* right there. Now … there also used to be a *hale* [traditional Hawaiian house, building] right behind it that Bishop Takahashi from the Kekaha Mormon Church would have to occasionally go up to bless, because the people living in the house couldn't go in certain rooms of the house. I think it's for whatever cultural things was happening in that period or in that state … I want to say … because they're not in the present yet, they are active in what they do … they are not allowed to go into certain rooms. So, he would have to go bless, and he would see people in their home … which was probably this home was built upon this sacred *hale* or whatever was there … where they would prepare to present their offering or respectful duties to the *heiau* itself. But below that, we would also hear singing. So somewhere in there, there is probably a person chanting or singing that still may reside in that mountain range there. A lot of the graves there were broken into way back in the day for archaeological studies. Some of them where shipped off to the Smithsonian Institute. Artifacts and other things were disturbed. Some of the caves was exposed because we had a cattle pasture along that cliff line … and then we would drive cattle, and we would see the exposed *iwi* [human skeletal remains] all in this location as well. As far as going down again back towards Polihale, I've seen two areas back in the '80s that had iwi in the upper caves, in the location where … KIUC [Kauaʻi Island Utility Cooperative] wanted to do a hydro line coming down from the upper mountain range. I mentioned it to them, my son and I went back, I could not find the exact cave anymore because there are a lot of wild goats in the area, and seems like the goats desecrated the caves where the iwi used to be. Now, I only could find bedding areas of the goats all with a lot of goat poop all in that vicinity. But I did mention to them the approximate location where it was, so

> if they were to put waterlines or things, maybe to avoid at least where I saw in the past out of respect. Even though it's not there, I still want to make sure we're mindful of what would have been there before the present.

Eben passionately explains stories, history, and his encounters about the negative impact the military induced on the *ʻāina* [land] regarding exploded and unexploded ordinances, fuel contamination, and bombings. He fears for public safety, pollution, and contamination of the *ʻāina* [land] in the Kona *moku* [district]. Eben took steps through the proper channels to help and bring attention to the issues in order to rectify the problem, and suggests for the U.S. military to clear and clean the ordinances he refers to as "*ʻōpala* [rubbish, trash]".

> Ordinance. And it's still not cleaned and yet they still utilize our *ʻāina* [land] in the modern day, but not have cleaned their *ʻōpala* [rubbish, trash] of the past. We all know about Kahoʻolawe. We no talk about Puʻu ʻŌpae area. They talk about Waimea Valley, Mokihana … Mokihana was also a target area … public hunting is done there now. Kaʻula is happening to this day. Okay. And Lehua as well. They might have hit Lehua So, there could be strays. But in our area, they never went in with the metal detectors to check to remove all of the unexploded ordinances. In Mokihana, they burnt the whole mountain back in the day, after the war. According to my dad, as a cowboy with Robinson, they went with the minesweepers and checked the whole mountain for any, and if they found any … they would put a charge near it to ignite it, and if it was big they knew it was live …. and if it was small, it was a dud or not active. Well, all the years that followed, after that burning of that forest, the grass grew back … the Provisional Government did not want the community to go there because there still could be some that snuck under the dirt at a different trajectory … which could be underground. Territory Days. They allowed Robinson to use the area for their cattle for ranching … so if the cattle steps on it, and blows … it's a lost to cattle, and not the general public. So, my dad, as a cowboy, Paniolo with Robinson, they would go in there, and occasionally they would find an ordinance. They would tie their handkerchief up in a tree … a lot of it was *haole koa* [or koa haole is a common roadside shrub or small tree (*Leucaena leucocephala*)], and the *koa* was very tall so you could stand on the top of your saddle seat, and the tree would still be above your head at times. Yes. So, you tie your handkerchief so you can see it from a distance, and then they would call the ordinance from Oʻahu to come over. The cowboys would bring them back so they could identify the target, then they would set a charge, and according to my dad … on three occasions that he knows of … he knows personally … one was live, two was duds. So again, the charge is set, is a small charge … it's a bang … and if it doesn't increase to a big explosion, then that projectile was already disarmed or dud, maybe it got soiled from water or whatever it might be … so it's contaminated it can explode. But one of the three was live. Hunting up there, I found projectiles on that mountain, and I would tell the hunters that I know … according to my dad's story was … you only ride your horse on the horse trails, because if you go off the trail, you might step on an exploded one that still could ignite with the wake of your animal and yourself. Now, the general public goes there weekly since the 1980s because the State of Hawaiʻi made it public hunting. And nobody talks about the unexploded ordinances that could be there … which this is all military again related with continuation of the new extended lease that Pacific Missile Range wants.
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> So, as you would drive further down [referring to the area at Puʻu ʻŌpae near where the nursery is located for the project directed by Sean Andrade], almost to the drop off on the edges, that's where these things would be located. If you ever go back, you are going to see tall telephone poles … some of the things I am talking about is right there … all the big concrete slabs … some of the metals are still there yet … it's almost like you could put ammunition projectiles to hang it on racks, it's still there yet. It's history, the thing is … is that … is it safe to be there? Or the contaminants in the soil … has it been tested? Or why is it still there? World War II has long passed. In the area above, we have found shrapnel from projectiles fired probably from the ocean into inland. So, where we are … I, myself has found a projectile when I was about 12 or 13-years-old. I did not know what I found, because I found a lot of small bullets like you spoke of earlier, but this was like the mother lode. I found the biggest bullet ever and I was so proud … so I dug it out of the ground because I see the back half of it and a piece of metal was showing … I dug it out of the ground, I flipped it over, it

was hollow. So, I thought that was a bullet, but it was not. It was actually the projectile from the ocean inland. Yes, so the hollowed-out … after I got a size 14 boot up my butt from my dad when I brought it home all proud, "Dad look what I found?" And I got a swift kick in my butt, and then a slap in the head. [Quoting his father.] "Because you know, you could have died." Because if the hollowed-out part was solid, when I dug it, it could have blown up, and I would have been dead. I still have that projectile till this day. I remember the tears and the pain up my spine from that boot giving me a swift kick, and my dad was close to 300 pounds … so yeah, it was a pretty good hit. [Laughter]. [Quoting his father.] "Whenever you see this … ever … don't touch it." Part of the projectile had like rifling on it…where it would spin out of the gun. His theory of being an ex-military said it probably came from the guns from the ocean, shooting inland. So, there's shrapnel throughout the mountain range up here.

I found one of the projectiles … believe it or not … my son, on one of his birthdays, might have been 22 or 23 years old … he, myself, and his girlfriend … he just wanted to go hike down the ridge line, because he never went down there … so I said, "Okay, we go." So, we took the whole day, we walked down … believe it or not…he found one too. Now, the internal part that I mentioned … the one I found wasn't there, his was hollowed but there was a lot of pieces … almost ball-bearings all scattered on the ground. So, it was like, it was disarmed. Yeah, like shot gun blast … like thick though … like marbles. But it was left on the ground, it was disarmed or deactivated, but some of the remains was still on the ground. What they used to take out the core, I would guess … yes, of the explosives … so it made this thing unaffected of exploding … but he wanted to take it home for his memorabilia. So, I said, "Brah, that's a long walk." And the thing is almost like 40, 50 pounds of heaving steel. And he carried it all the way back out, because that's his. So, in our family we have two, one that I found and he found as an adult. But it's there. And occasionally you will see the, head or the trigger mechanism which is made of almost brass. When it blows, its's almost like lead, and it flies. And I found one of those on the roads when I was repairing the road. It actually, unturned … almost like a compass with a reading…almost like lat. [latitude, long. [longitude] numbers … And before my dad died, he said they turned that dial for the coordinates of where that projectile supposed to hit. So up there like I said, eventually we are going to have Native Hawaiian there … but little do they know … our area was soiled by the military.

Along that same ridge line [referring to the location near the upper mountain range in the vicinity where he once located some caves] going Polihale from there to the Magazine location where the military base is now, there's still some significant cement areas where some of the artillery guns were set up to defend Hawai'i back in … probably during World War II. So, the platforms of the concrete are still there. I don't know if the area was ever checked for foreign matter in the soil. This whole area there is all … supposed to be all Department of Hawaiian Homes property which is trust lands for the Native Hawaiian people. The modern maps that I've seen just a few weeks back in Waimea High School … the DLNR (Department of Land and Natural Resources) came to present their new … proposal for Kaua'i … that lands are not even declared on their personal maps … its defined as Kekaha Game Management. But it's not, it's actually Department of Hawaiian Homes trust lands for the beneficiaries. I just want to make sure on record that people know that if a state entity is making a decision to allow things to continue, that it should include the beneficiaries as well because it could easily be soiled or polluted by any other activity or unnecessarily mishaps. Along this same ridge line my son and I saw debris on one of the ridges. We went over about three weeks after that … this happened about … Military debris. About one and a half to two years ago we went down to go check along the edge of the drop, which is little bit *pali* [cliff], but visible from the highway … you will see debris that looks like house debris or hurricane debris, but actually it's a destroyed rocket that impacted the *ʻāina* [land] right there. It's completely blown up with aluminum pieces just scattered all over the hillside. I reached out to the Pacific Missile Range. The person that called me … within a month he was relocated or reassigned … so, no follow-up. I called the NTSB [National Transportation Safety Board] on O'ahu, I told them the location, they asked me to contact the base … because NTSB should know about everything that hit, I did not know if it was foreign or not, I wasn't getting a clear answer. My son and I went back down the cliff, we started walking the area, taking pictures. Some of the material had identification on it. So, it does belong to the United States. I sent that picture back to the base … Pacific Missile Range. Eventually they

contacted DHHL, Department of Hawaiian Home Lands, and ADC)Air Defense Command) representative. ADC representative contacted me saying, "Oh it's not on Hawaiian Homes Land so don't worry about it." I mentioned to that person, I have the old map from the 1920s and from the 1990s, and both maps show that the projectile or the debris is on DHHL property … but their new maps are showing different … as is the new DHHL map that they posted over in Waimea High School a couple weeks back. So, it's just like their changing boundary lines for things that may have happened in the past. I remember my dad being in opposition for some of the rockets they would launch off of Nohili Dunes, because they do it quite regularly. His concern was … there might be one that goes crazy, and might impact us because we lived on the property. It was always said, "Don't worry about it, don't worry about it." Now I don't know if my dad knew if there was a rocket that actually impacted, because when we did our research, my son and I … we went online to look how the debris we see, to measure out how much debris, and try to estimate what this rocket looked like … the rocket would have been more than 40 feet tall. It's a good size rocket and then the one we saw that he could actually … it was allowed for the general public to see … it was actually launched off of a … it was either a ship or a sub … because they don't show the whole thing … and it was launching off of the water … so it's coming from either a ship or a sub … and it's supposed to be like one of the earlier nuclear type mini warheads. The model of what we saw or what we compare would have probably been Korean War or right after Korean War. '50s, '60s type of rocket, because then it changed later. As a mechanic for more than 25 years, we go through a lot of fittings, aluminums, air conditioning, you name it…lot of the material on it was almost technology from the '80s even though this rocket should have been back from the '60s…it shows how much ahead the technology was before it came to the general public. That's what I was saying because I left … everything I saw there … I left … because it is supposed to be cleaned up and people take responsibility for who it belongs to … this is a military *ʻōpala* [rubbish, trash] … it should be cleaned up because at some day or age maybe Hawaiian people will be back on the land or maybe not with an award but maybe they should be allowed to visit their home … like I should be able to visit Nohili even though I cannot. But by changing the boundary to quiet people down, I don't think is the answer … it's still the military needs to clean their mess.

BILLY DAN DECOSTA

County Councilman, Bill Dan DeCosta (Photo 18) was born in 1965. His dad was William DeCosta a manager at the Makaweli Ranch. He is one of three or four generations in his family who has lived in the plantation community of Pālaka Camp (also called Makaweli Camp). The camp was under the control of the Robinson Sugar Plantation. Billy was born in Waimea, and is the fifth of six children in his family. Billy and Drena DeCosta, his Native Hawaiian wife have three children. He has always lived on Kauaʻi except when traveling to California for school at Taft College and Humboldt State University. Billy is of Portuguese and Spanish descent coming from a family of plantation stewards.



Photo 18. Billy DeCosta. Photo taken in his office on the grounds of the County of Kauaʻi offices in the *kūlanakauhale* of Līhuʻe within the Puna *moku* on the *mokupuni* of Kauaʻi.

Billy's grandfather was a pillar of the community, a Sheriff of Pākala with excellent leadership skills. He explains the motto and standard set by his grandfather?

> My grandfather actually, John Costa was the last remaining Sheriff of Pākala who had a permit to carry a firearm on his white horse. He was the sheriff that would ride around and police the town. His motto of being a sheriff was, "I don't tell people what to do, I mentor good behavior, and the community tells each other what to do. The community governs each other." And that's how we grew up right?

Billy describes the interpersonal relationships within the plantation community, and his grandmother's interaction more specifically with her preparation, sharing of foods and cultural remedies:

I know they used to make the tea with the māmaki, and I remember that. I know the one that they call the *lonomea* [a native tree (*Sapindus oahuensis*), to 10 m high, with ovate leaves 10 by 20 and 5 by 13 cm; it is found only on Oʻahu and Kauaʻi], which was one black olive that they could make soap and it was a laxative for the stomach. Of course, the *kukui* nut [Candlenut] grandma guys used to use little bit of that … in the *poke* [diced fish with other ingredients] … *ʻInamona* [relish made of the cooked kernel of candlenut (*kukui*) mashed with salt (perhaps a contraction of *ʻīnaʻi momona*, sweet garnish)]. That would help with the constipation and stuff. There is a lot of little stuff. Of course, grandma guys they weren't native Hawaiian but because they were from the same community and the different ethnicities all inter-mingling … so maybe when my grandmother would share sweetbread from the Portuguese side, or my mom's mom Trinidad Martin Escobar, when she would share her Montecao … a Montecao is a sugar cookie, and is almost flaky, and it's made with homemade alcohol … so when they would bring the Montecao, the Japanese would trade the sushi…the Filipino would trade the Pinakbet or the Dinuguan with the blood meat … and the Native Hawaiian, they would trade the *poke* [diced fish with other ingredients] with the *ʻinamona* [relish made of the cooked kernel of candlenut (*kukui*) mashed with salt (perhaps a contraction of *ʻīnaʻi momona*, sweet garnish)]. A couple times my grandma would have a shell *lei* [necklace or garland made of shells, flowers, leaves, and/or feathers etc.] on the shelf, and we would be like, "Oh grandma what is that?" "That would be from one of the Niʻihau families sharing because they were so appreciative." At one time we would think, "That's just one shell *lei*, oh, easy, we can go pick the shell today." Today that thing is worth more than gold. Yeah, they worth more than gold.

I remember growing up, we did not go to the hospital all the time. We had *ʻōpū huli* [a "turned stomach," believed caused by falls, especially of small children, resulting in a kink or turning of the stomach, with attendant vomiting; a symptom is said to be a shortening of one leg; the cure is massage and binding of the stomach; this diagnosis and treatment are said to have been learned from the Portuguese], and the Hawaiian aunty would come and rub 'em with here oil, salt, and bless with the ti leaf. I think the missionaries will call it 'bush' or the stomach was in a knot. The *ʻōpū huli* stomach they turn 'em and massage. If you go to one western medicine, they would operate and cut the gut, and sew 'em back together. There is so many different … I have had injuries growing up that we blessed with the Hawaiian doctor … rub the shoulder and pray, and it goes away … it's amazing. I ain't saying it's better than western medicine, but it is an alternative. I experienced it, and the generation before experienced it. It's because it's real.

Aunties and uncles *hānai*(ed) [fostered, adopted] us they tell us what to do. "Eh, boy you get too much fish in the net. Boy, one throw enough, you get 32 fish. What you going do with all that fish? No be throwing again." Before we no sell fish, nobody sell fish, maybe the *ʻahi* [Hawaiian tuna fishes, especially the yellow-fin tuna (*Thunnus albacares*)], because that's big fish, good money. All the reef fish, we poke fish, dive, the *ʻuhu*(s) [the parrot fishes, of which *Scarus perspicillatu*s is among the most abundant and largest], the *kala* [surgeonfish, unicorn fish, Teuthidae], the *nenue* [Chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus*, *K. vaigiensis*)]. We no sell fish.

Our whole mindset is different. How we take care our own kind, our people, take care each other, take care the land. We have a connection to the land. We feed off the land. Our food come from the land. People no understand that because for generations they paid for their food

His mother's family had acres of land up in the Kalaheo area where they were ranchers and pineapple growers. His father, William who was raised at Pākala, was a supervisor for the plantation. Billy shares growing up in the *moku* [district] of Mānā, some family history regarding his dad and interesting facts about other ancestors in his family:

The plantations brought in the Portuguese to supervise the different ethnicities throughout the Plantation Era. When the different ethnicities came, the Chinese, the Japanese, the Filipinos. They all came with their dialects, and their own ethics and morals. They became a melting pot of this diverse group of people that got along. The missionaries wanted to intervene with a nationality that could work on both sides. One with the large white land owner and two with the ethnicities. Because

> the Portuguese had experience with sugar plantations in the Madeira Islands, they knew how to grow and cultivate sugar. They were the *luna*(s) or supervisors, foremen, stuff like that … My dad was one of them.
>
> And then my mom's two first cousins, her dad's brother had two sons, and they were *paniolo*(s) [cowboys] on the west side. The plains of Mānā and Kekaha where they raise the cattle for the AMFAC Sugar Plantation. So I used to ride my horse when I was young out in those valleys overlooking Mānā and herd the cattle, put them in the corrals, take 'em out to be shipped out on the barge to go to the mainland. I had an experience growing up in that area in that *moku* [district].
>
> Addie Citrol, she was married to Jack Citrol, but Addie was a DeCosta. She married this European guy. She is one of my dad's great aunties from the Portuguese side. Addie, we believe as a family … Addie through generations, because the Portuguese was the cultivators of sugar in the Madeira Islands, they needed a boiling point for sugar … for some reason, I guess … Jack ended up getting the credit for that. But we have something on our family legacy that the DeCosta Family gets residuals from this formula that they melting and cooking sugar at a certain temperature, crystalizing it. They yield a higher sweetness to the sugar. That was the C and H Sugar.

There was a story going around for many years about Hawaiian's being lazy, the statement started during the time of the Plantation Era, and Billy expounds why the statement is false:

> You know there was a facade … like one bullshit message. Do you know why they bought the Chinese, Japanese, and Filipinos to work the sugar plantations? Because the Hawaians never like work. They said the Hawaiians was lazy. You know why the Hawaiians never like work, you like I tell you why? Because they never understand, what they doing planting sugar, and we no even use sugar. Hawaiians no use sugar, that's a western ingredient … you think about it. What you put sugar in? My wife, you know why she's attracted to me? The way I think, she loves my train of thought. She listen to me all day. I'm telling you something, one Kanahele man, he had green eyes, his mother slept with a whiteman. That's how they get the *'ehu* [reddish tinge in hair] hair and green eyes. The Kanahele man, I think his name was Johnny, he was my father's really good friend. My father was a supervisor and before you carry 90 pound tank … He told my father, "Willy, you guys killing the kids, the tank too heavy Willy." Gotta get the *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] plastic tank. You know what the Hawaiian guy told my father … That's when they converted to the plastic tank. It was 90 pounds, you try carry … I carried it in the summertime … cement … 90 pounds, the tank filled with the Round Up. The Hawaiian they believe, they not going waste their time planting one agricultural product … (they not going to) … eat. Then the western money, *fo'* [Hawaiian Pidgin language meaning for] buy what? What they needed to buy? So, they not lazy it's a persona they put on the people. So they brought all this other cultural people because in their country, they were being paid peanuts and they were ran like slaves. They all ran away to come here. They were actually slaves too here. Lucky for the Chinese and Japanese who had striked. I believe they were getting paid cents per day to getting paid a dollar a day, something like that. They were only getting paid five cents per day. They strike and then they got a dollar. And then the Portuguese came … like I told you … because they were the liaison between the Chinese, Japanese, and Filipinos. They were starting to … the culture or nationalities started to bond too tight and they could not break their code of how they run the community. That's why our local government was always ran by Japanese, because for long time the Japanese during the Plantation Era, had a hold on how to run things, they were very smart. So, the westerners could not break them, they never could. That's why they bought all these white people in to bridge the gap.

For 10 years in his life, Billy has been an environmental studies teacher up in Kōkeʻe for the Department of Education. He has been a hunter of pig and goat in various mountain areas on Kauaʻi, especially on the west side. He has also gathered *maile* [a native twining shrub, *Alyxia olivaeformis*] and *mokihana* [a native tree (*Pelea anisata*), found only on Kauaʻi, belonging to the citrus family] in the isolated

mountain areas as well. He has fished along the shores of the west side including PMRF. Bill shares his experiences and conservation methods:

> I know how to pick *maile*. A lot of the *maile* we picked, we twist with our hand, we hold tight, then we pull, and we break the stem with our fingernails so the new shoots come out. My grandpa taught me this. My grandpa always made us carry this sock, like a white sock, we call 'em a durham bag, it was a tobacco bag before. We would carry a pocket of fertilizer, we would get from the sugar plantation, everytime we take *maile* from the bush, we would take one small pinch of fertilizer, throw 'em down by the plant, and that would be for the next guy … because that *maile* branch with the fertilizer, you already picked the *maile* … but you fertilize it for the next guy. Amazing how beautiful the *maile*. Hawaiians say, "*Mālama the ʻāina* [Care for the land], *mālama* what you gather." Same like when we go hunt, you catch one fat pig, and stay *hāpai*, pregnant, you supposed to let 'em go. It's hard to say that and couple times I never let 'em go, because how you going take the dogs off. But you wanna try and *mālama* your own.
>
> One other one too … when we would go hunt the goat, and there was one white goat … we never shoot the white goat. It was called a spotting goat. So you don't shoot the white goat because with the naked eye, you can see the white goat 400, 500 yards away. Yeah, never shoot any animal that is white … he's the spotter for the herd.
>
> Mānā is the largest white sand beach in the state. We would go out that area during the *moi* [threadfish (*Polydactylus sexfilis*)] season, and fish for *moi*. We would throw net and get *ʻopihi* [limpets]. We would camp on the beach. Polihale was our retreat on the west side of the island. The east side, they would do Hāʻena and the Nā Pali Coastline, that was their retreat. So, in everybody's *moku* [district] we have an area where we culturally gather and take resources. The Mānā area was very abundant at one time. Mānā is also known for their wild goats that actually come down the beach today. We used to hunt those goats all the time. We have wild cattle in the valley. It's a very good food source. The one thing I believe that most people don't know about Mānā area that during the Plantation Era there was a cold pond … there was a spring that ejected cold water out of the ground. After we would swim at the beach, or fish the *moi*, or thrownet, or gather *ʻopihi* we would go take one cold shower in the cold pond. Yeah. Those are … I think … memories that a lot of the kids today don't know about that was special. Of course, the great surf in that area that … Majors Bay and Polihale have excellent breaks out there for surfing.
>
> When they all carrying the eggs. You cannot do that. When you pick lobster, you look at 'em and get all that orange eggs, you got to put that lobster back. We used to take the fin, and broke one fin off the back, and you know why? So the next guy get lobster, "Eh, no more the fin." Then know that this is a mother, because sometimes they no more the eggs.
>
> *Akule* [big-eyed or goggle-eyed scad fish (*Trachurops crumenophthalmus*)], the mainland people throw away that fish, it's a bait fish for them. The *ʻōʻio* [ladyfish, bonefish (*Albula vulpes*)], they throw away that fish, that's a bonefish … best eating fish. The *ʻōʻio*, *lomi ʻōʻio*. My grandmother them used to make fried fish cake, patties out of the *ʻōʻio*. *Akule*, we would make *poke* [diced fish with other ingredients] out of the akule, it's a poor man's *poke*. Dried akule in the saddle bag when we go hunt, we get the dried akule. We get the dry *akule* in the dry box with only salt.
>
> The aquatic resources on that side was very bountiful. I must say, there are still good grounds till today actually. We do have access that the base give us and that is very important. It is more of a controlled access. I cannot tell you if it's better or not for the community. Maybe with the controlled access, the fishing and the gathering is more abundant. I believe maybe if it was free-access, the abundance wouldn't be as much … I don't know. I do know growing up, we did a lot of self-managing ourselves. Our *kūpuna* [ancestors, elders] … as you Native Hawaiians would say … would tell us, "You take what you need for your family, don't take more than you need, and leave back." So, I like to practice that till today with my own children. *Ogo* [Japanese term for *limu,in the same family as Manauea* (*Gracilaria coronopifolia*), a small red seaweed], we did the red *limu*. A

lot of time, a lot of people don't know, the scissors is your best friend when you harvest *limu*, you don't pull *limu*, you cut with the scissors, and you don't cut it too short. The *limu* is supposed to look like waving fans in the air, like fingers. When you cut it too short, you can ruin the *limu* … and when you pull. Like to do with our sea turtles … when you get too much sea turtles, they really over graze the *limu*. So everything has to have a balance, yeah? I remember when I was a boy growing up until about seven-years-old, we used to harvest turtle. The turtle go into the bang-bang net, get all the fish, but we bringing the turtle home. That's the best, better than fried chicken. Better than steak on the grill. Grandma would make a pot of turtle stew … whoa. The fat was green, greenish-yellow. Plenty people don't know that. All of our environmentalists, they don't know that this was the ways of our generation, how we grew up.

Billy expresses his wishes for accesibility to the Mānā and PMRF area to harvest resources, fish, surf, and camp. He also offers ideas of regulating the permits allowed, and suggests a mixer event or night to mingle with the locals and PMRF staff.

You know how we raised off the land … who wasn't raised off the land, who depend on currency, they look at us as being not as wealthy as them. They have their currency, they buy their stuff, they buy this package of beef jerky or fish jerky, whatever they going buy with the currency, we never had 'em … only now we getting that mindset. How we were raised was from the land … you take care the *ʻāina* [land] and it take care of you, the American currency, you no need. They like you feel dependent on the currency. Just like the base, they want us to feel dependent that we need them. I think they need us more than we need them. If you ask me what I like see happen, I want to see them open up some camping on those beaches to local families with the IDs, and we can go back camp. I wanna see more access for surfing and for harvesting fish. They need to stop regulating so much. If you like know the hidden agenda, I tell you … in reality that's my hidden agenda. Yeah, they provide a sense of security. Yes, they provide a whole bunch of jobs. I don't believe they should be restrictive of all the access, the harvesting, and the gathering of that area.

PMRF are the stewards of that land. They have a responsibility to care for the land. I not just talking about the land, they are responsible to care for the people's cultural gathering and harvesting rights. That's their job. They are only temporary stewards of that place. They need to make sure that the people can still practice what they used to. (There were a lof of people who used to fish out there). Big time. Camping too. We used to camp out there, now we cannot camp since … 9/11. 9/11 has long passed. Maybe it's time they open up some camping. Because 9/11 has passed. Let me tell you, you can record me on this … the base, I mean pass the base is Polihale State Park … the State gives out permits, the permits are taken online, you cannot discriminate whether you local or whether you non-local. Mainlander's can request a permit. Sometimes Polihale State Beach no more room for the locals to camp. But on the base, if they would give out so much local permits to people with one driver's license, then they could let the locals go camp, so just think about that in your cultural survey.

Take care their own trash. They put their trash in our landfill, our County … right next to them. We like them take care of their own trash. Maybe pay a higher fee for them to put their trash in our landfill. Be more cognitive of what they are putting in the landfill. Red Hill, the spill of fuel … The fuel they have down there … how secure is their fuel operation

I talked about some of the surfing access, the camping on the beach, the harvesting of the *moi* [threadfish (*Polydactylus sexfilis*)], the throw net, the fishing, *ʻopihi* [limpets] harvest … I not sure … I know the base has a restaurant, I know they open it to the public, that's nice. Taking care their own trash … being good stewards of the land with their trash. Making sure that their water source and their fuel source is very well cared for. Their fuel source cannot contaminate their water source. I'm pretty sure it's not underground, it's probably above ground. The transparency of when we have world issues … one time we had one … I believe practice missile launch, west side … RIMPAC … there was one Russian boat out there, was in the newspaper, Russian boat … the people deserve to know if there is stuff going down, and if there is this outside countries … we like know, we no like

wait or hear the week after in the papers, the Russian ship was sitting outside … we like know … what if something happens, we want to prep and prepare. Maybe one good one would be … A night to mingle. They have a restaurant, maybe make … A night to mingle … the military can do a little dinner and invite the community leaders, just some community people to come down and mingle, come out with us, ask some questions. Bring some family for a day at the pool. If you going be stewards of the land, then be stewards of the community, and know your community.

MICHAEL ANDREAS "MIKE" FAYE

Michael Andreas "Mike" Faye (Photo 19) was born in the year 1951 in Waimea, Kauaʻi where he currently resides. He is the son of Alan E. Faye, Sr. and Jean Burns Faye. He is the sixth out of seven children in his family. Mike is married to Colleen Vidinha Faye who comes from Kalaheo, Kauaʻi. They have two children of the ages 41 and 36.



Photo 19. Michael Faye. Photo taken in his Kekaha Agriculture Association office at the *kūlanakauhale* of Waiʻawa within the Kona *moku* on the *mokupuni* of Kauaʻi.

His paternal ancestors first arrived in the Kona district of Kauaʻi around 1850, in the area of Waiʻawa where our interview took place. Michael is of Norewegian descent and explains how his family journeyed here from Norway, and established their businesses in Hawaiʻi:

> Well … it *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of started with my grandfather's uncle who was Valdemar Knudsen. Valdemar had come to Hawaiʻi for health reasons, wound up being hired by which ever king, which ever Kamehameha [Alexander Liholiho Kamehameha IV or Lot Kapuaiwa, Kamehameha V] ruling in the 1850s, and he became the *konohiki* [headman of an *ahupuaʻa* land division under the chief] of this Waimea district. Primarily, *kine* of like John Parker too … rid the mountains and area of cattle … so he, rancher went up, would harvest, and get cattle, rendered them into tallow parts of it, took care of collecting taxes, that sort of stuff. In the 1870's when Hawaiʻi signed the Reciprocity Treaty

… you know … everybody jumped on the sugar market. It's *kine* of like hemp today. Royals and everybody … and … this land all out here is all Crown Land … you know that yeah? So they wanted to grow sugar. Valdemar wrote to his nephew, my grandfather, H. P. Faye, who was in Norway. At the time … I don't know if I have all the chronology just right but … they were looking for workers, they being the people in Hawai'i … looking around the world for different workers. They were trying … seeing if they could get Europeans to come out here and be field workers. And it just happened that my grandfather's family in Norway, was a fairly successful ship builder and just *kine* of brokerage company. So they put out a notice for Norwegians to sign-up as contract laborers come to Hawai'i. So they signed a bunch of people up and H. P., my grandfather, H. P. Faye was selected to *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of lead the group. He brings them down here to Hawai'i. And comes across the U.S. on a train. They hit the western U.S. just as the silver boom is going off, so a bunch of Norwegians jumped ship, and they stayed there. He brought some here, met up with his cousin…I believe … on Maui. And they began spreading these Norwegians out to the different plantations. Early on, when the first guys arrived, days…his cousin was escorting a group some place on Maui, on east Maui … and was crossing one of the little streams, and got washed away, and drowned, and died. So he never liked Maui after that. They wind up coming over here with the rest of them, and tries to get established here. He doesn't do very well with his uncle, and winds up working for the Robinsons … and back to Maui.

Eventually, he obtained a Royal Lease down in Mānā, and started growing sugar around there. He came in 1880, by 1885 he had established the H. P. Faye Limited in Mānā. Prior to him getting there, there was a rice farmer out here, Pah On. So he would hire … he would work with Pah On, provide him labor with cleaing the rocks. We got a picture of him. Right below there, where the tunnels are, and its just this rocky field (Chuckles), full of rocks, and no bulldozers or anything. So anyway, he started out there, brought in some other Norwegians to help him manage it. I don't know where they got the laborers from, probably a lot of Chinese, and other Hawaiian families that were living around there. He had a house out in Mānā, eventually married a Scottish gal who was living in Kilauea, Moloa'a actually, and brought her out here. They raised eight children. Five … I think … were born out at Mānā, and my father and his next older brother was born at Pōki'i, right over here. And … believe it or not … in 1910 … I don't know what the heck was going on … but they packed up and took the family back to Norway. Everybody, the Japanese maids that took care of the kids, the Chinese cook (chuckles), and they go back to Norway … and had one more kid over there. In the meantime, he's traveling back and forth to Norway once or twice a year…beleive it or not. That didn't work out, so he wound up coming back here. And the wife stopped him at Berkley, California, my grandmother, and established herself there. The kids could go to school, college whatever. But he kept coming back and forth to Hawai'i. I think … you know … the 10 years or 15 years living in Mānā was way the heck out there [Chuckles.] It must have been tough for her.

But in the meantime … in the 1890's, all these independent growers of sugarcane consolidated into Kekaha Sugar Company, and he became the first manager. So I would like to tell the story that, "Here's this Norwegian coming to the Kingdom of Hawai'i, realizes the American Dream in the Republic of Hawai'i." [Chuckles.] Yeah, he choose the Hawaiian Dream, in the Republic of Hawai'i. I think one of the reasons he left … I don't know … if he could really fathom the American Democratic Democracy. He lived … king on Norwary, king over here, strong rulers over here. But anyway … his kids, the eldest … So H. P. Faye during WWI, there is a really, really strong Anti-German sentiment going around. And the factory and company for Kekaha Sugar at the time was H. Hackfeld and Co., who were mostly owned by German nationals. And the government apparently was going to take over the company because they didn't want to have the German nationals. So he and a couple of people, he was getting wealthy at that time, got together and purchased it, and renamed it AMFAC or American Factors.

So as time goes on … the eldest son, eventually rises and becomes the head of AMFAC … the number two boy, runs Kekaha Sugar, which in the 1930s was considered one of the most valuable assets the territory had … it was just spitting out money. My Uncle Lindsay [faye] ran it from about 1930 to about 1960 … I think … and coincidentally, his son ran it for a while. And now, I'm

> basically running what's left of it … as far as … the infrastructure and assets is concerned, not the farming part. My father ran Waimea Sugar, which is in Waimea, that H. P. had purchased along the line. That plantation had been started by the Rowell family, the missionary Rowell family … As all these plantations, they needed water, and so they dug or installed the Waimea Ditches, basically the second ditch taking water … you know … out of the Waimea River … first being the Menehune Ditch, Peekauai [pronounced: Peʻekaʻuāʻi], and then Waimea. And I think … H. P. was like … had to be super jealous of them being able to pull the water out. So, I think he purchased it with the intention of incorporating it into Kekaha. That never happened so it ran independently. He buys it in the early 1900's. By 1908, he had already designed, constructed Kekaha Ditch coming out of the Waimea Valley … which … you know … brings water by way of gravity … all the way to Polihale, it's 29 miles. So if you *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of layed it out from Kekaha to past Hanamāʻulu, all by gravity. He ran Kekaha or he had people run it for him … then ran Waimea, and he died in 1928. As I said, the boys, the five boys in one fashion or another, continued … you know … within the business. One of the questions … I'm the second youngest of the second youngest. So, it stretches way out. It's not my great-grandfather, it's my grandfather who did that … so that's my paternal connection over here.

Michael's maternal ancestors are of Irish descent, the McCarthy family. His grandfather is Charles James McCarthy who became governor for the Territory of Hawaiʻi in 1918. Mike recounts his maternal family's connection to Hawaiʻi and interactions with his *ʻohana*:

> On my mother's side, she was from Honolulu. Her grandfather was Charles McCarthy. McCarthy came from … I don't know where the hell he came from … he winds up in Hawaiʻi, he winds up working for Liliʻuokalani. And … is supposedly … I don't know how true it is … they said that he was in charge of the palace guards at the time of the Overthrow. He was supposedly on King Street … or something like that … in Honolulu. He heard the marines marching, the cadence of their marching … swoosh … swoosh. So, supposedly he goes outside, and goes in the middle of the road, and uses his whistle to have his troops fall in behind him, and they don't. So, he retreats to the palace and that's when Liliʻuokalani says, "I'm going to be in the hands of … the government's going to take care of me," blah, blah, blah … you know … "Save yourselves." He dashes out, he hides out in the boonies in Pearl City. The next child that is born there is named after … her name is Pearl Lydia, after Liliʻuokalani's name. He eventually becomses governor of the territory in the 1920s. And actually is the first person to have, the first Governor to live in Washington Place after Liliʻuokalani dies. And they disperse her belongings. In fact, we have quite a bit of family in the Puget Sound area. We don't get together with that side of the family, but when we do, the conversation often is surrounding, "What are we going to do with our stuff from Liliʻuokalani or ʻIolani Palace?" I usually recommend (for them) to send it back to the palace … you know … nowadays. They possess some stuff, yeah. For McCarthy … I think … he didn't really like the idea of people picking over Liliʻuokalani's personal things. There is supposedly a whole list of stuff they sold. I think one of the family members has a list, and he buys a tea set … what the hell your'e gonna do with a tea set … you know? [Chuckles.]

He makes it clear that he is not an ocean person. When asked about ranching, Mike recalls growing up with cattle and his mother's fondness for horses:

> We had a small ranch up in the Kalaheo area. My mother wanted 10 acres to raise horses. My father said, "Horses will never make a poor man rich, and it will make a rich man poor," something like that. [Chuckles.] So we had horses and stuff like that. My mother was very active in saddle clubs and stuff like that. She died really, really, young. She was 46, and so I was 14 … I think … 15. Yeah, so she died really young, and that kind of ended that whole ranch thing. We eventually sold it. Our home was right on the water, but Waimea has really dirty water from the river. I guess my parents were really busy. They instilled the fear of God in us, we are not to go in the ocean..don't go in the ocean.

Michael talks of the influence from growing up around the different ethnic groups and his interactions during the Plantation Era. He also explains how his views and appreciation for different new cultures changed while attending Carnegie Mellon University:

> It was structured. I think everybody worked for *kine* of a purpose. Waimea Sugar was a small plantation, we only had 45 employees. Kekaha, next door, had 300. But I would call it structured. We grew up pretty much knowing the ethnic differences … everybody teased each other about it..about each other, but nobody disliked anybody. To me it was a great upbringing. I gotta say, I was definitely privileged because I was the plantation manager's child's son. So, my life was different from everybody else's. But you know what? We always wound up in the camp playing agates or things like that. [Chuckles.] Like I said, it was structured, your org chart was very structured … you had a manager, you had your office staff, you had your field supe, factory supe, your supervisors, and all the people going down from there. Everybody worked … I'm a Buza man, so I work for Mr. Buza … or I work for Peralta, something like that. I think it was somewhat stable, because you knew you were going to get paid every week or … I cannot remember how pay was back then. I would say, disciplined and organized … and culturally diversed, because you had all these different people around … from Japanese Bon Dances to *lū'au*(s) to Filipino things. I grew up with … we had yard men, Joe Tsuyama, an old Japanese man, and Jose Cuaresma. Before before I knew English words, I knew all the bad Japanese words and the bad Filipino words. But you grow up like that … you think your'e culturally astute to all these different things. I went to Carnegie Mellon University in Pittsburgh, *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of like the first time I left Hawai'i. And there were two groups of people I have never ever come across in Hawai'i, the Jews and Black people. Pittsburgh was half Jewish and half Black. [Laughing.] That made me *kine* of…and when people come to Hawai'i how different the things are over here, because I didn't know anything about this kosher food and stuff like that, that they eat over there. I had no idea. I had a better appreciation for visitors coming over here and asking, "How come you guys eating salty seed?" Stealling money to buy Yick Lung Li Hing Mui, or the big bag $ 1.75. [Laughing.]

Throughout his lifetime Michael had many jobs from working in the fields for the plantation at a very young age to managing family owned business'. He graduated from University of Hawai'i at Mānoa with a degree in Business Administration. He elucidates his work experiences in the following:

> So for me, I was … you know…born and raised in Waimea, Saint Theresa School … *Kine* of connection to this land … in the day … in those days when you turn 14 or 15, you expected to work at the plantation in the summertimes … so I started off at Waimea Sugar, me and three or four other plantation kids, boys. Then my father died when I was in high school. I sat out one year, and one of the foremen from Kekaha, saw me walking around. Hong Min Hee saw me walking around, and he goes, "Mike what you doing you not working?" Chinese guys … you know … "You supposed to be working." We had sold Waimea sugar to Kekaha by then. "No, no, I can get you one job." "Supposed to be only plantation employees." "No, no, no, no worry, go see Spike Roduit." [Chuckles.] So sure enough, I go in there the next Monday, I was issued by hoe, my file, and … So I spent the next six summers … I think … working over here, and it was a … You know … I knew I wasn't going to wind up being a *huki* lepo [pull or tug dirt] or something like that. So, I took it as an opportunity to be … you know … out and about. Our job was … they call us the *huki lepo* gang, and it was kind of the replant. So with sugar, after they finished harvesting, they would either plant it with a ratoon crop right … are you familiar with that? They just let the cane come back up … reshape the rows, make it come up, but where the trucks went and everything, it's usally mashed down, and ground is hard as cement. We would have to go back in there and plant the seed … the cane by hand in those areas, or whereever it was like bolohead. We hated ratoon fields because they were hard work. The planted fields, they would just … do away with the old stools, and just replant … with cane, those were way easier to deal with. I did that for more than six years. It was good fun. I probably walked down every square foot of this property [chuckles] at one time or another.

My first real job was at Pioneer Mill, Lahaina. So, I got hired over there as a AMFAC trainee … in the new-fangled computer, the IT [Information Technology] Department. And to be honest, when I was at UH, I paid some kid to do my deck of cards, because I couldn't make it work. [laughing]. This was 1975. But they had a little computer, they were called, Data Point Computers. It was a real small thing, 16k max of storage, but pre-dated Microsoft, and predated Apple. It was a pretty cool machine. AMFAC was trying to get computers into each of their plantations. At that point, I did not work for the plantation, I worked for Mother AMFAC. Which is also *kine* of cool because we'd talk to our bosses…there is one of us on each plantation…we talked to our bosses about, "We gotta get together … you know … so we can learn." We would travel regularly to all the different plantations to compare notes and stuff. So, I got on here to Kekaha, Līhuʻe … used to be KLOPP yeah … Kekaha, Līhuʻe, Oʻahu, Pioneer, and Puna. So we would fly around and check all that *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of stuff out. And it got us to go in to all the departments to see if we could somehow improve the paper flow. Then I got transferred to Līhuʻe Plantation. And Līhuʻe eventually hired me, because I worked there for … I don't know … five years or something like that … until …

So, Waimea Sugar remained in the Faye family hands. And H. P. did something way different than most of the other *Haole* [White, Caucasian] at the time … instead of setting it up as a trust, he set it up as a corporation. And so from small kid time, we all owned stock in this. We became very *kine* of corporate literate. While we *kine* of stayed within our family … siloed so to speak … still till today, there is political intrigue and stuff … who gets on the board … who's going to be chairman … and all that *kine* of stuff. The place never made any money. Nobody got rich off of it. But the family sold the Waimea Sugar Plantation operations to Kekaha. They kept the land. 1981 … I think it was … '80 or '81 I got hired by Kikiola Land Company, the successor company that owned the land underneath. It was like totally back water … *kine* of a piece of property. We had the old plantation camp, the remains of the mill, the remains of the dairy, which is now Meadow Gold running it. Anyway, I *kine* of inherited managing that job. I hired an architect planner friend of mine, this guys Bob Fox to update an old master plan of the property that my father had created back in the early 1960s … it's a 20-year-old plan. So, we got that thing updated, presented to a meeting, and basically the Board of Directors gave approval of it. Two weeks later, we got hit by a hurricane, the first one. ʻIwa … *kine* of bust everything up. But from there … one of the elements of that master plan was a plantation style hotel. Just a one-page, eight-and-a-half-by-eleven drawing of just the concept of some camp houses, but from there we grew Waimea Plantation Cottages … came out of that whole thing. And so, I ran that until the family got tired … until the next hurricane came. Then we had to rebuild it all over again. The family intrigue and politics, and all that … basically they wanted me out … so I cut a deal with them … I developed … we did all the work ourselves in-house. So *kine* of developed the construction … a maintainance department into a construction company. I said, "Sell me the construction company, give me a contract to do the maintenance for a couple of years, and lease me the land. Iʻll be out of your hair." So my wife and I formed, Kikiola Construction. We had Wranglers Steak House already. So from 1996 until 2018, I did Kikiola Construction. That was *kine* of fun because we got into structural moving along the way. Currently, we do most of the structural moving in the state. I have an office on the Big Island. Moved buidings over there. Got into working on old buildings so we became experts in single-wall construction and historic buildings … and … all that *kine* of stuff.

Then I got hired here … my predecessor, this guy, Landis Ignacio had run or had been involved with running this place for like 20 years. Kekaha Ag [Kekaha Agriculture Association] comes about … you know … when sugar went out in 2001 there abouts … one of the things I did when I was at Kikiola Land Company … we had several hundred acres of cane land … when the long sugar leases came up, I moved them from sugar into the corn, because they were paying way more money. I just thought it was *kine* of a cool thing to do. I *kine* a think … I had something to do with the establishment of the corn industry out here. ʻCause when the sugar went down it reminds me of … you know … the Oklahoma Sooners when they shot the gun, and everybody went out to grab their land claims? *Kine* of the same thing. These guys, on their own, partitioned the whole plantation up, and who was going to get what. Corteva, Pioneer, Syngenta, all people had leased land to … got them going … Wally Johnson, another guy up here … Robinsons from across the river. They just

kine of came across the river and said, "We're taking that cane," that was growing. This group of about five or six companies formed. They realized that the infrastucture was too much for any one company to handle. So they created Kekaha Ag Association to run a common intrastructure which involves all the roads, our drainage ditches, the irrigation systems, Kōkeʻe Ditch, Kekaha Ditch or Waimea Ditch … which ever you want to call it … the power plants … what else did we do … Pretty much that … we got that organized … got it … In the meantime, the state transferred the land from DLNR [Department of Land and Natural Resources] into the new Agribusiness Development Corp. Kekaha Ag Association, which is a non … it's a not-for-profit agricultural cooperative. And it's taxed by the IRS and the State. But anyway, they formed that, Landis was running it. There is a connection there too. Landis' grandfather, was my fathers's right hand field man. The Portuguese, they can either take the mother's name or the father's name right? So half of the kids, were Pavao and half of the kids took Ignacio name. Landis always had this dream to put hydro-electric plants along the Kōkeʻe Ditch. The Kitano hydro goes way back to the plantation days. I think my uncle probably started it, or it started when he was running the plantation I should say. It was *kine* [Hawaiian Pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of on the 'back burner'. Landis tried to do that. By the the time they tried to do that, or maybe before … the laws of the United States and the State of Hawaiʻi decided who had preference to water. The water rights is a pretty complicated situation. So, what happened was Kauai Electric or KIUC [Kauaʻi Island Utility Cooperative] did not like the idea of a competing power generation entity, so they teamed up with Hawaiian Homes who has a constitutional prior right to water. We got sued because they were wasting water. We're taking the same amount of water that were were taking like during the plantation Era, like 50 million gallons a day, and basically spreading it around this land down here, the Mānā Plains, and then pumping it down into the ocean. So Earthjustice with several local groups sued, said, "You are wasting water." The end result was the Waimea Watershed Agreement. That was negotiated with Landis. Landis had all that possibility of hydro basically pulled out from under him. My personal feeling is that pretty much killed him, because within a few months after that settlement agreement was signed, he just dropped dead. So, they looked for somebody, took them about six or eight months. I knew some of the management people over here because my construction company did a lot of work around here, and they said, "Mike we haven't seen your name as an applicant." I said, "Yeah, I know, I'm having too much fun doing what I'm doing." They said, "No, no, no, you should put your name in." So I did, and I got hired. I been here … for what … six years now, five and half years.

There were three main seed corn companies. This is all the GMO [Genetically Modified Organism] research *kine* of stuff that people don't like. Pioneer, Syngenta, and then BASF [Badische Anilin und Soda Fabrik]. For some reason BASF had an idea to do corn research. I guess there's lots of money in it. So they put this building up, designed specifically for what they wanted. In the seed corn, you have what they call 'regulated' seeds, and then 'non-regulated'. So, this building, what we see on this side, is pretty much duplicated on the other side. The other side was 'non-regulated' and this is the 'regulated' side. You can't mix them, and the Department of Agriculture really keeps a close eye on what happens. Anyway, they decided to get out of here, basically sold it for a song to a family owned, a large family owned seed company, Beck's … Beck's Superior Hybrids. Becks ran it for a few years, and they decided to get our of here. So I thought … I was licking my chops … and said, "Cool, I'm gonna get this building basically for free." I was willing for offer, or have Kekaha Ag offer … you know … couple million for it. As soon as they saw someone being interested in it, the price started going up and up. Eventually, people convinced the DOE [Department of Education] to buy it, because they were trying to do these ag. institutes on each of the islands. They were going to have to build them from scratch, they figured each campus was going to be 20 plus million, and could get this for a quarter of that. They bought it *kine* of for this ag institute, but at the same time they are trying to get the farm to school program going. Farm to table. But they couldn't really make it happend because of all the procurement issues … you know … with state run stuff. So the best thing they thought to do, was buy this, turn it over to us to develop and manage on their behalf. So that's what we're *kine* of doing. I'm in here under a use of facilities agreement. Which is *kine* of like, if you were to go sell brownies at a football game … you know … [laughter].

BASF is gone. Pioneer merged with DOW Chemical. I don't know why the corn companies are mixed up with chemical companies. I don't know. They merged and then they reorganized themselves. So Dow Chemical and Pioneer Chemical … I think … became DOW Chemical. The agro-science part got spun off as a wholly owned corporation called Corteva. Syngenta, across the street, huge company, got bought out by ChemChina. Those kinds of deals that to go through the United States something or other. They went, "No, no, no we cannot have Chinese owning a farm right next door to PMRF." The other syngenta property is up in Kunia, overlooking Pearl Harbor, next to Schofield Barracks. [Laughter.]

They said, "No, no, no you can't do that." Syngenta had to spin off the Hawai'i operations. Another large private family company, Hartung Brothers bought the Syngenta interest in Hawai'i. So, that's all we got left down here, is those two companies. They are way different than they were even 10 years ago. Syngenta across the road, is run by a young local guy, Josh Uyehara … who is between my two children in age. Apparently, I don't remember this, but he used to come to my house, to our house, was friend of my son's, and they used to play video games and stuff. I probably must have been yelling at you guys to get out and do something healthy, instead of these stupid video games. He's my boss now. [Laughter.] They are doing alfalfa, they do all kinds of stuff. Way different company. Corteva they are moving a lot of their stuff into the shadehouses, into the greenhouses. My construction company put up a whole pile of them in different locations. It's clear that they can do their agriculture research better within these very controlled environments. When the plant gets about that big (hand gesture), they know everything they need about it. They grow some out in the fields, but way smaller footprint. Then you see how they farm versus like somebody like Aloun, big vegetable grower. On O'ahu. They got squeezed out of O'ahu so they are here. We helped them get into … on Robinson property, which is like gold. Extremely good, Robinson's got a lot of water, higher lands which is way better than these plains out here. On the other side of the river. Aloun, they come in … for them it's production, money, *kala* [money] for …. They gotta make it work. The seed companies, this is R and D [research and development].

Mike and his family have been very supportive of PMRF throughout the years, and he describes the relationship and shares the story of the Flight of the Southern Cross:

For me, we have always been supportive of the base all the way back to when we became part of the United States … you know … because my grandfather was out here, and the sand dunes … he couldn't see any use for that. It was a military reserve coming into the United States. My uncle was running Kekaha Sugar or was it junior number two at the time, helps that Australlian pilot, Kingston-Smith or something like … Flight of the Southern Cross … out of PMRF … I don't know if you know that story.

Apparently, they were trying to around the world flight. They landed the plane here, and their last leg was from here down to Kwajalein or the island that Amelia Earhart was trying to hit, some island down there. So apparently, they were getting it ready at here plantation. Of course, *kōkua* [help] everything they could, fuel, food, and what ever. Apparently, the navigator liked to drink. They take off in the morning when it's cooler, so they can get more fuel into the airplane. They tried to find the navigator, and he's gone. They go up to Waimea Valley and he's in a bar at Waimea Valley. [Laughing.] They bring him down … "Get in the airplane". They take off on the dunes, and they built some *kine* of runway on the dunes. They took the plane off, then the crowd watching it, and it sinks below the dunes. I go, "Oh my God, the thing crashed." Struggle, struggle so close to there water, finally could get some elevation, and off it flew. They found their destination and so they didn't die or anything like that.

But it's been a close relationship. I remember going out there as a kid, when they were doing the missile training and things. They would invite the community out there, and they would do this flybys and stuff. My father-in-law just passed, was a young teenager during the WWII, and would pick up slop and stuff like that out there. Kind of fast forward, a lot of anit-military kind of people … I got the Kikiola Land Company … I was running Kikiola Land at the time … I got our Board

of Directors to write a public letter stating that we supported the base. We have always supported it. I have been in my Rotary Club for 40 something years. Back in the day, the Commanding Officer was always part of the Rotary, and got to be good friends with several of them. I generally have a nice pass to go out there. I don't have my CAC [Common Access Card] card anymore, but mines get renewed all the time, either for Kikiola Construction because we are out there doing work or because of now, our relationship. But on a larger thing, to me, it's good for the community because again it's financial stability, it gives good jobs for community people, high paying jobs, most of the positions are very stable. We fought hard because there was a period when they thought about shutting it down, and we worked hard to lobby that they keep it. I think the Base Commander at the time was a friend of mine. He explained to me what he was doing to reposition the base, and at that point … I think it was under Point Magu or something like that … and got it transferred to Pear Harbor, and that's been a really good situation. The base people intergrate with the community fairly well. I think, the *Haole* [Caucasian] sailors and all that love the local girls, the local girls love the *Haole* sailors … and vice versa. So you get a good ethnic mixing as well … if you wanna call it that. There has never been any real *pilikia* [trouble] between this community and base people. People wanting to fight. There is a relatively small presence … so, it's not like Schofield Barracks … compared to Wahiawa. Their small, and I think the Navy programs are good stewards of the land prety much. We actually don't like working on there because you got to go jump through too many hoops, because environmental stuff. We used to open up one of the ditches there, and it was like we just take one of our excavators, go on the base, and just do it. But you have to go through all these inspections. We can't go there because it's a *nēnē* [Hawaiian goose (*Nesochen sandvicensis*)] nesting area. But as stewards of the land, I think they're, in my opinion, their doing as good, if not better than anybody else would. When Inouye was around, a lot of pork came this way, that was good.

CHRISTINE FAYE

Christine Faye (Photo 20) is the curator of the Kauaʻi Museum and executive director of Hui o Laka, a nonprofit organization that manages the Kōkeʻe Museum and the historic Civilian Conservation Corps camp in Kōkeʻe State Park. Ms. Faye is a former chair of the Kauaʻi Historic Preservation Review Commission, a former member of the Hawaiʻi Historic Places Review Board, a former trustee of the Historic Hawaiʻi Foundation, and is affiliated with the Waimea Sugar Mill Museum. She is also a self-employed graphic artist and currently resides in Kekaha.



Photo 20. Christine Faye.

Hans Peter Faye, Ms. Faye's great-grandfather, was born in Norway and migrated to Hawai'i to work in the sugar industry, founding the H.P. Faye & Co. plantation in 1884. Ms. Faye shared the story of her family's establishment in Hawai'i.

> My grandfather was Lindsay Anton Faye, and my great-grandfather was Hans Peter Faye. So, my great-grandfather started at Mānā. It was the last piece of land that he could rent from his uncle — it was rocky, it was really bad land. And he was determined to make it on his own. He'd worked for a brother-in-law in Maui, at Pā'ia. And I think, two years growing for Gay and Robinson in Hanapēpē Valley. He just realized he was doing all this hard work, they were getting most of the money, and he said you've got to work for yourself this is crazy.
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> By then he had kind of a stake, so his uncle had been away. So, originally, he had come in 1880 to work with his uncle, but they'd gone on a trip because he'd leased most of his land. So, it takes a while to get from New York to here, and so he did not get the memo. He ended up on Maui for two years, two years with Gay and Robinson, and then he came and started at Mānā. He didn't have enough money, so his father — he'd come from a fairly well-to-do family, but there was a fire in Oslo, their warehouses burned down, ships and stuff. It was like a really big setback for the family. So, he asked his father if he could come and try to make his fortune here in Hawai'i. His father couldn't give him much, but he gave him some money and a suitcase full of clothing, basically. And there was one piece of clothing he had never worn — he said it was like a banker's suit. So, he wore that to Honolulu, and he went to Paul Isenberg, who was German and very successful at Līhu'e Plantation, and by then owned Kōloa, and was part owner of Hackfeld and Company, which eventually became AMFAC. And he walked in and asked to borrow money, because that's how you did sugar — you borrowed money, and when the crop came in and you got your money, then you paid off all your debt and started over again. To the very end, that is how sugar operations worked. He went in, I think he wanted to borrow $2,000, and I think Paul Isenberg looked him up and down and said, "Well, you know how to come and ask for money." He was very impressed. My great-grandfather said he never wore the suit again.
>
> So, with it he bought — I think there was a canoe landing, it must have been by Major's Bay — and he bought lumber and stuff like that. He built some houses and that's one of them [referring to structures at Waimea Plantation Cottages]. Then there's one by the swimming pool that we brought over from Mānā. It was next to a spring, and that's where he started. The lobby — the first part — is from then. The back part is the bedrooms that were added in the '30s. This is part of the bedrooms.
>
> He basically set himself up and got his sugarcane in the ground. It must not have been much, because back then, you did not have to have much. He got it in the ground, and then he rented the rice farmers — Paong Leong — his men to help him harvest. And I guess he did that for a number of years. He had two other Norwegians that worked with him, and he just kept growing like that. And I guess he didn't have enough water from the spring. And he hired a Hawaiian man who was a water finder. He didn't know if he believed it or not, but he said it was just the weirdest thing — the man found water. He apparently crawled around the ground with his ear to the ground, and that's how he found the water. There was nobody out there, there was just him and his two friends, and basically the village of Mānā…Yeah, [he] probably [found a] spring. That allowed him to expand his fields. So, pretty much for a while all he was doing was turning around, putting his money back into his operations, and increasing it.

Eventually Hans Peter Faye met his future wife, and the Faye family grew, as did the larger Mānā immigrant community.

> And then he met my great-grandmother, who was Scottish. They were in Kīlauea. Her father was a blacksmith for Kīlauea Sugar Plantation. They probably met here. There were a bunch of Norwegians in this area — a bunch of schoolteachers in Waimea who were Norwegian. So, it was kind of a little colony of them… the closet relative only or people they had nearby were basically the Knudsens at Waiawa. And HP — we call him HP because there's a lot of Hans-Peter Fayes

through each generation, so he was called HP or Hans. Well, he met his wife on Niʻihau at a house party. Because the steamship used to go around once a week, house parties generally lasted a week. You'd be dropped off and picked up on the next round. I guess it was Francis Sinclair's employee, one of the men who worked for HP earlier, E.K. Bull, who was managing the Niʻihau Ranch while the Francis Sinclair and his wife had gone to London to print her book with botanical illustrations — the first one on Hawaiian flora. They were gone for a while. And he'd asked permission if he could have some of his friends over, and they had a little house party. That's where HP met her. And apparently, he blazed a trail between Mānā and Kīlauea. He'd go for the weekend. The courtship lasted fairly short time because it was quite an effort. They say, you could see the dust of his galloping as he went through. Anyways, they were married and eventually had eight children, two of them born in Mānā. They socialized a lot with the Knudsen family. And they were pretty much the only people, and the kids became close because there were not that many people out here.

Ms. Faye's great-grandfather, grandfather, and father all served as plantation managers at Kekaha Sugar, which extended into Kōkeʻe.

Ms. Faye is also related to Valdemar Knudsen, Kauaʻi *konohiki* and sugar plantation pioneer.

My great-grandfather's uncle was Valdemar Knudsen, and he originally had the lease on the properties you're talking about, going from Kōkeʻe down to Kekaha, all the way to Miloliʻi. He ran cattle on the ranch, and when he decided to get into sugar, he talked a lot of his nephews from Norway into coming down, and my great-grandfather was one of them. So, my family's been here, starting at Mānā (the plains area on the west side of Kauaʻi). I'm the fourth generation; there's two more below me. My great-grandfather, my grandfather, and my father were all plantation managers at Kekaha Sugar, and Kōkeʻe is part of Kekaha Sugar.

As a child, Ms. Faye and her *ʻohana* maintained residences in all American Factors (later Amfac, Inc.) sugar plantations.

Ms. Faye described some of the cultural and landscape features near Valdemar Knudsen's residence near Kekaha.

He [Valdemar Knudsen] had a house at Waiawa. Past Kekaha, and if you look from the dump, it's directly back. And you can see there's like a "W" shape, and I think there was a *heiau* (place of worship) there — the one where the Menehune (legendary people, a race of small people) got paid for making the Menehune Ditch. I guess there's a famous proverb about them shouting so loudly it could be heard on Oʻahu.

The Knudsens, and later the Fayes, established residences at Kōkeʻe in Mānā's uplands in an area where a birdcatcher's grass house once stood.

But anyway, the Knudsens, when they acquired the property, there was only one house at Kōkeʻe that was a grass house — the birdcatchers used to live in it — in Hale Manu. And it had been rebuilt for people who had the lease before him. He went there, starting going up there, and the whole family started going up there. Not all the time, but they would go. My great-grandfather would be commuting because he had to stay down below, but the family would go up. And I think we finally leased part of it from the Knudsens and built a house in 1904 up there. They had already built wood buildings and things. In fact, the grass house was there until about 1900, or a version of the house, because you kind of rebuild it.

Ms. Faye's family and others spent summers at this upland retreat.

…my grandfather, when he was here at Kekaha, the family spent the summers at Kōkeʻe. The Knudsens, same thing — the next generation spent the summers at Kōkeʻe. Everybody, you know. And by then they had the leases, so you had a whole little summer community that came there.

The Mānā plain was quite hot compared to Kōkeʻe's cool climate.

Only the real small children would be inside. It was just so hot. In fact, the Knudsens used to call Hale Manu, Little Norway, because it had that coolness. But yeah, during the summer, it can be just as warm as down here. The nights cool off really nicely.

Kōkeʻe provided a respite from the heat of summer, though proved too cold to be comfortable in winter.

We went to Kōkeʻe a lot because he [Faye's father] was the caretaker. We got to do that *mauka* (toward the mountain) to *makai* (toward the ocean) thing, and it just makes so much sense to be up there in the summer. It's just so hot down here. None of us would ever dream of going up there in the middle of winter. Thanksgiving would be about the latest you might go up, but it was already really cold. Because it was just a camphouse — a big camphouse.

Ms. Faye recalled her family's imperturbable response when their Kōkeʻe retreat was damaged.

…our Kōkeʻe house — it fell off the hill in a windstorm, and they just rebuilt it where it landed.

At Kōkeʻe, the Faye family spent time at outdoor recreations such as hiking and blackberry-picking.

HKA: What did you guys do up at Kōkeʻe?

CF: Hike, walk around, whatever. Pick blackberries. Somebody had planted blackberries in their yard during the war, and when they came back five years later, the blackberries had covered over the house and gone into the forest. I remember in the '60s, my dad took us to pick *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) at this one place and there were blackberries everywhere. He said, "The state doesn't do anything about this. They're never going to be able to stop this."

HKA: And still yet?

CF: Yeah, because they didn't pull it when they should have. It's extremely invasive. It's got thorns, it shreds you, it sends out these big runners, it can claw its way up the bases of trees and fill the understory so things like *maile* don't grow. And if it does grow, it's hiding up in the trees, and you can't get at it.

Ms. Faye's family subsequently worked to preserve and protect the Mānā uplands through the establishment of parks and the removal of invasive species.

CF: Yeah, the family tradition was to go and spend the summers up there. Kekaha's very hot, and the reason you have leasehold properties up there from the state is because of the tradition the Knudsens started by spending the summers up there. Their lease was finished in 1907, so frantically before that lease expired, they made sure that the parks, like Puʻu Kapele Park and all the recreational areas, were established. They spent a lot of time with politicians trying to show them what could be done, that the area needed to be cared for. They spent a lot of time getting rid of the wild cattle and doing goat hunting and things like that to preserve the area.

HKA: Your *kupuna* (ancestors, elders) did a lot of work in this area, and a lot of *mālama* (caring for) of the parks and the lands they cared for.

CF: Well, that was in 1907, then it became part of the territorial system. I think Puʻu Kapele was the first territorial park, a major park up in the mountains. And then later there's a whole bunch of different game preserves and parks, they're all adjacent to each other. They

go from Polihale down to Nāpali, and then up to Kōkeʻe, and then up to Waiʻaleʻale, because Waiʻaleʻale is a conservation district, I believe.

Ms. Faye explained that, though she does not practice Native Hawaiian cultural protocols, she nevertheless announces herself to the space as a sign of respect when she visits.

HKA: So, did your ancestors, or do you practice any type of cultural practices? *Mālama ʻāina, hula* (Hawaiian dance) ….

CF: No, but you know, we moved around a lot, and this place always called to me. My favorite place has always been Kōkeʻe. And you know, there's things there. And so, you know, always that respect — basically the basic protocol of at least announcing you're there before you pick or do things of that nature.

HKA: Yeah. Because there's things there. That's a practice.

Ms. Faye also described time spent on the Mānā coast as a child, at Polihale.

You know, Polihale — we used to go out there with Army blankets, and the kids, we'd be there till way after dark. A bunch of different families and everything, do the campfire, and then they'd lay out the Army blanket, and we'd all be stacked in the blanket with one over us, just looking at the stars.

Ms. Faye noted some changes in the ecology of the coast over time. She shared that there used to be numerous Hawaiian bats at Polihale.

CF: …There used to be a whole bunch of bats out there.

HKA: Wow. What, these big bats?

CF: The Hawaiian bats.

HKA: The *ʻōpeʻapeʻa* (the Hawaiian hoary bat, *Lasiurus semotus*)? Tiny yeah?

CF: No, not that tiny — I have one in the museum. The wingspan is about this big [demonstrates], and it's like a little mouse. I mean, I see them all the time. People from other places that have bats, they'll see them before we will. They fly like moths. And they're about the size of some of the real big moths. They will see them, will be looking at the stars, and say, "There is a bat." But when you go up here where the two roads join, there's bats in there. They like hanging in the eucalyptus trees. Sometimes you've got to pick the exact time — when the birds go home and before it's totally pitch black, that's when the bats come out. And they're solitary, but when they come from the trees, they're all in a group. I've seen clouds of them leaving. And then I've had them follow me, follow my headlights. They're fast, I mean, they are amazing.

Ms. Faye also noted that the dunes in her youth were much less vegetated, and expressed concern for modern recreational usage of the dunes.

…when I was small, people were still going there and riding, you know. So now it's covered in vegetation when I saw it, which I don't know if it's good for dunes, but at least they keep people from — I mean, I don't know if you've ever been at Polihale during a three-day weekend. It's not just people. It's people driving all over the beach and over the dunes. They're just destroying everything. So, I don't go there anymore. It hurts to look at it. It hurts my heart.

In addition to these natural features, Ms. Faye recognized some unique cultural aspects of the Mānā landscape. Ms. Faye recognized Mānā's traditional association as a gathering space for spirits:

CF: But the whole area was famous for the way they did things, it was so different from any place else….all the houses faced a certain way — they had two doors and not one.

HKA: So that all the spirits can go through.

CF: Yeah. That's from Eric Knudsen's book about Valdemar, about his father.

She also mentioned an unusual method of growing *kalo* unique to Mānā.

> …the Hawaiians out there; they were growing taro on rafts. But they also had the reputation of never cooking their taro, they would trade it for taro already cooked, because they were famous fishermen. So, they would trade for taro. Especially down in Nāpali where you couldn't fish most of the year because it was too rough. There was always that.

And also described the Native Hawaiian upland trail network, which continues to be used into the modern era by the Fayes and others.

> The Knudsens had a trail that went up Huia and then went straight up, and then there was an old canoe road, because there were only two villages up in that area. One was Puʻu ʻŌpae [a place name in the uplands], and the other was at Puʻu Kapele at the horseshoe turn, and that was where they raised the *koa* (a large native Hawaiian tree, *Acacia koa*). Because our *koa* doesn't grow the same as on the other islands — it grows kind of twisty and turny, and it's lower. So, if you prune off all the extra growth, you can make it grow tall and straight for canoes. They would rough-shape the canoe, and bring it down on this trail to the village where it was going, and then finish the canoes there. But the road actually still exists. The plantation had it as a road, and my dad took us down it once. The Baldwins and Toulans who were descended from that branch of the Knudsen family — they rode horses up there until maybe 2000… we do have a photograph of it. They did actually bring wagons sometimes, and they would take the wheels off and drag the wagon up the steep parts and when it got up to the top, then put wheels back on.

Ms. Faye recounted details of Queen Emma's visits to Mānā, particularly her infamous journey through the Alakaʻi Swamp, a historical event honored by Hui O Laka.

CF: Yeah, actually, we used to run a festival. Hui O Laka used to do the Eō Emalani, you know, to honor Emalani's (Queen Emma) trip through the Alakaʻi Swamp.

HKA: Right. And she actually — I heard she was at Waiawa and she used to go to the hill and then go up with her horse.

CF: No, she went up on one occasion. She went on another occasion, I think with her husband when he was still alive; they landed at Polihale, and they cruised around that way. But this was a very particular journey she wanted to do, and not many people had been through the swamp at that time. A lot of the trails had been abandoned, so they had to — actually, Valdemar Knudsen found a guide to take her through. And it was only supposed to be a few people, and it turned into like a hundred people, and it was a nightmare.

HKA: I bet. Yeah.

CF: The guide said he'd never guide anybody again, no matter who it was. It was only supposed to be overnight. They were supposed to camp at Waineke, then take off from there, and go in and out. But they ended up having to spend the night in the swamp. Which talk about spooky.

HKA: Yeah, it is.

CF: It's bad enough when it gets all foggy and eerie. And she went in January.

HKA: Wow. Why did she choose that time?

CF: Because she happened to be here. She was apparently quite adventuresome.

Ms. Faye also described aspects of the plantation culture that developed in the Mānā region. She described the consolidation of various plantation operations at the turn of the century.

> And then HP, in 1898, there were several planters on the plain — and the Wilcoxs' and Isenbergs had gone in and purchased a mill for Kekaha — they were all operating independently, and then

they decided to put the whole thing together. At that time, they were also facing issues with water. They had been tapping into the springs and making artesian wells, with a lot of windmills drawing water up from the ground. And it started to get salty because freshwater floats on salt water. They drew it all up. It got to the point where the saltwater reached the roots of the cane and the cane wasn't producing well, in fact starting to die off. So, they had to figure out a way to bring water over there.

Ms. Faye also described the resourcefulness and innovativeness of the planters as they built their enterprises.

One of the things that people don't understand is they think the price of lumber and everything is very expensive now — it was always expensive. You didn't just throw away buildings. You would even dismantle them, store the boards to be recycled and reused. Not only is that something pretty much everybody did in Hawai‘i at that time, but the Norwegians were famous for moving buildings even in Norway. So, it's just that respect for the materials and the houses. That plantation, my God, until the end — when you're washing all that cane, you get all this dirt coming out. They would take all that dirt after it dried out and put it in fields that needed dirt, if there was too much sand or something. They were always improving, always trying to improve somehow, whether it was using science, they used everything they could to stay in business. It's hard work

Plantations, Ms. Faye shared, were complex and well-organized community institutions.

…back then the plantation managers were civil defense for their areas. They had a big responsibility. Now I'm really scared because you're seeing it on both Maui and O‘ahu — the county governments are not capable of doing what the plantation organization could do. Because you have almost a quasi-military operation when you have a sugar plantation. You've got all these divisions and people.

Ms. Faye maintains a strong connection the Mānā region today, citing its beautiful landscape, viewshed, and intangible value.

…we moved around a lot, and this place always called to me... But the landscape here is really awesome. It always surprises me. I always feel so lucky that I can drive up and down Kōke‘e, and I always try to do it at the best times of day — outside when the tourists are going up in the middle of the day. It's just always beautiful. You can say you've seen one sunset and you've seen them all, but that's not true. They're always awesome — the clouds and everything and being able to see Ni‘ihau.

Ms. Faye shared her opinion that PMRF has been a good steward of its coastal property, and expressed hope that the military could similarly assist in stewarding the lands at Kōke‘e, especially through trail maintenance and fencing.

I know there's a lot of politics between the state, PMRF, and the county, but I think that if PMRF wants to be — they do a really good job here at the base. I think they've done a lot of environmental things beyond what anybody else does. I mean, I think they have tried to be good stewards considering who they are. But I'd really like them to do it at Kōke‘e, too, especially maintaining the trails and things of that nature, because the state can't and will never do it. Right now, it really upsets me because I listen to the tourists. Those trails exist because of the plantation ditch system, or to go from one house to another, visiting friends that were all over the place. They were horse trails, not foot trails. In my day they became foot trails, but none of those trails are used anymore. And all these tourists are trying to use the same six trails, which haven't been maintained. That's why there's so many accidents. There needs to be better, more logical trail development, and maybe more effort. I'm all in favor of all the fencing they've been doing for conservation, and it would be nice if they did more.

CLISSON KUNANE AIPOALANI



Photo 21. Clisson Kunane Aipoalani.

Clisson Kunane Aipoalani (Photo 21) is the President of Na ʻOhana Papa O Mana, a NHO composed of members of the Kilauano and Aipoalani families who are lineal descendants of *iwi kūpuna* (Native Hawaiian human skeletal remains) previously identified at the PMRF. Pursuant to Section 3002(a)(2)(B) of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. § 3002), Na ʻOhana Papa O Mana maintains rights of possession and control over *iwi kūpuna* identified at the facility. Mr. Aipoalani's *kūpuna* were among the earliest settlers of the Mānā Plain, and he and his *ʻohana* continue to maintain deep-rooted traditional customs and practices associated with the project area.

He is able to recite his *moʻokūʻauhau* (genealogy) in Hawaiian to Kainoapuka, the first of his *kūpuna* to settle at Polihale after relocating from Kalalau Valley, and many of his *kūpuna* are also buried at Polihale. Mr. Aipoalani previously worked for both the Kekaha Sugar Company and PMRF.

Mr. Aipoalani shared his personal connections to the study area in his own words.

CKA: My *moʻokūʻauhau*, my connection here, is my *tūtū man* (grandfather or closely related male ancestor) Kainoapuka, who originated in the valleys of Kalalau. And then from there, he migrated. When he came out of Kalalau, he came to the west side, to Polihale, where they settled in that Polihale area, and his siblings went north shore, and they ended up in Waipā.

HKA: And so that is your *moʻokūʻauhau*, your *pīlina*, your connection, but you also have that *hana*, the work side.

CKA: Yeah, I actually started working for Kekaha Sugar Plantation. *Kala mai*, I forget what year I started because it was some time ago, and then from there, after the plantation closed, I went and worked at the Pacific Missile Range Facility in Mānā, and I retired from there, and that's where I am now.

HKA: What did you do there?

CKA: At Pacific Missile Range, I was the procurement agent, like a purchasing agent. I would order nuts and bolts for tank parts and airplane parts, from the very least to the very expensive items. Of course, being a government agency, all of this needed to be filled out properly — we needed to have bids. It was not something where we could just go out and buy. We needed to have transparency, so it was a matter of having items go out for bid, and then we would make the decision on purchase.

HKA: And you spent a lot of time at PMRF, as that was your job?

CKA: Yeah, I stayed out there for 17 years after the plantation's closure.

Mr. Aipoalani described the sanctity of Mānā's Polihale dune region, where his grandfather settled and where his own and others' relatives are buried.

CKA: Out there at the Polihale area, my grandfather settled in that area, so our family had their home there, and naturally when our *ʻohana* (family) *hala* (passed away), they were buried out there. So, we do maintain today a gravesite of our *kūpuna* (ancestors, elders) that are buried there, and we have, that we know of and that is documented, about 12 known burial sites of our *kūpuna* out there.

HKA: At Polihale?

CKA: At Polihale. However, just recently my nephew and others, working with DLNR (Department of Land and Natural Resources), went out there to survey the area, and they were able to find 42 marked graves, but unmarked, meaning not knowing who actually are buried there. They did a survey out in that area. That area is, to me, very sacred, and we are the caretakers of the area. Our family organization is Nā Papa o Mānā, and we are caretakers of the area of Polihale.

In their capacity as caretakers, Nā Papa o Mānā coordinates with the Navy to reinter *iwi kūpuna* when needed.

The Navy was very instrumental in providing us a place where we could reinter our *iwi* (bones) — those that show themselves, were unearthed due to wind, rain, the elements, and the sea. And whenever they would have a project where they needed to build an area, they would have that area surveyed and culturally inspected to see if there were any *iwi* out there. If there were, we were called upon — not only our *ʻohana*, but of course the Burial Council of Kauaʻi and Niʻihau. At the time I was working out there, I just happened to be a member of the Kauaʻi Burial Council. So, I was given the okay that whenever they did have any *iwi* or artifacts, we were there on base and were able to

make the decision, with the approval of the Kaua‘i Burial Council, of what should be done with any *iwi* or artifacts that were unearthed at the time.

Mr. Aipoalani explained that he trys to stay informed of any disturbances at PMRF out of desire to care for the land.

My mantra, that *‘ōlelo no‘eau*, is *E mālama ‘oe i ka ‘āina, e mālama ka ‘āina iā ‘oe.* [Take care of the land, the land takes care of you]. With that in mind, whatever projects or things happen out there at the base, I really try to keep abreast of what is happening out there, just in case they need to do any disturbance of the area. Because for me and why I say it is my mantra is because I was always taught and was told, this is where we came from — mother earth.

Mr. Aipoalani described the tension that sometimes arose between his dual perspectives as Native Hawaiian and as a PMRF employee, especially in the matter of burials.

I like to *mālama* (care for) the *‘āina* (land), make sure that it’s taken care of; and if it is not, if there are ways to remedy the situation of whatever project might be proposed that might disturb, we make sure it’s done in the right way, the *kanaka* (Hawaiian people) way — make sure that is done correctly. At one time when I was working at the base, I was working for the government, there were things done out there — they had provided my livelihood, put food on my table. So, sometimes the decision was push and pull, especially if it was something as delicate as our *iwi* concern. But I still said, I’m Hawaiian first and I do the *kanaka* thing first. If can, can. If no can, no can.

Mr. Aopoalani also shared his knowledge of *hula* practices in the Mānā region. Several members of his family were *hula* practioners.

My *tūtū man* Kainoapuka was also a *hula* instructor when he was living in Kalalau. He taught also school, the *keiki* (children) out there… My grandmother Kawehiwa Kaholoiki was taught the *hula* out there at the *hula pā* at Polihale. From there she came out, and then my mama, Margaret Kamala Kilauano, was taught the *hula* with her sister, Edna Kilauano. They both had a *hula hālau* (Hawaiian dance school) that they taught women of the plantation — we had *Kepanī* (Japanese), we had Portuguese, we had Filipino — they were the ones that taught the *hula* to those ladies who wanted to learn.

Mr. Aipoalani was not a *hula* dancer himself, but rather a musician for the *halau.*

CKA: Religious practices, I did not see. *Hula*, yes. Like I said when we were out there at Polihale camping, we would get together, not only for *kanikapila*, but we learned chants, we learned some of our Hawaiian numbers, we learned some things. That’s how I got to know the *hula*. But I was not a *hula* person.
HKA: Right.
CKA: I sang. I was the musician of the *hula*.

Mr. Aipoalani described the *hula* platform located at Polihale, and protocols associated with its use.

HKA: And Uncle, I remember one time, you talked about, I think, your *tūtū man* Kainoapuka — the *hula pā* was like different levels of the *hula*. Can you explain that?
CKA: Yes. The *hula pā* out there at Polihale was tiered into three different levels in between the valley. The first tier — from what I was told, this is where my *tūtū* lady Kawehiwa, when she was about 12 or 13 — she was taken there to be taught and to learn the *hula*. The entryway was along the line of a stone wall, and today you can see the stone wall remnants of the *hula pā*. To enter, you had to crawl through a little hole that was in the wall.
HKA: So, you had to *‘o‘opa* (hula step involving duck walk, crawl)?
CKA: Yeah, you had to *‘o‘opa*, and you had to *oli* (chant) your way in. The traditional protocol was to ask permission — you would *oli* from outside and wait for the *oli* from inside to see

if you were accepted to come in. Once they would respond to welcome you in, then you would *ʻoʻopa* all the way in. From what I was told by my mama, that first tier was where you learn the basics of the *hula*, whether it's rhythmic, whether you learn the steps or the motions. Once you learned the basics, you go to the next level where you learn the *ʻōlapa* (style of dancing), the *oli*, the words — you're graduating. After you get to that level, then you go to the third level where you *ʻūniki* (graduate). On the third level, just so happen, I was about seven, my mama took me up there to visit the *hula pā*, and that's when I saw the flat area with rocks where they would graduate and *ʻūniki*. What I understand is, Kauaʻi being the oldest island, my interpretation, what I was taught is the *hula* was taught here on the island. The *hula pā* here and the other one up there in Hāʻena. The *hula* was taught here. The *kumu* (teacher) from other islands would gather. That's why there's a point up there at Polihale where there's a *kuahu* (altar or platform). In front of the *kuahu* you could see people coming in from the west side from Niʻihau coming towards Polihale, and you could see people from the east side coming from Nāpali coming into Polihale. This is where they would come and gather, go up and learn the *hula*, then go back to the islands and teach the *hula*. That was what I was told.

HKA: Wow, that's pretty neat.

CKA: Yeah. I was very small, very young. I'll share a picture with Kaumaka — this is one of the times that we went up very recently, this is the *hula pā* on the very top of that area.

HKA: How did you get up there?

CKA: We traversed. Took us about three or four hours.

HKA: And this is at Polihale?

CKA: Yes, this is Polihale, right in between the valley on top, and there was a group of us that went. This is where we started. I will share this picture with you.

HKA: Yes, please. I really wish I could have been there….

HKA: …And that third level is high up, yeah?

CKA: Yeah, that's the third level. The walls are about eight feet, and then it's flat, maybe about 20 feet, and then another eight feet, you know, going up. The rocks are very loose now.

HKA: About 24 to 30 feet maybe? That's so interesting.

Mr. Aipoalani also described the gathering of plants from the Kōkeʻe uplands for use in *hula*, and expressed some concern about careless gathering practices today.

HKA: Wow. So, I imagine they gathered for their *hula* and things like that. Do you know if they gathered in Kōkeʻe?

CKA: They would, of course, they would use the flowers and fauna of Kōkeʻe, especially the *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) known on Kauaʻi, along with the *mokihana* (special native tree found only on Kauaʻi [*Pelea anisata*]). Their way of gathering was unique — they would make sure they would replant, or the way they gathered, like with *huki* (pick, pull) the *maile*, it was not cutting all the branches and bringing it down like how it's done today. It's very sad when the *hula hālau*, especially during Merrie Monarch season; not all, I would not say all, but those who would be in a hurry or rush, they would cut the *maile* branches and bring it down, and that would destroy our plants up there. I remember learning with two clothespins — you take it apart, you would *huki*, and you would strip it. They would do that and they would be doing an *oli* (chant) while stripping the *maile* to get it off the bark. My mom said it was a nice time to be with the *hālau*, a good time when they would all gather and do it as one, collectively. And when they were done, they would only take what they needed — don't overuse the place — and then make sure that the next time they went back to gather for lei making, they would go to a different area, let the area rest, let the area come back again, regenerate itself. They would go to Mākaha Ridge, they would go to different parts of Kōkeʻe, they would go inland. They had places where they would traverse and do it in a cycle so that it would give time for the land to heal and regenerate itself again.

HKA: And so *mokihana*, how do you pick the *mokihana*?

CKA: Very carefully. It was handpicked. And of course, people with sensitive skin, some got burned by it. But again, they did it in a cycle way.

Mr. Aipoalani also described some of the resources that were available on Mānā's coastline, such as seashells that were gathered for *lei*-making.

HKA: And your ancestors that danced, they made their own leis, yeah?
CKA: Yeah, they all needed to know how, and where to go gather the items for their leis, whether it'd be seashells, or flowers and fauna.

As a child, Mr. Aipoalani and his family would camp along the coastline seasonally to access various resources through fishing and gathering.

HKA: Interesting. And did they pick other things from the ocean side?
CKA: The ocean side out there at Polihale and Nohili, yeah. I remember going camping a lot out there. My grandfather, we used to just take *pa'akai* (salt) and our *poi* (pounded taro), and of course water. The rest they would gather — they would *kala'i* (gather) the *hā'uke'uke* (sea urchin [*Colobocentrotus atratus*]), the *pipipi* (little marine snail), the *'ōpihi* (limpet), the *loli waiwai* (sea cucumber). And of course, fishing — we would literally live off the *'āina*. We would gather our food from the ocean, bring our *pa'akai* and our *poi*, and have our camp. And when we went camp, we didn't camp one or two days — we stayed there for one or two weeks. It was gathering and doing family time out there.
HKA: And would you mostly go during the summer?
CKA: Yeah, during the summer months when the ocean was calm. It was a seasonal thing.

Mr. Aipoalani recalled the pleasures of this time spent along the Mānā coast.

HKA: What kind of memories do you have?
CKA: Oh, plenty memories, especially knowing we were going out to Barking Sands. We were excited because we would climb the mounds, and then we would get old cardboard boxes and slide down the dunes. That was a big thrill. Because those dunes, for us when we were small, were high. Every step you would take, maybe two steps down because the sand was soft. But we made it, and oh yeah, it was enjoyable. Not only that, we fished, and we *kanikapila* (played music) in the evening, and just to be with *'ohana*.

Mr. Aipoalani identified many varieties of fish harvested by his family.

HKA: Yes. Your *'ohana*, they were *lawai'a* (fishermen) too. So, you guys spent a lot of time on those shores — netting, diving. Was there a lot of *he'e* (octopus) out there?
CKA: Oh yeah, *he'e*, yes.
HKA: Reef fish too, was there a lot of reef fish?
CKA: Yeah, a lot of reef fish.
HKA: How about *akule* (big-eyed scad)?
CKA: *Akule*, I was just going to mention that. Like I said, when we were camping, that's what they would go fishing for.

HKA: So, that is reef fish you guys catch?
CKA: Yes, yes. Sometimes there is *moi* (threadfish [*Polydactylus sexfilis*]) inside [the net], yeah?
HKA: *Uhu* (parrot fish [*Scarus perspicillatus*]).
CKA: *'Ō'io* (bonefish or ladyfish [*Albula vulpes*]).
HKA: Yes.
CKA: And what is that stripe one, I forgot?
HKA: *Weke* (*Mullidae*, surmullets, or goatfish).

Mr. Aipolani also described the famed *pāhapaha o Polihale*, a variety of seaweed found in abundance at Polihale.

HKA: And even the *limu* (seaweed), because Polihale was known for that — the *pāhapaha* (sea lettuce [*Ulva fasciata* and *Monostroma oxyspermum*]) of Polihale.

CKA: *Pāhapaha o Polihale* (Sea lettuce of Polihale [the limu was so abundant and popular at Polihale that if you wore it as a lei, people know you have been to Polihale]). Yeah, and that *limu* — it's like sea lettuce but more elongated. You gather that, and then you dry it. And when you want to use it again, you just wet it and it'll come back to its form again.

HKA: Wow. And they say, like, you know you've been to Polihale because you get the *limu* on top of you, yeah?

CKA: Yeah, that's the saying.

He also identified some cultural features of the landscape, such as its identity as a gathering place and departure point for spirits.

HKA: That's so interesting. And Polihale is also known for *leina a ka ʻuhane* (leaping place for spirits to enter the nether world), yeah? You want to talk about that too?

CKA: Um, yeah. Out there at Polihale, there's a mountain ridge that has three rock formations that we were taught. The first rock formation is in the shape of a pyramid. [Note: CKA referenced photographs shared in a prior interview; the descriptions of the three rock formations and their associated names — Makaʻiʻo, Iesu Christo, and Hemolele — are documented fully in the August 12, 2025 interview with CKA.]

HKA: Can I use that from the other interview into this interview? Is that okay?

CKA: Yes. Okay then, you remember. Yeah.

HKA: And then, Uncle, the *ʻuhane* (spirit) used to come from all over, yeah?

CKA: I would think so.

HKA: Right. So, the thing is, that mountain was — *Hā*, the mountain over there where the *ʻuhane* used to travel and come down to Polihale. Oh, I can't think of it now. Is it Hā ʻeleʻele?

CKA: Hā ʻeleʻele, yeah, sounds familiar.

HKA: So, what I'm trying to figure out is, if these spirits came around Kōkeʻe, or you know, in Kalalau and up in that area, I'm trying to connect.

CKA: Connect. Yeah. Our *ʻohana* was free spirited, right? So, they can come from all over. This was their *ʻāina*, their place, so wherever they wanted to put their feet, they would go.

Mr. Aipoalani also identified the location of a birthing stone, inland of the Polihale shore.

CKA: Polihale. You also have, alongside of Polihale — remember, before, the whole area was all swamp, all waterways, so everybody was living alongside the mountainside. There is a birthing stone over there that I was taken to.

HKA: Where at Polihale?

CKA: No, in Mānā, in the district of Mānā. As you're going out to Polihale, you make a left to go in, but you're looking straight ahead — there's a nice big mountain directly across, and that's a *lele* (leaping place). Right on the left side is where this birthing rock is located, that my *tūtū* took us to. It's in the form almost like a saddle, almost like a chair, like a stir-up-type rock, where people sit down to give birth.

HKA: To give birth, wow!

CKA: And I can attest to that, because when we went out on a *huakaʻi* (journey, excursion) with my *tūtū* when she was taking us to show us places, my cousin — unbeknownst at the time — she didn't know what it was. She went up there and sat down and said, "Oh, this is so comfortable." My *tūtū* was busy telling other stories, and when she turned, she said, *Auē* (Oh dear, alas)," and saw my cousin sitting there, she just smiled. Not sure if you know Gwyneth Cardijon, but she was the mama of this girl that was sitting on it. And then my

tūtū turned to my cousin and she told them. And she said, "How can, tūtū, no can" — *Auē*, and it happened. Anyway, it's just one of those things.

Mr. Aipoalani also described how traditional transportation networks, including upland trails and canoe routes, connected locations in the Mānā region and to the Nāpali coast.

I have stories from my grandma, there were times when the ocean would be rough, so he couldn't traverse into Kalalau through the ocean. He had to go up to Kōkeʻe. There is a mountain ridge out there at Kalalau, on the left side of the mountain, where he would tie a rope and lower himself down to the valley so that he could teach. And when the ocean was calm enough, the *kūpuna* would bring him back to Polihale via canoe. Otherwise, he had to climb up again on the *pali* (cliff), come out of Kōkeʻe, and then come back home.

Although Mr. Aipoalani grew up perpetuating many kinds of Native Hawaiian cultural practices and knowledge, he shared that he did not grow up learning *ʻōlelo* (Hawaiian language).

What I remember is, what was nice about it is, we would always have a *kupuna* who would take care of the *keiki*, because our *kupuna* would be by themselves and they would *walaʻau* (talk story, converse). I am sad to say that at that time, the *ʻōlelo* (Hawaiian language) was not spoken. Our *kūpuna*, my mom's era, were the only ones that could speak it, and when we tried to learn, they didn't forbid us to learn, but they really didn't teach us, because they would say, "*ʻAʻole* (no), English is what you need to learn, because this is what it is today." That was back during the '40s, and we did not get to really learn the Hawaiian, our mother tongue, our language. No can help at the time; it was a different time. Regretting is not the word — it's just that if I want to, today you can go and learn. But for me, I think my time is over.

Mr. Aipoalani shared a few concerns related to cultural practices and places at Mānā. Mr. Aipoalani is concerned for the *pā hula* at Polihale, both in terms of visitors acting respectfully and in terms of invasive vegetation.

Yeah, and so this group is *Mālama o Polihale* (Care for Polihale). It's a separate group from our *ʻohana*, but there are people from our *ʻohana* in this group that went up there. Their idea is wanting to clear the area again. For me, it's good, it's like the Hui Laka, how they take care, that is what they want to do here. But on the bottom, I was telling them, leave it as is, because at one time we did clear the area on the bottom part, and people thought it was for camping. They camped in there, and it was very *pilau* (disgusting, dirty) inside. I mean, I'm talking about people using it as a bathroom and things. So yeah, I like the idea, but it's a lot of work — *kiawe* (Algaroba tree [*Prosopis pallida*]). It's plenty work. I don't think I'll see that in my lifetime, but at least I got to see it again.

Mr. Aipoalani also stated that the presence of PMRF limits community ability to fish along the coast.

CKA: And today, because of the situation with the base having security, our fishing is not as plentiful as before. And a lot of our *lawaiʻa* (fisherman) *kūpuna* passed on, so not too many fishermen out there now. Not a lot of our young people have picked that up. But there's still some of us that go out there, not only to *kaulāʻi* [fish with a line] but to go and *hukilau* (to fish, pull seine net).

HKA: You guys go *hukilau*?

CKA: Not like before though. Now, it's just go, lay your net, gather the net, put it on the boat, and come home, and then *hukilau*, not on the ocean. Everybody go and clean net. It's *ʻohana*, yeah — everyone goes and cleans it.

Even so, Mr. Aipoalani shared his opinion that PMRF is not overly restrictive, and that the base may actually offer fish populations some protection from over-fishing. He also reiterated that continued access to cultural sites and natural resources is a priority.

CKA: Yes, yes, yes. And so, as I was saying, because the place is secured, it's actually a blessing in disguise that the Navy is there to do the security, only in the sense that this is where our fish can multiply and replenish — they can go out to the north side and come back to the west side and rejuvenate. The breeding grounds are kept, and we're not out there taking more than we need, as far as fishing is concerned, the big boats and stuff. That is one good point that I see is happening, the fish can multiply and replenish out there, and they come back a lot. And not only that, the *hā'uke'uke* out there, like brother IZ sang the song, fat.

HKA: Wow, Uncle, your guys' *hā'uke'uke* is fat.

CKA: Yeah, yeah. Nice orange.

HKA: And that's around the summertime too, right? That's when the *wāna* (sea urchin, *Echinometra mathaei*) is fat too.

CKA: The *'ōpihi*, the — you know, those *'ōpihi* shells for necklaces — big, big. I mean, it's nice. And like I said, with the Navy out there, they still allow people to go in for gathering. You can go in and get a pass. The only restriction is when they have operations, but other than that — and that's one of the main things that I was very adamant about — making sure that the fishing rights and the rights of our Native people is not prohibited.

HKA: We have access.

CKA: We have access. The situation where they have the lease, and I can see them putting out their dos and don'ts — not only security for the base, but security for us as Native people to the area to go out and not interfere in the relationship of their operations, yet don't interfere in our relationship of our gathering. It's been working, to me from what I've seen from my time out there. Working there and making sure these things could be, I've never seen anyone turned away — if there's no operation, they're not going to say, no, you cannot go. They say, yes, you can go.

HKA: Or maybe, you cannot go now, but when operations are done, you can come back.

CKA: Yes. The access is the main thing. Because it's *wahi pana* (cultural site) — it's places that we've been, that our *kupuna* have been. It's where our *kupuna* lies even today.

Ultimately, Mr. Aipoalani shared that he is comfortable with the presence of the PMRF in its current form, but would have reservations about any changes to the installation and its operations.

From my perspective, I stick to my mantra — take care of the land, the land takes care of us. For the lease part, from what I've experienced, I've never had a problem, meaning I've never heard or have been called out to go address something happening out there that wasn't supposed to be happening. The lease itself hasn't affected me personally, as far as having it renewed. But with the change in government today and their thinking and their priorities, is that going to change what I am used to from back in the '40s what I had learned, and what I was comfortable with? Will the government be doing exactly what they were doing that I was comfortable with? But with today's climate and the uncertainty, I do not know what their intentions will be. So, if it still remains the same as back in the day, I have no problem. But if they have new intentions and new ideas that might affect the land, 'a'ole for me. I would not be comfortable. But right now, today, I can sit here and tell you I am if it still is the same, and it still stays in the guidelines of what was already established.

DAYNETTE DEE MORIKAWA



Photo 22. Daynette Dee Morikawa.

Dee Morikawa (Photo 22) represents House District 17 (Niʻihau; portions of ʻŌmaʻo, Kōloa, Poʻipū, Lāwaʻi, Kalāheo, ʻEleʻele, Hanapēpē, Kaawanui Village, Pākalā Village, Waimea, and Kekaha) in the Hawaiʻi State Legislature and has served as House Majority Floor Leader since 2018. She worked as a personnel specialist with the County of Kauaʻi Department of Parks and Recreation from 1975 to 2010 and is a former Hawaiʻi Government Employees Association (HGEA) State Board director and Unit 13 negotiator and director. She attended Kapaʻa High School and Kahuku High School and graduated from Kauaʻi Community College with an Associate of Science degree in accounting.

Representative Morikawa, along with Aunty Aletha Kāohi and other community members, raised funds to erect a statue of Kaumualiʻi at the Pāʻulaʻula State Historic Site (Russian Fort Elizabeth).

Though not born or raised on Kauaʻi, Ms. Morikawa's moved to the island in as an adult to join her mother, at which time she began visiting Mānā for recreational fishing.

> I used PMRF numerous times for fishing, mostly for fishing because it was really the best fishing spot that I knew of… We used to go camping at Majors Bay, Kinikini, of course, Polihale.

Her connection to the Mānā area deepened with her marriage to a man from Waimea, and continued through her role in political office.

> I moved to Kauaʻi in 1974 to live with my mom, so I really don't have a connection to the island of Kauaʻi in that sense. But I married a westside boy who lived in Waimea, and after working for 36 years with county government, I decided to run for political office, which was the representative for district — at the time district 16, now 17. And I won my first election, so ever since 2010, 2011 would be when I started to serve. My affiliation with PMRF began in the political sense because they are in my district.

Ms. Morikawa has primarily engaged with the Mānā region through its natural and recreational resources. She has frequented the coast for camping.

> HKA: And did you guys' camp in the summertime?
> DSM: Mm-hmm, at PMRF. Almost every week.
> HKA: Usually in the summer, though, yeah?
> DSM: Yeah, and that was before 9/11. We would go whenever we could because as long as you showed your ID, you could go and park, drive up to your spot and fish.

Ms. Morikawa also described fishing along the Mānā coast, driving on the beach to reach favorable spots.

> HKA: What kind of fishing did you guys do?
> DSM: Oh, mostly *moi* (threadfish [*Polydactylus sexfilis*]), because the *moi* was really plentiful back then. But *pāpio* (juvenile jack fish), *ʻōʻīo* (bonefish [*Albula vulpes*]). Oh, yeah, line fishing, yeah. Dunking more than anything. But you could catch anything down there. You could catch *kala* (surgeon or unicorn fish [*Naso unicornis*]) from the shore. Of course, *nēnue* (rudderfish [*Kyphosus spp.*]). The fish were just plentiful down there. And it's better now because it's like a sanctuary, because not too many people can access the area and drive on the beach like we used to.
> HKA: Yeah, you guys drive on the beach?
> DSM: Yes. Although it's illegal, we still do, because if you look at the beaches on Kauaʻi, they're just miles of beach. And if you were to walk, you wouldn't be able to get to areas to fish. So, people drive. And so far, they haven't really enforced illegal driving. But that's what we do.

Ms. Morikawa also spent time at Mānā to observe sugar plantation operations, as well as accompanying her husband on hunting excursions.

> HKA: Okay. And then, were you around during the time of the sugar plantations?
> DSM: No. Well, I was there at the end of the Kekaha sugar plantation, because my husband and I used to go and watch them wash the cane some nights. It was fun to watch the thing go up, the truck unload. But that's the only part I remember about the sugar cane industry. And of course, we would drive through the sugar cane roads because my husband was a hunter. And to get to Polihale, you'd have beautiful, thriving sugar cane in that area. The Mānā Plains was a terrific growing area.

Ms. Morikawa also described utilizing various upland resources from the Kōkeʻe region, including plants, fruits, and freshwater fish.

HKA: And what do you guys do up at Kōkeʻe?
DSM: When I go, I love to make *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) *lei* (garland). So, I'm a gatherer — *maile* gatherer, *mokihana* (special native tree found only on Kauaʻi [*Pelea anisate*]). I make *lei* for special occasions with permits. And there are times when you go up to pick the plums during plum season.
HKA: What kind of plums are those?
DSM: Oh, the regular — well, they call it Kōkeʻe plums, but they're small plums.
HKA: The purple ones?
DSM: Yeah, like the ones you buy in the market, but they're sweeter, but they're small. They don't come really big. So yeah, there's a lot of trees up there. So, we do a lot of that, and peaches, too.
HKA: Oh, they have peaches at Kōkeʻe?
DSM: Yeah, you pick the small ones and you pickle them. Because they don't come big like the peaches you imagine in the stores.
HKA: Wow.
DSM: And then trout fishing.
HKA: And they have plenty trout up there.
DSM: Yes. They raise the trout — I think they hatch the eggs here on Oʻahu, then they send them to Kōkeʻe, release them in the reservoir, Puʻu Lua Reservoir, and that's where they grow. And people, when the season comes around, you can go into the reservoir and fish. But the fish have leaked out into the streams in other areas of Kōkeʻe, too.

Ms. Morikawa was not aware of specific cultural sites located at Kōkeʻe, but shared her perspective that the landscape itself is sacred, and described her protocol of acknowledging the land when she visits Kōkeʻe to gather resources.

HKA: How about anything at Kōkeʻe? Any type of sites?
DSM: No. Everything at Kōkeʻe could be sacred, so you just got to say your "excuse me" and then — yeah.
HKA: Yeah. Do you do protocols when you guys go gather?
DSM: I don't do that formally, but every now and then I'll talk to myself — I mean, I'm talking to the forest, but I'm alone. It just comes with the Hawaiian style, yeah.

Ms. Morikawa is also aware of the presence of *iwi kupuna* burials along the coast, as well as the families working to care for them.

HKA: Any other type of Hawaiian cultural activities?
DSM: No, I just knew people who we tried to help them preserve their — what do you call that — the bones of their ancestors, *iwi kūpuna* (ancestral bones). And along PMRF, Polihale, in that area.
HKA: You mean like the Aipoalani family?
DSM: Yes, yes.
HKA: And the Kilauano.
DSM: Yes, so I worked with them briefly — and DLNR.

Ms. Morikawa expressed her support for the presence of PMRF, and her praise for PMRF leadership.

Only that I think PMRF has — ever since I have known PMRF — always come in with good leaders. Very, very *pono* (correct, righteous, balanced), sensitive to the culture, to the community. They listen. And I think because of the relationship, time after time — they change like every three years or so, a new captain comes in — but so far, even this recent younger captain, he is respectful of — Kaulana and Thomas Nizo, as young as he is, he listens and he does follow the protocol, which I'm very, very happy for, because if you had somebody that just wanted to be the one and not listen to anybody, you would never get along in the community. But in that sense, PMRF has been the best neighbor. That's why I will always defend them when it comes to any legislation or policy that targets military areas. And I have made it clear here that I will not get involved in anything that will hurt PMRF.

KEITH POMEROY ROBINSON

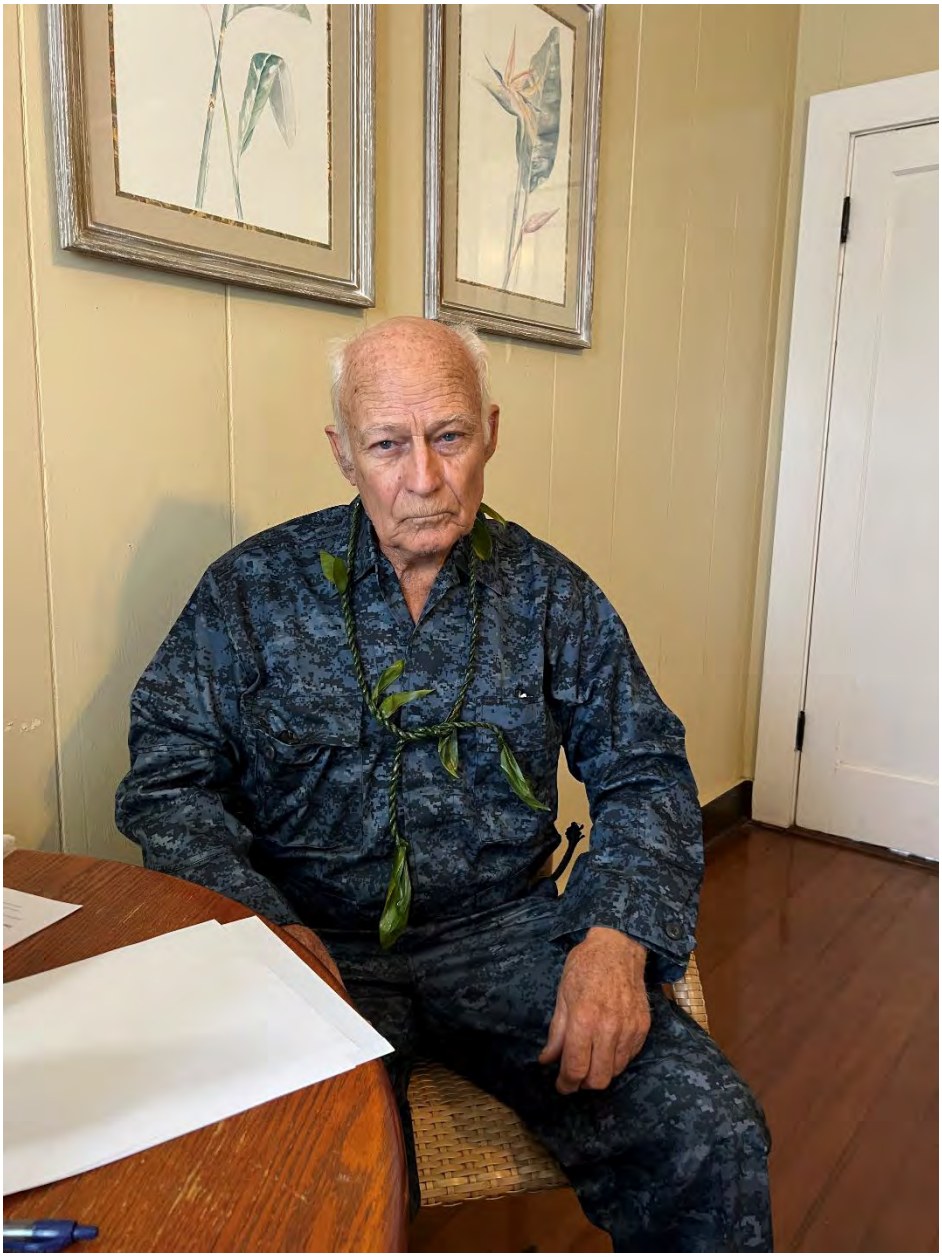


Photo 23. Keith Pomeroy Robinson.

Keith Robinson (Photo 23) is a member of the Robinson family, the largest private landowner on Kauaʻi and owner of the island of Niʻihau. His *ʻohana* has been on Kauaʻi for approximately 160 years. He was raised in Mākaweli in West Kauaʻi and learned to speak Hawaiian at a young age.

Mr. Robinson described his familial connection to the Mānā region.

HKA: And how about *moʻokūʻauhau*, your genealogy? Who were your grandparents?
KPR: Aubrey Robinson and his wife, Alice Gay Robinson. Those are my grandparents on my

father's side.

HKA: Is that the same family as the Gay and Robinson map? I've seen that map before.

KPR: Aubrey Robinson, together with his cousin Francis Gay, founded Gay and Robinson. There was later a peaceful split, and Francis Gay ultimately returned to England and ultimately died on the Channel Island of Jersey, if I recall correctly, which is a few miles off the French coast.

HKA: And your *ʻohana* (family) has been here, living here, for a long time? Generations?

KPR: Going on about 160 years.

Mr. Robinson rarely visited the Nohili/Polihale area as a child, but visited those locations more frequently as an adult.

HKA: Were you around in those areas as a child growing up?

KPR: Once in a great while we would go to Polihale or Nohili Sand Dunes, but it was very rare —if dad had some time for an evening picnic or something, which he almost never did, he was a hard worker. So, I know a little bit about the place. And later in life, as I grew up and became aware of the endangered species situation, I traipsed over a lot of those sand dunes myself and checked them out.

Mr. Robinson does not feel strongly connected to PMRF or the Kōkeʻe Observatory, but has lifelong experience of Kauaʻi and Niʻihau more broadly.

Well, I don't have a huge connection with PMRF or with the Kōkeʻe Observatory. I was born and raised here, spent all my life here except for nine years of high school and college and army on the mainland, but other than that, I've been around here on Kauaʻi and Niʻihau all my life and have a certain amount of knowledge as a result. I run an endangered species wildlife reserve up on the southwestern mountains of Kauaʻi and that's mostly where my interest is: native Hawaiian endangered species.

Mr. Robinson described the famed inland waterways of Mānā, formerly used as a Native Hawaiian transportation network before the wetlands were drained.

KPR: Well, when the first missionaries arrived here, if they wanted to go from Waimea to Mānā — which is a tiny hamlet way out in the middle of nowhere toward Polihale — they didn't go trudging around for hours on hot loose sand dunes. They took a canoe along the inland waterway. This whole place was a beautiful swamp. And Hawaiian swamps, a lot of people think of swamps as dismal places where people and cows get sucked in and never get seen again. Hawaiian swamps are different they had all kinds of rare plants and trees and birds and stuff like that. The last of this swamp was not drained until about the 1890s, there was still a remnant. The missionaries and the ancient Hawaiians often found it easier to take a canoe from here to Mānā than it was to trudge around on that long hot loose sand and coastal sand dunes. But when the swamp was drained, an awful lot of things went wrong.

HKA: So that was a main transportation route, that waterway?

KPR: I wouldn't say it was the main transportation, but it was a very commonly used one, yes. From about over here to somewhere around where the housing is now or the entrance to KVMH (Kauaʻi Veterans Memorial Hospital), all the way out to Mānā and Polihale, there was an inland waterway that ran through the swamp.

Mr. Robinson also shared his own experience fishing along the Mānā coast.

KPR: I've fished for *akule* (type of fish, big-eyed or goggle-eyed scad [*Trachurops crumenophthalmus*]) and *ʻōpelu* (type of fish, mackerel scad [*Decapterus pinnulatus* and *D. maruadsi*]), and everybody does that. I've also fished for squid and for tuna.

HKA: Do you surround the *akule* and *ʻōpelu*?

KPR: No. I do a hand line —I tied my own hand lines and made my own fishhooks and handlines, and my own little flies for the *akule* or the *ʻōpelu*. The *akule* or the *ʻōpelu* thinks it's some little crustacean, shrimp, or something.

HKA: You dive, catch *heʻe* or octopus?

KPR: No. Those are waiting around on the reef; I was at sea. Most of my fishing was done in waters between 25 fathoms and 1,000 fathoms —6,000 feet of water. At night the critters come up from the depths —after the sun goes down, a lot of wildlife comes up out of the depths and decides to have an orgy until the sun rises or until the sky gets light in the east, and then they go back down to 2,500 feet or beyond. In the meantime, if you're up there, you can see all kinds of interesting things.

During one outing off the coast of Polihale, Mr. Robinson had a dangerous experience, becoming entangled in his line.

> I had a kind of a spooky experience one time, yes. I had a boat — I was one of the three men in the factory that built the boat, I was a fiberglass man in those days. I was one of the three men that built it. I knew that there was shallow water off of Polihale and off of the start of the cliff country, and I decided to go out and try for *uku* (type of fish, snapper [*Aprion virescens*]) out there early one morning, just after sunrise. I had spent the night drifting around offshore catching practically nothing. I sent down a line, unfortunately the line had a stainless-steel leader on it — a big mistake. Something big seized the line. I was kind of careless about the line, and which any veteran fisherman will tell you to always be careful about your lines, especially the strong lines, be very careful or you will tangle up in them and get dragged overboard. There was a groundswell running, about a six- or eight-foot groundswell coming in from the north. I was in a ten-ton boat, and the line wrapped itself around my hand as it ran overboard, while I was hanging on to the superstructure on the roof of the boat. It must have been a shark — it was a steady, very powerful pull. Sharks have a very powerful and steady pull, tuna has a powerful pull, but it's a pulsing pull. So, this had to be a big shark. And between that shark and myself, we got that boat turned right around. Luckily, I clung to the boat and never got pulled overboard. After a while the stainless-steel leader, which was a 150-pound test leader, broke. I was very relieved —and so was the shark, I'm sure. Not too long after that I decided there wasn't much to be had there, cranked up the boat, and came home.

Mr. Robinson holds a Bachelor of Science degree in agronomy and ranch management from University of California, Davis. He is an avid rancher and horticulturalist and operates private plant and wildlife preserves on Kauaʻi and Niʻihau. He is especially passionate about preserving endangered plant species on Kauaʻi, particularly those predating human contact. He is highly knowledgeable about plant life at PMRF, Kōkeʻe, and across the broader Kauaʻi *mokupuni*, and shared many observations on the topic during his interview.

Mr. Robinson described the nature of his plant conservation work.

> Native Hawaiian plants and trees. They divide into, depending on who tells the story, there are between 2,200 and 2,800 native species of Hawaiian plants and trees that are found nowhere else in the world, only on the Hawaiian Islands. This number further subdivides into as many as six subspecies of each species, and some of those subspecies are very distinctive looking. Those things can be roughly subdivided into three categories. One-third, approximately 600 to 800 species —this is very approximate — are holding their own and in no danger of any kind. Another third, another 600 to 800 species — again I am being very approximate here, very vague — are declining steadily and relentlessly but are not yet rare enough to be classified as endangered. And then finally, there's the 600 or 800 species that I work with, which are down to the last one, two, ten, one hundred — that kind of way —and scratching down the wall of extinction and leaving fingernail marks as they go. So, that's basically the work that I do. When I began my work back in the 1970s and 1980s, native Hawaiian species and varieties were going extinct at an average rate of one every nine

months. In the years since then, that extinction rate has accelerated. So, that's where it is. is. I try to bring a few into my endangered species reserve and put them on life support for as long as I can.

Mr. Robinson further explained that he is mostly interested in plants present in Hawai‘i prior to human arrival.

I don't go for ethnobotanicals much. I'm primarily interested in species that were here before the first Polynesians ever saw the place. Most of the ones that really need the help now. The so-called canoe species — the species that came with the Polynesians, and there are about 34 of those species that came in the long canoes — are not my primary interest. My primary interest is stuff that was here from the time the islands came out of the ocean.

Mr. Robinson described a plant species, *‘ohai*, which was formerly plentiful in the Mānā wetlands near the north gate of PMRF.

Sesbania tomentosa [or *‘ohai*] —there was a yellow or orange flower variety of *Sesbania tomentosa* that used to grow in the area. There was a small pond out near the north gate of PMRF, and the *sesbania* persisted in that pond in semi-swampy conditions for quite a few years, around the 1960s or 1970s. Then it gradually died out. The state government came and decided to improve the pond with bulldozers. If my memory serves me correctly, there was a man named Tom Telfer, with whom I had a number of professional disagreements. He wanted to improve the pond to make it slightly larger for waterfowl. I thought that since the edges of the pond were the last habitat of some of the swamp species, it should be left alone. But he got the bulldozers and improved the pond, and that was the end of the *sesbania* and a couple of other species. Ironically, the waterfowl weren't much interested in using the pond after that anyway. More recently there have been indications that some *sesbania* are still around that pond or in the waterway that runs alongside the highway — I haven't had the time to do a comprehensive check, but they might still be there. There's also a non-native species of *sesbania* that has become naturalized in there it's about the same height, and the flowers are about the same size, instead of being yellowish-orange to red-orange, those flowers are yellow and purple, the non-native *Sesbania, Sesbania sesbans*, if I recall correctly.

Mr. Robinson shared that there are small patches of endangered plants in the Kōke‘e uplands.

HKA: So, there are still a lot of endangered plants up in Kōke‘e, yeah?
KPR: If you know where to look, yes. But a lot of these species now are up there are, but they are up there in very thin numbers and little colonies — one colony here, another colony half a mile over, another colony two miles beyond. You've got to know where to look.

Mr. Robinson described a native sunflower present at Kōke‘e.

Well, there's a million kind of plants in Kōke‘e. Kōke‘e has a kind of native sunflower, *Bidens cosmoides* — very pretty thing. It grows up about five or six feet tall, but usually about half that size, but can grow five or six feet tall, [KPR gestures] around this big around. Very pretty little thing, but very rare now. You've got to know exactly where to go. It's almost gone — eaten readily by grazing animals.

Mr. Robinson also shared a story about *hunakai*, a beach morning glory found on the Mānā coast, which unexpectedly benefited from the introduction of nitrogenous compounds to the soil after a rocket misfired and spilled rocket fuel on the terrain.

Hunakai (type of beach morning glory plant with white flowers [*Ipomea stolonifera*; synonym, *I. acetosaefolia*]), *Ipomea stolonifera* is in the sweet potato family and morning glory family. It is a sand morning glory…The old Hawaiians called it *hunakai — huna* is to hide, and *kai* is saltwater, the ocean — the thing that hides by the saltwater. It is found on sand dunes. The species' name is *stolonifera* because it probably propagates by stolons — stems (vines) that grow underground —

especially in loose sand. Pretty soon the leaf sprouts out. Along with the leaves a flower bud comes up, or if a flower bud sets seeds, you get a seedpod; and 90% of the plant is underground. You only see the flowers, the seed pods, and the leaves, that is all that you see — *hunakai*, the thing that hides by the ocean. There had been some of this right there by the Terrier site. And it got massively fertilized by the rocket fuel. It was the finest stand of *hunakai* I've ever seen in my entire life — the place was wall-to-wall *hunakai.* It's a little morning glory, it's white with a yellow center. I looked around and wow, I've never seen something like this. And it was just wall to wall *hunakai* everywhere that had come out of the sand dunes. And there were another couple of species of native plants too. But anyway, we walked over by where the Terrier had taken off, and two feet away from the rocket blast site, where the Terrier had been, there was healthy *ʻakoko* (an endemic tree shrub [*Euphorbia* spp.]), *Euphorbia celastroides*, nice big bushes. The stuff that hadn't been actually trimmed, physically trimmed, or scorched off by the rocket blast, two feet away was all perfectly healthy. There was a lot of native stuff in that place, a lot of native stuff.

The XO was following me around — He asked, "Keith what do you recommend that we do?" …I said, "I recommend that you crash a rocket on this place once every two years." [KPR laughing]. The horrified look on that man's face was something to see. Oh, gee, it was comical. He said, "You mean it's not that bad?" I said, "No, this is great — it's all coming up native stuff. The rocket blast burned up all the non-native stuff, and the native stuff is all coming up."

Mr. Robinson expressed a number of concerns regarding dangers to Kauaʻi's plant life. He identified introduced fauna as a threat, sharing a story about the introduction of deer to Kauaʻi.

We were at the party, Ralph Daehler, who was the district forester…Ralph Daehler came to my father, he was at that big social event, he said, "Oh by the way Lester, we're thinking of bringing deer into Kauaʻi and turning them loose so the hunters will have something else to shoot at besides goats." Dad thought it was a very bad idea, and Bruce and I thought it was a very bad idea. Ralph said, "You guys have a very good reputation for not allowing poaching and destruction on your property, on Gay and Robinson land. Could we turn the deer loose on Gay and Robinson land?" Dad was standing right there, and Bruce and I were standing behind just behind him, echelon behind him, like a couple of maliciously grinning idiots. It was well known every summer when we came home from high school or college, we would go out in the mountains, and we would spend that summer with our gray-old daddy; and spend our summer killing goats. In an average summer we would kill about 125 goats, and this was just on our spare time on the weekend, when we weren't breaking in horses or doing work. So, Ralph asked, "Can we turn the deer loose on G and R lands?" Dad looked at him, and he smiled gently and said he, "No, I don't think the deer would really appreciate the climate there." And Bruce and I were standing behind him, you know, [KPR letting out a cynical laugh] nyuk, nyuk, nyuk. Ralph got a sickly smile on his face and said, "Oh, I see, we'll find some other place." So, they found some other place and they turned the deer loose right in the middle of the headwaters of Mahanaloa and Paʻaiki Valley, which has some of the rarest and most highly endangered species on Kauaʻi right there. The deer of course, went around doing what deer do, and very soon the whole place was a wreck.

Mr. Robinson identified motor vehicles as a threat to Mānā's fragile dune ecosystem.

HKA: Yeah, because there's a lot of people — before, there was a lot more access, people would walk all over the beach and such.

KPR: And they mess it up. You tell some stupid hippie like I did one time. He had a dune buggy, and I said, "Don't drive your dune buggy over *such and such* a place because you'll wreck the native plants there." "Oh no, we're flower children, we're concerned with the earth, we don't do anything to damage the earth." [KPR makes the sound of a dune buggy engine] RRRR!!! Off he went, all over the plants. So — the people who talk loudest about conservation are usually the ones who are the most damaging. The ones who are quiet and do their work quietly in the shadows where no one can see them, those are the guys that

make the difference.

Mr. Robinson also identified overharvesting as a threat.

HKA: Many people I've been talking to have been up there for the *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) and the *mokihana* (special native tree found only on Kauaʻi [*Pelea anisata*]), yeah?

KPR: Yes. I don't like that. I worry about the *maile* and the *mokihana* — they're being picked into extinction by people with no sense of conservation at all. They just go out, and around graduation time or somebody's big wedding, they go out and devastate the forest. It's not a good situation. I get really upset about it. I've almost never worn a *maile* lei, just on general principles. It is a lot worse than it was then. In the ancient times, if the Hawaiians wanted to decorate themselves with *maile* or *mokihana*, they had to send a huge expedition miles into the mountains. People would collect it and then run back down before the stuff wilted. They would have to get back down here. There was a natural limit to what each person could carry. But now they go up in pickup trucks and bring back far too much. One of the people involved in that practice once told me they're not happy until they get at least a gallon of *mokihana* seeds. That is an H blank of a lot. This is why *mokihana* is going extinct.

Mr. Robinson explained that overharvesting is both a historical and current threat, sharing two examples.

Because I know a good deal about Hawaiian cultural practices and about how the natives lived in those days, I can sometimes predict where native endangered species will be found or figure out where and why a species became extinct or how. The Hawaiians picked it up too much or overused it. Like for instance, *kokia* (Kauaʻi tree cotton [*Kokia kauaiensis*]). They occupied the same environmental niche that is now occupied by *kukui* (candlenut tree [*Aleurites moluccana*]) trees. In the dryland country, on the dryland sides of the island, that environmental niche was occupied by *kokia* trees. [KPR is speaking to his nephew who is in the room on his computer] James, bring up a picture of any Kokia tree, *drynarioides*, *kauaiensis*. [KPR and HKA look at the photo of the kokia] Now, that flower is the size of my hand. It's kind of small on that screen, but it is the size of my hand. When the Polynesians came to Hawaiʻi, they very quickly discovered — well, they brought *kukui* with them, because *kukui* is a very useful plant in Polynesian culture all across the Pacific. Wherever the Polynesians had gone, the *kukui*, *Aleurites moluccana* had gone with them. When the Hawaiians had come to Hawaiʻi — I can see the point, making a fishnet is big work — you got to find the *olonā* (a native tree shrub used for cordage [*Touchardia latifolia*]) fiber, you've got to sort it out, weave the fishnet — it's a lot of work. You don't want to lose your fishnet. But when the Hawaiians found they could make a preservative dye for the fishnets by stripping all the *kokia* trees of their bark, soaking the bark in water, and making a preservative dye that they could stain the fishnets. This would extend the life of the *olonā* fishnets for a couple of years or something like that. But if you rip the bark off a tree, the tree dies. So, by the time Westerners saw the place, the *kokia* were virtually extinct already. That is where a big problem began because nobody knew what was going on. The only place where *kokia* were now found, were dry distant places that were far from Hawaiian civilization. And the Hawaiians, a simple primitive people, high stone age, but still stone age, they lived near the drinking water, and man still does. Where we put our cities, we try to have a good water supply. So, everything in the good water supply or in the fertile valleys — the *kokia* got all wiped out. When the last few *kokia* trees were first seen by Westerners, everyone assumed they grew only in hot, dry, remote locations. Then I came along, had all kinds of problems, started growing the things, and not too many people had grown them before — and these things were not doing that well — eventually, I started growing them in nice, deep, rich, bottom-soil valleys. And then they thrived.

HKA: Many people I've been talking to have been up there for the *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) and the *mokihana* (special native tree found only on Kauaʻi [*Pelea anisata*]), yeah?

KPR: Yes. I don't like that. I worry about the *maile* and the *mokihana* — they're being picked into extinction by people with no sense of conservation at all. They just go out, and around graduation time or somebody's big wedding, they go out and devastate the forest. It's not a good situation. I get really upset about it. I've almost never worn a *maile* lei, just on general principles. It is a lot worse than it was then. In the ancient times, if the Hawaiians wanted to decorate themselves with *maile* or *mokihana*, they had to send a huge expedition miles into the mountains. People would collect it and then run back down before the stuff wilted. They would have to get back down here. There was a natural limit to what each person could carry. But now they go up in pickup trucks and bring back far too much. One of the people involved in that practice once told me they're not happy until they get at least a gallon of *mokihana* seeds. That is an H blank of a lot. This is why *mokihana* is going extinct.

HKA: And it's only here too —it only grows here.

KPR: Yup. I'll never forget one time when I was in the U.S. military, up in the East Range over in the Koʻolau Mountains behind Schofield Barracks. We got into a part of the forest that was primeval and had never been invaded before by anybody, as far as I could tell. There were huge clumps of *maile* vines hanging off the *lehua* trees up there, it was just fantastic — everything was native forest, native forest. And we had some local guys, activated National Guard, "Oh goody." They went around ripping down all the *maile* off the trees and making huge wreaths, fifty pounds of it for each soldier, and then they taught the mainlanders to do the same. By the time we left that forest, it was a ruin. This was local people. No sense of conservation. And they taught the mainlanders and the mainlanders had just come in as replacements, and it was a nightmare watching what happened. They tore the heck out of it. And a lot of that happens. We have constant problems with people ah — well, PMRF here is off-limits to most of the public; and PMRF has much better fishing than the rest of the Kauaʻi shoreline does. Niʻihau is off-limits, most of the public cannot go there, so the reefs there have a lot more fish and *ʻōpihi* (limpets) than here. If you go down by Burns Field, by Port Allen, by the airport, and you can search the rocks there, you may occasionally find one *ʻōpihi*, the size of a dime, but that's about it. They just strip it. There's no sense of conservation — they talk endlessly about conservation, but they don't do it. Everybody is, "Oh we love the *ʻāina*, we *mālama*." Tears and all that, bullshit.

Mr. Robinson also explained that human presence on the landscape can introduce pathogens and other unintended dangers that can harm the local flora.

A few years back — a quarter century now — some of them, a *hula hālau* (Hawaiian dance group), wanted to go out to the Polihale sand dunes and visit some of the *sesbania* out there. I said, "Look, this is not a good idea. It's not a bright idea. Those plants are extremely fragile. If you walk close to them, there is some kind of a pathogen on people's feet that gets tracked in, and if you get close to those *sesbania* on that sand dune, if you get within about six or eight feet, that pathogen gets to the *sesbania*, and it kills them. Do not bring the *hula hālau* out there, they have no idea of this kind of thing. It's a bad idea." They disregarded my advice and went out there. "Oh wow, how lovely." They walked all around and handled all the plants. Within about six or eight months, all the plants in that place were dead. I went out there and checked the tracks afterward, but there was one place where the tracks showed, one small colony of *sesbania* the *hula hālau* had not gone to. That colony survived and continued on. I got seeds from that colony and tried to start replanting them elsewhere. Some of the replantings I did on the Polihale sand dunes stretching down toward Nohili have taken, and the species is slowly spreading on those sand dunes, very slowly spreading. But the place where it's safest is inside the military installation.

Mr. Robinson shared one strategy that he uses to support native plant propogation in the face of these many threats: guerilla-planting at PMRF.

> I like to pick up seeds whenever I can, endangered species seeds. If I can, I try to sneak into the sand dunes at PMRF, without PMRF knowing about it, and I poke it into the sand dunes. And the stuff is slowly spreading. I have been back a couple of times over the years, and *sesbania* is slowly spreading.

Mr. Robinson shared his perspective that plant ecosystems benefit from access restrictions imposed by the presence of military installations.

> If you want a place where the wildlife is left undisturbed, go to a military reservation. The public cannot go into a military reservation. Some of the best endangered species' areas I know out in Polihale are inside the military reservation. The public cannot go there. The cultural practitioners cannot go and fool around with the *sesbania*, walk up close to them, and leave their pathogens on the ground to attack the *sesbania*. Some of the best stuff. The finest.

In light of this protection, Mr. Robinson stated that "as far as I'm concerned, PMRF can continue forever."

KU‘ULEI KEAMOAI



Photo 24. Ku‘ulei Keamoai.

Ku‘ulei Keamoai (Photo 24) was born in Waimea, Kaua‘i. Her *‘ohana* comes from Ni‘ihau: her father was a *paniolo* on Ni‘ihau who moved to Kaua‘i to work on the sugar plantation, and her mother was an *‘ōlelo* (Native Hawaiian language) speaker who was one of the first teachers at Pūnana Leo. She has lived in several places across the island, including her current home of Kekaha on *‘āina ho‘opulapula* (Hawaiian Homestead lands).

Ms. Keamoai worked as a project administrator for the Central Federal Lands Project from 2017 to 2022 and has been employed by Hiʻilawe Construction as a project assistant since 2022. She is the Kumu Hula for Hālau Hula O Haliʻileo and enjoys composing music and volunteering as a cheer coach.

She raised her *keiki* (children) with Hawaiian values and knowledge of *hula* traditions, teaching them the protocols of appropriate chants and dances, how to conduct themselves in particular spaces, what to expect during spiritual encounters, and the *haʻahaʻa* (humility) required to enjoy blessed experiences.

Ms. Keamoai described her personnal connection to western Kauaʻi in her own words.

> Okay. My *pilina* specifically to the western part of Kauaʻi — I currently live in Kekaha. I reside in Kekaha and raise my children on *ʻāina hoʻopulopula* (Hawaiian Homestead land). So that in and of itself has so many layers and depth, right? To be on what is considered Hawaiian homelands, and all of the things that you need to go through in order to qualify for said Hawaiian homelands — but that's probably for another conversation.
>
> I'm currently raising my children there, but also my *ʻohana* (family) is from the island of Niʻihau. My parents, after we were born, moved to Kauaʻi when I was probably about the age of three, and I was raised in Kaumakani, not in Kekaha. I was raised in Kaumakani, and then my parents had qualified for Hawaiian homelands, so we relocated from Kaumakani to Kekaha when I was about 12 years old, and have resided in Kekaha since then, except for when I went to high school and was married and did all of that — but I've since returned. I've lived in Kekaha for now going on almost 20 years.
>
> Our *pilina* to that place — well, specifically Kekaha is a pretty Hawaiian community. If you could really call any community a Hawaiian community, right? Because we live in Hawaiʻi, so really all communities should be Hawaiian. But primarily there's a lot of Hawaiian presence in Kekaha, and specifically a Niʻihau presence and a Niʻihau representation, especially in the subdivision that I live in. A lot of my *ʻohana* are my neighbors, and so just raising my children in that environment and in that atmosphere.

Ms. Keamoai has helped her own children to form a strong attachment to western Kauaʻi, as well.

> I guess I've done my job so well that they don't ever want to leave, specifically Kekaha, they don't want to leave Kauaʻi, but they absolutely don't want to leave West Kauaʻi and Kekaha specifically.

Ms. Keamoai emphasized that her connection is not only to place, but also the future generations of Hawaiians.

> Going back to the original question — what is my *pilina* to this place? It's not just to *ʻāina,* my *pilina* is to build the future. The future of Hawaiʻi always is the people. We have to equip them to make good decisions.

As a dedicated cultural practitioner and educator, Ms. Keamoai shared how she came to prioritize these activities in her life.

> Our identity has literally been stolen from under our feet. We been beat down way to fricking long. We've been told too many not good things. And I am really tired of it. I grew up and I got really angry when I was at Kamehameha. I was angry for a long time — didn't want to touch history, didn't want to learn about it, didn't want to talk about it because I was mad. And then, I softened when I became a parent. I realized then because the same year I became a mom, is the same year that my sister died. I never like do nothing about *hula*. I never cared and just wanted to dance *hula* because I looked pretty. I didn't want to stand in the front; I was all about the back row because I was kind of tall. My sister was like, "You gotta come *luhi* (tend to with care) *wai*, you got come

gather, you got to *oli*." I was like, "I no like do that. You the *kumu*, and I'll be the dancer. You be the *kumu*." "Who's going to teach your kids." "You going. I'm going to give birth to them, and I'm going to bring them to you." And a month before I had my first daughter, she died, she had passed away. My whole world had flipped. Everything I had thought — ah, I don't have *kuleana*, I'm the baby of the family; the baby just gets to play around; no need to do anything serious. My whole world turned upside down. Who's going to teach me kids, right? Not me, then who? So, that started my journey of like, what are the things I want my children to learn? How am I to conduct myself in a way that my children will respect me, will love me, and see the sacrifices I am willing to make? I stay very much in my lane. I try to support as much people as I possibly can. I don't say anything negative in public. If I don't support you, because I don't like the way you do things, I just don't go. My presence or lack of presence is a message. Other than that, I don't bother anybody for the most part; far as within our cultural *kuleana*. There are some people, mmm, the vibes are off; I'm not really cool with that, so I don't — it's not that I don't support, I just don't bring myself there. Your presence will show, more than your words, who you support and why. There is that *kuleana* that we also have to carry as *kanaka*. Not all the things that are put out there need to be amplified by us. If you are going to amplify something, you must take ownership of that. So, one of the things I definitely live, eat, sleep, and breathe — what future am I going to live behind for my *keiki* (child); and not just my physical children, my personal children, I mean the children that I teach, and the children that live in my community. How am I or what am I going to make better for them?

Ms. Keamoai explained the importance of perpetuating and normalizing Native Hawaiian practices and knowledge across the larger community.

We have to normalize what being a *kanaka* in Hawai‘i looks like. You got to understand your upbringing is not the same as other people's upbringing. What is normal for us, doing ceremonies, gathering *wai*, making *lei*, doing all of those things, is not normal for majority of Hawaiian families. So how are we going to help *mālama* our *kaiāulu* (community), if we don't set the example." I don't mean set the example like, "Look at us, oh by the way look at what I'm doing." That's not what I'm saying. What I'm saying is, we show up, we do the things, and then other people going say, "Oh, I can do that. I can go play football and still dance *hula*. I can do this and still go paddle canoe. I can go college, and very much come home and work in the *lo‘i* (taro pondfield)." Like you can do these things. It's not like one family is better than another family, because this family has knowledge and this family doesn't. Your *kuleana*, if you are the keeper of knowledge, you better be sharing that stuff, you better, or else what, what you going do with all of that? Have knowledge for what? Keep it to yourself? If not to instill? If not to create a sense of strength building? Because we have to do foundational building.

Ms. Keamoai returned to this point later in the conversation.

EKK: …like I said earlier — normalize what being a *kanaka* in Hawai‘i looks like. Whatever that looks like for anybody. I'm not telling anybody what that looks like for anybody else. But I know what it looks like for us and for me and my *‘ohana*.

HKA: Explain that.

EKK: Just being an example, right? So again, doing ceremony in public. There's certain ceremonies that can be done in public and there's certain ceremonies that shouldn't be done in public, that should be done under the veil of night for a very specific reason. But there's some ceremonies that need to be done under the light of day so that people can see. A lot of what I encounter with *‘ohana*, especially children's families that I meet at Kekaha School specifically, they don't know what that looks like. To them, living a local lifestyle — driving lifted trucks and getting all the things — that local type of lifestyle is what being Hawaiian means to them. And so, kind of nudging them in the direction of, actually we have cultural practices. And if opening your children's minds to that will be helpful, then great.

Ms. Keamoai explained the importance of practicing protocols in her own life, such as when she gathers resources at Kōkeʻe where spiritual entities dwell.

> …there's certain things — spirits, *deities* — they live in certain parts of the mountain. You should not be there if you don't belong there, if you have no *kuleana* there.
>
> We go up there, we gather, but we know the protocols, knowing when to go. And then we've had ceremony up there too. I don't ever go into Kōkeʻe without going to Kalalau — up at the lookout anyway — and just spending time there. That's really important, specifically to my *ʻohana* and to our *halau.*

Ms. Keamoai also emphasied the responsibility to teach children to incorporate practices/protocols into daily life in ways that are specific to family and place.

> We have that *kuleana* to expose our children, right? Bring them into those spaces. It doesn't have to be big, it doesn't have to be loud, it doesn't have to be crowded. It can just be you and your *ʻohana.* But I know that once we start instilling those things in families and they do it independently — not just when they go paddle and not just when they dance *hula,* but what is specific to your *ʻohana,* which is important to understand *pilina* to that place — so, what is in that area, whether you honor the *wai* (water) or whatever you like to do, you don't gotta wait for the big *Makahiki* (annual festival season) to happen. You can just pick a day, when you think it is important to honor your *kūpuna.* Go outside and dance *hula*. *Oli* in the front of your property or wherever. You like go to the beach, *oli* to the ocean.

Ms. Keamoai gave a recent example of tailoring the offering of *oli* to fit the space of Kōkeʻe, which she explained is more appropriate to offer quietly or silently so as not to awaken the *akua* of the forest.

> I was just in Kōkeʻe the other weekend — the weekend that never had the storm. We stopped at different places. I've had to tell my children — like, there's different *oli* that we do. I was taught by an aunty about this — if you're ever going to *oli,* either do it super quietly or just do it internally. And they're like, huh? And I said, because our forest is filled with a lot of energy and a lot of *akua* (deities, divine forces) and a lot of things that you cannot see. As you're going to pay respect, not everything in culture has to be loud. It has to be a big show. Some things can just be quiet and still. Sometimes you don't even have to say a word. You can just go and hold space in silence for however long — five minutes, thirty seconds, twenty minutes. But if you are going to offer *oli,* you should do it quietly. Because if you wake up certain things in the forest, which happen a lot, they don't know enough to know not to follow you. And you may not be equipped enough to tell them not to. So, I suggest you just do it in your *poʻo* (head), do it in your spirit, allow your spirit to be in the element, then go do what you gotta do, make your *hoʻokupu* (offering), and leave it there.

Ms. Keamoai also stated that there are risks associated with spiritual encounters, and that adults must prepare their children for such exposure.

> I've had families ask me, "How do you take your children into places like that?" I say, "Well, first of all, you gotta prepare them. You cannot take them into a lion's den and not teach them the things they need to know. You cannot just take a child that you've kept sheltered their whole life and take them to ceremony at midnight in Kalalau, you don't do that. That's your *kuleana* as a parent, as a *makua* (parent, elder). You have to have that wisdom. But if you know you're going to bring them for whatever purpose, you have to prepare them. Build their confidence. Tell them honestly what can possibly happen. What bad vibes feel like, what whispers in the darkness sound like. These are things you cannot hide from your kids. And then you teach them what is the *oli* they can do. What is prayer? I go, you know what, pray to whoever. I'm not saying you only have to pray to Hawaiian gods. Pray to Jesus. I don't care. Just prepare your children." Because the reality is, once you hit ceremony, the veil becomes so thin. And that's always one of the things — when the veil becomes thin, you're gonna have a hard time differentiating between what is real and what is not real. And

not all *kupuna* that you see are good *kūpuna.* So, you have to use your discernment. You have to know what your *ʻano* (sense of being, moral quality) naturally feels like. And what does your *ʻano* feel like when you're around people that are just not good? We gotta teach our kids that.

There are also spiritual rewards that come with engaging in such cultural practices, such as encountering *hoʻailona* (sign, omen, confirmation). Ms. Keamoai shared a story of *hoʻailona* that became evident during a *hula* dance.

Yeah — so there is some construction that's happening in Poʻipū. They're building some condominiums, and it had gotten pretty narly a couple of years back, maybe 2022. There were some marches happening in Poʻipū, and one of my really good girlfriends was kind of involved — people having confrontations with real estate developers, and the police were there as well, acting as private security. And there was all this *hakakā* (conflict) happening. But what was important was that the energy of the *kūpuna* of that space was very heightened.

When my girlfriend asked me, can you bring the *hālau?* I said, yeah, I can. It was on a Saturday, nobody's there, like we never tell nobody — which is always the purpose. So, I had my children and some of my younger *hula* students — they're like college age. I explained to them: okay, this is what we're gonna do. We're gonna do trilogy (three specific *hula* dances). We're going to open with this *oli*, and we're gonna end with this *oli*…So, I explained this is what we are going to do.

We put all of the *pahu* down, put our mat down. When we started, it was overcast — super overcast day. And then they did their *oli* and came in. Once we had gotten to the first part — we basically did trilogy [*hula* trilogy, three specific chants]; trilogy is very grounding. You probably know, yeah? So, we started out with that *hula*. When we started dancing, the wind started whipping. And when I literally mean whipping, I don't mean mild — I mean my hair was like in a tornado almost.

And the kids kind of paused, and I said, just keep going, don't stop. So, the way that we do the trilogy is that on the last part, we do *ʻAua Ia* [*a hula chant*]. My children will kneel down and they become the *hoʻopaʻa/hoʻopā* (one who steadies, one who keeps the rhythm) for me. So, I have to stand up and dance. The reason is because *ʻAua Ia* is a prophetic chant — you're talking about the children — for our specific *hula* lineage, the adults and the *kumu* are the ones that dance. The *haumana* (student) sits down and *oli* for you. And the children do the *hoʻopaʻa/hoʻopā.* So, my children have all learned it from when they were little. I'm standing up there by myself. You have to take your *kīhei* (shoulder wrap worn in ceremony) off, because as a *hula* dancer, if you are wearing a *kīhei* and then you have to dance, you are changing roles. So, I took my *kīhei* off and tied it around my waist, which made me a dancer. When that happened, it was like the clouds had opened and there was like a spotlight shining down on just that opening. It was hella bright. You could see through the opening to blue skies. During that time, the sun was shining, but then it also started to rain and the wind got really, really strong. And again, they got kind of stunned. So, I said, just keep going. They kept drumming and I kept dancing. And at the very end, once your knee touches the ground, you're done. And everything just got super still. Then we finished up, *pule* (prayed), did our last *oli,* and left.

But it was one of those things where, if you're not present and you don't realize that our *hoʻailona* (sign, omen, confirmation) is always going to present itself — whether in the wind, in the rain, the clouds, in the sun, the birds — it can get silent, completely silent. So, there's all these things that, unless you're in it, you're not going to know.

Ms. Keamoai also described her personal and professional position on the colonial history of Hawaiʻi and of the Mānā community, emphasizing the cognitive tension that can result for children of PMRF employees or for those who remember the Mānā agricultural plantations fondly.

We are, as a *ʻohana,* very pro-Hawaiʻi versus pro-America. I'm not saying that they [my children] can't be pro-America if they don't want to — I'm just saying that's the environment they've grown

up in. And my biggest thing to them — because I'm also a *kumu* (teacher) of Hawaiian studies at Kekaha Elementary School — one of the things they asked me, as a *kumu hula* (hula teacher) to teach their program — I told them, I'm just going to let you know, I going do things, the way, I going to do things. And they're like, okay; and I'm like, okay. I said, first of all, May Day is not Hawaiian, I'm going to tell you guys that right off the bat. But as a *kumu* I have a responsibility to make it as Hawaiian as possible. So that means, there might be things you find questionable, but it's either I have free reign or I'm not taking this job. There are no ifs, ands, or buts, I do not compromise when it comes to Hawaiian knowledge and Hawaiian practices, I don't compromise. You cannot tell me we cannot do this because the school — then I'm not the *kumu* for you. Go find somebody else who's okay with downgrading their *'ike* (knowledge, wisdom) to fit in the box of the education system requires this of us. I'm not that person, I just going tell you.

They said, no, no, it's okay. And I said, "You sure?" Go get permission. Because I'm not going — you cannot tell me halfway through the school year. So, when I started school, they also don't tell me what to teach. We've covered everything from the Overthrow, I taught the students things you will not learn in a DOE (Department of Education) school normally. We covered the Overthrow, we covered the *ali'i* (chiefs), really hard topics, we covered military presence — we covered all of these things — but it's always done in a very talk story kind of way. We talk about stories, we explain, I explain the history, but in a very not watered down version, because I don't water it down, in a way that children can digest. I'm not going to lie though; I've had some third graders whose parents work at PMRF who have literally sat after my class, and they are just stunned. And I'm like, "What's the matter?" "Oh — my dad is in the military." And I'm like, "I get it. I'm not saying that you should be sad for your dad. I'm not saying any of that, I'm just saying this is what happened in 1893, this is history, this is real. Your dad wasn't there in 1893, chances are his *kūpuna* was not there either. But I cannot, not teach you history. The reality is, is you live here. This is a part of your history. The time that your dad is here in Hawai'i, you have a *kuleana* as being here on our *'āina* (land). I cannot water that down for you. I'm sorry, I won't. But you can say, we didn't like this part of history, we want to be different, and we want to make it better. That's all I'm saying. If it hurts your heart babe, I'm sorry, *kumu* did not mean to make you feel that way. But the reality is, this is real. If you want to go home and talk to your parents, and your parents have questions; if they want to talk to me, and if they have concerns, you can tell them to come to the school, and you can tell them to call the school, because I will have those hard conversations. But I just need to teach you this, so when you get older, you're going to be more aware. And then when somebody says, whatever about Hawai'i, you can say, my *kumu* thought me this, my *kumu* said this. The reality is, it's true. I'm not even telling you, my opinion. I'm telling you what is in the history books."

When people in our community, specifically people in our Kekaha community, like to talk about the wonderful history of Kekaha Plantation, I stop them right away because we were in existence before the plantation.

As previously noted, Ms. Keamoai visits Kōke'e to gather plants in her capacity as a *hula* practioner; she has also visited PMRF as a practitioner, to honor *iwi kūpuna.*

HKA: And have you guys gone to, like, Nohili or PMRF?

EKK: Not for any gathering...The last time I went to PMRF was a couple of years back, I think 2022. Wasn't only us though, was us and a whole bunch of *hālau*. We had gone to PMRF because they were honoring *kūpuna* bones — right, in the tomb...while they were doing stuff at PMRF, they had found bones. They had gathered the bones and interned them in one location. We were there for the ceremonies. We were one of the *hālau*, there were maybe like five or six *hālau* from Kaua'i and O'ahu that had participated. We were just honoring the internment of all of the bones into that tomb.

Ms. Keamoai shared her perspective that she does not support the presence of the U.S. military in Hawai'i, preferring a return to Hawaiian sovereignty.

> Going back, what does that have to do with military lease expansion? Call me crazy, but I am one of those *kanaka* that is not okay with any kind of military presence. I believe in us going back to sovereignty. What is that going to look like? I don‘t know. I had this question, and had this conversation with my mom one time; because she was just like, “Well you know, where is your father going to go because he is not from Hawai‘i?” Because my *hānai* dad is from the Philippines. She also speaks Hawaiian and she was like tida ‘eh (strong Hawaiian woman who speaks their mind). And I said, “What do you mean, mom?” “What do you think sovereignty is?” I go, “I’m gonna guess you’re thinking sovereignty is only Hawaiians live in Hawai‘i. But how are you gonna do that when the majority of Hawaiians are mixed?” What it is — and what I had to learn — it’s the idea of saying, why are we relying on other ethnicities to tell us how to live and govern ourselves in Hawai‘i when we are more than smart enough, we are more than capable, and we have enough intelligence to build our own?

Ms. Keamoai stated that she does not support lease renewal, and also expressed a lack of faith in the current administration.

> …I am not for the renewal of the leases. I will clearly state that. I am not supporting and I’m not supportive of the lease renewals. There’s no shortage of information that shows that the American government is not the greatest government when it comes to doing the right thing by native peoples. And our current administration — the current head of America’s government is also a little cuckoo, and you can just say it like that. And again, my opinion and my thought; I’m not very confident that the commander-in-chief of the United States of America is the greatest option the American citizens have, as far as being the person who makes decisions.
>
> I would like to say — I don’t like to say that I’m not American, but if you were to ask me how I identify, I identify as a Hawaiian Kingdom Nationalist. I’m very open to the idea of Hawai‘i being governed by ourselves. Not just for ourselves, but who else would have greater wisdom than our own people? I do not ever align with the idea of foreigners would have a better way of governing Hawai‘i than *Po‘e Hawai‘i* (people of Hawai‘i). I’m not very shy at all about making those kinds of statements.

Ms. Keamoai also articulated a fundamental conflict between her Native Hawaiian ontology and the practice of military bombing exercises.

> …I have such a hard time, as a *kanaka,* when I look at other people — how are you okay with the military bombing *Papa* (Earth Mother)? How are you okay with that, how? We are the representation of *Papa* and *Wākea* (Sky Father). That’s who we are. We are the descendants of *Hāloa* (the first Hawaiian, born of *Papa* and *Wākea*). And you’re okay with bombing of your own mother? I cannot.

Ms. Keamoai shared that she has little patience for ongoing colonial legacies in Hawai‘i and is refraining from offering comments during public meetings until she feels more controlled in expressing her opinions.

> This isn’t your island to fucking do it, sorry about my language but — I mean, literally, I walked into one of the public meetings, signed the paperwork that I was there, and I lasted for like 10 minutes. Because I know that if I stand in front with a microphone, I’m not gonna be the most calm. I’m not gonna say things in the best way, other than just: Get the fuck out. I don’t know how else to say it. I have to work on that. And because I know I have to work on that, that’s why I don’t stand in front and give verbal testimony, because I cannot promise that I am going to keep it together. So, I usually sign the paper, get the papers, listen a little bit, and I bail. Because my heart is so sore, and it’s so *‘eha* (painful, hurt), that we literally, as *kanaka,* constantly have to stand in front of people that are usually foreigners, and we have to explain our existence. And I don’t want to do it.

RONALD DAN KOUCHI



Photo 25. Ronald Dan Kouchi.

Ron Kouchi (Photo 25) represents Senate District 8 (Kauaʻi and Niʻihau) in the Hawaiʻi State Legislature and has served as Senate President since 2015. He previously served for 22 years on the Kauaʻi County Council, including 12 years as Council Chair. He is a former director of the Kauaʻi Island Utility Cooperative, the Koloa Neighborhood Center, the Kauaʻi Chamber of Commerce, and the Kauaʻi Visitors

Bureau. He has served on the boards of the Kauaʻi Veterans Memorial Hospital and the YMCA, and chaired the Wilcox Health Foundation capital campaign. As a student, Senator Kouchi spent summers at Kōkeʻe cleaning trails for the Hawaiʻi Department of Land and Natural Resources.

Mr. Kouchi grew up in the Mānā area.

RDK: In 1962, we moved to Waimea. And in 1972, we moved to Kekaha. So, I have resided for both elementary and high school in either Waimea or Kekaha. I'm a graduate of Waimea High School.
HKA: And where does your family come from? Another island?
RDK: My dad is from Kauaʻi, and my mom is from Honokaʻa. And my dad was born in Makaweli, West Kauaʻi.
HKA: Right there, right by Waimea.

Mr. Kouchi grew up knowing Mānā's locales by their post-Contact names, rather than their traditional Hawaiian ones, many of which are now in popular use again.

…growing up in Waimea, we would go up into Waimea Valley a lot. By the time I moved to Kekaha, I was going to be a junior in high school, busy playing sports. And in our time, as you're exiting Kekaha heading to Mānā, it was "first ditch" and then the next one was "second ditch." That's what we grew up knowing. And you can imagine — I'm a 1975 graduate of Waimea High School. So that would have been year one of the [Hawaiian] Renaissance, which had not yet taken effect. And Russian Fort, or Fort Elizabeth, was the name in Waimea until about four years ago. Now it's Pāʻulaʻula and we are reclaiming the place name. So, I did not grow up with the traditional place names. Donkey Beach is now referred to as Kuna Bay. There's a lot that has happened and changed. But on the names of the ditches, I don't have that awareness. Like I say, we knew them as "first ditch" and "second ditch."

Mr. Kouchi shared that he has only cursory knowledge about the traditional *moʻolelo* of Māna.

HKA: Do you know any *moʻolelo* (stories, history) of Kōkeʻe, Kekaha, or the Mānā Plains?
RDK: From what context?
HKA: Like Ola the chief, the *Menehune* (small statured race of people) or *moʻolelo* about the area.
RDK: For us growing up in Waimea, it was the Menehune Ditch and the legend connected to that. And of course, the high school nickname was the Menehunes [referring to Waimea High School]. But as far as any of the legends in Kekaha, I didn't grow up there when a lot of that was being shared. And again, just given the time that I grew up, it was not something that was celebrated or taught in the schools at that time.

Mr. Kouchi was more familiar with Mānā's sugar plantation lifestyle and practices, as the plantations were still operating during his youth.

HKA: That's true. You were probably around during the sugarcane industry. Can you talk about that?
RDK: Well, it employed a lot of people. And we grew up to find out that a lot of what was the way of doing business would not be considered environmentally best practices — whether washing down machinery or equipment, the use of pesticides. And even in the plantation camps, to keep the dust down because the roads weren't paved, they would take the used oil from servicing vehicles and throw it on the ground to keep the dust down. So, while the employment was critical to the development of the state at the end of the day, environmentally we didn't know enough to implement what would be better practices. It was not unusual for me in 1982, when I was running for the council, the neighborhood centers were vibrant and the senior programs were active, but they were predominantly

women who did not speak English as a first language — either Japanese or Filipino. Because of the way the plantations operated back then, many of the husbands had already passed away and the wives lived a lot longer than the husbands did. And it was hard work working on the plantations as well.

Mr. Kouchi gained some familiarity with Kōkeʻe as a student working with DLNR.

HKA: And what about Kōkeʻe? Did you guys ever go up there and gather anything?

RDK: I cleaned trails two years in the summer for the State of Hawaiʻi DLNR (Department of Land and Natural Resources) as a student. And when we would have gatherings, we would go up to Camp Sloggett [in Kōkeʻe], as it was called at the time. And we had friends who had cabins, so we'd go pick plums. I was also aware that one of the DLNR employees built a disabled ramp. So, I went with Governor Waiheʻe, and had a dedication of that disabled ramp, which allowed people with walkers or wheelchairs to go trout fishing, because Kōkeʻe has a trout fishing season. I think Awaʻawapuhi [Trail] was the only trail that I would go with my friends a couple of times. You get to the end, and you can see Niʻihau. Some of those guys' hobby was photography, so we'd go hiking, bring our picnic lunch, get to the end, and see Niʻihau. It was beautiful up there.

Mr. Kouchi is also aware of the *iwi kūpuna* burials at the Mānā coastal dune area, and the people engaged in that preservation work both as family members to the deceased and as PMRF employees.

RDK: Well, the Pacific Missile Range has highlighted the dune preservation, the *iwi* (bones) that is there, because they have won International Navy Environmental Stewardship Awards. And part of the stewardship is preservation of the dunes and the practices involved in dealing with any *iwi* that has been discovered. Kaulana Mossman is the current information officer. Her mother was in that same role for 30 or more years before her. And it is their ancestors' bones that are buried in the dunes. So, the other members of Kaulana's family have worked at PMRF, and the current preservation group that works out in Mānā Kekaha is led by members of her family. And so, it's an interesting relationship to have direct descendants who are employed and, in a position, to oversee that the Navy is using best practices in dealing with the ancestors who are buried in the dunes at the Pacific Missile Range.

HKA: So, we're talking about Nohili, the Nohili dunes, and then the Aipoalani and Kilauano families?

RDK: Yes, and they're all related. Kaulana is Kilauano [family]. And Kunane went from Kekaha Sugar, when they closed, to the Pacific Missile Range. So, you have the Aipoalani family as well who are or have been employed there.

Mr. Kouchi shared his positive opinion of PMRF within the Mānā community, particularly as a multi-generational workplace.

I think PMRF is unique in that they have, I think, now fourth-generation family members who are working there. They've been there long enough and have been a good employer that family members worked hard to get their children to go, and then their children's children, and now their children's children's children. Kaulana is an example of that. And so, it's very different in that you have about 100 to 150 active Navy personnel and almost 800 to 900 civilian personnel. So, it is much more familiar as an employer of local residents than what you would traditionally think of with a military installation.

VAL KANE TURALDE



Photo 26. Val Kane Turalde.

Valentino Kane Turalde (Photo 26) is a *Kānaka Maoli* currently living in Waimea Valley on Kauaʻi. Although he was born and partially raised on Oʻahu, his family has deep connections to the Waimea area dating to the reign of Kauikeaouli (Kamehameha III). His aunt, Mabel Navarro, who lived in Waimea Valley, cared for him as an infant and deeply influenced his life. The healers Emma De Fries of Oʻahu and Nui Keale of Niʻihau also shared some of their *ʻike* (perception and knowledge) with him as a child.

Over the course of his life, Mr. Turalde has worked as a musician, taro farmer, security instructor for the Honolulu Police Department, Native Hawaiian educator, canoe-racing coach, and salt maker, having

practiced traditional salt making since the age of seven. Mr. Turalde described some of his work as a cultural educator.

HKA: What kind of cultural practices did you practice here on Kauaʻi? You did *kalo* farming, and then you also taught, right? You were a cultural educator, right?

VCT: Ke Kula Niʻihau O Kekaha. I took the students to Niʻihau to educate them…the families that's there, all of the grandchildren, most of them with Ke Kula O Niʻihau, I've educated them. For the 10 years I was there as a consultant, I did the after-school programs. I do have videos with the students of Ke Kula Niʻihau O Kekaha. It's salt making that I educated them in. *Hana Paʻakai* (salt making) Salt Making 02 was a video that we made with the students.

He currently serves as a co-representative for Kona Moku on the Kauaʻi Aha Moku Council.

Mr. Turalde shared his personal connection to western Kauaʻi.

VCT: What connects me is my family who's from here, the Hoʻokano and Aweau family from Waimea Valley. And I grew up in the *loʻi* (taro pondfield) with my parents and grandparents here in Waimea as I grew up, and also Kaʻalaea, Oʻahu. And Kaʻalaea is where my family is also from, where my great-grandmother, Kukahiko, that last name. She was also, you know, the *moʻokūʻauhau* there. And we have all the documents and history of our family in Kaʻalaea.

HKA: Your grandfather over here?

VCT: My grandpa was Hoʻokano. Aweau, John Aweau.

HKA: And he lived here?

VCT: Yeah, and then they went to Oʻahu because of the land from my grandma.

HKA: Right, where did you live here?

VCT: In Waimea Valley. I'm not sure how long, but I know that the Hoʻokano family have different properties up in Waimea Valley. And I do have the documents. So, from being taken, I was *hānai* (adopted, fostered) at birth by my grandpa's sister, who took me at birth. And at five years old, I went back with my family on Oʻahu to Heʻeia Kea. And the families were evicted from Heʻeia Kea because of the military installation that they once had there. And because of our family burials in Heʻeia Kea, they could not take the land. These were ancient burials that are still there today. The Kaluhiwa family are the ones who live there today and got the land because of the burials, proving to the state, the county, and the government that the family burials were there from ancient times. So, you know, I went to Oʻahu, being born, taken, brought to Kauaʻi. And I grew up on Oʻahu. I went to Waiāhole Elementary School, King Intermediate, and Castle High School, where I graduated. And when I graduated, I came back to Kauaʻi.

Due to this longtime familial connection, Mr. Turalde shared that there are many of his family's burials present in Mānā.

HKA: And so, what is your connection to Kekaha, like PMRF? Have you been down that side?

VCT: Yeah, because our family burials are all over there in tombs, the burial tombs.

HKA: Where?

VCT: Waiawa and it's all up on the west side. The burial tombs are still there today. On the mountains. And also on the base, there's our family tombs over there too, on the military base, the Aipoalani family and Kīlauano family. And so, we're all connected.

HKA: So, Uncle, you mentioned there were burials?

VCT: Yeah, there's burials back there, that's why they cannot build, because of our family burials. And I know that there's burials. I gotta think, I cannot even remember my uncle's name, but they have burials on the family property there in Kōkeʻe.

Mr. Turalde also shared that he has documentation of his family's traditional ownership of the lands of Mānā, from the coast to Kōkeʻe uplands.

VCT: …then we also go back to the kings and queens of all the islands. And I have the documents and everything. I was given the will to all the lands by Uncle Wairamu Terangi Carroll, Prince Kūhio's great-grandson. As I was told when I was 12 years old, one day there's going to be a man with an accent and a mark on his face, and he's going to give you the paper for the land. And back then, I was 12 years old, they told me it could be 10, 20, 30, 40, even 50 years from now. From that time, 30 years later, that's when I got a call from my brother Keoni on the Big Island in Hilo. "Brother, there's a man looking for you, he coming to Kauaʻi, he gonna come, he said he must see you." I got a call the next morning: "Can you meet me at Kekaha Park?" So I went, and this is where I met Uncle Wairamu Terangi Carroll. When I went, "*Aloha* (love, greetings)," and he started speaking with an accent. And when he turned his face, he had the *moko* (Maori facial tattoo) on his face. That's when I told him, Uncle Sam Lono and Auntie Emma Defries said you were going to come home and give me the paper for the land. He said, "Wait." And then he went to the car and brought a booklet and took out the papers. He sealed it with the royal seals: Nation of Hawaiʻi, Hawaiian Kingdom, head of state. And then he gave it to me and told me I had to sign my name on that paper. So that paper is pretty much recognized by the State of Hawaiʻi because, you know, as I was going to the Aha Moku meetings and the state meetings, I showed them the documents.

HKA: And do these lands also include PMRF?

VCT: Oh all, all the way to Polihale.

HKA: It includes the Kōkeʻe Park Geophysical Observatory?

VCT: All the lands. Because I do have the documents, I was told that this is for you to have forever and ever, to help our family, our people, and our children get what is correctly theirs back.

Mr. Turalde engages in many of the traditional cultural practices of the Mānā plain, such as camping on the coast.

…we used to go Mānā, Kunane can speak for that, Kunane Aipoalani, yeah. We're all the same family and we all used to camp in the same area, right there at Mānā, right at the base. At PMRF, at the base. And Kunane also has documents about all that. And he has pictures of where we used to camp. And I was like, wow, cuz' (slang for cousin), this is amazing. Because when I grew up, he was one of the older cousins that I've looked up to because I knew that things had been passed on to him also. And this is why when we had the *aha moku* (meeting) they asked me, oh, who? Then I mentioned his name first. Because I know that when we grew up with my grandma and his mom, we all were together doing the cultural things.

Mr. Turalde described the many subsistence resources he grew up utilizing, such as watercress, prawns, and Samoan crabs.

HKA: So, Uncle, when you were young, there was more access to PMRF before, right? People could go there.

VCT: Yeah, we used to go pick watercress. Had watercress growing wild back there. Because they get five springs back there, they capped the springs with pipes and then they leak out, but the spring water goes all the way to the ocean. I haven't been there in a while. We used to go, as I was growing up, to get watercress all the time.

HKA: And besides watercress and stuff, did you guys go fishing over there?

VCT: Yeah, over there had *ʻoʻopu* (fish from the *Eleotridae*, *Gobiidae*, and *Blennidae* families), prawns. Till today, oh, loaded with prawns, loaded with prawns. And the ocean side, they call it Second Ditch. Over there, you get prawns and some Samoan crabs (mud crabs). I

haven't gone for a while but when going out there I throw the bait, I put on a floater, tie the bait, and throw it in the water. I used to get the thrownet, I throw over and bring in all prawns and Samoan crabs in the net. Till today, I know people say that they go catch some Samoan crab over there. I've gone a lot of times, and just if I was hungry to eat Samoan crab, I used to go there. Because I was going to Waimea Pier to catch some, then something told me, hey, go to Second Ditch. And I went and I got big kind crabs from there.

Mr. Turalde also detailed a number of marine resources available on the Mānā coast, such a seaweed, fish, and shellfish.

HKA: And then how about the ocean? The ocean all up by PMRF? You guys used to gather *limu* (seaweed)?

VCT: We used to dive out there. Plenty of lobsters. We used to grab lobsters. Because I grew up as a fisherman, you know, my dad was a fisherman, my grandfather was a fisherman. We used to go throw net, lay net, surround, *pa'i pa'i* (a surrounding net fishing method), all that out there. Every kind of fish. All the reef fish. Had *moi* (threadfish [*Polydactylus sexfilis*]) mullet. That's what we mainly went for, the *moi* and the mullet. And then had the invasive fish they brought, the yellow one, *ta'ape* (bluestripe snapper, an invasive species). *Roi* (peacock grouper, an invasive species), and *to'au* (blacktail snapper, an invasive species). We caught a lot of those and shared it with families. The *kupuna* (ancestors, elders) were always happy because, you know, it was all part of the past, but as I got older, I just passed it on. Nice to see other families going and gathering too.

HKA: What kind of *limu* did you guys get?

VCT: Had *limu manauea* (red seaweed [*Gracilaria coronopifolia*]). Yeah, mostly it was *limu manauea*. And we used to go on the north side, gather *limu manauea*, and had the *kūpe'e* (marine snail [*Nerita polita*]), had *'ōpihi* (limpet), all that out there. And then I used to always go Polihale for *'ōpihi*. At Nu'alolo Kai, all out there, big time *'ōpihi*.

Mr. Turalde utilized both coastal and upland plant resources for *lei* making and for medicinal purposes.

HKA: And then, so over there at PMRF, were there any plants that you noticed when you were growing up?

VCT: Yeah, out there had plenty *'ilima* (native shrub, all species of Sida). Yeah, till today still get the wild *'ilima* growing. We used to pick and make leis. I used to go with my auntie them and they used to make leis.

HKA: How about the *'uhaloa* (small downy plant, Waltheria indica) out there?

VCT: Yeah, *'uhaloa* too. All out there too. We used to pick them. They used to make tea, and you can make [tincture], with the *'uhaloa*, yeah. All that.

HKA: And going back to like Kōke'e, are you familiar with any gathering up there or any type of cultural practices that have been done up at Kōke'e, or Kalalau, all of that area?

VCT: Well, up at Kōke'e, we actually I grew up picking *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) Yeah, *maile*. And we picked the *māmaki* (native Hawaiian plant [*Pipturus* spp.] used for tea), the tea, that was grown by my auntie them long time ago back there. I kind of know where all the *māmaki* stay and the *maile*, *maile li'i li'i* (small-leafed maile variety).

HKA: Oh, wow. That was the small leaves. Wow. And so, is there any *mokihana* (special native tree found only on Kaua'i [*Pelea anisate*]) over there?

VCT: Yeah, there's a lot of *mokihana*. And one certain area where the *mokihana* trees are still there. And when it's *mokihana* season, we go up and make the leis. I had my students, we went up when I was at Ke Kula, and we gathered and they were taught.

Mr. Turalde also hunted pigs, goats, and cattle in the Kōkeʻe uplands.

HKA: …Kōkeʻe, did you guys ever go hunting up there?
VCT: Yeah, we go make trap. For the pig. Pig trap. Up there you get plenty of pigs. Goats too. Get wild *pipi* (cattle) too.

In addition to his extensive experience with the resources of Mānā, Mr. Turalde shared his knowledge of the traditional water transit networks connecting locations on the Mānā plain.

HKA: But people used to ride their canoe from Waimea to Mānā.
VCT: Actually, from Mānā to Waimea, I know my auntie has a picture where they paddled the canoes from Mānā to Waimea River. At one time, it was like a big river that went from Mānā to Waimea. My auntie had a picture of it, they lived up on the Mānā side, and from her house there was a picture of that big river going to Waimea. And they used to travel on the canoes going down from Mānā to Waimea. I have to find out who has that picture today. I remember going to her house and the picture was on the wall.

Mr. Turalde is also a practitioner of stone art, and has contributed pieces to the Kōkeʻe Museum.

I did stone art. If you go to the Kōkeʻe Museum and Kauaʻi Museum, most of the stone artwork was done by me. I also gave stonework to Queen Liliʻuokalani Trust in Līhuʻe. They have some of this stonework. If you go into the office, there's two types of *poi* (Hawaiian food staple made from taro) pounders, the ring and the regular *poi* pounder. And I also made *poi* mashers. These are in Liliʻuokalani Trust. They have a big window display. And on the outside, there's all the different *ʻulumaika* (Hawaiian game stones). I've done all that.

Mr. Turalde stated his opinion that PMRF is providing a valued service in protecting Kauaʻi from military threats, but also emphasized that PMRF activities must not disturb burial or cultural sites.

HKA: So let me ask you one question here. Do you feel that there's a difference between cultural and natural resources?
VCT: It's all pretty much the same, yeah. Because it's part of our culture.
HKA: Natural resources, right?
VCT: Passed down to us.
HKA: Yeah, right. And in your opinion, does the renewal of military leases impact cultural resources?
VCT: Well, like I told them, I don't care what they do, but stay away from the cultural sites, the burial sites, any cultural sites…
HKA: Is there anything you want to share?
VCT: Yeah. Yeah. All I know is that I told them when I met with the officers, the Admiral, Captain, all those guys, I told them, I don't care what they do, just stay away from the cultural sites, the cultural area. Because they have a gun range, they have places where they get missiles. I said, no, you guys cannot. Even like on Niʻihau, they got missiles on Niʻihau. But because it's for our protection here on Kauaʻi, if other countries want to bomb us, they get the missiles to intercept. And that's why I told them it's okay for them to have it there because it's for our protection. They get about four missiles at the base and two miles out in the ocean, underwater, they get about four missiles out there too to protect us. That's why when I met with all the military heads and I showed them documents, they were just like, these are documents and this is the proof of who we are. So, you know, stay away from the sites.

PUALOKELANI HARADA AND KIELEPUAALAOKALANI HARADA

Pualokelani Harada was born and raised in Hāʻena and Wainiha in Hanalei moku on Kauaʻi, and has ʻ*ohana* from Polihale who are buried in the sand dunes along the north coast of the Mānā Plain. Pualokelani holds a Master's Degree in Education and works as a *kumu ʻōlelo Hawaiʻi* (Hawaiian language teacher) at Kula Aupuni Niihau A Kahelelani Aloha (KANAKA) Public Charter School in Kekaha.

Pualokelani's paternal and maternal *kūpuna* were *kanaka mahiʻai* (farmers), *lawaiʻa* (fishers), community volunteers, *haipule* (pious people), *kahuna*, activists, and more. Her *tūtū wahine kualua* (grandmother), Rachel Mahuiki, was a *mānaleo* (native Hawaiian speaker) who taught her and twin sister, Kielepuaalaokalani Harada, a deep respect for the *moʻomeheu* (Hawaiian culture). Her great-grandparents, Tūtū Elizabeth Kapeka and Francis Elias Chandler, taught her how to be part of an *ʻohana* and a community, including how to *hanai* (foster children), feed others, and provide resources to support local youth.

Kielepuaalaokalani Harada is a Kauaʻi native and serves as a Grade 6–8 math and science teacher at the Kula Aupuni Niihau A Kahelelani Aloha. The school's mission is to educate youth to become community leaders capable of guiding the future of the Niʻihau community, with an emphasis on student involvement in community-related activities and issues to foster informed and effective representation of the Niʻihau indigenous population. Ms. Harada holds a bachelor's degree in social sciences with an emphasis in Political Science and a Master of Education in Teaching.

Ms. P. Harada and Ms. K. Harada were educated in the Hawaiian language immersion schools Pūnana Leo (preschool) and Kaiapuni (K-12), strengthening their ties with the west side of Kauaʻi, where Tūtū Kahala and Anake Kuʻulei served as their *kumu hānai*.

The Haradas began their conversation by explaining their *pilina* to PMRF, to Kauaʻi, to their Native Hawaiian culture, and to their duty to care for and protect land.

HKA: The first thing I want to start off with is your *pilina* (connection, relationship) to not just PMRF or Kōkeʻe, but the greater Kauaʻi — whether it's your *moʻokūʻauhau* (genealogy), your lifeways, or your *hana* (work, practice). If it's all of it, can you please speak [to that]?

KH: *Hiki nō* (all right, it can be done). So, for me and my *māhoe* (twin), we've been born and raised here on the *mokupuni* of Kauaʻi. We don't have direct relationships with any of the military sites, but we do know of *kānaka* (Hawaiian people) who do work there. [KH referring to Thomas Nizo, the PMRF Deputy Public Works and Stewardship Officer]. Milimili, we call him "Coach" because he used to be our *ʻanakēʻs* (auntie's) soccer coach. When we were introduced, they introduced him as "Coach" or "Milimili." How we came to know him is that he has a side job of being a DJ and sounds man, and a lot of the events we would go to they would hire him out, and that's how I knew him as a familiar face — that's how I met her [referring to TD].

KH/PH: Outside of that, we have really strong ties to the North Shore of Kauaʻi, because that's where our *ʻohana* (family) hails from. My *ʻohana* — my *tūtū* (grandmother) is a Chandler, and she married Harada. So, both sides of my *ʻohana* are *kanaka mahiʻai* [Hawaiian farmers], they're *kalo* (taro) farmers, rice farmers, fishermen, community volunteers, community members, they're activists *nōhoʻi* (intensifier for the word 'activists'), *haipule* (pious people), *kahuna* (priests, professionals in their craft). All of the above. We have everything in between and all of the above in *ʻohana.*

KH/PH: So, I guess our *moʻolelo* (story, history) really starts, why we're on this path, is with our *tūtū wahine kualua* (four generations removed, of a great-great grandmother or great-great grandchild), Tūtū Rachel [Nāhaleʻelua Ilaloʻole] Mahuiki. She was a *mānaleo* (native Hawaiian speaker) for our *ʻohana*. She spoke *ʻōlelo Hawaiʻi* (Hawaiian language). When UH Mānoa was starting up their immersion program and wanted to provide *ʻōlelo Hawaiʻi*

within the *kula* (school), they would consult all the *kūpuna* (ancestors, elders) around the *Pae ʻĀina* (the Hawaiian island chain). [PH confirming with KH] She lived on Oʻahu, yeah? Yes, she lived on Oʻahu but she's from here. When they came to Kauaʻi, they would come and visit her on Kauaʻi, on the North Shore.

KH: They have a video of her *mākaʻikaʻi* (visiting, observing) in Hāʻena. She is the reason our roots in the culture are very strong. We *mahalo* (have gratitude) that we are lucky to have one. She was alive when I was born — she got to hold both of us — and then she passed. So, I was fortunate to live with my great-great-grandmother *tūtū*. My great-grandparents are Tūtū Elizabeth Kapeka Mahuiki, who married Francis Elias Chandler. They were the ones who taught all of us how to *hānai* (adopt, nurture) and be *ʻohana*, what it means to be part of a community, and what it takes to feed a community and provide resources to help our youth. They helped to found the Hanalei Canoe Club. And we are a part of the [Hawaiian] Civic Club. She's an Honorary Treasure of Kauaʻi. And it's because of that lineage that we were able and fostered in the way that we were, to be raised with all of our *tūtū uncles* and *tūtū aunties*, who taught us from a very young age how to be *kanaka*. So, I have to give thanks to that.

KH: But in regard to what you're talking about in this arena of *mālama ʻāina* (caring for the land) or to be *kiaʻi* (guardian, protector) — we both, *tita* (sister), we both naturally have the instinct to, you know, *kūʻē* (resist, oppose). Ever since we were young, we've had a mind of our own.

The Haradas have family burials located at Polihale, attesting to the traditional connectedness of Kauaʻi's north shore with the Mānā region via overland trail neworks.

PH: Yeah, I was born on the east northshore side, grew up my whole life there — only to come to find out that my *kūpuna* are buried in those sand dunes right there in Polihale.

HKA: Polihale.

PH: They showed me, they said, come, this is your *kūpuna*. I walk down to the burial ground and I'm flabbergasted. I'm *pūʻiwa* (in awe, startled). Just like all my hair sticks up on my neck. Just amazed. Because why? This is your *ʻāina* too. Then to find out back in the day, how did they come to this *ʻāina* — before Kekaha was as it is in Kapaʻa, it was covered in *wai* (water) for the rainy season [referring to the historic swampland]. How did they come across from the other side of the mountain? The people who lived in Hāʻena would come across the mountain, bring down with rope their *waʻa* (canoe), and *waʻa* (paddle) across that *ʻāina* to get from one place to the next.

The Haradas explained the importance of perpetuating *ʻōlelo Hawaiʻi* to their family.

…for us growing up, the yearning to know who we are, where we come from — rooting ourselves in our language and learning it — was one of my mother's dreams and passions for us to learn it, and also of my grandmother and great-grandmother. So, three generations in from when we first had a *mānaleo* to now, there are more than nine of us — children, cousins, and their own children — who have a level of *ʻōlelo* (language) in their life or in their family. We were the first of a handful of us who actually started from *Pūnana Leo* and who went on to continue learning *ʻōlelo Hawaiʻi* in the Hawaiʻi Language Immersion Program at Kapaʻa. But in the sense of *ʻōlelo* that's where it all started.

As adults, the Haradas both chose careers in teaching *ʻōlelo*.

So now, 27-plus years since we were in that space, in that time of our life, we've graduated, gotten our licensure and degrees to teach, and are in this *papahana* (body of work) teaching *ʻōlelo Hawaiʻi*.

Ms. K. Harada described the formative role of Hawaiian language in identity perpetuation.

> …without our language, we would not be nothing. Without our language, we wouldn't have stories, we wouldn't have traditions, we wouldn't have customs, we wouldn't have any type of sense that tells us where we're rooted — which is here in Hawai‘i.

Language, Ms. K. Harada explained, is part of daily, lived identity affirmation and reproduction.

> So, a lot of these things tie back, again, to the education and perpetuation of language — not in what is a book-learned or AI-learned integration of language to *‘āina* or to traditions or customs or culture, but what it actually manifests as in our everyday lifestyle. What it is that our *kānaka*, our children, our *kamali‘i*, our *makua* (parents), our *kūpuna* are integrating as a lifestyle today.

The Haradas described the inherent sacredness of the landscape, not just at Polihale but in its entirety.

> To most of us, right, we walk on ground, the *kanaka* — *malihini* (newcomer, tourist) or *Haole* (foreigner), thinks it's just dirt, just sand. But beneath it, all the *mana* (spiritual power) that lays there, and all the *mana* that gets disturbed every day — not just here on Kaua‘i, not just at PMRF, not just at Polihale, not just in Kōke‘e.

The Haradas shared numerous concerns regarding cultural and environmental impacts caused by PMRF specifically, the U.S. military generally, and the overall legacy of colonization.

Ms. P. Harada described widespread ecosystem damage on Kaua‘i, and is frustrated by the lack of systemic support for community members' desire to *mālama ‘āina*.

> …everything that is physically manifesting to us in the lack of rainfall, the lack of water access, the lack of hydration in our forests, the lack of native birds, the lack of native plants, the lack of endemic plants that grow only here on Kaua‘i — *lehua makanoe* [a shrub that is part of the primrose family [*Lysimachia daphnoides*]) that grows in Limahuli, the *kiele* (gardenia [*Gardenia augusta*]) flower that is known to grow in Hā‘ena and Wainiha. Her name, *kiele* is significantly known to grow in Lā‘auhā‘elemai in Wainiha — these things, *loulu* (native fan palm [*Pritchardia*]), *mokihana* (special native tree found only on Kaua‘i [*Pelea anisate*]), *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) — are all being neglected by our community and only kept and preserved in place by a handful of our *kanaka*. And that is only because the access to funding, or the access to resources to sustain an *‘ohana*, is very limited to only a handful positions. That is the reality that we face today. Not enough of us even give to care. We go to all these other *‘āina* and try to put our two cents in those places, yet the community that lives right there, that has been there for generations, has no say or have no participation in what it that they themselves know best that *‘āina* needs — whether that's *makai* (toward the ocean), whether that's *mauka* (toward the mountain), whether that is in the *kula* (open land, field) where we are right now.

Ms. P. Harada states that it is difficult for community members to find time for *mālama ‘āina* activities, amongst the many other critical demands of daily life.

> And the saddest thing is that those of us who make the time to fight for the things we truly desire to see, protect, conserve, and perpetuate — again, a handful. Why? Because it's extending ourselves beyond our capacities of our *mana* and of our *ola* (life, health), because we choose — beyond our 9-to-5, 8-to-2, 8-to-3-hour jobs — to make *‘āina* important in our life, to make it something worth fighting for. Not everybody can commit to that. Some of us have *‘ohana* and children. Some have more than one child in the home. For some, there are no *makua* in the house.

This issue is compounded, she continues, through disruption of intergenerational cultural transmission, generationally reducing interaction and relationship with *‘āina*.

> There are so many youths right now — we're talking about the cultural impact — so many young teenagers, we're even talking about the influence of media and phones and electronics — do not have *makua* in their home when they come home from school. Where *tūtū grandma, tūtū auntie, tūtū uncle*, who physically are not well, physically have ailments, physically are in pain, have *maʻi* (illness), are trying to perpetuate and then take on this *kuleana* (right, responsibility, privilege) to *hānai* the next generation. And we're seeing the impact: is that a lot of young people, young *kanaka*, don't have respect for *ʻāina*, don't even care enough. There's no reason to care. Why? Because they are not taught their *moʻolelo*. They're not taught what is their tie to that *ʻāina*. Yes, they love it. We never question the love that is there for *ʻāina*. We never question the love that is there for our culture. But how can they identify with something if they don't interact with it?

Ms. P. Harada described devaluation of traditional lifeways and expertise as an additional barrier to making the best use of the capacities and skills of the Native Hawaiian community.

> As I shared earlier, my *ʻohana*— master fishermen, master weavers, master *hula* practitioners, masters in *kahuna*, *kahuna lāʻau lapaʻau* (herbal medicine practitioners), *kahuna haipule* (priests/priestess of prayer). All of these things. And even the bad exists in all of our families. But to know that these gifts and talents were passed down to our *ʻohana*, to us — and yet, if we are brutally honest, most of us do not perpetuate that as a consistent part of our lifestyle. Why? Because we're constantly being aggravated by the Western metrics: to provide for a family you need this, to provide for our families you need to have accolades, you need to have a title, you need to earn the credentials to be a *kanaka*. That is not the way of our *kupuna.*

Educational institutions, Ms. K. Harada states, are a critical source of support for such households in developing the capacity of the next generation.

> the solution is with us. And it starts within our home. But the education we teach to these children is so vital for them to figure out what are their gifts and what are their talents — makes it that much harder for them. And if you're already absent as a parent in the home, that is one more nurtured factor that brings the difficulty level of them understanding and finding what are their gifts, and what are their talents. It makes it that much harder for them. And you see all the troublesome things that come out of it.

The Haradas emphasized the Native Hawaiian cultural disruption that results from ecosystem damage by the military, private corporations, and others.

> If they [military] bring in the most money, where is all that money going to? And again, talking about initiatives, why are they not spending money to clean up their mess? And that goes back to the cultural impact, because they've already impacted us — not beyond repair, but they have. The soil is polluted because of the easements they have. They're allowing all these high industrial corporations to use the land and do what they please — pesticides, herbicides — and killing our *ʻāina* and that gets into the air and water. That's why we had that whole bill [referencing Kauaʻi County Bill 2491, passed in November 2013, by the Kauaʻi County Council to regulate use of pesticides and genetically modified organisms (GMO) in agriculture]. That bill was asking for the county or state to tell the community when they would be spraying the chemicals in the fields, because it was poisoning the schools that are located not too far from where those companies and their farms are. And that is why the cultural impact — they've already impacted us. The damage has been done.

The Haradas gave examples of environmental degradation, including less abundance of *limu* and fisheries' decline.

> KH/PH: Every fisherman on the North Shore notices what's happening. Our *limu* (seaweed) in Keʻe — it's not growing. It's not as plentiful.
> HKA: *Limu kohu* (soft edible seaweed [*Asparagopsis taxiformis*])?

KH/PH: We are known for our *limu*. All of Koʻolau, *moku o Koʻolau* (district of Koʻolau), all of the North Shore — we are known for our *limu*. It is abundant. It used to be. But now it's not. Why? Because they're throwing all the *kemikala* (chemicals) chemicals in the water. Doing all these kinds of testing and diverting our *iʻa* (fish) from returning home and living within our *kāheka* (pools) and our *kai*. And the *ʻauwai* (irrigation ditch). And then you have commercial fishermen that you guys allow. And then you're allowing all these private investors and developers to go and *ʻoka* (purchase) and purchase acreage of land that should be used for propagation.

Ms. K. Harada describes her profound investment in supporting systemic change to ensure cultural and environmental health for future generations, as embvodied in access to cultural-natural resources such as *maile.*

> We are looking and operating from a deficit mindset. We are trying to get out of the fog and to stand on solid ground. And if that means we're all hunched over, flat on the ground— at least we're there together. It would be worth it. That's something worth dying for. So that you know the next generation coming after you doesn't need to worry about polluted water, doesn't need to worry about where they're going to get their maile lei, doesn't need to worry about where they're going to live or who's going to take care of them — because they have everything they need to be self-sustainable, to provide and thrive.

The Haradas acknowledge the need for both adaptability and continuance to the future of Native Hawaiian culture.

PH: And our *ahupuaʻa* is not going to look the same —

KH: The *ahupuaʻa* is going to change — so stop looking at boundary lines, because that's going to change. We learned that from the big floods in Hanalei, Wainiha, and Hāʻena — the whole landscape changed because of landslides, floods going happen. You're *hale* (house) not going to look the same. The boundary line is going to change. But what's not going to change? Our culture. Who we are as *kanaka*. The values don't change. We are who we are today because the value system that we all want to protect and want to perpetuate is the same: which is *aloha*. That's the only thing that separates all of us as *kanaka* from everybody else. It's not just the word. It's not just the I love you, hi and goodbye — no. *Aloha* is perseverance. *Aloha* means, to your last breath, the last gift of breath of life you're willing to give it without a second thought because you know it's being done for good.

The Haradas also expressed frustration with inadequate military investment in addressing environmental contaminants introduced by the military.

> …it's not about being right or wrong. You made the mistake; you chose to be ignorant. You chose to continue to do all your missile testing and launching. All that metal and debris, all kinds of chemicals you have in there, definitely terrible, and you don't want to go clean it up? Why?... they could not answer our questions. I am asking simple questions. "So, when have you ever cleaned up? Oh, you have not cleaned since day one, okay. Are there any initiatives to go clean it up?" "No." "And then, you are telling us all these great ideas about *kuleana*, it's your *kuleana*, if you make the mess, you got to go clean it. Whose *kuleana* is that? mine? I pay you tax dollars. We pay you for security. CIA, all your essential offices up there. Don't we pay you tax dollars to serve and protect, so serve and protect."

The Haradas provided the example of military policies around range clean-up, which they find to be insufficient.

TD: …for certain ranges, if a range is active, they do not move forward with clean up until that range is closed.

KH: Which in this case — shut it down, right? Is that what I'm hearing? They have to shut it down so that it's inactive, clean it up. And that's why they haven't cleaned it up — because they don't plan to shut it down. Right, that's what I heard.

PH: Well, that range is never going to not exist because of where we are and where PMRF is logistically located.

KH: That's an excuse. Okay, I'm just going to say that. It's an excuse, because you guys know, you guys plan, right? You plan when you're going to do your tests, your missile testing. There's a gap of time from when you actually do it and when you don't — to clean. So, you go tell the people who told you that bull shit, sorry, I'm just going to say that. And for feasibility ….

PH: If they can find the Titanic, they can clean up the missile range rubbish.

The Haradas expressed a desire to work transparently and collaboratively with the military to reduce environmental harms associated with military presence before the situation reaches an ecological tipping point.

> If we truly believe we are as smart as we say, it's the modern 21st century, 2026 — then let's truly be conversing at that same caliber and level. If you're a professional, then let's speak professionally. This is not going to work for the perpetual future of an island community… are things escalating to a point where we're having a high percentage of degradation in our native environment? Yes.

Ms. K. Harada also expressed frustration with the ongoing nature of cultural impact assessment, in which Native Hawaiian consultants are asked to contribute their cultural perspective to a growing body of information, but which does not seem to produce sufficient visible impact.

KH: Based on what they say, that's been the normal. So, I don't know — you've been in this game, you've been doing your *kuleana*, collecting data, interviews for how long, *'anakē* (aunty)?

HKA: About seven years.

KH: So, everything we're talking about is not all new information.

HKA: No.

KH: It's the same information.

HKA: Right.

KH: From every site you've been to, right so that probably a starting point, so every site youve been at, every report you've collected — why are you not referring to all of that? Because it's the same issue. Why aren't you using the data that already exists to support that? It's not maybe, it's we have to. Or, how soon? Because that response right there — if it gets me riled up, it will get everybody riled up. And we want to stop operating from a deficit mindset because we've been operating from deficit for so long, we have, and it's tiring. I'm young and I'm tired.

Ms. K. Harada shared her perspective that enough information has been compiled, and it is time to move to a more active phase of collaboration.

> We are past the point of conversation; we just want action. You know what I'm saying? Walk into the room, what is your plan of action? You have a plan of action, what is step one? Okay, where am I included in the step? Do I have to participate? Okay, I'm coming with step two, *hiki nō* (can do). Plan of action.

The Haradas also describe a culturally-appropriate attitude for such collaboration, which includes taking both responsibility and initiative.

> All we're asking — it's not even an ask, it's a telling — '*auamo kuleana* (burden the responsibility). What does that look like? It looks like: shut up, pay attention. Like our *kupuna* tell us: Shut up, *pa'a kou waha* (shut your mouth). *Ho'olohe me kou pepeiao* (listen with your ears). *Hana me kou lima*

(work with your hands.) *Huli kou lima ilalo* (Turn your hands downward, meaning do not ask for something with your hands facing upward). Provide us. Don't ask us. Initiate. Anticipate. Military tactics: initiate and anticipate. What is the next move?

Ms. K. Harada identified specific strategies that PMRF could implement or improve to reduce the cultural impacts of the base's presence and activities.

> …solutions look like this: collaboration with community; having access to all the *wahi pana* (culturally significant places) that they are occupying illegally, and restricting us from; they should allow community to go onto PMRF — there should be a special admissions process; waive the fee because we deserve to pay nothing; limit the personnel to how many you can bring in a group, that can be all waived because our *keiki* need to know that these are the people, and this is the *hui*, that are doing all these things, this is where they work at, this is what they do here. You want them to fight, you have to show them what they are fighting up against. Because we don't deserve to pay anything. Limit on group size, of course — that can be worked out. Because our *keiki* need to know these people and this *hui* (group, organization) that are doing all these things. This is where they work. This is what they do here. You want them to fight? You've got to show them what they're up against.

The Haradas state that collaborations with positive outcomes, such as surrounding care for *iwi kupuna*, will be retold within the Native Hawaiian community and support improved relations and future partnership.

> What about the *iwi*? Don't leave it like that to be desecrated. Give them back their *iwi*. Go through the proper protocols. You don't know what the protocol is? Anthropologist, direct them to the person who knows how to do the protocol. Go to the *'ohana*. Because that's theirs. That is the solution. That's step one. And there are a lot of steps after that. But step one, you know who they belong to. You know whose *'āina* you're on. You need to go and reach out to the *'ohana* and start figuring out how to fix the mess that you just made. And don't tell the *'ohana* to fix it. That's not their *kuleana* (responsibility/obligation). That's your *kuleana*. And in there, I'm sure there are things they need, there's some way to make that a collaborative effort that is beneficial for both parties. And then you know what the *'ohana* going do? They'll go back to their community, their *lāhui*, and be like: this is what we did; it was super *maika'i* (good); I was a little skeptical; but through the process and continued support, this is the outcome.

Active effort by military collaborators with visible impact, the Haradas explain, bypasses questions of good faith, objectives, and the power structure, reframing the interaction as one of positive mentorship.

> KH: If they're being *puni* (deceitful) then they're *puni* — it's not that you cannot work with *puni*. There is a way to that you just have to address it from that perspective, right? If somebody is being *puni*, you just have to —
>
> KH/PH: Okay, you're *puni ala* (deceitful), thats okay, but can you please go cut the *huli* (top of taro used for planting)? You can *mahalo*, there you go. Re-advert them from their *puni ala* state and make them go *hana* (work, be effective). That's a *kumu* mindset — Come, come pull weeds. This is your cross-fit workout. The end, girl, get real down to the ground and *'oki* (cut) her, *'oki* her. We're *kumu*, so it's our *kumu* mindset too. Haumāna first, always. This *kumu* action is like, how do children learn? If you got to take it down to children, you have to show them. "You see that rubbish over there — go pick up the rubbish." "Why *kumu*, it's not mine." "Go pick up the rubbish, go, go, go, doesn't it look more beautiful now that there is no rubbish on the ground?" And that's what we call *mālama 'āina* — and what is *mālama 'āina kākou* (what is caring for the land everyone) — that means we must pick up our rubbish. That's one definition to *pai papa maala'o* (encourage kindergarten class). And if they [kindergarteners] can learn the *ha'awina* (lesson), why can't captain, why can't commander, why can't a sergeant, whatever the titles are — expertise this, expertise that?

The Haradas also suggest that PMRF should allocate more budgetary resources and personnel to developing productive collaborations with the community, especially through inclusion of community representatives.

PH: [to TD] Demand the budget so you have a team. And you know why — it's one setting you up to fail for you to *ʻauamo* (carry the burden) all of that. Honestly, if I had to look at it from a business standpoint, one person to oversee that whole highly congested, highly trafficked area, inclusive of military occupation and daily usage — that's a lot…okay, let's take that meeting for instance, I don't know how it's done at other meetings — but when I walked into the room, there were a lot of people.

PH: Girl, you had committees of committees.

KH: So, they have their teams, right? You're one part of that many, many, many — not use. If they have their team, what you need to say to them is that you need a cultural collaborative team to *mālama* all that *kuleana* and to help support them — and that's a key word, help support them to do the right thing so that this can be a collaborative effort. Collaboration is you talk I listen; I talk, you listen; we're talking about is going to the same goal. The first step is, we need to include more *ʻelele* (representatives, messengers) from the community that live in this *ʻāina*, who are willing and able to come to our *hālāwai* (meetings) and participate in cultural collaboration meetings — boom — that's us speaking the same language. What is this goal going to mean? This is us truly reaching out to community, enacting community outreach, having community liaisons come in with us at our home base, which is the PMRF office, to discuss the matters on the viability of each area of that lease, from Kōkeʻe all the way to Mānā; which actually goes around Mānā to the other *puʻu* (peak), Nuʻalolo — all of that area. That's a lot of *ʻāina* to cover. Yeah, to Mākaha, that's a lot of *ʻāina* to cover. And what needs to happen — if they showed up with their whole team and it's just you — how does that make sense? You're already in a losing battle…Tell them, demand it, you need a collaborative team of community to *mālama* this *kuleana*. Why? Look at how much *ʻāina*. So that we can do right by the people.

The Haradas also suggest that the military could be a source of advisement and capacity building within the Native Hawaiian community, facilitating adaptation and technological innovation.

KH: …at the speed at which things are escalating and evolving, we as *kanaka* have to take back our *mana* in that power of evolution.

PH: The innovation part is where the collaborative [effort] should happen.

KH: Military, they have access to all the high-tech technology from every part of the world. I don't have to see it to believe it, I know it. Skills — computer science, engineering, all of that has a part to play. It can be a very positive thing. If we present it that way. Because if all we are saying is get the hell out of here, and then what? Who gets all the education? Where is all the technology? Not us. We can ask for it, we can do partnerships, but that takes time. Use what you have, make it work, and make them do their part.

The Haradas summarized their position on how to support Native Hawaiian cultural perpetuation and reduce cultural harms, as well as their vision for what institutional support looks like.

PH/KH: We just need more access, really. Access to the *ʻāina*. We need access. We need initiatives, people to be there to *kōkua* (help, assist). — every time they do educational groups to come out, and to work the *ʻāina*, there are projects that the do — whether it's cleaning a *loʻi kālo* (taro pondfield), planting *kō* (sugarcane), or just cleaning the *nāhelehele* (weeds, undergrowth) on the side of the walkway — that's what needs to happen so they [*keiki*] can see the value in going back to the *wahi pana* that are filled with *moʻolelo*. And then they understand the concept: we're going here because we're going to *mālama* these *iwi kūpuna* (ancestral bones); or we're going over here because we're going to clean this little patch it used to belong to so and so *tūtū kane*; or we're going here because this is a *wahi*

kaulana (famous place) where they used to grow *lehua* (ʻōhiʻa tree flower [*Metrosideros macropus*, *M. collina* subsp. *polymorpha*]), grow *maile,* or grow *makaloa* (perennial sedge plant [*Cyperus laevigatus*]). We're going to these places, and that is the access we need so that we can show the *keiki* that these are resources.

KH: It's not like we're looking to treat everybody like you're the enemy. But if you stay as you are, you are the enemy. If you choose to change and buy into this idea of *laulima* (cooperation, working together), of *kākou* (all of us together), of *lāhui* (community) — and you truly go above and beyond — because you should. Above and beyond, you're not just providing access, you're providing resources. Resources look like tools. Resources look like, maybe transportation. Resources look like *kānaka* to help facilitate what *mālama ʻāina* is. It requires all those pieces so that we can start to show that there is momentum. Because right now, there's none.

DENNIS EGUCHI



Photo 27. Dennis Eguchi.

Dennis Eguchi (Photo 27) was born and raised in Kekaha and has lived on the west side of Kauaʻi for more than 75 years. He descends from Okinawan and Japanese immigrants who settled on Kauaʻi more than a century ago; his mother was from Kekaha, and his father was born in Waimea Valley. As a child, Mr. Eguchi helped support his family through farming and charcoal making and later worked for the telephone company before retiring. He has also been an avid fisherman and recreational diver for more than 40 years and continues to practice his "fire drill" *ʻōpelu* fishing techniques in waters ranging from Port

Allen to the Nā Pali Coast. Mr. Eguchi is a member of E Ola Mau Na Leo O Kekaha, a group that works with PMRF to facilitate subsistence fishing access at the base and organize community events, including a recent Easter egg hunt.

Mr. Eguchi recalled his childhood in Kekaha working at his grandparents' piggery and the closeness it instilled in his family.

> …the piggery actually was outside of Kekaha. It was between here and the base. They had everything — mangoes, watercress, papaya, bananas. Yeah, that's why, unfortunately and fortunately, myself and my cousins, when we were growing up, male or female, we never, ever could participate in sports, especially in high school, because the family came first and we had to work on the farm. We're not just working on a farm; we're helping make and sell tofu. We're doing charcoal, going to cut wood, you know. But in a way, when we were young, we used to kind of complain among each other, and now at our age, we think back and we go, what a blessing, because all of our family came so close.

The piggery was located on lands formerly belonging to the Kilauano family, a lineage with long presence at Mānā.

> HKA: You live over here in one of the old lands in Kekaha, like, one of the Kilauano lands?
> DE: Well, my grandparents bought it from them, and then we ended up buying from my grandparents.

Mr. Eguchi shared many reminisces about community life at Mānā during his youth. He recalled the plentiful produce grown in Mānā's home gardens.

> DE: I think everybody in the plantation community, at one point, everybody had one garden.
> HKA: What did your family plant?
> DE: Eggplant, string beans, Filipino beans, okra, some had *kabatiti* (luffa or ridge gourd used in Filipino cuisine [*Luffa acutangular*]) and squash. All the traditional vegetables, everybody planted. Not so many cucumbers, because those days they had fruit flies, so the eggplant would fare well. And then *ampalaya* (Filipino bitter melon), everybody had one garden. In fact, even I had gardens for quite a while. I was planting eggplants, because the eggplant can turn into a tree and still bear them. And I love squash, and I love *kabatiti*. Filipinos like that, but I love that, so I was raising that too. Over here, lettuce and that kind of stuff don't fare too well, because summertime comes too hot.

Mr. Eguchi described Mānā's food culture as abundant, diverse, and communal, contributing to a sense of connectivity and identity.

> DE: When I was younger and we were being raised — these are the things that I remember — anybody that had a fruit tree, it was open to anybody in the community. If somebody had a certain type of mango tree bearing, everybody would just say, "Hey, so-and-so has mangoes," and you just go ride up. "Uncle, yeah, okay." Or lychee, or everything else, right? I lived in a plantation camp right in the back of the mill. Kekaha was divided: it was the Haole camp, the Haole camp was more of the supervisors; the workers for the mill — the Puerto Rican camp across the mill, and the Filipino camp. But as I got older, everybody just kind of integrated. Along with my friends, we'd go surfing. On the way home, whoever's home was closest and had food already prepared, we'd all go there and eat. I'd get home and my mother would say, "You're not going to eat? I cooked already." But that's how it was. And one of the biggest things I remember too was that anytime anybody had a party, the entire block would be invited, no matter what nationality. I grew up learning how to eat all the Filipino foods because we had Filipino neighbors and they'd kill pig, and of course I'd go there and help. I would never eat some parts because I had so much of that

when I was growing up. I got tired of pig feet, milk gut, and pig head. They sell everything and we get all that, right? That was all I ate, so nah. I grew up eating boiled green banana with cod fish, *pastele de hoja* (Puerto Rican tamales wrapped in banana leaves), all the Puerto Rican food, all the Filipino food, and all the Japanese food.

HKA: And everybody shared food.

DE: Everybody knew how to make it because they'd ask, you know, and everybody was willing to teach. The biggest thing to me was whatever fruits were available — lychee, longan, mango, whatever.

Mr Eguchi described how this closenss helped the community through difficult times, when everyone pooled their resources and skills to provide food.

A plantation community is very, very tight, in a sense where when I was younger, I went through two strikes. Okay. And we had to go to the soup kitchen. So, you go over there with your pot. It was very interesting because all the workers there would provide all the resources to make everything right. The hunters would go get *kālua* (underground oven cooked), the guys with fishery, of course, with all the shoreline fish — fried fish or fish soup or whatever. But it was always shared. All the kids I grew up with, everybody was friends. It's not like that today. You cannot find this today.

Mr. Eguchi himself is a fisherman, and has fished the Mānā coastline for most of his life.

…at one point I used to fish wherever there was a lee, in other words, calm water. I'd fish from Līhuʻe Airport all the way down to Nāpali Coast. But I was young then. My fishing days would be like, I'd get up at four o'clock in the morning and take the boat down to Nāwiliwili and go fish, then come home, process the fish, and so on. But as I got older, I realized that my passion for fishing was taking up too much time. So now I only fish in the areas from, for example, Port Allen down to Nāpali Coast.

He began learning fishing as a child, witnessing the skill of fishermen using traditional Native Hawaiian net fishing techniques.

DE: When I was young, I used to be the bag boy for about four fishermen over here, because my dad owned a boat. He had four good friends. They were supposedly two of the best net fishermen on the island because they had really good eyes for the fish. I actually went with them a couple of times where they kept the fish in what I call chocolate water — murky water. I never learned too much from them in that way because they would catch so many fish, come up, and I'd come in the back with a bag. I can see reasonably well but not like them. I never got to actually spend much time figuring out how to look for the fish. They'd walk up along the beach, and maybe 30 yards away out on a reef, they'd stop and start fixing the net. I'm trying to look, right, but they're looking way out there. And dirty water, literally dirty water, chocolate, and they're fixing the net, and they're going down because they spotted a school, and then throw, throw, throw. And then I see the net jump up. I go, holy smokes. I got to experience fishing in the old style. One of them was actually from Niʻihau and came to Kauaʻi, and he knew Niʻihau very well. Once in a while we'd go across with him to Niʻihau and, oh my God, that's where the fish stay.

HKA: And what kind of fish were they catching in the net?

DE: Well, number one, they target *moi* Yeah. So, they go to *moi* first. Then after the *moi* they go for mullet and *uouoa* (false mullet [*Neomyxus chaptalii*]). After that they go for *āholehole* (young stage āhole, an endemic fish [*Kuhlia sandvicensis*]). Then they go for *manini* (common surgeonfish or convict tang [*Acanthurus triostegus*]). And then they go for *nenue* (chub fish, pilot fish, or rudder [*Kyphosus bigibbus, K. vaigiensis*]). But rarely ever *nenue*, because they target *moi* first.

Mr. Eguchi expanded his repertoire over time, learning additional fishing techniques.

DE: When I was younger, I used to just be a bag man, and that was only on weekends. Otherwise, I used to only surf. At 25, I started figuring, you know what, I'm getting nothing out of surfing. So, I started going fishing. In those days we used to go catch *aku* and chase *ʻahi*, all the pelagics, the trolling fish. I did that for about 10 years. Then I joined Westpac (Western Pacific Regional Fishery Management Council [WPRFMC]). Westpac took some advisors to Saipan. We all went, and I got to meet guys from the Big Island that do only *ika-shibi* (squid tuna fishing at night with lights), guys that do only *palu ʻahi* (*ʻahi* line fishing using a stone and chum bag). I met guys from Maui that only do *onaga* or *ʻōpakapaka* (snapper [*Pristipomoides sieboldii, P. microlepis, Aphareus furcatus, A. rutilans*]). I became good friends with all of them. They were kind of old; I was the youngest of them every time, but we became good friends. They'd invite me to come out, and I'd go. Because I used to sell electronics for ocean trollers, I knew well about all the electronics. I'd go out on a boat, and ask them, "You know how to find the fish with this." "Oh, no, but I can see the bottom." "No, your recorder can see fish." They tell me, "What?" I said, "Yeah." So, I readjust it for them. And they go, "Oh wow." Then that guy calls his friend from another island and asks if they can bring me along. I used to go all over the place. I enjoyed it because I would be involved with fishing. I used to love to hunt too. That is how I got to the Leslies. If you do it and you, do it honestly, from the inside, trying not to get anything but meeting somebody new and becoming friends, it turns right around. They'd tell me, come out to Hilo, and we'll take you. Watch us go catch *ika-shibi.* [Uncle saying to his friends] "What, what is that?" You go out there, you put out these lights, you get this long pole with a gaff. As the squid swims by, you gaff them. Then you bait them, set them down, and the *ʻahi* comes to feed on them.

HKA: That's why you say *ika*, because *ika* is a squid, and *shibi* is the *ʻahi*.

DE: Yeah. And then *palu ʻahi* is where you get a stone, you put your *palu* (chum) on, you wrap it up, and you chase ahead of the porpoises. You go in front of the porpoises, you send a line down, you bust a rock, and hopefully the *ʻahi* will pick them up. They do that in Kona. Hilo side cannot because the wind's too strong. In my fishing career, when I started off, the boat at that time to buy was called a Radon. The Radons come out of Santa Barbara, and they're known to carry heavy loads at high speeds. Perfect for diving and fishing. So, that is how I used to go Niʻihau to dive. My first fishery was *ika-shibi*. I'd go nighttime, do all that.

As a commercial fisherman, Mr. Eguchi focused his energies on different fish species over time.

DE: So, I went from *ʻahi* to *ono*, and then eventually to *uku* (deep-sea snapper [*Aprion virescens*]), and then eventually to *ʻōpakapaka*, and then eventually to only *onaga*. Each one took me about five years. I stayed in each fishery for five years each, because you cannot just jump around. If you jump around, you cannot market the fish. You have to be in a business when they call, yes, I have it.

HKA: Right. You have to be reliable. They expect you to have that certain fish.

DE: To sustain the market. Yeah, yeah. That's why everytime I jump to a fishery; I stay in that fishery for five years minimum. Then when the light went on about *ʻōpelu*, I went — forget all that. I want to go catch *ʻōpelu*. So, I'm the only one who has *ʻōpelu* in volume on the island. Other people go and hook, but I go with volume. And that's why I modified everything. I figured out what I had to do. That's why I'm productive.

Mr. Eguchi also distributes fish to the community at no cost.

Basically, I fish for ʻ*ōpelu* (mackerel scad [*Decapterus pinnulatus* and *D. maruadsi*), but a certain time of the year I'll go and catch *onaga* (Japanese name for Hawaiian red snapper) and ʻ*ehu* (ruby snapper [*Etelis carbunculus*]), the deep-sea fish, and that's because I give them to people. Other than that, I chase *ʻahi* (yellowfin tuna [*Thunnus albacares])* once in a great while, but I prefer to

just concentrate on ‘*ōpelu*. About 60% of my catches are sold, but 40% of my catches are donated — to weddings, funerals, birthdays. Almost every part of here, my fish is there.

Mr. Eguchi, through various organizations, distributes highly valued fish species, as well as *pa‘akai* (Hawaiian salt), both considered very precious as resources.

DE: Normally I fish according to how many orders I have, because I donate a lot to my church and we give them away at the food bank. Some people come by and I’ve got a bag of *‘ōpelu*. They go, “Oh my God.”
HKA: That’s gold, Uncle.
DE: And my church, we give away Hawaiian salt.
HKA: Both of them is gold.

Mr. Eguchi also benefits personally from his catches, trading his abundance of marine resources for other items in a modern version of *mauka-makai* resource exchange

DE: I eat *poi* almost every day. One of my friends goes to the *poi* factory, and the *poi* mill, they get.
HKA: Where Uncle?
DE: Waimea.
HKA: At Kaina’s?
DE: You can get the *poi*, the one with no water inside.
HKA: The *pa‘i ‘ai* (undiluted taro)?
DE: Yeah. The hunters use that when they go to the mountains, right? My friend, I give him fish and he gives me *poi*.

Mr. Eguchi’s skill as a fisherman extends beyond the catching of fish, into complex preparation techniques. He described some of the difficulty in processing *‘ōpelu*.

I did dried ‘*ōpelu* for only about six months and I said, “No, this is too labor intensive.” And if you dry fish perfectly, yeah, the day you finish, you eat them — oh, so *‘ono*. But if you put them in an ice box or a freezer, the thing starts to dry out. When you eat them, the texture is not the same. I called up the guys in over there [Hawai‘i Island]. How much is one *ka‘au* (a basket full; *ka‘au* used to refer to a count of 40) for dried ‘*ōpelu* now? At the time it was $85. Now must be $200 I think. How many pieces? Depending on how big the *lauhala* (pandanus leaf [*Pandanus odoratissimus*]) basket. I said, $85 for how many? They told me the amount — 18 pieces. So, I go target the big kind, I go make and then dry them. The best way is sun dry. But it takes too long. I’ve got to sun dry them on this side, turn them over the next day, and I’ve got to watch the weather. So anyway, I started dehydrating them. Dehydrating is terrible. So instead, I put plexiglass on top of my dry box and put them out in the sun. If it rains, I just let them go. But I remember 18 pieces of ‘*ōpelu* for one small *ka‘au*, $85. I called up some guys, hey, you like dry ‘*ōpelu*? I like them hard-dried and to be able to peel it. I hard-dried them, but one fourth of the weight disappeared. I had to put more inside. And I was like, you know what? I’m over this.

Mr. Eguchi shared some of the reasons he is so passionate about the craft of fishing.

…it has to mean something to you. For me, I love to eat fish — that’s number one. Number two, it’s a challenge. Because all fishing — *‘ōpelu* fishing is a Chinese fire drill. Everything has to go boom, boom, boom, boom, boom, and if you make one mistake, there went the fish. I like that because it’s multitasking and I doubt if I’ll ever get Alzheimer’s. I’ve got to use my brain all the time.

Mr. Eguchi described the importance of maintaining a strong relationship with the PMRF in order to facilitate marine resource access on or near the base.

I belong to an organization in Kekaha, and it's called E Ola Mau, E-O-L-A-M-A-U. It's a non-profit, and we do anything that needs to be done in Kekaha. So, we make it a point whenever there's a new captain at the base, we go as E Ola Mau to introduce ourselves and ask the captain, whoever is there, that whatever we're going to have, we'd love them to participate. For example, for Easter, we did an Easter egg hunt. We put out 2,000 eggs and we invited from the whole island, but we only put out the posters from Waimea to Kekaha. But we also do it at PMRF. We love the participation from PMRF. But we do all this kind of stuff to try to keep in touch with whoever is in charge, only because the people on the west side also like to go to the base for subsistence fishing. Certain base captains close the base down. We try to make it so that the base understands how important it is to be able to get to the resources. We participate with whatever they want to do, and we invite them to whatever we do. So that's part of the interaction. This island is so small that everybody knows who the major players are on this island.

Access to the marine environment near the base is important for the broader community of Kaua'i, as the Mānā coast still maintains supports one of the best fishing environments on the island.

Anyway, this whole island, like I said, interaction with the base — everybody is close, tight. We get guys that go to the base specifically to spin-fish close to Major's Bay, and they do for *moi* (the threadfish [*Polydactylus sexfilis*]). We get guys from all over the island coming over here because we've got one of the better places. And that's the reason why we need to keep close ties with the people at the base. We now have some planning people at the base in good positions that can advise the captain about the boaters when they're fishing, about the people going to the shore. You've got to have that, otherwise it's going to be like O'ahu.

Mr. Eguchi describes a copacetic relationship with base staff, who will communicate changing access restrictions around the base.

LK: Any problem when you're fishing in front of the base? You have a relationship with the Captain so it's, okay? Do they know who you are?

DE: No. The base tower will let you know if you're infringing on an area where they have ops on. Rather than become a problem, if I see a military boat out there, I know from experience that area back, they're going to close it. So, I go someplace else. Why [not avoid it], you know what I mean? I just make sure I watch. And then, ever so often, I'll call the guys in the control tower and say, "Hey, you guys got ops coming up?" Like right now they're doing RIMPAC (Rim of the Pacific Exercise), right? But RIMPAC is way outside. If you are aware, then you're not going to have a problem. That's what I try to do.

Mr. Eguchi described how these relationships support the distribution of fish to where they are needed, including for purposes such as Native Hawaiian protocols related to the *iwi kūpuna* crypt located on PMRF.

DE: Because I fish, I have a lot of fishing friends right across the island. I have friends down Hanalei, Kīlauea, Hā'ena, and the go-to person would be Hanalei Hamasua. So, if you want anything down there, you call him and he'll set it up for you. Or if you need anything, like for example, Thomas needed some fish for his crypt [reinterment structure]. I think it was seven species, and they couldn't get some fish. Thomas couldn't get one *'āweoweo* (red fish with large eyes [*Priacanthus*]). So, I passed the word out, and I got fish from every community all the way down as far as Hā'ena. Yeah, everybody sent me *'āweoweo* I gave them to Thomas.

HKA: … it was for the crypt, yeah? Were they rededicating the crypt? To reinter more *iwi* (human skeletal remains)?

DE: No, they were opening the crypt. Something about the Hawaiians believed in having, I think, seven different types of fish or something.

HKA: Fish for ceremony, yeah?

DE: Yeah, and just so happened, they couldn't get one particular one.
HKA: Yeah, right, the *ʻāweoweo.*

Howeover, Mr. Eguchi notes that, while Mānā's coast remains abundant, there is less abundance today due to overfishing.

> …one time, the area outside of PMRF, the resources were just in abundance. When we get trade winds, the lee is from here all the way to the back of PMRF. The fishermen, if they're looking for calm water, they'll target that area. The resources back there, especially the pelagics — the *aku* (skipjack tuna *Katsuwonus pelamis*]) and *mahimahi* (dolphinfish [*Coryphaena hippurus*]) and *ono* (wahoo [*Acanthocybium solandri*]) — they're not as abundant as they used to be, because there's too much fisherman interaction and too many tour boats. Way too many tour boats.

Mr. Eguchi expressed concern about food access for vulnerable demographics of the Mānā community, such as seniors or unhoused people.

> I know we have a homeless problem and every community has that. Unfortunately, we try to feed everybody if we can. Our church actually goes and looks for them. It's called Westside Christian Church, and Westside Christian Church works with E Ola Mau. We take food to the senior housing, the low-income housing, and a lot of the meals for the homeless — we go from Kekaha to Waimea.

Mr. Eguchi also shared a few concerns about Native Hawaiian culture in a modern context, wondering about the larger utility of educating children extensively in *ʻōlelo Hawaiʻi* (Hawaiian language).

> DE: My grandson went to Kamehameha School. Kamehameha School paid for University of Hawaiʻi and so on. We were fortunate. He knew how to speak some Hawaiian, because the *Tūtū* Māmā and *Tūtū* Kāne (grandparents, male and female), they speak Hawaiian — they came from Honolulu. But I tell her, now that he's in the real world, there's no more room for Hawaiian. The rest of the culture, the business culture, doesn't speak Hawaiian. So, these kids are at a deficit. They can speak fluent Hawaiian, but when they get into the real world, unless they can adapt and have the personality to function there, the Hawaiian [language] is not going to help them.
> HKA: Hopefully they'll be bilingual. But I know kids nowadays, they're bilingual.
> DE: Yeah. But plenty over here, they don't speak too much English because when they go home, the parents all speak to them only in Hawaiian. Because I go over there every time to different people's homes. Always in Hawaiian. I think to myself, oh man. Unfortunately, even the real business world.

Mr. Eguchi is also concerned about whether perpetuation of traditional knowledge will stifle adaptability, using the example of nylon fishing net.

> Well, in the last couple of years, there's been a big movement — you guys are part of it, because you guys are Hawaiian — to go back to the old traditional. Okay. But you cannot survive in this world old tradition today. The Leslies do old traditional fishing. He calls me all the time only because I do not do traditional. At one time he was using nylon for the net. I never did use nylon. Everything is *suji* (Japanese word for monofilament) because the net is too heavy for me to handle alone. I'm by myself, right? So, from way back when, I started making net. He tells me, "Oh, how big the net?" I thought, oh, it's not how big the net is, it's how much fish can go inside. [I say,] "I am getting trouble right now because I don't use nylon, I use only *suji*." "No can, no can," he tells me. [I say,] "Can we just got to figure out how." He believes in cotton twine rope for everything, for tying. I don't use that kind of stuff because the thing absorbs water and tangles too quickly. I use plenty Japanese technology. When I tell him, he says, "Oh no, the thing hot on the hand." I said, "Yeah, but no tangle." Unless you actually keep up with technology, yeah.

Mr. Eguchi did not express any specific concerns regarding PMRF except for the importance of maintaining good community-base relationships to facilitate marine resource access, as described above.

V. DATA ANALYSIS AND CONCLUSION

This section presents an analysis of the data provided through the interviews and provides important information about the categories of land resources, water resources, cultural resources, and general concerns about the Proposed Action. A component is included that specifically addresses these resources, including their value, availability, accesibility, and locations. These categories are used to organize information about important practices, locations, and concerns for the study area, and to aid in the assessment of how the Proposed Action and No Action Alternative may affect these resources, locations, beliefs, and practices. Some of the locations of noted cultural tradtions and practices in the Kona *moku* of Kauaʻi and surrounding area are depicted in Figure 7 and listed on Table 6. Importantly, only two of these locations are within the Proposed Action, with numerous additional ones found throughout the main installation federal property.

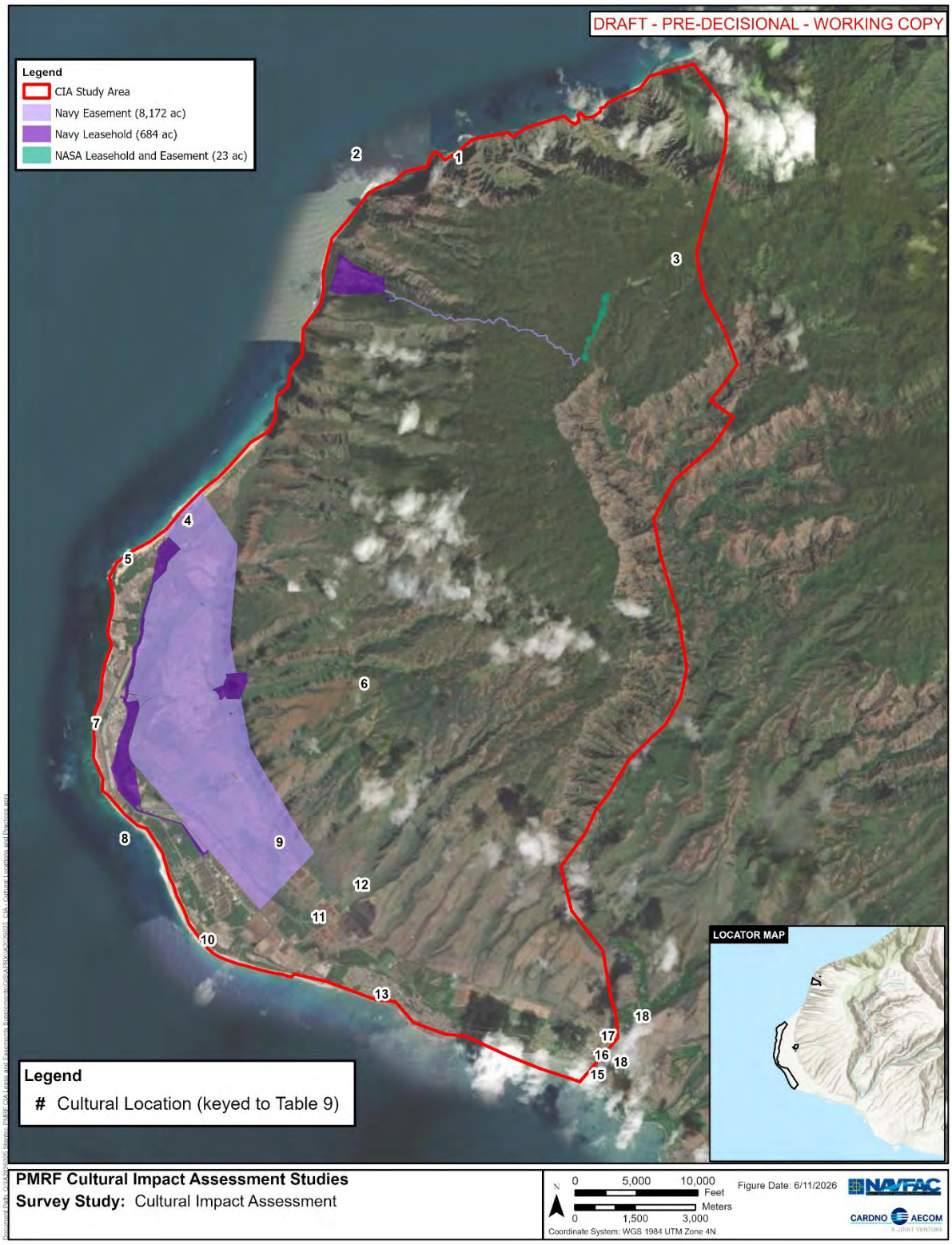


Figure 7. Places of noted cultural tradtions and practices in the Kona *moku* of Kaua‘i and surrounding area (see Table 6).

Table 6. Places of Noted Cultural Traditions and Practices in the Kona *Moku* of Kauaʻi and Surrounding Area in Figure 7.

Number	Cultural Traditions and Practices	Location and Comments
1	Mālama ʻĀina and Mālama Kumuwaiwai	Nuʻalolo Kai. Nā Pali Coast ʻOhana
2	Kona crabbing	Off of the Nā Pali Coast
3	Gathering for *lei* making used for *hula*	Puʻu Ka ʻŌhelo or Berry Flats
4	Moʻolelo of Pāpiohuli and Location where the ancestors of the Kua ʻohana resided in reference to the Hawaiian Newspaper Article (Ke Alakai o Hawaii, Feb 4, 1932, p.4). Presently the Kua *ʻohana* lives in Kekaha. The beaches of Polihale is a place of geat memories, where *kanaka* camped, fished, and gathered. There are memories of *aloha* and *pilina* close to the *puʻuwai* and *poli*, craddling the *ʻohana* who has spent time here. Many would like to spend time here or nearby Nohili. *Puka* shells were also collected here to make *lei* or necklace. There is *kanu ʻia*, *pāhula*, and *heiau* here. The l*eina-a-ka-ʻuhane* is off the shores here as well. *Iwi kūpuna* and veneration of *iwi.*	Polihale. Location is where the Monkey Pod Tree is located. This location is also a former residence of the Kilauano family as described by C. Kunane Kilauano.Presently the Kua *ʻohana* lives in Kekaha. Queen's Beach and at the shores of Polihale.
5	*Iwi kūpuna* and veneration of *iwi*	Ke One Kani O Nohili [Barking Sands]. Harvesting or and gathering of *kiawe*.
6	Mahiʻai kalo, Lāʻau Lapaʻau, Paniolo, Mālama ʻĀina, Mālama Kumuwaiwai, Hoʻonaʻauao, ʻŌlelo Hawaiʻi, Pilina and Aloha with Lāhui.	Puʻu ʻŌpae, in the vicinty of Puʻu ʻŌpae Reservoir.
7	Up and down the coast of Mānā, the sand or *one* is prime for detoxing and cleaning, a form of *lāʻau lapaʻau*. From Kokole to Polihale [considered Mānā] the following practices are recognized: Gathering: Marine Resources: Varieties of *limu, ʻopihi, pipipi, kūpeʻe, wana, hāʻukeʻuke*, and *loli*. *Paʻakai* was collected in the *poho* of the *koʻa* when the tide was low and *paʻakai* had tie enough to solidify. Beach to the Inland Resources: *Lāʻau lapaʻa* or medicinal plants were collected such as *kaunaʻoa*, wild *ilima*, *ʻuhaloa*, and other. Lawaiʻa: Diving for *heʻe*, lobster and fish is or have been a common practice in most *ʻohana*. Other fishing such as casting throw net, surround net, and other allows for a variety of fish such as *ʻōʻio, nenue, ʻāholehole, palani, kala, moi, kūmū, taʻape*, mullet and others. Spiritualism: From makai to mauka there are archaological sites that are recognized where people pratice their own personal spiritualism, and ther are unknown sites as well.	Mānā (*makai*)
8	Heʻe Nalu	Major's Bay

Number	Cultural Traditions and Practices	Location and Comments
9	Wahi ʻāiwaiwa: Within the fields of cane and later corn. A place that exists on a different parallel as expressed in the interview with Eben Manini and Keao NeSmith.	Kaunalewa
10	Lawaiʻa.	Kokole Point
11	Sugarcane. Kekaha Agriculture Association (Location may not be precise). Waiawa is where the Knudsen-Faye family lived and worked during the early years of their settling into the Kona *moku*, and as sugar became a prominent commodity, they expanded and lived in different areas.	Waiawa Plain
12	Mahiʻai Kalo, Mahiʻai Mala, Mālama ʻĀina, Mālama Kumuwaiwi, Lāʻau Lapaʻau, Paniolo, Pōhaku Building, Hoʻonaʻauao, Pilina/Aloha with Lāhui.	Waiawa Valley
13	Lūʻau. Pilina/Aloha with Lāhui. Lūʻau were held here at Kekaha Beach when it was sandy during the 20th century and Plantation Era. Presently, a wall was constructed in the 21st century because of improvement with the Kikiola Boat Harbor and possibly global warming.	Kekaha Beach
14	Nā Pali Coast tours launch site.	Kikiaola Boat Harbor
15	Kūhonu crabbing in the area. Lawaiʻa (Thrownet) for mullet. Hoe Waʻa: Kilohana Canoe Club.	Waimea River Mouth
16	Aloha Aina Poi Company. *Poi* processing and Mālama Kūpuna [feeding the *kūpuna*] and selling *poi* products world wide.	Waimea Town
17	Kumano I Ke Ala: Hoʻonaʻauao; ʻŌlelo Hawaiʻi; Moʻolelo; Lāʻau Lapaʻau; Mālama ʻĀina, Mālama Kumuwaiwai; Mahiʻai kalo/loʻi kalo; Mala with other crops; Hale building; Pōhaku constructing; and Aloha/Pilina with Lāhui.	Waimea/Makaweli Valley
18	Gather for *ʻōpae* and *ʻoʻopu/hinana*	Waimea/Makaweli Stream

LAND RESOURCES

This section presents land resources discussed in the interviews. Specific categories of land resources that were mentioned include the harvesting of *kiawe*; farming and ranching; sugar, rice and pineapple agriculture; and educational opportunities and responsibilities. *Hoʻonaʻauao* or education is *ʻāina*-based education, a Hawaiian-forward concept from *wā kahiko* [ancient time] to *manawa nō* [at this time, contemporary]. *ʻĀina*-based education offers a healthy environment through indigeous ways of knowing for future generations. The concept of *hoʻonaʻauao* structured much of the conversation regarding land resources.

The long-term effect of sugarcane agriculture was a major topic that came up during the stakeholder interviews. Specific concerns mentioned included contamination through residual pesticides and the channeling of water away from natural water courses. It was also clear through the interviews that

revitalization of the landscape to support the planting of *loʻi kalo* [pond for growing *Colocasia esculenta*] as well as providing *ʻĀina*-based educational opportunities to the community are major stakeholder goals. These goals can be viewed through the lens of food sovereignty and the long-term aims of reconnecting with traditional and sustainable indigenous foodways.

In regard to specific land-based resources and their locations, Eben Kawaikea Manini recalls going to PMRF as a youngster until his teenage years with his *ʻohana*, and they were permitted to cut *kiawe* posts which they used to secure fences up at the *ʻohana* Puʻu ʻŌpae Ranch. The *kiawe* was harvested where the military wanted to cut back the encroachment of some invasive species at Nohili, the fuel farm, the airstrip, and all the way down to MacArthur Park near to where there was once a firing range. Eben's dad refrained from cutting *kiawe* where there were thought to be burials especially on the Nohili Dunes. *Kiawe* is a wood used for firewood when utilizing *imu* [underground oven, traditional style of cooking] or other cooking. There is an abundance of *kiawe* at PMRF and elsewhere on Kauaʻi. Working in conservation professionally for over 12 years, and as a Kauaʻi master gardner, Eben recognized the rare and endangered plants at Nohili Dunes. It is his understanding that there are State and Federal government laws protecting those plants from being destroyed. He acknowledges that these plants should be protected by law.

Keith Robinson also expressed deep concern for Native Hawaiian plants and trees, identifying several threats as described above including overharvesting, introduced pathogens, and careless disturbance/destruction. Specifically, he shared a story about *hunakai*, a beach morning glory found on the Mānā coast, which unexpectedly benefited from the introduction of nitrogenous compounds to the soil after a rocket misfired and spilled rocket fuel on the terrain.

Sean Mokuonahiala Anadrade explained that because of the frequent floods that used to come through through Mānā, inhabitants of the area used to keep the *kalo* on rafts fastened together from trees that were anchored down so they would not float away.

Specific categories of land resources that were mentioned during the interviews include:

- *Lāʻau lapaʻau* (medicinal plants)
    - *ʻUhaloa* [a small, downy, American weed (*Waltheria indica var. americana*)]; *kaunaʻoa* [a native dodder (*Cuscuta sandwichiana*)] *Lei*-making plants
- *Lei*-making plants
    - *ʻIlima* (native shrub, all species of Sida); *maile* (*Alixia stellata*); *mokihana* (*Melicope hawaiensis*)
    - *Maile* [a native twining shrub, (*Alyxia olivaeformis*)]
- Introduced game animals
    - Pigs, goats, cattle

WATER RESOURCES

Wai [water] is the most treasured resource for Hawaiians. The island of Kauaʻi was and is teeming with *wai*; this includes the Mānā plains. The *ʻauwai* [ditches and canals] are essential in the irrigation of planting *loʻi kalo* [taro pondfield] from the *kahawai* [stream]. If there is a harmonious balance in the

kahawai, *ʻauwai*, and *loʻi kalo*, stream inhabitants such as the *ʻoʻopu* [Hawaiian sleeper [*Eleotris sandwicensis*], *ʻōpae* [shrimp], and *hīhīwai* [endemic grainy snail (*Neritinu graposacan*)] are allowed to flourish and so will the marine life that depend on the benefits of brackish water areas for spawning.

Specific categories of water resources that were mentioned during the interviews include:

- Marine resources:
    - Fish: Specific taxa mentioned are *moi* [threadfish (*Polydactylus sexfilis*)], *āhole* [an endemic fish (*Kuhlia sandvicensis*) found in both fresh and salt water.], *manini* [Common reef surgeonfish (*Acanthurus triostegus*)], *ʻōʻio* [ladyfish, bonefish (*Albula vulpes*)], *pāpio* [young stage of *ulua* (crevally) fish], *uhu* [parrot fish (*Scarus perspicillatus*)], *mū* [(*Monotaxis grandoculis*), known as the bigeye emperor or humphead bigeye bream.], *kūmū* [goatfish (*Parupeneus porphyreus*)], *palani*, [a surgeonfish (*Acanthurus dussumieri*)], *pākuʻikuʻi* [a long fishing net; specifies a net laid in coral reef, into which fish were driven by beating the water], *Kala* [surgeonfish, unicorn fish], *kawakawa* [mackerel tuna], *ono* [large mackerel type fish (*Acanthocybium solandri*], *mahimahi* [dolphinfish (*Coryphaena hippurus*), *Pāpio* [the young stage of growth of *ulua*, a fish], *moi* [threadfish (*Polydactylus sexfilis*)], *ʻoʻopu* [general name for fishes included in the families Eleotridae, Gobiidae, and Blennidae], *Nenue* [chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus, K. vaigiensis*)], *ulua*(s) [certain species of crevalle, jack or pompano, an important game fish and food item];
    - Seaweeds: (*limu*); *limu kohu* (*Asparagopsis taxiformis*)], *limu līpoa* [bladelike, branched, brown seaweeds *(Dictyopteris plagiogramma and D. australis*)]; *limu pahapaha* [or *limu līpahapaha* a general term for sea lettuce (*Ulva fasciata* and *Monostroma oxyspermum*), a common green seaweeds with delicate broad blades]; *ogo* [Japanese term for *limu,in the same family as Manauea* (*Gracilaria coronopifolia*), a small red seaweed]; and *wāwaeʻiole* [*Codium edule*, is a green seaweed];
    - Shellfish and crustaceans: ʻ*opihi* [limpets], *hāʻukeʻuke* [an edible variety of sea urchin (*Colobocentrotus atratus*)], *kūpeʻe* [an edible marine snail (Nerita polita)]; lobster; Samoan crab;
    - Other: *heʻe* [octopus]; shells for *lei* making; *paʻakai* (sea salt)
- Freshwater resources: reliable arable land for agriculture, accessible water for farming, *ʻoʻopu*, *ʻōpae* [shrimp], watercress, and *hīhīwai* [endemic grainy snail (*Neritinu graposacan*)].

Many of the consultants expressed general concerns about the management of the natural water flow based on the history of sugarcane cultivation in the area. Also, of primary concern and mentioned during several of the interviews was the need to increase access to PMRF's shorelines for fishing, collecting marine resources, camping, and surfing. Many consultants had fond memories of camping at PMRF and Polihale. For example, Hena Caberto-Raco, described the reef as being beautiful and he spent much time gathering and fishing. Camping near abundant marine resources has been part of Hawaiian life and culture for centuries. Concerns about access to PMRF are discussed further below.

Mānā has the largest expanse of white sand beaches on Kauaʻi. The sand, reef, and rocks provide important habitat for marine wildlife. Kaina Makua and several other consultants expressed their joy of fishing and gathering at Nohili Point, Kinikini, and Kokole. They would harvest many of the marine resources listed above, including a variety of species of fish, octopus, crustaceans, and shellfish. Kaina Makua also conveyed a terrifying experience while harvesting *ʻōpihi* and fishing (thrownetting) at Polihale where he encountered armed soldiers from PMRF with AK47s. Kaina harvested *ʻōpihi* in the area of Polihale and Nohili Point. *ʻOpihi* is a traditional delicacy with a substantial nutritional value. Safe accesibility to these resources is important for Hawaiians as described by Kaina Makua. Kaina also noted that the sand of Mānā including Nohili and Polihale, has healing qualities for detoxifying the body. Moreover, the raised coral reef can be used to harvest salt in the the same areas.

Aʻalona Dela Cruz is an avid fisherman who does not like to sell his bounty from the ocean but prefers to trade and give his catch away to the *ʻohana* and *kūpuna* of the community. He and Kaina share their love of shoreline fishing, but Aʻalona also fishes from his boat. Kokole, Nohili, Polihale, and Nā Pali are all places he likes to fish. Aʻalona earns his livelihood as a captain of a Zodiac boat transporting tours from Kikiaola Boat Harbor to Nā Pali and back. He describes a misunderstanding with the Coast Guard and PMRF staff while transporting passengers. During this encounter, guns were pointed at the passengers, but the misunderstanding was cleared up before it escalated too far.

Aʻalona Dela Cruz's biggest concern was accessibility and permission to drive on to the shorelines fronting PMRF for fishing and gathering at the coastal areas of Kokole, Nohili, and Polihale. He noted that driving onto the coastal areas of the installation were necessary because it is a struggle to carry fishing gear to the beach by hand. Many stakeholders expressed the belief that there is a plethora of fish, crustaceans, and shellfish at PMRF's coastal areas. Without access to these special places, the community can not effectively monitor the resources, which has been part of Hawaiian customary marine tenure practices since before PMRF was in place. Aʻalona and Keao NeSmith also described gathering shells to make necklaces at Polihale, where those shells still exist. In addition to gathering marine resources, Billy DeCosta acknowledged the excellent breaks for surfing at Majors Bay and Polihale.

Dennis Eguchi, a lifelong fisherman, also frequents the Mānā coastline. He emphasized the importance of maintaining close relationships with PMRF staff to facilitate access to off-shore fishing.

CULTURAL RESOURCES

This section covers Hawaiian cultural resources such as practices, traditions, and *moʻolelo* [stories]. Traditional Hawaiian cultural practices or *mēheuheu* include, but are not limited to, *ʻōlelo Hawaiʻi* [Hawaiian language]; *ʻōlelo noʻeau* [wise and traditional sayings]; *haipule* [worship]; *mahiʻai kalo* [taro farming]; *lawaiʻa* [fishing]; *lāʻau lapaʻau* [Hawaiian medicine]; *kāhea* [spiritual invocation]; *ʻoli* [chanting]; *mele* [singing]; *lua* [Hawaiian martial arts]; *hoe waʻa* [canoe paddling]; *kapa* [tapa, as made from *wauke* or *māmaki* bark] making; *lauhala* [pandanus leaf] weaving; *hula*; *lei* making; *mea kaua* [weapons making]; *hailawe* [barter] food items, *mālama kūpuna* [care for the elders] , *mālama ʻāina* [care for the land], *mālama kumuwaiwai* [care for the resources] and *hoʻonaʻauao* [education].

Cultural resources may be traditional *wahi pana*(s) [cultural sites, legendary places, and sacred sites]; any cultural gathering place; or the tangible remains of *ka wā kahiko* [the ancient past]. The West Kona *moku* [district] of Kauaʻi has remnants of *heiau*(s) [temple, place of worship]; *kanu ʻana*(s) [burials]; *koehana*(s) [artifacts]; *kauhale*(s) [house sites]; *hale waʻa*(s) [canoe houses]; *loko iʻa*(s) [fishponds]; *loʻi kalo*(s) [taro pondfields]; *auwai*(s) [ditches, canals]; and *pā hula*(s) [platforms where *hula* is danced and honored]. There are other significant intangible cultural resources: *moʻokūʻauhau* or geneaological and *pilina*(s) [connections] to place and people; spiritual locations (for example, *leina a ka ʻuhane* [place where

spirits leaped into the nether world]); and *wahi āiwaiwa*(s) [mysterious places]. Other ethnic traditions and practices are considered cultural resources as well.

Specific categories of cultural resources that were mentioned during the interviews included *ʻōlelo noʻeau*, *moʻolelo*, *hula*, *ʻoli*, *mele*, *lua*, and *hoe waʻa*. Specific *moʻolelo* mentioned include *Moʻolelo o Kūkona me Manōkalanipō*, *Moʻolelo o Ke One Kani O Nohili*, *Moʻolelo o Ola me Nā Menehune* and *Moʻolelo o Koʻolau.* Remnants of the past are found in *heiau*, *pahula*, *kanu ʻia*, *hale waʻa*, and *kauhale*, *koehana*. Clisson Kunane Aipoalani described the location of a *pā hula* and a birthing stone at Polihale and associated cultural practices, and several consultants identified Mānā as a gathering space for spirits, and Polihale is a *leina-a-ka-ʻuhane*. Moreover, Christine Faye, Daynette Morikawa, and Kuʻulei Keamoai described the Kōkeʻe uplands as sacred space requiring a protocol of acknowledgement for entry, and Ms. Keamoai explicitly described Kōkeʻe as the home of deities or spiritual entities.

IWI KŪPUNA

Several consultants expressed concern about the *iwi kūpuna* or ancestral bones in the sand on different areas of the base, but mentioned specifically the Nohili Dunes, Polihale and Queen's Beach, and fuel farm area. Disturbance of the *iwi* was one conversation, but being able to have access to venerate these *kūpuna* was a higher and more significant conversation. Most of the consultants have been on the base, and have knowledge through their parents and grandparents, where the *iwi* are located. When they would visit the base, whether it be to harvest *kiawe* or harvest marine resources, they acknowledged these *kūpuna*.

GENERAL CONCERNS

Although not directly impacted by the Proposed Action, the interviews often turned to feelings about the PMRF installation in general, including concerns about past and present activities, and future planning. There were both positive and negative impressions with a number of stakeholders pointing out the benefits of the installation for the community, including positive effects on jobs and community support. Specific categories of information about the military during the CIA interviews include limitations on base access for fishing, marine resource gathering, camping, and surfing, and problems with transparency between PMRF and the local community regarding planned and ongoing activities on base and within the surrounding areas. Several of the stakeholders also shared opinions that PMRF staff members from the mainland are not well integrated or educated on local community culture, history, or etiquette, and this lack of education leads to bad feelings and negative interactions. The Harada sisters named specific opportunities for improved collaboration with the local community, including: improved access to *wahi pana* for community members generally and school groups specifically; institutional support for such activities such as transportation and supplies; increased community representation in the PMRF cultural resources unit; and capacity building for Mānā community members in applied STEM. Finally, at least one consultant expressed the need for PMRF to conduct remediation to clear ordinance and contamination from locations not currently on PMRF. The majority of consultants expressed concerns about access to PMRF's shorelines for subsistence and cultural activities like fishing and marine resource gathering, and camping and surfing. The following section explicitly examines how the Proposed Action may potentially affect the cultural resources, beliefs, and practices of the community members interviewed during the CIA.

This section examines the historical and archival information from Section 3 and the ethnographic interview data presented in Section IV and presents an analysis of the potential effect that the Proposed Action and No Action Alternative may have on any cultural resources, practices or beliefs within the project area. The primary results of the analysis are that the renewal of the real estate lease and easement agreements has the potential to affect access to PMRF's shoreline areas for fishing and gathering of marine

resources, and other cultural activities like camping, surfing, and visitation of *iwi kūpuna* areas. Moreover, retention of State lands by PMRF has the potential to impact human burials in culturally sensitive areas such as the Nohili Dunes and Polihale through future installation acctivities. The following sections describe each of these effects in more detail and discusses the Standard Operating Procedures (SOPs PMRF currently must allow for community access and to preserve *iwi kūpuna* and associated funerary items. Finally, these potential effects are discussed in relationship to the No Action Alternative.

POTENTIAL IMPACTS OF THE PROPOSED ACTION

While a variety of concerns were expressed during the consultant interviews, most were not directly applicable to the Proposed Action and No Action Alternative, which specifically involve the renewal of State land leases and easements. Two that may be directly affected by the Proposed Action include access to shoreline areas for cultural practices such as fishing, marine resource gathering, camping, surfing, and visitation of *iwi kūpuna* sites, and future impacts to *iwi kūpuna*. The following sections explore these potential impacts in greater detail.

PMRF SHORELINE ACCESS UNDER THE PROPOSED ACTION

The Proposed Action will potentially impact access to PMRF's shoreline areas. Shoreline areas are locations where community members participate in fishing and the gathering of marine resources, such as shells, mollusks, and seaweeds. These locations are also used for camping, surfing, and other cultural activities like visitation of *iwi kupuna*. Concerns about access to PMRF were presented during several of the stakeholder interviews. When discussing access to the shoreline areas that front PMRF, Kaina Mākua notes:

> "When we was young, we could go anywhere … Nohili Point, *holoholo* [term used to go fishing], Kinikini, Kokole … we go anywhere and *lawai'a*, go fish. What year was it? Might have been 2014 … I think so … but I went go *holoholo*, and they went close all those beaches, you couldn't'go..but you could go Polihale. So, I went Polihale, and I went walk because I know where get *'opihi* [limpets], I know where get *i'a* [fish]. So, I took my thrownet, I took my bag, I wen' get one *'opihi* knife, and I wen' go get *'opihi*. And I was in the water, and then two of these soldiers from PMRF came with AK47s, telling me for come out of the water. But me, I know, I not stupid … you come out of the water, they get rights *fo'* [Hawaiian Pidgin language meaning for] take you in. So I just stood in the water, and they had their hand on the trigger. And I was like, "What's up guys?" And they said, "Ah you gotta come out, we like talk to you, just come cruise." "Negative, I know I safe in the water, but you should take your hand off of the trigger." And so, I just kept pounding *'opihi*. And for one solid 10, 15 minutes they stood there trying to get me go on the sand, so they could take me in. I just kept walking, pounding *'opihi*, and doing my thing.

Enoka Chee Fook Karratti also notes his concerns about access to PMRF:

> I think Mānā when I used to work security for them [PMRF], we used to drive through Nohili … all the dunes … and I drove through there as a kid, as a high school student. Back in the day, we could drive all through there. But being on the government side of the fence and going through that space, I used to think, "Whoa, too bad the community cannot see or be back here." You know obviously you going get the bad that come with the good, you not going be able to cover it all, but we used to go from Kekaha Elementary … up to the dunes … and the whole *mo'olelo* ... slide down and listen to the dogs bark. But I think, that's a special place … that whole stretch, but obviously there are a lot of special places in Hawai'i, but growing up on the West, and knowing like that's Ni'ihau … no can even go … like that kind of vibe, I think … that gotta change. We gotta … accessible … got to get more easy access to the space. You know … something got to give.

Similiarly, Sean Andrade explains:

> In the ’70s, early ’70s. We were camping. Our whole family was camping. My Uncle Kamaile, and my Uncle Gilroy took me and a couple of my other cousins, and we were all swimming that day, we jumped in the jeep, we drove through PMRF (Pacific Missile Range Facility), went to Queen’s Pond, jumped in the ocean there again, and drove back out straight to the spring water. We actually rinsed off and swam there for a little bit. So that was nice as a youngster. But today, I really don’t know the difference because I haven’t … I don’t like going in there, so I stay away from PMRF. It seems like it’s so hard to get in. It just seems that way. I don’t think it is, but it just seems that way.

When discussing what he would like to see PMRF do to provide for future generations, Edwin A‘alona answers:

> Definitely better access. I guess … you know … we had it so good back then. And back then being pre-9/11 … up until that point. They closed the base, and we couldn’t even dive off shore, couldn’t anchor offshore for couple of years or however it was. All the *manō* [sharks] got a little bit more frisky, because no more boats chasing them, so it’s like they took over. They [referring to the sharks] took the area back. When it first opened … you shoot one fish, the sharks all over you already. So to be able to go back to how it was … not that it’s our space, but they were not as frisky as they were before. They more frisky than they were before and now they getting back to that not so frisky because people are utilitzing the area.
>
> The main thing is … I don’t want to say lenient, but get more lenient on the access like … it’s an unenforced law, you are not supposed to drive on the beach. I’m in the … I’m not quite *kupuna* [elder], but yet for me to lug all my gear to go fishing … the parking area is … the shore … you like go more down … you going have to walk in the soft sand. You know, stuff like that … or open up the end so we don’t have to come through the base, we can drive from the side and come in … to have access to all these spots to fish. I remeber my dad … get all my dad’s lobster holes and everything too. We went from shore with one scuba tank. We swim out on the surface, get to the spot, turn on our air, dive down, we clean the hole, come out, and fill our cooler with lobsters from couple t-bars. Now we cannot. We cannot drive to that area anymore.
>
> Gathering, camping … actually I would love to camp at Nohili Point again … on the Flats, at the grassy area before the gates and stuff. I like take my kids there, my boys like … because all my family like to go *holoholo* [another term used for “to go fishing”]. Go camp on the beach at Majors Bay like we used to and stuff like that. We lost ’em, we lost all of that because of 9/11.

Billy Dan Decosta has thoughts about future access to PMRF and voices his concerns:

> If you ask me what I like see happen, I want to see them open up some camping on those beaches to local families with the IDs, and we can go back camp. I wanna see more access for surfing and for harvesting fish. They need to stop regulating so much. If you like know the hidden agenda, I tell you … in reality that’s my hidden agenda. Yeah, they provide a sense of security. Yes, they provide a whole bunch of jobs. I don’t believe they should be restrictive of all the access, the harvesting, and the gathering of that area.
>
> PMRF are the stewards of that land. They have a responsibility to care for the land. I not just talking about the land, they are responsible to care for the people’s cultural gathering and harvesting rights. That’s their job. They are only temporary stewards of that place. They need to make sure that the people can still practice what they used to. (There were a lof of people who used to fish out there). Big time. Camping too. We used to camp out there, now we cannot camp since … 9/11. 9/11 has long passed. Maybe it’s time they open up some camping. Because 9/11 has passed. Let me tell you, you can record me on this … the base, I mean pass the base is Polihale State Park … the State gives out permits, the permits are taken online, you cannot discriminate whether you local or whether you non-local. Mainlander’s can request a permit. Sometimes Polihale State Beach no more room for

> the locals to camp. But on the base, if they would give out so much local permits to people with one driver's license, then they could let the locals go camp, so just think about that in your cultural survey.

Clisson Kunane Aipoalani also expressed his concern that shoreline access be preserved for Native Hawaiian cultural uses.

> You can go in and get a pass. The only restriction is when they have operations, but other than that — and that's one of the main things that I was very adamant about — making sure that the fishing rights and the rights of our Native people is not prohibited.

The proposed action limits access to PMRF's shoreline areas and restricts camping and certain forms of recreational fishing and other activities, and the Navy monitors the nearshore marine areas and examines the effects of proposed projects and recreational fishing on ecosytems health (see Department of the Navy 2023) It is important to note that PMRF currently has a program in place for granting access to the installations shoreline areas which are discussed in greater detail below.

IWI KŪPUNA

This section discusses how the Proposed Action may potentially affect *iwi kūpuna*. Notably, PMRF does have procedures and guidelines in place for dealing with access and protection of ancestral remains which are also discussed here. There are both positive and negative potential impacts of the project on the protection of *iwi kūpuna*. The PMRF installation operations that require ground disturbing activities in locations determined sensitive for the presence of human remains have the potential to impact *iwi kūpuna* and other associated artifacts and/or cultural materials. However, the continued control of *iwi kūpuna* sensitive areas by the Navy retains the federal legislative protections in place through the National Historic Preservation Act (NHPA) Section 106 for any future activities, the Native American Graves Protection and Repatriation Act (NAGPRA), Archaeological Resources Protection Act (ARPA), National Environmental Policy Act (NEPA), and the Integrated Cultural Resources Management Plan (ICMP) SOPs. These sets of legislation consider the areas as historic properties, sacred sites, and traditional cultural properties. Although federal legislation affords a certain degree of protection for burial locations, it also results in the access restrictions that are currently in place. Moreover, activities associated with the operation of PMRF have the potential to impact *iwi kūpuna* directly through ground disturbance. For example, Treston "Hena" Caberto-Raco explains:

> Also, there's a lot of burials on the base that I know of. You hear it all the time of stories that, "Oh, we want to put up one post there, one light post there." But they dig three feet. And they find *kupuna* (referring to *iwi* [bone] of *kupuna* [ancestor]. So, there's that kind of stuff. And yeah, I don't know … I no really feel really good about it but if it's here we have to plant seeds to make it good for us. What are the things that we going say that they can implement that'll be more cultural sensitive, or resource management sensitive?

Similarly, James Nakaahiki provides locations of *iwi kūpuna* that concern him:

> Yes, I do know of some (burials). It's right by the area going to Queen's Pond. Queen's Pond Beach used to be where only the Queens used to go back in Royalty days, they were the only ones allowed to swim in that pond. It was a saltwater pond specifically for queens. On the road to Polihale, you can't miss it. There is a Monkeypod tree that's there. There is an intersection in the road that splits off, you take a left, you go up for about a quarter mile, before you climb over the dunes before you get to the beach, to the right of that, they are marked graves over there. There is *iwi* [the bones of the dead] in those dunes over there. Supposedly, they belong to the Kilauano *'ohana* and Aipoalani, I believe.

Keao Ne Smith also notes:

> Uh, Queen's Pond, close to Nohili is about as far as we would go, but the area around used to seem like a real mystery to me … almost spooky *kine*. But, um, I came to learn later on that those sand dunes had all the bones inside. And I wasn't aware of that as a kid…we came to learn that over time. Um…but I used to…I don't know, because it was overgrown with *kiawe* [algaroba tree (*Prosopis pallida*), a legume from Peru, first planted in 1828 in Hawai'i trees] and bushes … the sand dunes, over there. So, I remember feeling *kine* of scared of that place, and then I came to learn later that that's where had the bones … Then I made the connection, "Oh, no wonder I used to be so scared of that place …" But I'm not afraid of that place anymore. It's not a … there's nothing spooky about it.

Eben Kawaikea Manini mentioned that his father would refrain from cutting *kiawe* where there were thought to be burials especially on the Nohili Dunes.

Importantly, the Nohili dunes are on the PMRF installation federal land, and Queen's Pond Beach and Polihale are within the State easements which is part of the current project area (see Figure 7 and Table 6). Although Nohili dunes is not directly affected by the Proposed Action, it may have an indirect affect on access through control of lands to the north, directly adjacent to the dunes where community members enter the shoreline areas.

Val Kane Turalde expressed general concern that the military not disturb burial or cultural sites.

> Well, like I told them, I don't care what they do, but stay away from the cultural sites, the burial sites, any cultural sites…All I know is that I told them when I met with the officers, the Admiral, Captain, all those guys, I told them, I don't care what they do, just stay away from the cultural sites, the cultural area.

As expressed above, during many stakeholder interviews it was mentioned that access to PMRF's shoreline areas was problematic and a concern. The following section provides information about PMRF's current access program and SOPs as well as the federal legislative context for the protection of PMRF's *iwi kūpuna*.

PMRF'S CURRENT BASE ACCESS PROGRAM

Acording to PMRF ICRMP SOP #16, protocols for providing public access and Native American (American Indian, Eskimo, Aleut, and Native Hawaiian) cultural access is required by federal laws; Department of Defense (DoD) Instructions; the Memorandum of Agreement (MOA) between the US Navy and PMRF, Hawaii State Historic Preservation Office (SHPO), and Advisory Council on Historic Preservation (ACHP) regarding activities proposed within the PMRF Enhanced Capacity Final EIS (FEIS 1998; MOA 1999); and the Programatic Agreement (PA) among Commander Naval Region Hawai'i (CNRH), the ACHP, and the Hawaii SHPO regarding Navy undertakings in Hawai'i (Search 2012: 361). SOP #16 describes public access and cultural access to individuals and community organizations that attach cultural significance to resources on PMRF. The primary responsibility of carrying out this SOP lies with the PMRF CRM. The SOP states (SEARCH 2012: 362):

> Requests for cultural or public access shall be submitted in writing. Upon receiving the request, the PMRF CRM is responsible for conducting any necessary consultation, and coordinating with other facility divisions and personnel, including the Public Affairs, Safety, and Range offices, to ensure no security issues or other circumstances conflict with the granting or scheduling of access. He/she will consult with Na Ohana Papa o Mana and other Native Hawaiian organizations concerning all requests for cultural access. The PMRF CRM shall notify requestors in writing of the approval or

disapproval of their public or cultural access request. If access is approved, a list of all attendees should be submitted by the requestor(s) five working days prior to the preferred date of access in order to conduct any necessary security clearances and appropriately provide for support staff. All attendees will be required to present picture identification upon entry and sign a waiver of liability for injury or death.

In addition to requsted access by community members, all of PMRF's shoreline access areas are open with exception of locations demarcated by restricted area signage. In 2005, PMRF began the Morale, Welfare and Recreation (MWR) Guest Card Program, which allows civilians to access PMRF using the main gate and affords unrestricted travel and acces to Majors Bay and beach areas. In August 2012, beach access along PMRF's north and south boundaries was adjusted to allow walk-in beach use for civilians without authorized access to PMRF. Walk-on access to PMRF's shorelines is typically carried out from either the north or south and community members have the opportunity to participate in fishing, shell-collecting, and surfing. Civilians are not allowed to drive motorized vehicles on the State beach at any time. The authorization of PMRF beach access is based on circumstances related to PMRF Force Protection Condition (FPCON), public safety during range operations, and the protection of threatened and endangered animal and plant species and habitats. MWR Guest Cards allow access to additional areas on PMRF, including the Waiapua'a Bay Trail, Shenanigans Beach, and weekend fishing at Kinikini Ditch.

PMRF'S STANDARD OPERATING PROCEDURES FOR *IWI KŪPUNA*

As with public and cultural access, PMRF has SOPs providing guidance for the discovery, consultation on, preservation, and treatment of *iwi kūpuna*. The PMRF ICRMP outlines these SOPs which include SOP #8: Monitoring During Construction and/or Ground-disturbing Activities, SOP #10: Inadvertent Discovery of Human Remains, and SOP #6: Native Hawaiian Consultation (SEARCH 2012: 325–335). In addition to these SOPs, PMRF and Na Ohana Papa o Mana executed a NAGPRA Comprehensive Agreement (CA) in 2011 (see Appendix II in SEARCH 2012). As expressed in regulation 43 CFR 10.5(f), CAs between federal agencies and Native Hawaiian communities are encouraged to "address all federal agency land management activities that could result on the intentional excavation or inadvertent discovery" of NAGPRA items. The purpose of the CA is to provide guidelines for determination of the custody, treatment, and disposition of items covered under NAGPRA (SEARCH 2012: 243).

POTENTIAL IMPACTS OF THE NO ACTION ALTERNATIVE

In contrast to the Proposed Action Alternatives, under the No Action Alternative, the Navy and NASA would not seek any real estate agreements for the State lands after expiration of the leases and easements. The current real estate agreements would expire and all existing infrastructure would be removed from the Navy leased and easement lands and all NASA leased lands. The No Action Alternative could also have potential impacts on PMRF's shoreline access and the preservation of and visitation to *iwi kūpuna*.

PMRF SHORELINE ACCESS

The potential impacts of the No Action Alternative on cultural resources, practices or beliefs could be fewer access restrictions to PMRF'shoreline areas for fishing and gathering of marine resources and camping. A possible indirect effect of more opportunities for access would be an increase in exploitation pressure on fish and invertebrate species through higher rates of fishing and gathering. As repeatedly described during the stakeholder interviews, a variety of marine resources are targeted in and around PMRF's shoreline areas, including fish such as *moi* [threadfish (*Polydactylus sexfilis*)], *āhole* [an endemic

fish (*Kuhlia sandvicensis*) found in both fresh and salt water.], *manini* [common reef surgeonfish (*Acanthurus triostegus*)], *ʻōʻio* [ladyfish, bonefish (*Albula vulpes*)], *pāpio* [young stage of *ulua* (crevally) fish], *uhu* [parrot fish (*Scarus perspicillatus*)], *mū* [(*Monotaxis grandoculis*), known as the bigeye emperor or humphead bigeye bream], *kūmū* [goatfish (*Parupeneus porphyreus*)], *palani*, [surgeonfish (*Acanthurus dussumieri*)], , *kala* [surgeonfish, unicorn fish], *kawakawa* [mackerel tuna], *ono* [large mackerel type fish (*Acanthocybium solandri*], *mahimahi* [dolphinfish (*Coryphaena hippurus*), *moi* [threadfish (*Polydactylus sexfilis*)], *ʻoʻopu* [general name for fishes included in the families Eleotridae, Gobiidae, and Blennidae], *nenue* [chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus, K. vaigiensis*)], and *ulua* [certain species of crevalle, jack or pompano, an important game fish and food item]. Invertebrates, crustaceans, and other marine animals include ʻ*opihi* [limpets], *hāʻukeʻuke* [an edible variety of sea urchin (*Colobocentrotus atratus*)], *kūpeʻe* [an edible marine snail (Nerita polita)], lobster, and *heʻe* [octopus].

In accordance with NEPA and DoD policies, the Navy reviews the effects of any actions on coral reef ecosystems. Following these mandates, PMRF actively monitors the installation's nearshore marine resources and has as one of its objectives to "employ a systematic approach to managing coastal and nearshore resources, using a process that includes inventory, monitoring, modeling, management, assessment, and evaluation (Department of the Navy 2023: 4–43)." Specific concerns at PMRF include impacts from recreational fishing, operation and construction in nearshore waters, and erosion as a result of sea-level rise (Department of the Navy 2023: 4–42). To address these concerns, the Navy currently limits shore fishing to allow only pole, throw net, and spear fishing from Barking Sands Recreation Area (Department of the Navy 2023: 4–42). Presumably under the No Action Alternative, access to PMRF's fishing areas from the State easements to the north would be less restrictive, leading to an increase in exploitation intensity. However, it is important to note that local community fishers and marine taxa gatherers often regulate exploitation pressure themselves, and Hawaiians have a long history of traditional ecological knowledge and customary marine tenure (e.g., Friedlander et al. 2013) that may be effective even in the absence of federal monitoring and management.

IWI KŪPUNA

The No Action Alternative would result in the loss of federal protection for *iwi kūpuna* within the State lands. As discussed above, federal legislation for the protection of human skeletal remains and associated funery items, which include NHPA Section 106 for any future activities, the NAGPRA, ARPA, NEPA, and ICRMP SOPs #8, #10, and #6, as well as PMRF and Na Ohana Papa o Mana executed NAGPRA CA. Under the No Action Alternative, these federal protections would no longer be applicable and the responsibility for preservation and access would fall to the State agency managing the land.

CONCLUSION

The Navy proposes to retain the use of 8,348 acres of State lands on Kauaʻi, Hawaiʻi, for operational continuity and sustainment (in support of continued military training, testing, and facility operations) at the PMRF. NASA proposes to retain the use of 23 acres of State lands on Kauaʻi, Hawaiʻi, in support of continued operations at KPGO. The Proposed Action is needed because the existing real estate agreements for these lands are set to expire between 2027 and 2030. The Navy and NASA are considering two action alternatives and the No Action Alternative. Under contract to AECOM Technical Services, Inc., and at the request of NAVFAC PAC, IA has prepared this CIA to analyze the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.

The CIA was carried out in two phases. First, a cultural and historical archival literature review was completed. Next, an ethnographic study, including oral history interviews, was conducted. Twenty-three cultural consultants were selected to provide information about cultural activities, beliefs, and resources within the study area. Data from these two phases, which included the ethnographic interviews and past oral histories, were then analyzed to learn about cultural resources, practices, and beliefs, and ultimately to examine the potential that the Proposed Action and No Action Alternative could affect them. The primary potential impact of the Proposed Action is restrictive access to shoreline areas within PMRF for camping, fishing, marine resource gathering, surfing, and visitation of i*wi kūpuna* areas. Potential impacts to *iwi kūpuna* [ancestral remains] on PMRF lands is also a potential impact.

PMRF currently has guidelines in place for base access, including protocals for accessing shoreline areas for various recreational activities. The PMRF ICRMP SOP#16 also provides guidance for public and cultural access permision. Additionally, the PMRF ICRMP describes numerous SOPs that deal with the preservation, treatment, consultation on, and disposition of *iwi kūpuna* across the installation's federal and State lands. Under the No Action Alternative, these federal protections would no longer be applicable and the State of Hawai'i would be responsible for preservation and access to *iwi kūpuna* and the monitoring of shoreline areas for marine ecosytems health and exploitation pressure.

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CULTURAL IMPACT ASSESSMENT FOR THE PACIFIC MISSILE RANGE FACILITY (PMRF) AND KŌKE‘E PARK GEOPHYSICAL OBSERVATORY (KPGO) ENVIRONMENTAL IMPACT STATEMENT, AHUPUA‘A OF WAIMEA, KONA MOKU, MOKUPUNI OF KAUA‘I

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The sharing of *ʻike* [recognize, knowledge] and *manaʻo* [thoughts, belief] between people is precious, and it is the *leo* [voice] that brings *ola* [life] to the *moʻolelo* [story]. It is the *leo* of the ethnographic consultants that is required to make this Cultural Impact Assessment [CIA] possible, and therefore *mahalo nui loa* all of you: Aunty Leinaʻala Compoc, Uncle Paul Compoc, Kipi Akana, Kaina Makua, Enoka Karratti, Hena Caberto-Raco, Uncle James Nakaahiki, Sean Andrade, Aʻalona Dela Cruz, Eben Manini, Billy DeCosta, Mike Faye, Christine Faye, Clisson Kunane Aipoalani, Daynette Dee Sumie Puanani Morikawa (Ah Puck), Keith Pomeroy Robinson, Elaine Kuʻulei Momi O Kai Kawaiola Gampong Keamoai, Ronald Dan Kouchi, Val Kane Turalde, C. Pualokelani Harada, Chandlyn Kielepuaalaokalani Harada, and Dennis Eguchi.

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APPENDIX A: CONSULTANT CONSENT FORMS

INTERNATIONAL ARCHAEOLOGY, LLC

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and National Aeronautics and Space Administration (NASA) under contact to Cardno-AECOM Joint Venture (JV).

The CIA will include semi-structured interviews with individuals from appropriate Native Hawaiian Organizations and local communities to obtain ethnographic information about multiple discrete parcels across PMRF and KPGO while contextualizing these specific areas within the *ahupua'a* and adjoining land for the PMRF and KPGO Succeeding Lease and Easement study. The information will be used to assess the cultural landscape and the potential impacts to cultural resources and practices that may result from this project. These interviews will be conducted by a qualified Ethnographer on behalf of the study's Project Director, who will assume primary responsibility for the background historical research and consolidation of the historical and ethnographic data, and will be the primary author of the CIA.

Before the interview begins, the Ethnographer will ensure that each interviewee understands the interview process and goals, and that the interviewee provides informed consent in writing by signing this Authorization and Release Form. The informed consent procedure includes a review of the points listed below with the interviewee, and answering any questions the interviewee may have before signing this form.

- I, Keao NeSmith, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for refernce and annotation purposes.
- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
- I understand that, following my review and approval of my interview transcript(s), the

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Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identifying potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.

- I understand that, following submittal of the final study, all digital recordings of interviews, approved written transcripts, annotated maps (if any), and signed consent forms will be submitted to the project contractor, JV and to CNRH, and NASA as part of project documentation.
- I understand that digital copies of the interview recordings, interview transcripts, annotated maps (if any), and signed consent forms will also be retained by International Archaeology, LLC, on its computer system in Honolulu, Hawai'i, for an unspecified period.
- I understand that I will not benefit directly from participating in this research.
- I understand that even if I agree to participate now, I can withdraw my consent at any time during the interview(s) or refuse to answer any question without consequences of any kind.
- I understand that I can withdraw permission to use my interview data within two weeks after I review and approve my interview transcript, in which case the material will be deleted. I also understand that I cannot withdraw my interview data after the final version of the study report has been submitted to the client
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- I understand that I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

International Archaeology, LLC (IA) may want to use portions of your interview for other CIAs, archaeological reports, oral history archives, educational programs, displays, or other public material (including the internet). You have the option to grant IA permission for future use of your interviews (s) on this form, or decline use beyond the purpose of this project.

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Yes ✓ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant — Date: 11-25-23

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Signature of researcher — Date: 11/25/2023

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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Before the interview begins, the Ethnographer will ensure that each interviewee understands the interview process and goals, and that the interviewee provides informed consent in writing by signing this Authorization and Release Form. The informed consent procedure includes a review of the points listed below with the interviewee, and answering any questions the interviewee may have before signing this form.

- I, Sylvia Leimala Compoc, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for refernce and annotation purposes.
- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
- I understand that, following my review and approval of my interview transcript(s), the Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identifying potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.
- I understand that, following submittal of the final study, all digital recordings of interviews, approved written transcripts, annotated maps (if any), and signed consent forms will be submitted to the project contractor, JV and to CNRH, and NASA as part of project documentation.
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- I understand that I will not benefit directly from participating in this research.
- I understand that even if I agree to participate now, I can withdraw my consent at any time during the interview(s) or refuse to answer any question without consequences of any kind.

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X

Yes ____ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No ____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Kei Coupe

Project Manager: Alex Morrison, Ph.D. - [redacted]

Ethnographer: Hannah Kaunakamanomakamaka'ole Anae, M.A. - [redacted]

Signature of participant: X

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant: X Kei Coupe Date: 3 / 2 / 24

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Signature of researcher: Hannah K Anae Date: April 11, 2024

INTERNATIONAL ARCHAEOLOGY, LLC

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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- I, Paul Compoc, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
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Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant

11/28/23
Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Hannah K. Anae "Kaumaka"

11/28/2023
Signature of researcher Date



INTERNATIONAL ARCHAEOLOGY, LLC

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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- I, Brad K.A. Akaka, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
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- I understand that, following submittal of the final study, all digital recordings of interviews, approved written transcripts, annotated maps (if any), and signed consent forms will be submitted to the project contractor, JV and to CNRH, and NASA as part of project documentation.
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- I understand that I will not benefit directly from participating in this research.
- I understand that even if I agree to participate now, I can withdraw my consent at any time during the interview(s) or refuse to answer any question without consequences of any kind.
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Yes ✓ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

[signature] 02/13/2024

Signature of participant Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Signature of researcher _____ Date _____

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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- I, KAINA MAKUA, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
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Yes KM I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant

11/29/23
Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Hannah K. Anae 'Kaumaka'

Signature of researcher

11/29/2023
Date

INTERNATIONAL ARCHAEOLOGY, LLC

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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- I, ENOLA KARRATTI, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
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No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

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Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant

11/29/23
Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Signature of researcher

Date

INTERNATIONAL ARCHAEOLOGY, LLC

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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Before the interview begins, the Ethnographer will ensure that each interviewee understands the interview process and goals, and that the interviewee provides informed consent in writing by signing this Authorization and Release Form. The informed consent procedure includes a review of the points listed below with the interviewee, and answering any questions the interviewee may have before signing this form.

- I, N/A Treston "Hina" Caberto-Kaca, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for refernce and annotation purposes.
- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
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- I understand that I will not benefit directly from participating in this research.
- I understand that even if I agree to participate now, I can withdraw my consent at any time during the interview(s) or refuse to answer any question without consequences of any kind.
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Yes ✓ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

[signature] 11/24/23

Signature of participant Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Kaumaka K Aiu "Kaumaka" 11/24/2023

Signature of researcher Date

INTERNATIONAL ARCHAEOLOGY, LLC

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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- I, James Nakaahiki III, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
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- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
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Yes _____ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant — Date: 11/26/2023

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Signature of researcher — Date: 11/26/2023

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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- I, Sean Arrade, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
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- I understand that I will not benefit directly from participating in this research.
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Yes _____ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No <u>G</u> Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.



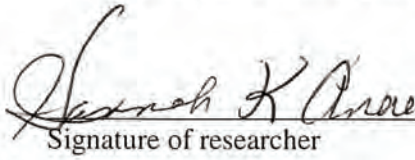
Signature of participant

NOV 26, 2023

Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study



Signature of researcher

11/26/2023

Date

INTERNATIONAL ARCHAEOLOGY, LLC

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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- I, A'alona Dela Cruz, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for refernce and annotation purposes.
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Yes _____ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant

11/28/23
Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Hannah K Anae "Kaumaka"

Signature of researcher

11/28/2023
Date

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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- I, Eben K. Manini, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
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Yes KKV I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt [signature]

By my signature, I give consent and release for my interview(s) to be used as specified.

[signature] K. [illegible]
Signature of participant

27th November 2023
Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Hannah K. Anne Kaumaka
Signature of researcher

11/27/2023
Date

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

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- I, Bill De Costa, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
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- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
- I understand that, following my review and approval of my interview transcript(s), the

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Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identifying potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.

- I understand that, following submittal of the final study, all digital recordings of interviews, approved written transcripts, annotated maps (if any), and signed consent forms will be submitted to the project contractor, JV and to CNRH, and NASA as part of project documentation.
- I understand that digital copies of the interview recordings, interview transcripts, annotated maps (if any), and signed consent forms will also be retained by International Archaeology, LLC, on its computer system in Honolulu, Hawai'i, for an unspecified period.
- I understand that I will not benefit directly from participating in this research.
- I understand that even if I agree to participate now, I can withdraw my consent at any time during the interview(s) or refuse to answer any question without consequences of any kind.
- I understand that I can withdraw permission to use my interview data within two weeks after I review and approve my interview transcript, in which case the material will be deleted. I also understand that I cannot withdraw my interview data after the final version of the study report has been submitted to the client
- I have had the purpose and nature of the study explained to me in person and in writing and I have had the opportunity to ask questions about the study.
- I understand that I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

International Archaeology, LLC (IA) may want to use portions of your interview for other CIAs, archaeological reports, oral history archives, educational programs, displays, or other public material (including the internet). You have the option to grant IA permission for future use of your interviews (s) on this form, or decline use beyond the purpose of this project.

Deed of gift: I hereby give this interview to International Archaeology, Inc. (IA) for historical, scholarly, educational, and community-outreach purposes as IA sees fit, including but not limited to exclusive rights of production (copyright), distribution, preparation of derivative works, public educational performance, displays visual, in print, or electronic, or other media including the internet unless stated otherwise here.

Yes _____ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant

11/28/2023
Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Hannah K. Rae "Kaumpke"
Signature of researcher

11/28/2023
Date

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and National Aeronautics and Space Administration (NASA) under contact to Cardno-AECOM Joint Venture (JV).

The CIA will include semi-structured interviews with individuals from appropriate Native Hawaiian Organizations and local communities to obtain ethnographic information about multiple discrete parcels across PMRF and KPGO while contextualizing these specific areas within the *ahupua'a* and adjoining land for the PMRF and KPGO Succeeding Lease and Easement study. The information will be used to assess the cultural landscape and the potential impacts to cultural resources and practices that may result from this project. These interviews will be conducted by a qualified Ethnographer on behalf of the study's Project Director, who will assume primary responsibility for the background historical research and consolidation of the historical and ethnographic data, and will be the primary author of the CIA.

Before the interview begins, the Ethnographer will ensure that each interviewee understands the interview process and goals, and that the interviewee provides informed consent in writing by signing this Authorization and Release Form. The informed consent procedure includes a review of the points listed below with the interviewee, and answering any questions the interviewee may have before signing this form.

- I, Bill De Costa, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for refernce and annotation purposes.
- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
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- I understand that digital copies of the interview recordings, interview transcripts, annotated maps (if any), and signed consent forms will also be retained by International Archaeology, LLC, on its computer system in Honolulu, Hawai'i, for an unspecified period.
- I understand that I will not benefit directly from participating in this research.
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Yes _____ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant

11/28/2023
Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Hannah K. Rae "Kaumpke"
Signature of researcher

11/28/2023
Date

INTERNATIONAL ARCHAEOLOGY, LLC

October 27, 2023

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i, Contract N62742-18-D-1802. [IA202241]

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and National Aeronautics and Space Administration (NASA) under contact to Cardno-AECOM Joint Venture (JV).

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Before the interview begins, the Ethnographer will ensure that each interviewee understands the interview process and goals, and that the interviewee provides informed consent in writing by signing this Authorization and Release Form. The informed consent procedure includes a review of the points listed below with the interviewee, and answering any questions the interviewee may have before signing this form.

- I, Michael A. Faye, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
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- I understand that, following my review and approval of my interview transcript(s), the

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- I understand that digital copies of the interview recordings, interview transcripts, annotated maps (if any), and signed consent forms will also be retained by International Archaeology, LLC, on its computer system in Honolulu, Hawai'i, for an unspecified period.
- I understand that I will not benefit directly from participating in this research.
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Yes _____ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant — Date: 11/29/23

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Hannah K Anae "Kaunoha" — Signature of researcher — Date: 11/29/2023

INTERNATIONAL ARCHAEOLOGY, LLC

March 20, 2026

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and the National Aeronautics and Space Administration (NASA) under contact to Stantec.

The CIA will include semi-structured interviews with individuals from appropriate Native Hawaiian Organizations and local communities to obtain ethnographic information about multiple discrete parcels across PMRF and KPGO while contextualizing these specific areas within the *ahupua'a* and adjoining land for the PMRF and KPGO Succeeding Lease and Easement study. The information will be used to assess the cultural landscape and the potential impacts to cultural resources and practices that may result from this project. These interviews will be conducted by a qualified Ethnographer on behalf of the study's Project Manager, who will assume primary responsibility for the background historical research and consolidation of the historical and ethnographic data and co-author the CIA.

Before the interview begins, the Ethnographer will ensure that each interviewee understands the interview process and goals, and that the interviewee provides informed consent in writing by signing this Authorization and Release Form. The informed consent procedure includes a review of the points listed below with the interviewee, and answering any questions the interviewee may have before signing this form.

- I, Christine Faye, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application by CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for reference and annotation purposes.
- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
- I understand that my interview transcript will be partially generated using TurboScribe, an artificial intelligence (AI)-powered transcription tool (https://turboscribe.ai/), and Claude

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AI, an AI chatbot powered by large language models (https://claude.ai), and checked for accuracy by an Ethnographer before it is provided to me.

- I understand that, following my review and approval of my interview transcript(s), the Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identify potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.
- I understand that, following submittal of the final study, all digital recordings of interviews, approved written transcripts, annotated maps (if any), and signed consent forms will be submitted to Stantec, CNRH, and NASA as part of project documentation.
- I understand that digital copies of the interview recordings, interview transcripts, annotated maps (if any), and signed consent forms will also be retained by IA on its computer system in Honolulu, Hawai'i, for an unspecified period.
- I understand that I will not benefit directly from participating in this research.
- I understand that even if I agree to participate now, I can withdraw my consent at any time during the interview(s) or refuse to answer any question without consequences of any kind.
- I understand that I can withdraw permission to use my interview data within two weeks after I review and approve my interview transcript, in which case the material will be deleted. I also understand that I cannot withdraw my interview data after the final version of the study report has been submitted to the client
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- I understand that I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

IA may want to use portions of your interview for other CIAs, archaeological reports, oral history archives, educational programs, displays, or other public material (including the internet). You have the option to grant IA permission for future use of your interviews (s) on this form, or decline use beyond the purpose of this project.

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Yes ✓ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participant

Christine Faye

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant — Date: 3-26-2026

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Signature of researcher — Date: 3.26.26

INTERNATIONAL ARCHAEOLOGY, LLC

March 20, 2026

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and the National Aeronautics and Space Administration (NASA) under contact to Stantec.

The CIA will include semi-structured interviews with individuals from appropriate Native Hawaiian Organizations and local communities to obtain ethnographic information about multiple discrete parcels across PMRF and KPGO while contextualizing these specific areas within the *ahupua'a* and adjoining land for the PMRF and KPGO Succeeding Lease and Easement study. The information will be used to assess the cultural landscape and the potential impacts to cultural resources and practices that may result from this project. These interviews will be conducted by a qualified Ethnographer on behalf of the study's Project Manager, who will assume primary responsibility for the background historical research and consolidation of the historical and ethnographic data and co-author the CIA.

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- I, Gissen Kunane Apoalani, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application by CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for reference and annotation purposes.
- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
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AI, an AI chatbot powered by large language models (https://claude.ai), and checked for accuracy by an Ethnographer before it is provided to me.

- I understand that, following my review and approval of my interview transcript(s), the Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identify potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.
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- I understand that digital copies of the interview recordings, interview transcripts, annotated maps (if any), and signed consent forms will also be retained by IA on its computer system in Honolulu, Hawai'i, for an unspecified period.
- I understand that I will not benefit directly from participating in this research.
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Yes ✓ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant — Date: March 23, 2026

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Signature of researcher — Date: 3.23.26

INTERNATIONAL ARCHAEOLOGY, LLC

March 20, 2026

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and the National Aeronautics and Space Administration (NASA) under contact to Stantec.

The CIA will include semi-structured interviews with individuals from appropriate Native Hawaiian Organizations and local communities to obtain ethnographic information about multiple discrete parcels across PMRF and KPGO while contextualizing these specific areas within the *ahupua'a* and adjoining land for the PMRF and KPGO Succeeding Lease and Easement study. The information will be used to assess the cultural landscape and the potential impacts to cultural resources and practices that may result from this project. These interviews will be conducted by a qualified Ethnographer on behalf of the study's Project Manager, who will assume primary responsibility for the background historical research and consolidation of the historical and ethnographic data and co-author the CIA.

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- I, Daynette "Dee" Morikawa, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application by CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
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- I have had the purpose and nature of the study explained to me in person and in writing and I have had the opportunity to ask questions about the study.
- I understand that I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

IA may want to use portions of your interview for other CIAs, archaeological reports, oral history archives, educational programs, displays, or other public material (including the internet). You have the option to grant IA permission for future use of your interviews (s) on this form, or decline use beyond the purpose of this project.

Deed of gift: I hereby give this interview to IA for historical, scholarly, educational, and community-outreach purposes as IA sees fit, including but not limited to exclusive rights of production (copyright), distribution, preparation of derivative works, public educational performance, displays visual, in print, or electronic, or other media including the internet unless stated otherwise here.

Yes ✓ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

[signature] 4/1/2026

Signature of participant Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

[signature] 4.1.26

Signature of researcher Date

INTERNATIONAL ARCHAEOLOGY, LLC

March 20, 2026

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and the National Aeronautics and Space Administration (NASA) under contact to Stantec.

The CIA will include semi-structured interviews with individuals from appropriate Native Hawaiian Organizations and local communities to obtain ethnographic information about multiple discrete parcels across PMRF and KPGO while contextualizing these specific areas within the *ahupua'a* and adjoining land for the PMRF and KPGO Succeeding Lease and Easement study. The information will be used to assess the cultural landscape and the potential impacts to cultural resources and practices that may result from this project. These interviews will be conducted by a qualified Ethnographer on behalf of the study's Project Manager, who will assume primary responsibility for the background historical research and consolidation of the historical and ethnographic data and co-author the CIA.

Before the interview begins, the Ethnographer will ensure that each interviewee understands the interview process and goals, and that the interviewee provides informed consent in writing by signing this Authorization and Release Form. The informed consent procedure includes a review of the points listed below with the interviewee, and answering any questions the interviewee may have before signing this form.

- I, KEITH P. ROBINSON, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application by CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for reference and annotation purposes.
- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
- I understand that my interview transcript will be partially generated using TurboScribe, an artificial intelligence (AI)-powered transcription tool (https://turboscribe.ai/), and Claude

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AI, an AI chatbot powered by large language models (https://claude.ai), and checked for accuracy by an Ethnographer before it is provided to me.

- I understand that, following my review and approval of my interview transcript(s), the Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identify potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.
- I understand that, following submittal of the final study, all digital recordings of interviews, approved written transcripts, annotated maps (if any), and signed consent forms will be submitted to Stantec, CNRH, and NASA as part of project documentation.
- I understand that digital copies of the interview recordings, interview transcripts, annotated maps (if any), and signed consent forms will also be retained by IA on its computer system in Honolulu, Hawai'i, for an unspecified period.
- I understand that I will not benefit directly from participating in this research.
- I understand that even if I agree to participate now, I can withdraw my consent at any time during the interview(s) or refuse to answer any question without consequences of any kind.
- I understand that I can withdraw permission to use my interview data within two weeks after I review and approve my interview transcript, in which case the material will be deleted. I also understand that I cannot withdraw my interview data after the final version of the study report has been submitted to the client
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Yes _____ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No ✓ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Keith P. Robinson — MAR. 24, 2026

Signature of participant — Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Kenneth K Grace — 3.24.26

Signature of researcher — Date

INTERNATIONAL ARCHAEOLOGY, LLC

March 20, 2026

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and the National Aeronautics and Space Administration (NASA) under contact to Stantec.

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Before the interview begins, the Ethnographer will ensure that each interviewee understands the interview process and goals, and that the interviewee provides informed consent in writing by signing this Authorization and Release Form. The informed consent procedure includes a review of the points listed below with the interviewee, and answering any questions the interviewee may have before signing this form.

- I, Kimiki Keamoai, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application by CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for reference and annotation purposes.
- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
- I understand that my interview transcript will be partially generated using TurboScribe, an artificial intelligence (AI)-powered transcription tool (https://turboscribe.ai/), and Claude

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- I understand that, following my review and approval of my interview transcript(s), the Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identify potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.
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Yes ✓ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participant

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant — Date: 3/23/26

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Signature of researcher — Date: 3/23/26

INTERNATIONAL ARCHAEOLOGY, LLC

March 20, 2026

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and the National Aeronautics and Space Administration (NASA) under contact to Stantec.

The CIA will include semi-structured interviews with individuals from appropriate Native Hawaiian Organizations and local communities to obtain ethnographic information about multiple discrete parcels across PMRF and KPGO while contextualizing these specific areas within the *ahupua'a* and adjoining land for the PMRF and KPGO Succeeding Lease and Easement study. The information will be used to assess the cultural landscape and the potential impacts to cultural resources and practices that may result from this project. These interviews will be conducted by a qualified Ethnographer on behalf of the study's Project Manager, who will assume primary responsibility for the background historical research and consolidation of the historical and ethnographic data and co-author the CIA.

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- I, _____, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application by CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for reference and annotation purposes.
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- I understand that, following my review and approval of my interview transcript(s), the Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identify potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.
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- I understand that I will not benefit directly from participating in this research.
- I understand that even if I agree to participate now, I can withdraw my consent at any time during the interview(s) or refuse to answer any question without consequences of any kind.
- I understand that I can withdraw permission to use my interview data within two weeks after I review and approve my interview transcript, in which case the material will be deleted. I also understand that I cannot withdraw my interview data after the final version of the study report has been submitted to the client
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Yes MW I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant — Date: 3/31/26

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Signature of researcher — Date: 3.31.26

INTERNATIONAL ARCHAEOLOGY, LLC

March 20, 2026

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and the National Aeronautics and Space Administration (NASA) under contact to Stantec.

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- I, Val Kane Turalde, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application by CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for reference and annotation purposes.
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- I understand that, following my review and approval of my interview transcript(s), the Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identify potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.
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- I understand that I will not benefit directly from participating in this research.
- I understand that even if I agree to participate now, I can withdraw my consent at any time during the interview(s) or refuse to answer any question without consequences of any kind.
- I understand that I can withdraw permission to use my interview data within two weeks after I review and approve my interview transcript, in which case the material will be deleted. I also understand that I cannot withdraw my interview data after the final version of the study report has been submitted to the client
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Yes ✓ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participant

By my signature, I give consent and release for my interview(s) to be used as specified.

Signature of participant — Date: 3-23-26

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Signature of researcher — Date: 3.23.26

INTERNATIONAL ARCHAEOLOGY, LLC

March 20, 2026

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and the National Aeronautics and Space Administration (NASA) under contact to Stantec.

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- I, C. Kiele Harada, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application by CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
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Yes _____ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No C.K.H Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participant

By my signature, I give consent and release for my interview(s) to be used as specified.

C. Kuelbs-Hanks — 03/24/26

Signature of participant — Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Hannah K. Chase — 3.24.26

Signature of researcher — Date

INTERNATIONAL ARCHAEOLOGY, LLC

March 20, 2026

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i

International Archaeology, LLC (IA), a cultural resource management firm based in Honolulu, Hawai'i, is currently preparing a Cultural Impact Assessment (CIA) in support of a proposed action application by Commander, Navy Region Hawai'i (CNRH) and the National Aeronautics and Space Administration (NASA) under contact to Stantec.

The CIA will include semi-structured interviews with individuals from appropriate Native Hawaiian Organizations and local communities to obtain ethnographic information about multiple discrete parcels across PMRF and KPGO while contextualizing these specific areas within the *ahupua'a* and adjoining land for the PMRF and KPGO Succeeding Lease and Easement study. The information will be used to assess the cultural landscape and the potential impacts to cultural resources and practices that may result from this project. These interviews will be conducted by a qualified Ethnographer on behalf of the study's Project Manager, who will assume primary responsibility for the background historical research and consolidation of the historical and ethnographic data and co-author the CIA.

Before the interview begins, the Ethnographer will ensure that each interviewee understands the interview process and goals, and that the interviewee provides informed consent in writing by signing this Authorization and Release Form. The informed consent procedure includes a review of the points listed below with the interviewee, and answering any questions the interviewee may have before signing this form.

- I, C. Pualoke Harada, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application by CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for reference and annotation purposes.
- I understand that a full transcript of my interview(s) will be prepared in Microsoft Word (DOCX) format, and will be provided to me for corrections, additions, or deletions (in person, online, or via post). Only the interview data I have reviewed and approved will be used in the study.
- I understand that my interview transcript will be partially generated using TurboScribe, an artificial intelligence (AI)-powered transcription tool (https://turboscribe.ai/), and Claude

HAWAI'I: 2081 Young Street, Honolulu, Hawai'i 96826-2231 - Tel: (808) 946-2548 - Fax: (808) 943-0716 - E-mail: HonoluluOffice@internationalarchaeologyllc.com
GUAM: P.O. Box 22621, GMF, Guam 96921 - Tel/Fax: (671) 646-7552 - E-mail: GuamOffice@internationalarchaeologyllc.com

AI, an AI chatbot powered by large language models (https://claude.ai), and checked for accuracy by an Ethnographer before it is provided to me.

- I understand that, following my review and approval of my interview transcript(s), the Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identify potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.
- I understand that, following submittal of the final study, all digital recordings of interviews, approved written transcripts, annotated maps (if any), and signed consent forms will be submitted to Stantec, CNRH, and NASA as part of project documentation.
- I understand that digital copies of the interview recordings, interview transcripts, annotated maps (if any), and signed consent forms will also be retained by IA on its computer system in Honolulu, Hawai'i, for an unspecified period.
- I understand that I will not benefit directly from participating in this research.
- I understand that even if I agree to participate now, I can withdraw my consent at any time during the interview(s) or refuse to answer any question without consequences of any kind.
- I understand that I can withdraw permission to use my interview data within two weeks after I review and approve my interview transcript, in which case the material will be deleted. I also understand that I cannot withdraw my interview data after the final version of the study report has been submitted to the client
- I have had the purpose and nature of the study explained to me in person and in writing and I have had the opportunity to ask questions about the study.
- I understand that I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

IA may want to use portions of your interview for other CIAs, archaeological reports, oral history archives, educational programs, displays, or other public material (including the internet). You have the option to grant IA permission for future use of your interviews (s) on this form, or decline use beyond the purpose of this project.

Deed of gift: I hereby give this interview to IA for historical, scholarly, educational, and community-outreach purposes as IA sees fit, including but not limited to exclusive rights of production (copyright), distribution, preparation of derivative works, public educational performance, displays visual, in print, or electronic, or other media including the internet unless stated otherwise here.

Yes CH I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participant

By my signature, I give consent and release for my interview(s) to be used as specified.

C. Fredoline Hinds — 03/24/26

Signature of participant — Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Hannah K. Chase — 03/24/26

Signature of researcher — Date

INTERNATIONAL ARCHAEOLOGY, LLC

March 20, 2026

SUBJECT: Interview Authorization and Release Form for a Cultural Impact Assessment (CIA) for Pacific Missle Range Facility (PMRF) and Kōke'e Park Geophysical Observatory (KPGO) Succeeding Lease and Easement Areas, Kaua'i, Hawai'i

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- I, Dennis Eguchi, voluntarily agree to participate in this study in accordance with the interview process and goals outlined in this form.
- I understand that this study is part of a proposed action application by CNRH and NASA in support of the PMRF and KPGO Succeeding Lease and Easement Areas study emcompassing the surrounding areas.
- I undersand that participation in this study may involve sharing information about significant archivally-identified cultural areas, especially sites and their components within the area study.
- I agree that my interview(s) will be recorded with a digital recorder supplemented by hand-written notes. A map or maps of the subject parcel and the surrounding lands will also be provided for reference and annotation purposes.
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AI, an AI chatbot powered by large language models (https://claude.ai), and checked for accuracy by an Ethnographer before it is provided to me.

- I understand that, following my review and approval of my interview transcript(s), the Project Manager and Ethnographer will jointly analyze the interview results and extract information pertinent to identify potential cultural and natural features of significance. These results will be included in the draft and final versions of the study.
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Yes ✓ I am donating International Archaeology, LLC, my interview(s) for future use as stated above.

No _____ Please use my interview contribution exclusively for the purposes of this study as described on this form.

Project Manager: Alex Morrison, Ph.D. <amorrison@iarii.org>
Ethnographer: Hannah Kaumakamanōkalanipō Anae, M.A. <hanae@iarii.org>

Signature of participantt

By my signature, I give consent and release for my interview(s) to be used as specified.

Alexis Y Equab — 4/21/26

Signature of participant — Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

Hannah K Grace — 4/21/26

Signature of researcher — Date

APPENDIX B: CONSULTANT TRANSCRIPTIONS

ORAL HISTORY INTERVIEW

With

Richard Keaoopuaokalani "Keao" NeSmith [KN]

November 25, 2023

Waimea, Kauaʻi

By

Hannah Kaumakamanōkalanipō Anae [HKA]

The interview took place in the *moku* of Kona, *ahupuaʻa* of Waimea. Overlooking the town of Waimea.

Recording file names IA202241_2023-11-25_Keao NeSmith(1).MP3 and IA202241_2023-11-25_Keao NeSmith(2).MP3

HKA: *Welina kākou* [greetings to all],[1] today is November 25, 2023, and we are on the *mokupuni* [island] of Kauaʻi.

KN: *Moku* [district] of Kona, *ahupuaʻa* [land section] of Waimea.

HKA: I am Kaumaka Anae, representing International Archaeology, LLC and we are conducting the Cultural Impact Assessment interviews for the Pacific Missile Range Facility (PMRF) and Kōkeʻe Park Geophysical Observatory Succeeding Lease and Easement Areas. And I am here with Keao. Keao, can you say your full name?

KN: Keao NeSmith.

HKA: And do I have your permission to record this interview?

KN: Yes.

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

HKA: Before we start, I'd like to say of course, *e kala mai* [excuse me], if I seem so *maha'oi* [brazen]. And um, so … it's not my intention. So, we can start this interview. So how long have you and your ʻ*ohana* lived in the area?

KN: I was born here in Waimea, raised in Kekaha, next town over. Um, but my family was here. My parents, uh let's see … Seven of us children, I'm number six out of seven and uh … the third child in the family was born here, and the rest of us was born here. So that was in the fifties, I guess?

HKA: And so, did your *ʻohana* … did your mom and your *ʻohana* … were they always living here? Your sisters?

KN: Uh, not my mom and dad. Um … my mom was born Keaukaha, Hilo. My dad was born in Texas … Gainesville, Texas. Um, but the generation before, my grandpa was born Hanalei, Kauaʻi. And um, going back on his side, is a long Kauaʻi connection. And then on my grandma's side, my mom's mom, is Kaʻū, Puna. Uh, my mom's grandpa was from Waiheʻe, Maui but the maternal side all Kaʻū, and Puna, and Hilo.

HKA: So, I know you're familiar with the Mānā area and PMRF (Pacific Missile Range Facility). What can you tell me about that?

KN: The what?

HKA: The Mānā area and PMRF.

KN: Oh, Mānā … Um, okay, so, ah, what … just tell any kind about the area Mānā? Well, my first-hand personal experience growing up in Kekaha, there used to be a village up by Mānā side, right. You go on the highway all the way till you gotta make the left turn to go Polihale to the beach. On the right-hand side of the road, there at the turn off, was a village … old plantation houses. And there was a big community swimming pool there. And it was a nice swimming pool, so we used to go as kids, rarely to that swimming pool. I remember because it had the high diving board, 'cause we had a swimming pool in Kekaha too, but it didn't have a high diving board—but that one did. And, uh, I have a grandaunty who used to live in that village over there. And uh, only once though did we ever go visit her at her house over there. And I remember she had *lauhala* [Pandanus leaf] mat covering the floor. Um, but that village

closed down in the … ’80s maybe into the ’90s, is when people left that village permanently and then all the buildings got torn down.

So that’s a big memory of Mānā side. Other than that, Polihale for sure … camping, spending time on the beach, picking *puka* [hole] shells on the beach. As a kid, we used to make our own *puka* shell *lei*(s) [necklaces made of flower, leaves, and/or shells etc.]—spending time on the beach over there picking *puka* shells. And I remember the rest of the coast ’cause we know Polihale real well but when you keep going on the beach around the point, Nohili way, around there to me always was *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of a mystery because it’s not an area we used to go. Uh, Queen’s Pond, close to Nohili is about as far as we would go, but the area around used to seem like a real mystery to me … almost spooky *kine*. But, um, I came to learn later on that those sand dunes had all the bones inside. And I wasn’t aware of that as a kid … we came to learn that over time. Um … but I used to … I don’t know, because it was overgrown with *kiawe* [algaroba tree (*Prosopis pallida*), a legume from Peru, first planted in 1828 in Hawai‘i, where, in dry areas] trees and bushes … the sand dunes, over there. So, I remember feeling *kine* of scared of that place, and then I came to learn later that that’s where had the bones … Then I made the connection, “Oh, no wonder I used to be so scared of that place …” But I’m not afraid of that place anymore. It’s not a … there’s nothing spooky about it.

And then growing up in the church, we used to have church camping stays for days at a time. Not at Polihale but more around the point, which was good ’cause that was part of the area that I used to be scared of, because it was such a mystery to me. But camping in those areas as a group, and all these people that I knew all my life, made it feel safe to me. And, uh, so lot of fond memories … Yeah, the memories my era was the plantation days. So, it was always sugarcane. Even now today, it’s weird to me not seeing sugarcane, because it seems so recent that the sugarcane fields were done away with. Because it’s such a big part of my growing up years, yeah? But going through all the dirt roads, through the different sugarcane fields as a kid, one of the really awesome things about growing up on the west side was to be able to just roam freely. There were never gates on the roads. The dirt roads going between the sugarcane fields, that came later, I guess starting in the ’90s.

But as a kid growing up, we were free to roam through the different cane fields and stuff like that … through the ditches and explore on the bike. There were also the pig pens. A lot of families in Kekaha would raise pigs, and there were pig pens along the *pali* [cliff], back over here. So, the back road of the furthest *mauka* [toward the mountain] road closest to the *pali,* that used to be the old Government Road

that went all the way to Polihale. But when they made the coastal highway, then they kept the back road. But it always was a dirt road and along that road is where the pig pens were. So that was part of the adventure. To be able to go through those dirt roads, and there's those pig pens there—we used to stop and go check them out and stuff like that. And then there was the rubbish dump area, the landfill area. Now it's a big hill. It was never a hill, it was more of a dip before. You could just drive up with your truck and unload your rubbish into the pit … there was a big pit. Now it's a big hill and it was pretty much … for us it seemed unregulated at the time. Everyone just kind of knew you went to that particular spot, dump all your rubbish. Now it's heavily regulated … for good reason.

And then next to the rubbish dump was a rifle range. There was a rifle range. It was a big, long rifle range. I guess it was the military that started it? I don't know but it was always there when I was a kid growing up. And my two best friends when we were growing up in elementary school … One of the naughty things we used to do was go to the rifle range on the target end, and pick up exploded lead [chuckling], which was really bad. Come to find out, it was a really bad thing to do, but for us it was fun. And we pick up the exploded lead, and we go to my friend's house and he had the, the … what is it, the smelting thing? To melt down the lead so that we could make fishing lead for our fishing poles. So now as an adult, I, uh … am super alarmed that we even did that because that's one of the most dangerous things you can do. [Laughing.] And of course that's one of the things you don't tell your parents. And then finally I got busted; I got busted by my dad for doing that. He grounded me for like a month … and I'll never forget that. Never went back and did that again. Only as an adult I came to realize how really dangerous that was … lead poisoning and all that. Because my two best friends, we were very tight and after school we would rush home and finish our homework, and then we would meet up again at the spot at the beach because we would spend at least a couple hours fishing in Kekaha, on the reef, and stuff like that. So that's why it was so important that we had the fishing lead! So, to us it was a big deal. And uh … we would, uh … if we weren't exploring up *mauka* on our bikes, then we were on the shore fishing … doing a lot of fishing … stuff like that. So we were real tight.

So that was my firsthand experience. Rarely did we go to PMRF, the facility there. They would have special events like the Blue Angels. They would come and do their air show, and we went to go watch them perform a couple of times, as we were growing up. They would have fireworks displays, Fourth of July … Uh, the military was heavily … When we were growing up, our community was very tight. There was a community … Kekaha Community Association (KCA)…were very active. They always had … was very reliable. Very reliable during, um, New Year's. There would be a big fair. Bazaar, fair at the local park, Kekaha Park, with all the booths. It was a regular fair, carnival atmosphere … And then

Christmas time, there would be like a mini fair. A big gathering at the park. The military would come fly helicopters, Santa Claus would come down and throw all this candy and stuff like that.

So, the military were supportive of those events … those Kekaha events. And then Fourth of July was a big, uh, the same type of event, Fourth of July. So, three times a year, very reliable. There was the Fourth of July Carnival; it was a big event you know, easily 10,000 people would show up. Then New Year's again, the same type of event. Then the Christmas Santa Claus Drop … that was a big deal because it made us kids think that really was Santa Claus, 'cause he came down from the sky. [Chuckling.] But it was a military helicopter that would come. And um, the military would also provide doctors once in a while. They would set up a tent in town, in Kekaha. They would provide doctors to look people over … dentist … so that was the involvement of the military back then. Then over at the Navy housing, just past the landfill, there's a housing area where the military families would stay. And they had an outdoor movie theater, so there was an outdoor movie screen and then you can sit on the grass. It was available for the public back then, so we used to go there and watch movies under the stars. That was a lot of fun.

My mom used to teach *hula* [Hawaiian dance], as a kid growing up, at community centers around Kaua'i. And she also would teach *hula* there at the Navy Base for people, usually moms from the Navy families who wanted to learn *hula*. And my mom used to go … So, she would take me along with her sometimes. And so that was our exposure to the military families. In our church [Church of Jesus Christ of Latter-day Saints (LDS)], some military families would come to our church too…so that was the engagement we had with the area. Children of military families were my classmates at Kekaha Elementary School. I remember one particular friend I had whose family lived on the base and my mom took me on a couple of occasions to his house for a couple of hours to play with my friend and then she would come and pick me up.

So as far as my firsthand experience with Mānā side, that's it. More as I became an adult, I became very fascinated with history. History and culture. So, I devoted lots and lots of time, years, into digging into the historical records, and the lore, and the cultural records of the area of Mānā, growing up. And then recently, in the past several years, I got into composing original *mele* [song] in Hawaiian for performance for *hula*, and for chants and stuff with Leinā'ala Jardin's *hālau* [school of *hula* called Hālau ka Lei Mokihana o Leinā'ala]. That's been like over 20 years now, doing that kind of thing. But digging into the *mo'olelo* [stories, history] in order to keep those *mo'olelo* alive, because they seem so many years ago; centuries ago. That to me anyway, it would be more than unfortunate if people today in our generation never really heard those stories. So, one way to go about it is to turn them into *hula* [Hawaiian dance],

mele [song], chants. To make people aware that these things continue even today. So that's really, I don't know … summarizing my experience with Mānā.

HKA: Does your *ʻohana* [family] have genealogical connections to the area, *ʻāina* [land]? Your *ʻohana* family land?

KN: Yeah, some of the uh … because we're in the Kaumualiʻi [Kauaʻi Chief] genealogy so some of those *kupuna* [elders] after Kaumualiʻi's time lived in Kekaha. And they're *kūpuna* of mine. And after a while, the family kind of left the area and as far as I know, it's my family now, who are the next generation to actually go back to live in Kekaha. And that's where I grew up, yeah?

HKA: So, the house you're in now, is the same house you grew up in?

KN: No, our house now is Hawaiian Homestead Land and I have no idea where the family plot was …

IA202241_2023-11-25_Keao NeSmith(2).MP3

HKA: Aloha, we are back here with Keaʻau … Keao. Sorry, excuse me 'cause my niece is Keaʻau. Um, and … we are back. Can we start the interview again? So, where were we? Um, so, do you have any *ʻohana* burials, or burials that you know of? If so, where?

KN: Ah, just my dad. My dad is probably the one *Haole* [Caucasian, White] guy in the Hawaiian cemetery in Kekaha. [Laughing.] But that's where the rest of us going be too, eventually so … we going get some Hawaiian NeSmith's in there.

HKA: Um, your *kupuna* … were they, um … Oh, you told me about your *kupuna*. So, do you know … you mentioned being related to Kaumualiʻi [Kauaʻi Chief], and any other relatives from the past that is associated with the area?

KN: I mean, uh, just those kupuna who come after Kaumualiʻi's time. I trying to remember the names right now. Any who … and some of them are *aliʻi* [chief, ruler] of Niʻihau too, but we're talking in the late 1800s, early 1900s. Yeah, that's all as far as *kupuna* connected to Kekaha, Mānā are concerned.

HKA: What is your favorite *ʻōlelo noʻeau* [wise or traditional saying].

KN: [Chuckling] I mean, you know … Eh, for me *ʻōlelo noʻeau* is *noʻeau* [wise, clever] because it came from a *kupuna*. Um, it's a little annoying when people always, *"*Oh, let me go look in the book*"* … well that's not so much *noʻeau*, that's a collection of things that have been recorded. For me, the *ʻōlelo noʻeau* is stuff that came straight from my grandma, 'cause I lived with my grandma. That's how come when me and her were living together, we only spoke Hawaiian to each other. So when she has those expressions that just come out, that she can repeat, that's *noʻeau*.

HKA: *ʻAe*. [Yes.]

KN: Uh so, she would … so when you ask me that kind stuff, I think of her and the kind of things that she would say. And they're a lot of things that she would say. Um …

HKA: What is your favorite one, she would say?

KN: Uh, no more one single favorite … I get plenty. They're all equally favorite. She would say stuff like, "*ʻĀpōpō aku nui ia lā*", "leave it up to tomorrow." In other words, you gotta have faith and you gotta be confident that what you did today was good enough, that tomorrow you going see the result. And she would say stuff like, when somebody pass away, "*Hāʻule ka ʻulu malalo*," 'the breadfruit fell down.' Uh, *ʻulu* [breadfruit], is the *ʻulu* ah, growing in the tree? And *ulu* is to grow. So, our whole life we growing just like one *ʻulu* tree. But there comes a point when we produce fruit and that's the things that we do that are good and that everybody can see … that everybody can enjoy … that everybody can benefit from. And then you work so hard, and then one day comes that the *ʻulu* fall down from the tree … and that's the end. So that's, "*Hāʻule ka ʻulu malalo.*" And I thought it was a beautiful way to describe a person's life.

HKA: Yeah, yeah. And your grandmother, she spoke the Niʻihau …

KN: No, this is my mom's mom. So she from Kaʻū, Puna, Hawaiʻi and I was living with her in Hauʻula, Oʻahu.

HKA: Oh wow … wow. And what was her name?

KN: Annie Kaʻuhane. We only spoke Hawaiian at home.

HKA: Wow …

KN: And she would come visit us here in Kaua‘i too, in Kekaha. And my neighbors in Kekaha from Ni‘ihau, and so often she would go next door and spend the whole day talking story to my neighbors.

HKA: Nice. Um, what kind of um, besides the language of course, what kind of Hawaiian traditions are practiced by you or your *‘ohana*? Or your *kupuna*?

KN: Uh, a lot of the everyday kind stuff. So, the fact that we eat *poi* [Paste or pudding made of taro or breadfruit] on a regular basis. The fact that when people come, you go out of your way to welcome them at home … um, you have to bust out all the food and the drink and make them feel really welcome in your home. And uh, my grandma taught *hula* as we were young, growing up … and she passed that onto us too. And the music … a lot of the music, Hawaiian music, is a big part of our family too … um, plenty kind stuffs.

And then as I grew up, I would involve myself in learning the history and the culture … having to do with *heiau* [Pre-Christian place of worship]. And so, I’m heavily involved these days in that kind of preservation work … having to do with *heiau*. And then other skills like doing *pa‘akai* [salt] out in Hanapēpē, helping others with theirs. For many years I was a farmer of our *lo‘i kalo* [irrigated terrace for taro] in Kahana Valley, O‘ahu, working with *‘ohana* over there too … And uh, so all of these things at different parts … You know, you engage at different parts, times … and then you move on to other things. So, there’s always something there. There’s always something around.

HKA: Do you still practice any part of the Hawaiian religion?

KN: Um, I don’t know if you can call it religion, in the way we understand religion today. But customs, for sure, yeah. So, the things having to do with understanding how special, for example … One thing is say, *lā‘ī* [ti leaf (*Cordyline terminalis*)]. *Lā‘ī* is special … we know it’s special … we know it’s sacred, we know it offers protection. So that’s always in our consciousness at some point. So, we’ll integrate it when we think it’s called for, either at the house, or … Same for *pa‘akai* [rock salt]. *Pa‘akai* is for protection, for cleansing, forgiveness … And so that incorporates into what we do. Um, making *lei* [necklace or garland made of flowers, leaves, feathers and/or shells, etc.] for particular reasons … And then, why we give *lei*. Why we make *lei*. Why the type of leaves, or flowers, or plants we use in *lei* … There’s a reason why we chose what we chose, and that all goes back to traditional understandings of the *mana*

[spiritual/esoteric power; strength] inside those things. So, all of these things conveying mana is part of the, you know, centuries old understanding of how energies play an important role in our environment, the surroundings … um, the energy of those things that are unseen around us. I don't know if you consider that religion, but it definitely plays into our consciousness as a family, as a community, um … and definitely um, something that we still do, even today, even despite the fact that our family was raised in the Mormon Church, these things still played into these things. And the appreciation and understanding of what is an *ʻaumakua* [personal or family god] … things like that. So even though we don't know the specific name of our family's *ʻaumakua* from the past, we know that, that's an important thing. It's not just when you cite an animal, and in our family, it was always understood to be *pueo* [owl], that's how come I have this tattoo over here … But you cannot just say every *pueo* is your *ʻaumakua*. There's one particular *pueo* and it has a name, and that name is somebody, is one of our *kūpuna* in the past, or that name is lost and we don't know that story attached to that name and that *pueo*. But it's a *pueo*. And so, you kind of keep it at that super general kind of space. We wish we knew … we want to know … there's a good chance we'll never know, but the memory of it, we preserve. So even though we grew up in the church, from the western American sense, these things were always there, and they're always kind of in the background, or in the foreground, actually.

HKA: So, you're *mahiʻai* [farmer] and probably *lawaiʻa* (fisherman) … What did your ancestors plant or what do you plant?

KN: Um, I'm not so much active *mahiʻai* today but the emphasis was *kalo* [taro] in Kahana Valley for more than 10 years, maybe 15 years. Almost every weekend I was in the *loʻi kalo* [taro pondfield] in Kahana Valley, Oʻahu working with my *ʻohana* harvesting *kalo*, growing *kalo*.

HKA: Your ancestors, what did they plant?

KN: Don't know.

HKA: Did they plant anything in this area?

KN: I don't know, I don't know. So, when my kupuna who were living in Kekaha, I don't know anything about what they did. I can guess because many of the others were, uh … many other people in the area were fishermen and *mahiʻai*, to whatever extent subsistence *mahiʻai*, for the family, the neighbors and … So, I can only assume it was like that 'cause it cannot be true that they did nothing, right?

HKA: ‘*Ae* [Yes].

KN: It was impossible to do nothing, so must’ve been that they did either *mahi‘ai* or unless it was other certain skills, yeah? Like making stuff, maybe *lauhala* [pandanus leaf]. Further back would be *kapa* [made from bark; formerly clothes of any kind] … but stuff like that. Or, uh *paniolo* [cowboy].

HKA: How bout like *lā‘au lapa‘au* [medicine made of herbs to heal, cure]? Do you still use?

KN: My grandma would use for herself and with me, certain types of *lā‘au lapa‘au*. I have this scar over here on my arm. Used to be a boil when I was young, maybe 10 years old or something like that … My grandma was visiting with us in Kekaha and I had this boil on my arm, it was nasty. And my grandma would go outside in our yard and grab *laukahi* [broad-leafed plantain (*Plantago major*), a Eurasian stemless weed] and she would steam it to wilt it, and then she would pile it on top of the thing and wrap it. She said that was to bring the boil to a head so that it could drain out. And when I would be sick, she would give me … well, she would give me *māmaki*, [small native trees (*Pipturus spp.)* with white-backed leaves and white mulberry-like fruit] *koko‘olau* tea [a class of small plants of the genus Campylotheca employed as remedies, sometimes called the Hawaiian tea plant] on a regular basis, especially when I was living with her. A typical day living with grandma was for me, ‘cause I was going to school and working, I would wakeup say 5:30 am in the morning, she was already up, already cooking, and she would make cowboy pancake with honey and butter and *māmaki* tea. Was always *māmaki* tea. If she never have, then would be *ko‘oko‘olau* tea because she said it was good for my *‘ōpū* [stomach]. And uh, when I was sick with a cold or something, she would make … *ha‘uōwī* [a weedy kind of verbena (*Verbena litoralis*)]. And she would talk about when she was growing up, ah.

HKA: What is *ha‘uōwī* ?

KN: *Ha‘uōwī*? It’s another kind of plant. I wouldn’t be able to point it out to you. [Chuckling.]

HKA: ’Cause I don’t think it’s here.

KN: Yeah, uh probably … yuk. That thing was yuk. [Chuckling.] She said was ‘ono [delicious] for you … I mean it’s good for your sickness, but I used to not like ’cause it was so bitter.

HKA: And where would she get these plants?

KN: Outside … she knew.

HKA: She grew it?

KN: She never grow 'em.

HKA: She went and gathered?

KN: Yes. She went someplace and found 'em and then she would … Like I would tell her I wasn't feeling good and she ask me, *"*What kind not good?" Then she would go … Next thing you know, there was this pot boiling on the stove, so … I never really knew where she got if from but ... She was uh, she used to explain to me uh, *haʻuōwī*, *koʻokoʻolau*, *kīnehe* [(*Bidens pilosa*); young plants, just before flowering, are cooked for tea.], *māmaki*… Uh, one time she talked about something having to do with *maiʻa* coming out of the banana. I didn't pay attention. Now I regret, I didn't pay attention. I was, *"*Oh yeah, whatever grandma *..."*

HKA: [Laughing.]

KN: Uh, and then … not anything more serious than that, really. But as far as coming straight from *ʻohana*, and not from a book, or not from a scientist, these are the kinds of *lāʻau lapaʻau* I'm talking about.

HKA: Yeah … So, you're familiar with the *kalo* growing in the swampy areas, yeah? And they used to put 'em on top the rafts …

KN: Yeah, I remember reading … creating the rafts …

HKA: And so, you know … that stream going that way, that you showed me … is that, that place, that swampy area where they used to travel on?

KN: Part of it, but it would … all the way to Polihale right?

HKA: Yeah.

KN: And uh, it was the ponds and the lakes were kind of meandering, so it wasn't in straight lines or anything, it was just here and there … I always found that fascinating yeah, when I first learned about that, and I can only imagine how it must've been. But essentially, it's *pu'epu'e* [A rounded pile of earth in which plants are set.] … *pu'epu'e* style. You know how when you make mud mounds, yeah? So, you make the raft and then you pile the mud on top the dirt. And then you make it *pu'epu'e* style and that's how you plant the *huli* [Name of taro tops for planting.] on top of the *pu'e*, and then the irrigation is coming from underneath. But it couldn't work to use those ponds as *lo'i* because it's too much water, and it's standing water mostly because it comes from springs. It does flow, because the water was clear, yeah? So that means it was flowing and not just stagnant.

But when we were kids though in Kekaha, I grew up in the old Hawaiian homes section of Kekaha town and further west, there's a subdivision called Kekaha Gardens. I remember when that was, the ground was raised in order to build those houses. But before that it was ponds; it was swamp. We called it swamp, but really they were ponds. And the water was super clear, and it was green. It was green in color. And to us, it was spooky. [Chuckling.] We thought of it as spooky but it was so clear and mysterious but the water was spring water; it was actually fresh water. And they had to fill those in, in order to build that subdivision. So, we were able to see some of those ponds, as kids growing up. And then as I grew older, I learned that actually the whole, all the flat lands, because much of it is below sea level. So, a lot of the flat lands you see out here is actually below sea level. So, you got the beach and so you got the berm that comes up, but it goes downhill gradually till it goes below sea level. So that's why the water table is so high over here.

HKA: Yeah … Okay, so let's go to the *limu* [seaweed] gathering. Well, let's go to the fish first. Have you…has your family, or have you been like fishing in the area? Like you know, around Mānā on the ocean side? What kind of fish …

KN: *Moi* [Threadfish (*Polydactylus sexfilis*)], *āhole* [an endemic fish (*Kuhlia sandvicensis*) found in both fresh and salt water], *manini* [common reef surgeonfish (*Acanthurus triostegus*)], *'ō'io* [ladyfish, bonefish (*Albula vulpes*)], *pāpio* [young stage of *ulua* (crevally) fish] … that's the kind that you catch with the fishing pole.

When you throw net, you get the *āhole*, you get the *manini*, you get the *ʻōʻio* … Um, the kind you spear fish on the reef, you get the *uhu* [parrot fish (*Scarus perspicillatus*)], you get the *mū* [(*Monotaxis grandoculis*), known as the bigeye emperor or humphead bigeye bream], you get the *kūmū* [Goatfish (*Parupeneus porphyreus*)] … Um, you get the *palani*, [surgeonfish (*Acanthurus dussumieri*)], *pākuʻikuʻi* [a long fishing net; specifies a net laid in coral reef, into which fish were driven by beating the water] we call ’em. All this kind, that’s all the favorite fish. *Kala* [Surgeonfish, unicorn fish], that’s all the favorite kind fish to eat. And that’s the reef fish.

And then you go outside on the boat, if you fish off the boat, then that’s where you get the … you can either get the deep-sea *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] … So, you get the *kawakawa* [mackerel tuna], and you get all the different kinds of snapper, yeah? And then you get the *ono* [large mackerel type fish (*Acanthocybium solandri*)]. Of course. you going get the *barracuda*, you cannot help [chuckling] … And then you get the *marlin*, and you get the *mahimahi* [dolphinfish (*Coryphaena hippurus*), a game fish]. Plenty *mahimahi* outside on the boat.

HKA: You guys get plenty *he’e* [octopus (*Polypus sp*.)] too, yeah?

KN: Uh, not bad, yeah. Actually, we get pretty good on the *heʻe* [octopus] side, especially if you go where get plenty reef, like … and then the lobster too, yeah. But if you go Nā Pali side, choke *heʻe* on that side.

HKA: How ‘bout the *limu* [seaweed]? What kind *limu* get? You guys still have over here?

KN: I wasn’t so on it with the *limu.* Like I not so good at pointing out the different kinds but like my aunty who just called, her mom when she was alive, when we were kids, she used to come pick us up early in the morning, 4 o’clock, 4:30 on her truck, and take us, because a *lūʻau* [Hawaiian feast, party] was coming up and many people would call her to make the food. So, she would have her certain families that she would hit us up to go help her go harvest, yeah. So, I remember going with her out to Mānā side, Kinikini Point side. Um, she knew the spots to go, so we would just go with her and she just point to us on the reef, on the coast … tell us go pick this *limu*, stick it in the bag. It was *limu kohu* [small seaweed (*Asparagopsis taxiformis*), with densely branched furry tops that are tan, pink, or dark red], *ogo* [seaweed], and also sea cucumber. She would have us grab *loli* [sea cucumber (*Holothuria spp.*)] and she would sit on the reef and she would scrape ’em and then cut the two ends, squeeze out the guts, and then scrape ’em some more, and chop ’em into pieces and throw ’em in the big mayonnaise jar. And it would

attract all these eels, and they would come eat up all the stuff and that used to make us scared. But we used to grab the *loli*, throw 'em to her, and she would just sit on the *papa* [reef] where the water would just come up to her, and that's where she would sit there and scrape, scrape, scrape, and then cut it up. And then we would help her prepare the foods for the *lūʻau*. I remember those memories ...

HKA: Wow … that's neat. So, did you guys have a lot of *lūʻau*(s) when you guys were growing up?

KN: Plenty. And Kekaha Beach was a huge beach, and now it's only waves crashing on rocks right now. But it was a huge beach. In fact, there used to be the big kind, the old school canvas tent, the military kind, and I remember going to at least one or two, at least two different big lūʻau on the beach in Kekaha, where it was like that … With the long tables, everything was on the sand … Or, or up *mauka* [toward the mountain], you know? Different locations … Waimea, Kekaha … Yeah, many lūʻau. I always, always did love that.

HKA: You know what, so what I'm going to ask you is ...You tell me what you want to talk about in this interview ... because we're going to come across … 17 more minutes to 12:00, so I'm going to let you talk … tell me what you want to talk about*?*

KN: Okay. Well, um, let's see … Uh, having to do with the military, yeah, so there's been a happy slash, frustrating slash, irritating relationship with the military, yeah? First of all, the Hawaiian Kingdom achieved international recognition as a sovereign state in 1843 with status equal to the U.K., France, the US and other recognized states through bilateral treaties of friendship, commerce, et cetera. In 1893 the U.S. lands their troops in an illegal occupation, military occupation, that continues until today. The United States has no business being here. This is the Territory of the Hawaiian Kingdom. The United States has mutual treaties of friendship, recognition, commerce with the Hawaiian Kingdom and those are still valid, even until today. There exists no bi-lateral treaty of cession between these two equally sovereign, equally independent nations—the Hawaiian Kingdom and the United States, just a unilateral declaration of annexation on the part of the US. There is no treaty of merger of these two countries. So, the United States has no business being here and the rights of the HK of its territory are continually violated every day of the occupation. This is an international crime, a war crime. The perpetuation of US propganda making Hawaiʻi residents and people around the world think that Hawaiʻi is a state of the US is perpetuation of the crime.

So, when Pearl Harbor was hit, the Japanese Empire was not bombing the Hawaiian Kingdom. They were bombing specific American targets—military targets—illegally occupying Hawaiian Kingdom Territory. That was actually part of the argument Japan was making at the time. Obviously, Japan was trying to jockey for its own selfish agenda at the time. That is not a question. But it remains true, at Pearl Harbor time, and all the way till today. So, the fact that Russian spy ships, Chinese spy ships, North Korean missiles and spies, are attracted to PMRF (Pacific Missile Range Facility), is not a Hawaiian Kingdom thing. Its only because of the illegal intervention of the United States military. That is the only reason. So, had the Hawaiian Kingdom been left alone and respected by the United States since 1893 till today, do you think these targeting of Hawai‘i in these military ways, would continue? I doubt it, because there would be no motivation.

HKA: *‘Ae* [Yes].

KN: So, there’s that. Now, within this capacity as an illegal entity, military entity, here in the Hawaiian Kingdom, now we’re using Ni‘ihau as part of their advanced technology, radar communications technology, spy technology … You know, to further the U.S. agenda for illegal purposes, is terrifying. Because that creates us… We exist as a nuclear target, not because of the Hawaiian Kingdom [HK] but because of the U.S. presence here. So then, there’s that. So, this uncomfortable, sometimes awkward relationship today with PMRF, has a lot to do with emotions that are stirred among locals. And are we educated in our elementary schools, middle schools, high schools, locally about these issues and exactly what the position of the United States is? The relationship between the Hawaiian Kingdom and the U.S.? It is not part of the curriculum. It is not part of this, so the fact that there’s a lot of speculation going on and really charged emotions among locals that are many times unspecific, just ambiguous, charged up, frustrated emotions among locals having to do with the U.S. military, is no surprise to anyone because it is not part of the formal education that we get in our schools. And I am not a conspiracy theorist, however, it is no surprise that, that kind of ambiguity leads to either mistaken or confusing positions among locals, about the relationship between our Hawaiian people, the local people and the U.S. military. So, don’t be surprised about any of this. Obviously, it isn’t our fault that we’re not being educated properly about these relationships.

So, one thing that disturbs me a lot is the position of the U.S. military relative to Ka‘ula. [a rocky islet off Ni‘ihau] Ka‘ula is the modern day Kaho‘olawe [smallest of the eight major Hawaiian Islands], back in its bombing days, which was never intended to continue past World War II. So, Kaho‘olawe was never intended to be used as a bombing target past the war days of World War II. So, it was the imposition of

the U.S. again, with regards to that. Well, when Kahoʻolawe ceased as a bombing target, the U.S. military continued to bomb Kaʻula. And Kaʻula is a sacred site. That's where Kūhaimoana [shark god] lives, the giant shark, who is the guardian of this area, in the cave Hālauaola [shark cave], which is under the water level of Kaʻula over there. On top are several *heiau*, which the U.S. military continually disregards as anything special and feels perfectly fine strafing, you know, certain targets ... Like they'll lower Matson containers onto Kaʻula as a target to bomb, or to strafe with guns from aircraft or from boats. They join together in the RIMPAC exercises (Rim of the Pacific is the world's largest international maritime warfare exercise) with other countries to do the same, and that is absolutely unacceptable. That is unacceptable. The fact that Kaʻula was excluded from Papahānaumokuākea [US-declared marine preserve consisting the northwest Hawaiian Islands from Nihoa to Midway] is international injustice. That should never have happened. Kaʻula should always have been preserved and kept sacred and the emphasis should have been for local fishing, and learning, and for preservation purposes. Never for bombing or for guns.

We hear the bombing of Kaʻula from here, Kekaha. From Kekaha, we can hear the bombing in the valleys of Mānā and Kekaha. It reverberates in the valleys. So, Waiʻawa, when you're in the valley, it reverberates when they bomb…you can hear the bombs from there during RIMPAC (Rim of the Pacific Exercise). So the fact that the U.S. considers it safe, or unharmful, et cetera, is a complete lie; a complete travesty. No one ever talks about it, the impact of such things, which is part of this agenda to keep us dumb. Keep us uninformed … the locals of those activites. There must be education about what exactly is going on with regards to Kaʻula and what happens at PMRF. That cloak of secrecy and refusal to disclose is unacceptable. We want to know exactly what's going on over there. And the launching of missiles out of Nohili, that area where our local boat traffic has to come to a complete stop or be arrested under threat of arrest, under threat of anything not good … that is unacceptable. And so, these are issues that always are there in the minds of locals but this needs to be … What the military, the least that the military could do for us, is be transparent. We know that it is the nature of the military of any government not to be transparent. And that is unacceptable. We want to know why such information is denied us in our schools for our children to learn and we want that to be remedied. We want education to be prominent, as to what exactly the military is doing.

So, the fact that it provides all these jobs, I don't appreciate the fact that they use that as bait against us. That is inhumane. That is part of the inhumane tactics that other countries do, like Russia, for example, countries the U.S. constantly points fingers at for mistreating their people. And yet, here they go, doing it to us, ever since 1893. So, the destruction that was done to our language and our Hawaiian culture, traditional Hawaiian culture, traditional Hawaiian language, because the conspirators of 1893 were very

explicit, very clear that it was their intention to eliminate the Hawaiian language and to eliminate the consciousness of our Hawaiian National identity. They said so, straightforward. And so, the presence of the United States military till today, is a reinforcement of that agenda … even today, all these years later. So that is what our local people need to know. That is what the U.S. military needs to own up to, and be responsible for and remedy. So, I understand that coming up in the next year, I believe, next October [2024], there is an agreement for the U.S. military to withdraw in increments, and that needs to be respected. It is a consequence of Secretary of State Blinken being served notice last month by the acting government of the HK of termination of the previous agreement of access to Pearl Harbor, which had a time limit of some years after 1887. *Pau* [Finished, done].

HKA: *Mahalo nui* [Thank you very much]. I will end this interview right here.

ORAL HISTORY INTERVIEW

With

Sylvia Johnette Leinaʻala Compac [SJLC],

Brad Kekipiaki"Kipi" Akana [BKA],

And

Paul Compac [PC]

November 28, 2023

Akana-Compac Home, Hanapēpē, Kauaʻi

By:

Hannah Kaumakamanōkalanipō Anae [HKA]

Recording file name IA202241_2023-11-28_Akana-Compac Ohana.MP3

HKA: *Welina kākou* [greeting everyone], today is November 28, 2023, we are on the *mokupuni* [island] of Kauaʻi, in the Kona *moku* [district],[1] and *kūlanakauhale* [city, town] of Hanapēpē. I'm Kaumaka Anae, representing International Archaeology, LLC and we are conducting the Cultural Impact Assessment interviews for the Pacific Missile Range Facility (PMRF) and Kōkeʻe Park Geophysical Observatory Succeeding Lease and Easement Areas. And I am here with Aunty, Aunty, can you say your full name?

SJLC: Leinaʻala Compac … Leinaʻala Akana-Compac.

HKA: And, Kipi, can you say your full name?

BKA: Brad Kekipiaki Akana.

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org /gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

HKA: *Mahalo* [Thanks] and do I have your permissions to record this interview?

BKA: Yes.

SJLC: Mmmhmm.

HKA: Before we start I would like to say, *e kala mai*, or excuse me if I seem so *maha'oi* [brazen] …

SJLC/HKA: [Chuckles.]

HKA: … I apologize in advance. It is not my intention, and this is just for interview purposes.

SJLC: Yes.

HKA: So let's start the interview. So … basically I start of with *mo'okū'auhau* [genealogy] or your *pilina* or connection to the land. And how long has your *'ohana* [family] lived in the area … this area? Were you living in Kekaha?

SJLC: Waimea.

HKA: Waimea? So how long have you been living there?

SJLC: Oh … I can remember as far back as … I didn't know her, but my great-grandmother. My great-grandmother lived there, and then my grandma … and then my dad and his families … his siblings.

HKA: And possibly …

SJLC: And that goes way back to the … 'cause when we moved here, that was in the … what, 1950s … we moved from Honolulu. My grandma died in '47. I would say from maybe the '20s or '30s, I would say the '20s maybe.

HKA: Wow.

SJLC: 1920s I think.

HKA: And … [clearing throat] … and probably before that right … your … your mom's side, yeah?

SJLC: My father's side.

HKA: Yeah, your father's side.

SJLC: My mother has no family here.

HKA: Yeah. Your father's side may have even gone further, right?

SJLC: Yes, that could be. That could very well be.

HKA: Are you familiar with Mānā and PMRF [Pacific Missile Range Facility] because … ?

SJLC: Because I worked there.

HKA: Yes. And Kōkeʻe as well, right?

SJLC: Yes.

HKA: Can you tell me about that?

SJLC: Kōkeʻe was very interesting because it was something that was new to the world, more or less, because we did like aerospace; that's when aerospace was in … you know … in full bloom … I guess at that time. And we were the only Pacific Tracking Station. And we tracked the, ah … You tell her, Dad.

*****Paul Compoc enters conversation*****

PC: We track all the big ships … you know … the Cappalo … We were the only station in the U.S. or in the world, in fact, that could catch certain part of the orbit when the thing pass over. So we can track it, and take all that data, and send it straight to Houston.

HKA: And, Uncle, what is your full name?

PC: Paul Compoc, born and raised Kahuku.

HKA: And do I have your permission to interview you, I mean to have this interview recorded?

PC: Of course.

HKA: Thank you and so … you both worked there?

PC: I worked there.

SJLC: He worked there …

PC: That's how I first came to Kaua'i. Before Kentron.

SJLC: Yup. A little before me.

HKA: And what year was that?

PC: 1971 … I like say … until 1978.

SJLC: And I worked there from 19 …

PC: ’71.

SJLC: ’71?

PC: Yeah, because that’s when I got there.

SJLC: Okay. 1971. And then I worked there until 1983. And then I started down at the base in 1985.

HKA: And what did you do at the base?

SJLC: At the base? [Clears throat.] I worked in the department called Air Operations. And I handled all the scheduling of the aircrafts, the pilots, the crew. Made sure we were in budget … of course … it’s the main thing … and I did whatever other clerical work that had to be done. I was the only woman in the whole department, among six officers and 20 sailors. I was the only woman and the only civilian.

HKA: And how was it before because you probably saw the place when there was less activity of the military, right? Could you see the difference in time … like when they were there … or was it always there when you came to Kaua‘i?

SJLC: It was always there … at times when we had worldwide missions … and then they would come here … I think … it was like every other summer … and we would have people like from Japan, from China, from Portugal … just from all over the world.

HKA: So like a collaboration, yeah?

SJLC: Yeah … I mean yeah.

HKA: And what would they do when they come?

SJLC: They would do their part of the mission that was … like the Japanese would do like their part of what that mission was going to be for that time of the year.

HKA: So going back to the genealogical part … did your *ʻohana* [family] have *ʻāina* [land] around the area?

SJLC: In Waimea, yes.

HKA: Yes. And where was that?

SJLC: Waimea Valley.

HKA: Waimea Valley. Can you describe growing up in Waimea Valley?

SJLC: It was wonderful … I mean.… You know … when I go up there now, it's a whole different town. It was very low key, everybody knew each other, everybody helped each other, all the kids played together … you know.… That doesn't happen nowadays. It was very low key, Waimea Valley was very low key. But I think … it was a very loving town, because no matter if you were Japanese or you were Filipino, Hawaiian, or whatever, it didn't matter … you know … you just … everybody was one person.

HKA: Did you guys have any community get togethers … like *lūʻau*(s) [Hawaiian feast, party] and stuff?

SJLC: If there was any, it wasn't like a community thing it would be more like.…

HKA: *ʻOhana* [family].

SJLC: Yeah, *ʻohana* thing.

HKA: Were any of your *ʻohana* engaged in *lawaiʻa*, like fishermen, or *mahiʻai*, farmers?

SJLC: You know, I can't remember them being that way … The workers I can remember in our family was more like County workers, State workers, and stuff like that. But never for the *ʻāina* [land] type. They never worked on the *ʻāina* as a farmer … Even fishermen, I cannot remember anyone being a fisherman.

HKA: Did they fish sometimes? Did they gather?

SJLC: Fun type, social type … yeah.

HKA: Did they gather? Yeah … yeah.

SJLC: Yeah, yeah, yeah.

BKA: We used to fish all the time.

SJLC: What's that?

BKA: We used to fish all the time.

HKA: Yeah, what kind of fish you guys used to catch?

BKA: *Pāpio* [the young stage of growth of *ulua*, a fish], *moi* [threadfish (*Polydactylus sexfilis*)], *ʻōʻio* [ladyfish, bonefish (*Albula vulpes*)].

HKA: So what kind fishing your guys did … cast … or … net?

BKA: Cast, throw net… I catch *ʻoʻopu* [general name for fishes included in the families Eleotridae, Gobiidae, and Blennidae] in the river too.

SJLC: [Chuckles.]

HKA: *ʻOʻopu*? You guys get *ʻōpae* [shrimp] too?

BKA: Yes, but …

PC: Not plenty.

BKA: Not plenty. Mostly in the streams.

SJLC: The streams get that.

HKA: Yes. So you guys gather *limu* [seaweed] too?

SJLC: My dad used to.

BKA: Once in a while, yeah. My grandpa used to.

HKA: What kind *limu*?

BKA: *Limu kohu* [a soft, succulent, small seaweed (*Asparagopsis taxiformis*)].

SJLC: What you call that? The Filipinos call that?

BKA: No, not *limu kohu*. I grab *limu kohu* once in while.

HKA: And where? Where you guys used to go? Waimea?

SJLC: My mother …

BKA: Right here?

HKA: Hanapēpē?

BKA: Yeah.

SJLC: My mother had a stepbrother who married into our family in … Kapa‘a … *limu kohu* was their business. The Lovell family.

HKA: And so is that business still being carried on today?

BKA: No. I don’t think so.

SJLC: Not as a business, just as a … you know … private … family type … yeah. But that was an interesting thing, going and picking up *limu kohu* … never did it before except with them.

HKA: Oh, yeah. I like doing that.

BKA: Get, but not over here … where I live now.

HKA: Long *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit]

BKA: Long *kine*, purple *kine*.

HKA: Whoa, that’s the *‘ono* [delicious, tasty] one.

PC: I remember camping up Miloli‘i. Only helicopter can go inside there. And a bunch of us from Kōke‘e, we get dropped off by helicopter. We went in there. The first thing they did was go up a stream, and they caught plenty, big *kine* shrimp. I don’t know what they call ’em before, but they were plentiful.

BKA: Prawns.

SJLC: Prawns.

HKA: Prawns, yeah.

PC: Plenty … you know … I mean like.

HKA: Plenty, yeah, they get over here.

PC: Yeah. About that time when we went … that's the first thing they caught, and that's what they ate. I didn't eat that … you know what I mean?

HKA: [Chuckles.] Yeah.

PC: That was … to me … that was interesting. Even for fishing like that over, because no one goes over there … the fish comes to you.

HKA: Whoa … man.

PC: Throw net … and boof.

BKA: Mullet. We used to go there and get the *hīhīwai* [endemic grainy snail (*Neritinu graposa*), in both fresh and brackish water, eaten both cooked and raw].

HKA: Inside the streams?

BKA: Plenty. Some of the other beaches now, I think the hippies had figured it out … yeah … so they scraping the low ones, but if you go get the high ones, in any inaccessible stream get plenty inside there.

SJLC: What is that, Kipi?

HKA: *Hīhiīwai*, they almost like *ʻopihi* [limpets].

BKA: Freshwater *ʻopihi*.…

HKA: Yeah.

BKA: … in one black shell.

SLJC: I don't really eat shell food.

HKA: Ohhh …

PC: I remember that … in the stream … that one stream … Miloliʻi.…

BKA: Yeah. Miloliʻi get.

PC: … they go right up there … Otis guys … and all of them … and foom! But they only take what they going eat because this was camp for the weekend. And all the rest was fishing.

SJLC: I remember going up Wainiha on the otherside of the island with Otis was to go get prawns.

HKA: Yeah.

BKA: We get prawns at my house too … in our stream … in our river.

HKA: And where you live?

SJLC/BKA: Kāhili [land division, peak (3,016 feet high), falls, and park, Waimea district, Kauaʻi].

HKA: Where is Kāhili at?

BKA: You know … like when you're going to the airport?

HKA: Yes

BKA: And like get the tree tunnel like when you going down to Po'ipū?

HKA: Yes.

BKA: Right before the tree tunnel … get this sign that says … like get one charter school inside.

HKA: Yes. Yes. I seen that.

BKA: All the way pass the charter school … the last house … all the way at the base of the mountain.

HKA: That's way up right?

BKA: Yeah.

SJLC: I love that place.

BKA: Yeah. We live on 107-acre property. With one ranch thing. And I get my own 15 acres on the side, and I get my horses … and my.…

HKA: Oh, really … so you *paniolo* [cowboy] then … right on.

SJLC: [Chuckles.]

BKA: I'm a … wanna be.

HKA: So long you ranching … that's *paniolo*.

BKA: Those cowboys, they work hard … I not working that hard.

HKA: [Laughter.]

BKA: You should come out one time, come check it out. Keao knows where it's at.

HKA: Yeah. I went up that road a little bit because I was *maha'oi* [inquisitive] the first time I came. I seen where that school is … it was beautiful … and the trees are beautiful over there.

BKA: I live past the school, behind the school.

HKA: Yeah.

BKA: So instead of going through the school gate where they … You gotta go to one gate, like right on the side get one little gate. But get one community up there of about 20 houses. Their own gated community.

SJLC: The most beautiful is getting up in the morning and seeing the waterfalls. Oh … so beautiful.

BKA: We get our own water system, we get electric, we no more like cable or nothing. We just when get Wi-Fi like two weeks ago.

HKA: For real … mean.

BKA: We when get the Elon Musk one …

HKA: [Chuckles.]

BKA: Star Eight or something like that. Now we can watch a little bit of T.V.

HKA: That's cool.

PC: Kauaʻi is just like Kahuku … one big Kahuku.

HKA: Yeah, Waimea reminds me sort of like Kahuku too.

BKA: That's where we grew up. I grew up Waimea Valley.

PC: He went to Kahuku. He used to spend his summers at Kahuku.

HKA: For real? I wouldn't have known that … you know what I mean … while we were going to Kamehameha School … I wouldn't have known that.

BKA: Our *hale* [house, but in this case residents at the dormitory Kipi stayed at while attending Kamehameha Schools] and stuff used to go Kahuku.

SJLC: You grew up in Punaluʻu?

HKA: Yes.

BKA: Because was cheaper than flying back to Kauaʻi.

HKA: Yeah.

PC: You know the Logans?

HKA: Yes.

BKA: Bulla.

HKA: Bulla is our classmate.

BKA: Yeah.

PC: You know the one used to work with me … yeah … the Lost … when they filmed Lost like that. He used to work on … I forgot his name. He was a Logan too. The old man.

HKA: Ahi?

BKA: Ahi?

HKA: Bulla's dad?

PC: No … what's the other.… He used to be in Punalu'u … you know … Pat's At Punalu'u?

HKA: Yeah.

PC: In that building.

HKA: Oh, I wonder who's that?

PC: Logan … I forget, but he was a bull. Logans, Greens, Compocs …

HKA: I heard of the Compocs … oh, your last name is Compoc.

PC: You know Jeffrey?

*****Conversation stricken from the record because it strayed away from the interview. The interview begins again at 18:28*****

HKA: So did any of your family practice Hawaiian traditions such as *lei* [necklace made of flowers, leaves, and/or shells, etc.] making, *'oli* [chant], *lua* [Hawaiian martial arts], *hula* [Hawaiian dance]?

PC: Tammy … *hula* [Hawaiian dance].

BKA: Like now or … ?

HKA: Now or even then …

BKA: I do *lua* [Hawaiian martial arts].

HKA: You do *lua*?

BKA: Yeah. In the class. I never go long time … but get one right now with Alan Arquette.

HKA: Where is this at?

BKA: Started west side. The guy … the *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] … is in Waimea Valley.

SJLC: Alan Arquette.

HKA: He's the instructor?

BKA: My brother is one *ʻōlohe* [skilled, especially in *lua* fighting] too, the *ōlohe* on Maui. And then Alan is the *ʻōloh*e over here.

HKA: Cool. I wouldn't think you would be doing *lua* right now. [Chuckles.]

BKA: Yeah. I just when give up hunting.

HKA: Oh, yeah?

BKA: About seven years ago. I was addicted to killing pigs with my dogs for years.

HKA: [Chuckles.] Oh, we got plenty in Punaluʻu too.

BKA: Even by my house … loaded pigs.

HKA: And so … where you guys practice *lua* [Hawaiian martial arts]?

BKA: Now, we was practicing at … the last time we went … Kōloa Park … in the dark but. The public county park. We get one big *papa* [class] maybe 100 people. We shake that park up … yeah.

HKA: Wow … good.

BKA: Yeah. But I haven't gone in a while. Get some internal beefs [struggles] with some guys … not me but … they split apart and they …

HKA: Different factions?

BKA: I never pick which group I going follow … so …

SJLC: And you know the *ʻoli* [chant] that they do …

HKA: Yeah.

SJLC: … before they start everything … my grandpa Kekahuna wrote it.

BKA: Yeah.

HKA: Oh, really …

BKA: For all the *papa* [class].

HKA: Can you talk about your grandfather Kekahuna … where was he living?

SJLC: When I was growing up … okay … as far as I know … him, growing up … they lived in Pālolo.

HKA: He was an … archaeo … not certified archaeologist, but …

SJLC: He was also for the Hawaiian Studies at University of Hawai‘i. And this was told to me by Bill Kikuchi. Bill Kikuchi was …

HKA: Yes, he was an archaeologist.

SJLC: Yeah, he was an archaeologist in Kaua‘i. He told me when he was going to the University of Hawai‘i, and they would go on excursions to different places, my grandpa would go with them.

HKA: Can you say your grandpa’s full name?

SJLC: Henry Enoka Kaleinapa Kekahuna.

PC: Only one leg, yeah, he had? You know that he had only one leg, and he did all that walking.

SJLC: Yeah.

HKA: And what are the works that he did in the *moku* [district] of Kona, on the *mokupuni* [island] of Kaua‘i?

SJLC: Kaua‘i?

HKA: Yeah.

SJLC: Well, he was working with Mrs. Juliette Wichman, and he also was working with … I don't remember his first name … but Moir from Kōloa … he used to have this cactus gardens, called the Moir Cactus Gardens … and I think it sat on some kind of Hawaiian grounds. So my grandfather worked with him also, and with Mrs. Wichman … mainly. But when he went to Hanalei to work with Mrs. Wichman, almost towards the end … going to Hā'ena already. He also worked with another Hawaiian family out there … Maka, the Maka family. There were two brothers, Simeon and the other one … I cannot think of his name. But he gave my grandfather a lot of information about the areas on that side of the island … on the north side of the island.

BKA: On this side, he did plenty stuff at Polihale and Barking Sands too, he … mapped out

HKA: Polihale also had the *hula pā* [a place to honor the hula] over there yeah?

BKA: He did all that stuff … He did on the top of Barking Sands, I think it's part of PMRF, what he did. The picture is of him on the top of Barking Sands.

HKA: Yeah, that's the one I just took. [I captured a photo of a photo of Henry Kekahuna hanging in a hallway of the Compoc home.]

SJLC: If you have a chance and you go to the Bishop Museum, you'll find things I didn't even know he did. I never knew he made calabashes.

PC: He made an original map of one [referring to the mapping of a *heiau* or temple at Po'ipū].

SJLC: The Kōloa one.

PC: The original.

SJLC: Yeah, the Po'ipū one.

PC: Where is it?

SJLC: Loke has it, she's going to have it framed … expensive because big … ah … the map. The map is about half the size of that door.

HKA: Oh, that's unreal.

BKA: Even like … you go to Bishop Museum, you go downstairs, and you can hear … they even get recordings of him teaching classes … in half-Hawaiian and half-English. We listen to his voice, because I never …

PC: These guys never even know.

BKA: He died … I think … like a year after …

SJLC: Two years …

BKA: … after I was born.

SJLC: … two years after you were born, because he scolded us when I named him Kekipi. He said, "Why did you name him Kekipi?" I said, "I don't know, the father wanted his name Kekipi … I just went along." "You know what this is?" "No." "That's the rebel … and kids turn out to be like their names." [Chuckles.]

HKA: [Chuckles.]

BKA: Oh, well.

SJLC: Because after he was born … it wasn't even a year yet, we took him up at Pālolo to see my grandpa and my grandma …

HKA: Wow, so he worked all over the *pae ʻāina* [archipelago, group of islands], yeah?

SJLC: Yeah.

HKA: Whoa … my goodness … what a legend.

BKA: He's a legend … but guys … we get people from New Zealand coming over down, trying to talk to her, and just … because he is such a legend in … mapping. Without pretty much no trainning, just mapping out stuff. And drawing accurate maps while the thing is actually overgrown …

HKA: That's crazy.

BKA: … with bushes.

SJLC: With perfect penmanship.

PC: Yeah … no need air support.

SJLC: Beautiful.

PC: No need nothing. One-legged.

BKA: Get the Poʻipū one … get the stuff about the *heiau* [place of worship, temple]. And then get his picture on top too with … Because they get one map, and one drone map of the thing, and the thing match up perfect to when he drew up the thing in the '60s.

HKA: Yeah. They do the overlays … yeah? Oh, man … that's amazing.

SJLC: He was … he was an amazing man.

HKA: Did your *ʻohana* [family] practice any *lāʻau lapaʻau*, Hawaiian plant as medicine?

SJLC: No.

BKA: Only my father, but he's kind of … on Maui. He was teaching *lā'au lapa'au* classes.

HKA: Yeah?

BKA: Maui Community College.

HKA: Really, wow.

PC: You probably know his last name, his biological father.

BKA: Lyons-Naone. Before he went …

*****Stricken from the record*****

HKA: You guys familiar with the Mānā area … it was like a swampy area … there was water flowing through … they used to grow taro on rafts … in the Mānā area … yeah? They used to grow them on rafts.

BKA: There was one swamp out there before.

HKA: Yeah. All the way down, from like Waimea to Polihale. And they used to go … and you could travel on a canoe going inside this … And I saw some of it when we went above Waimea, Keao pointed to some of it where the thing was. And you can see a stream going down.

PC: Right behind Taniguchi's place going underground like.

BKA: Like the Mānā … like I know about Mānā … used to be like all swamps.

HKA: Yeah …

BKA: Used to be all water, and they used to grow taro and rice. If you drive on the west side and you see all that valleys coming out … all those valleys was cut by water. And basically what they did when all those cane companies came, they dug out one ditch line on the top, and it catches all the water that used to feed all those valleys coming down, and then they shift the water … transports the water to one place. And they use that water … and it went to Puʻu Lua Reservoir up in Kōkeʻe, the big reservoir … and down to Kitano Reservoir, that's where they distributed all the water to Kekaha Sugar and stuff. But all … I mean was swampy that place.

HKA: Then it got drained …

BKA: Got drained and then they would stop the water from coming down the valleys.

HKA: For plant, yeah?

PC: How come they get that water, you know by Waimea by David Taniguchi's house … Kitano Stream … in the back? Where Uncle Paul guys' house used to get one, like one trough.

BKA: Yeah … that's how they transport the water.

HKA: Yeah, plenty ditches.

BKA: On top the mountain.

PC: Built right.

BKA: You can see 'em.

HKA: Yeah. I seen 'em.

BKA: It's on top the hill, above the hill.

PC: If they never do that, would flood out all the place?

BKA: Basically, if they let the water down again, Kekaha town would be flooded.

HKA: It wouldn't be dry like it is now.

BKA: So they had to stop all the water from coming down because all those big valleys … dried out … those valleys were made by water years ago.

HKA: Yeah. That's what carved the valleys.

PC: We used it call that the *Menehune*(s) [legendary race of people who worked at night, building fish ponds, roads, temples] … the *Menehune*(s) used to go through there … from the mountains.

HKA: Yeah, get Menehune Ditch … yeah, over here?

BKA: Yeah, but the Menehune Ditch is below that top water one.

HKA: Yeah.

BKA: Yeah, it runs on top.

HKA: Puʻu ʻŌpae get …

BKA: Puʻu ʻŌpae get the Puʻu ʻŌpae Reservoir.

HKA: Yeah, and I was at Waiawa too. Plenty water. Plenty ditches over there too.

BKA: Get the pump house over there at Waiʻawa.

HKA: I saw the pump house too.

PC: What if those ditches broke, man? You know what I mean?

BKA: They been there for years.

PC: Years and years and years … they not going be there forever.

BKA: Somebody gotta maintain 'em.

PC: All man-made too.

BKA: All man-made … a lot of tunnels and stuff.

HKA: Yeah.

PC: Amazing.

HKA: Amazing yeah.

PC: How those people did 'em … no technology.

BKA: They just when did by hand, these Chinese guys.

HKA: Yeah, they had the manpower. So you guys … are around the *Menehune* … you know … history … do you know anything about it?

BKA: So, my Aunty behind here, my Aunty Lei Ignacio … she was kind of like my grandpa's sister … when I was down there, she told me that … when they was in high school one time … [addressing SJLC] when did she graduate from high school?

[To HKA] They chased a *Menehune* [legendary race of people who worked at night, building fish ponds, roads, temples] through Waimea town then he went underneath the school building or something, and they couldn't find him. But she would tell me that story all the time. I was like, "I don't know man." She was pretty honest about stuff so … I know think she would BS me too much but …

HKA: Because there's the *Menehune* [legendary race of people who worked at night, building fish ponds, roads, temples], we talk about the little person, but there is also the *Menehune* that is a race of people … What was said in some of the interviews … like Hawai'i Loa, the Hawai'i Loa people when they came they were bigger …

BKA: Yes … and they *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of …

HKA: Yeah, like the regular-statured people would be like the Menehune.

BKA: They *kine* of took over the *Menehune* … yeah … and they made them do work and stuff like that … Is that what happened? That's what I heard.

HKA: They were pushed out of Kaua'i and they were on a different island … There is all kinds of different narratives about the *Menehune*.

BKA: They would be scared of getting caught or something … so, they would only come out and do some work at night.

HKA: Night.

BKA: I heard of something like that.

HKA: There was like chief Ola, he had them do work too. You heard about chief Ola?

BKA: Yeah.

HKA: That's why you get Hauola Heiau … you get different stuff named after Ola … stuff he commissioned … what I read was the *Menehune* was here, then they went to Marquesas, and he had them come back, and he had them do these certain type of work for him … and stuff like that.

BKA: I heard that.

HKA: That's another *mo'olelo* [story] that I heard about. But I just wanted … you know … people's opinion what they think a *Menehune* was or is … because to me, it's a narrative that has always been heard, but everybody has been attributing it to …

SJLC: Little people.

HKA: … little people … and like they're not real … you know.

SJLC: I think they're real.

HKA: I think they're real. I think even the little ones are real.

PC: All that *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stories.

HKA: Yeah. Even the race is real.

BKA: She told me in Waimea Valley … that's where the *Menehune* was living in Menehune Valley …

PC: Menehune Beach.

BKA: … and they only would come out at night to work because they were scared of getting caught. And then whoever caught them, would make them do work for them …

PC: Slaves.

BKA: Yeah. So they would come out at night, do their work, and hang out up there … that's what I heard.

HKA: Yeah …

PC: Doing all this *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] research … you ever follow that old man that used to dress in the *malo* [men's loincloth] by Punalu'u?

*****Conversation stricken from the record because it is not pertinent information to this interview.*****

HKA: And so … you know … you were probably here during the time of the … you might have seen the transition of the *kalo* [taro], and the sugar, right … can you describe that?

SJLC: The difference you say?

HKA: Yeah, like … you know … when it changed … Actually, it changed from *kalo* to *laiki*, rice yeah? And then went to sugar, yeah? Can you describe the land or what you saw?

SJLC: I remember as a really young child … I remember the rice paddies that we had going up to Waimea Valley on the right hand side. It's a subdivision now, but that was rice paddies in there. And then, but before long, it was gone. And everybody had their own *lo'i* [taro pondfield] as far as taro … you know … for taro. Sugar … I mean … I don't know when sugar came but … I mean … that was just the biggest employer here on the islands at one time … was sugar. And then … of course … pineapple too.

HKA: Where was the pineapple at?

SJLC: Mainly on the east side of the island. We had one, two … we had three pineapple factories here on Kaua'i … one was in Lawai and two in Kapa'a. One in Kapa'a town where Pono Kai Hotel is right now, and the other one was up on … past Kapa'a High School. Three, and was very, very good … we had during the summer that would come from the outer islands that would be housed by the … cannery owners to work in the fields.

HKA: It's like Lana'i, yeah.

SJLC: Yeah.

HKA: So what is the pros and cons of having the sugar and the military?

SJLC: You know … when you think about the military versus sugar … you said, right?

HKA: Yeah.

SJLC: Unless with sugar you where in the upper echelon … you know … everything else below that was hard workers … actual physical hard workers. I think … with the military … you have of course, those in the higher echelon, but almost everybody below that to be more or less educated … I mean with some sort of education. To me that's the difference between sugar and the military.

PC: They think the military has something to do with all the plantations closing down?

HKA: Oh, no. No, no, no, that is not what I am asking … what I'm trying to ask is like …

SJLC: Comparison.

HKA: … for sugar what is the pros and cons of the sugar industry being on this side of the island, being in Waimea? And what are the pros and cons of the military being there, being on that land … on that *'āina* [land]?

PC: In the '70s, I not seeing no difference. The only difference is, when the plantations started closing down, everything went down hill. Nothing. Before, Kekaha was a striving.… When I came down, I was impressed … everyday, every weekend you could see stuff happening with the community. They had a swimming pool … everything. Then when all of that close … that's what I'm talking about now … everything went downhill. By the time I came back again for visit in the '70s again, was different, was like nothing … zero.

HKA: And how about the military, what do you think?

PC: The military was still there. To me … in my honest opinion … without the military being there, that place would turn to crap. They took care of the place. Really, look at how they keep the place. "Oh I guess they have the money, they can do it." Tough … they keep the place going and … all that buildings and.… Like now you go through there, it's like it's a different world.

SJLC: Plus too, they're the biggest employer of the island.

PC: To me … when people talk about them.… They want the land for what? Look at Barber's Point … what they did with 'em? That's what gets me … you know.

BKA: I think … the military, the jobs was more high paying than the sugar industry. And plenty people don't like the military, plenty people didn't like the plantation mentality either but … I like the military here. They take care the place, and what else we going do with the land? All these guys think they going farm, they not going farm. They ain't farming … And then the sugar industry was good because it gave a lot of jobs, but bad because they stopped a lot of water. But the benefits of stopping all that water, coming down and making one swamp is the Mānā Community, the Kekaha Community … you know … get some some benefits. And of people always call me plantation mentality. But those guys work hard for what they got … those plantation guys.

PC: It was like a big family, everybody take care of each other. You know … when they … I was from Kahuku now, Plantation life … when something went wrong, like they had strikes, and all that *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stuff like that … nobody had to feed us, we all feed each other. Soup kitchen, you tell somebody to go to the soup kitchen now, they going like, "Haaaa." They going say, "What is that?" That's how used to be when we had hard time. That's the same thing with Waimea, I think. All of a sudden that place went down … Kekaha. To me, no more nothing for the kids like before. Every weekend you could see stuff going on.

HKA: That's what Keao told me … [referring to Keao NeSmith telling HKA about how active Kekaha town was].

BKA: I think a lot of people think that the base is not transparent with stuff they do because a lot of stuff is like 'hush-hush'. But some stuff got to be 'hush-hush'because it's just that … you know … like sometimes they shoot one missile like without telling nobody … and everybody is freaking out, don't know what the hell is going on. Sometimes they tell you that the thing went off. And I know sometimes they cannot say, but I think a lot of people are like conspiracy theorists think that stuff going on out there that people don't know. But they are probably right because there are a lot of stuff out there that people never ever going to know what's going on … that's part of life. I don't know why you gotta know everything.

PC: That's why they have secret confidential … you know what I mean?

BKA: You cannot tell everybody what's going on.

HKA: Yeah. So what is your concerns like moving forward about like these … in fact, I have a map.… This is a map, I will show it to Kipi.

PC: They go Waimea and then come over here to Hanapēpē … it's just a little corner of the world … and that's it.

BKA: They … out of all this little corporations and stuff … they are probably the only people that help the community more than … guarantee if the base shut down, Kekaha town shut down, because a lot of people work out there, and they support the community. Some of the plantations … they don't help the community at all.

PC: It's all money.

BKA: [Looking at the map]. The yellow is where the lease is?

HKA: Yeah. You see … yeah.

PC: They not buying more land, ah?

HKA: No, I don't think they are leasing more, but they do … I could not really say if they are, honestly … but that's where it is at.

BKA: So if they don't get the lease, where does the lease go back to, the State?

HKA: Basically.

BKA: I rather have.… This road [referring to the road from Kōkeʻe to Pacific Missile Range Facility], it's all paved down to Makaha. I work State for 30 something years. They shouldnʻt get any more land back because they cannot handle what they get now … All these places in yellow…

PC: What about Polihale?

BKA: Polihale is all State, park yeah.

PC: They should take ʻem back.

BKA: All these places [referring to the map] are maintained nice.

****Conversation sticken from the record because I keep forgetting that SJLC [Aunty] is unable to see papers/maps I keep passing to her.*****

BKA: I can see all of this, I know exactly where all of this … I work this side of the island for years. I know.

HKA: Yeah.

BKA: Yeah.

PC: One thing about Kauaʻi, they never make one road that go around the island …

HKA: Yes … of course … how can? Yeah, hard … but I'm so glad they dont't because there is a lot of … history over there.

PC: And they don't build a lot of big buildings.

HKA: Yeah. Yeah.

PC: Over here, they don't, they just stick to their guns. No buildings … I love that.

HKA: Yeah.

PC: Imagine if they did … Waimea would have hotels and …

HKA: Yes.

PC: Shoot … there probably would be a hotel by Polihale.

PC/BKA/HKA: [Chuckles.]

PC: They would build high, I telling you.

HKA: Yeah.

PC: Like this salt pond over here … if they could, they would have one hotel right over there …

HKA: Yeah, yeah.

PC: Like Barking Sands, at least they get one air … believe it or not … nobody looked at it that way, but they have a land airstrip that can really take … when there is really big emergencies … help a lot of people.

BKA: And they did … when the hurricane came. They brought in plenty supplies …

PC: And they never stop nobody.

HKA: Oh, nice. So … during Iniki?

BKA: Iniki … Iwa … they brought in a lot of supplies, the military … yeah, Ma?

SJLC: Yeah.

BKA: When she was working for them.

SJLC: I worked directly with them.

HKA: Wow … Yeah, and that's good.

PC: This side of the island … but they helped everybody.

BKA: Yeah.They brought in plenty supplies. I love the base …

SJLC: The very next day after the hurricane, I went down to the base … you know … to see. I went in my office … it was all changed … the desk was here, and now it was there. And I said, "What's going on?" And the Captain was in the office, and he said, "I'm using your office, and it has to be the central office." Because we are right there on …

BKA: The airstrip.

SJLC: … the airstrip … right next to the tarmac.

HKA: Wow … that's pretty …

BKA: Yeah. And this is another story too. You know, when my son was born, he was … premature, and then … but he was born that same week as … the air ambulance crash on Maui, and so they never have one plane … and they couldn't medevac him because never have the *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] … so the Coast Guard came and … Coast Guard, before they couldn't land at the regular airport because was too small … so the Coast Guard when actually land their big C-130 on the thing, and take him on the ambulance all the way to the C-130 … and they took off from the base.

HKA: Oh, wow.

BKA: So I love the military.

HKA: Yeah.

BKA: And they brought the plane in because nobody … the air ambulance was down … they wasn't flying … they were grounded, but he had to go to Kapi'olani [O'ahu children's hospital Kapi'olani Medical Center for Women & Children] … and so we had to wait. And the Coast Guard actually sent one big C-130, the big plane … landed at PMRF (Pacific Missile Range Facility), and the ambulance took him to PMRF … jump on the plane, and then … it's different from air ambulance because I couldn't go on … I mean … I could go on the air ambulance with my son, but their protocol and stuff is like, "There is no passengers." So he went by himself. I showed up at the airport, and caught the last plane out, and went to Kapiolani. And the C-130 landed at Barber's Point and because they couldn't land in Honolulu International Airport, and then they transported him over there. So that was one big help during when the … And they did it for a lot of people because …

PC: Yeah, Mom.

BKA: For real?

PC: They brought me and Kanamu, and took his mother out …

BKA: From the base?

SJLC: Yes, it was during the hurricane … The hurricane was like …

BKA: Oh … she got evacuated from the base.

SJLC: No, no, no.

BKA: You was sick, yeah?

SJLC: The hurricane time. What happened was … I think it was couple of days after because my boss asked me … my boss was the head of the air operations … he said, "Is there anything I can do for your family." I said, "Yeah, my husband is on O'ahu, and he and my son bought things for us … " Because we lost this whole place.

BKA: This was after the hurricane because it smashed this whole house to the ground.

SJLC: So I said, "They have things but they can't get it here." He says, "Okay." And I said, "My mother is here …" My mother was very sick … you know. And I said, "I want her to go to Honolulu, but we can't get her to Honolulu," He says, "Get her ready, bring her down here, I'll take her to Honolulu, as long as someone is there to meet her. And then I'll pick up your husband and your son, and I'll bring them back here. They can unload what they have for you, and I'll take them back again." And so from Hickam, he flew my mother with them, yeah … was with them, yeah? Was with them. He came back … he and my son came here, dropped off stuff for us, took my mother back on the plane … the little C-26 … small plane yeah. And they took them back to Honolulu to Hickam. If wasn't for him, I don't know …

BKA: Never had water, never had.

SJLC: Never had water …

BKA: Never had electric. Never have nothing over here. I don't think my grandma could survive. And plus to, she was living in a house here, and when I came that night after the hurricane had stopped, the whole house was flat to the ground.

HKA: Wow.

SJLC: But it's a good thing … the day … the night the hurricane … was the next day of the hurricane, we went to where he was living up in ʻEleʻele with his girlfriend at the time.

BKA: I went go work. I was a policeman. I went go work that night, and left them up there by the house because … Yeah, good because they wanted to stay here. But when I came the next day after they was clearing the roads … that night … probably about 10:30 when I got here, the whole house was like flat to the ground. All these houses.

PC: You couldn't even drive on the road.

BKA: You couldn't even drive.

PC: Because I remember when we came …

HKA: So much debris?

PC: No, all the poles.

BKA: Yeah, all the poles was down.

HKA: All the poles and everything?

PC: You know what it reminded me of … when my son and I was coming down here with all of the stuff to meet them, was like Vietnam … all the trees … all broken down like splinters, all on the roads and everything. Was dead silence, you could hear the …

BKA: I came up here, I opened the door, I whistled, and all my hunting dogs came running from underneath the house, and jumped in the back of my police car, and I took them up to my girlfriend's house … my ex-girlfriend's house.

PC: They heard you?

BKA: Yeah, they was scared … Because before the hurricane came, I had all my hunting dogs in the cages over here. I just opened all the doors and let them run.

PC: Where they was hiding?

BKA: Every dog for themself, you know what I mean? [Laughter.]

HKA: [Laughter.]

BKA: So, before the hurricane had started, I came over here, I just opened kennel doors, and let all hunting dogs out, and I just let them run. They was running all around the place. And then I jumped in my car and left. When I came back, I seen the house, I just when whistle, and I seen them coming out from underneath the house. The foundation was still there, but just the whole roof, and the walls had collapsed … everything.

PC: Never had nothing.

BKA: Nothing.

HKA: Wow, that is amazing.

SJLC: And you know … the funny thing is, it looks like that spin of the hurricane came like from the valley … just beyond there [pointing *mauka* or towards the mountain] … because it hit that house, our house, and that house.

BKA: It came right through over here. Everybody else …

SJLC: On the side … these houses on the side, maybe little bit of the thing …

BKA: Little bit damage, yeah … but right through …

HKA: Not flat, yeah … like your guys'?

SJLC: No.

BKA: Either that or maybe they thinking one of the big houses in the valley, they roof had fly off, and maybe had fly in the wind, and come through this whole thing. If we were here, nobody would have survived.

HKA: I'm glad you guys weren't here.

SJLC/BKA: Yeah.

BKA: I was working and …

PC: The funnel comes through this way, because everytime when get strong wind like that, I watch that tree … you know … the big mango tree over there?

HKA: The thing woosh … [making a motion with her hand].

PC: I watch 'em, and the thing goes like this? [Making a motion with his hand.] You can see it lean … turn this way … everything up here.

HKA: Yeah. So much valleys, yeah.

SJLC: So funny, though, just this three houses … across the street, ours, and the one behind us.

BKA: All in a line … down. Maybe you think it was the wind or one big piece of debris that was flying in the air came flying right through here and whacked everything? If wasn't for the base, we wouldn't have gotten my grandma out, we wouldn't have gotten food in, because never have storage … nothing … and my son wouldn't have gotten medevac to Honolulu because …

HKA: What happened to your son?

SJLC: He's fine.

HKA: No, what happened during that time?

SJLC: He was in the hospital. [Chuckles.]

BKA: He was in Kapi'olani, he did good. He was big, but he was like almost seven pounds … seven pounds something. But because my wife was small, they had to an emergency C-section on her because his organs never developed, so he couldn't breathe on his own and stuff. I felt bad actually going to Kapi'olani because he was seven pounds something, and next to him get one baby about his big [making a gesture of how tiny the baby next to his son was]. I was like, "Bradley, what the hell is wrong with your baby, he's big."

HKA: But he needs help.

BKA: He's good now. I mean … I was *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of premature, but I made up for it all these years.

HKA: [Chuckles.]

SJLC: He was, he was premature.

BKA: [Chuckles.] And more some … at one point in my life. Double size …

HKA: Oh, yeah. Me too.

PC: Oh, but that's interesting though.

BKA: And if it wasn't for the base …

SJLC: Personally, we have very good …

BKA: Personalities … to why we love the military.

SJLC: … association and appreciation.

HKA: Yes! Awg, that's good.

SJLC: You might go to the next house and they might tell you, "Oh the base … throw 'em away." You know.

HKA: All kinds of different opinions.

BKA: Plenty people no like the base.

HKA: You get all kinds of different opinions.

BKA: People no like the plantation, the … That's how it was … It's over now, so I don't know what everybody crying about.

HKA: You know what … I going end this interview right here. And I *mahalo* [thank] you guys because it's been a joy, *mahalo*.

SJLC: I wish Keao could have been here.

HKA: Me too.

ORAL HISTORY INTERVIEW

With

Kaina Makua [KM]

November 29, 2023

Aloha Aina Poi Factory, Waimea, Kauaʻi

By

Hannnah Kaumakamanōkalanipō Anae [HKA]

Lilia Merrin [LM]

And

Keao NeSmith [KN]

The interview took place in Waimea Town at Aloha Aina Poi Factory, and music can be heard in the background.

Recording file name IA202241_2023-11-29_Kaina Makua.MP3

HKA: *Welina kākou* [Greetings everyone][1], today is November 29, 2023 we are on the *mokupuni* [island] of Kauaʻi, in the *kūlanakauhale* [city or town] of …

KM: Waimea.

HKA: Waimea. I am Kaumaka Anae representing Internationa Archaeology, LLC. And we are conducting Cultural Impact Assessment interviews for the Pacific Missile Range Facility [PMRF] and Kōkeʻe Park Geophysical Observatory Succeeding Lease and Easement Areas. And I am here with …

KM: Kaina Makua.

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org /gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

HKA: And is that your full name?

KM: That is my first and last name.

HKA: *Mahalo nui* [Thanks very much]. And … do I have your permission to record this interview?

KM: Yes.

HKA: *Mahalo* [thanks], before we start … of course … I would like to say, *e kala mai* [excuse me] if I seem so *maha'oi* [brazen]. (Chuckles.) It is not my intention, it's for the purpose of this interview. So … let's start with your *mo'okū'auhau* [genealogy] or your connection to the *'āina* [land]. How long has your *'ohana* [family] been in this area?

KM: Pretty … I don't know … long time. We can trace … you know … our *mo'okū'auhau* goes pretty far back … Kūkona, Kaumuali'i … I mean Kaumuali'i [more modern chief (late 1700s–early 1800s), Kūkona very ancient chief (1400—1500s)].[2] And get *mo'olelo* [stories] about all of them in our connections. So, yeah … I going go on tangents, but …

HKA: It's cool, it's cool.

KM: Kūkona had one son, Manōkalanipō. You know Kaua'i, it's Kaua'i-o-Manōkalanipō. But Manōkalanipō's years of reigning on Kaua'i wasn't really one … he never reigned like one normal *ali'i* [chief], because everybody had eat the same, everybody had drank the same, everybody lived the same as he did, sat on the same table. They referred to his time as the Golden Years. And so … going on one tangent … what we do in Waimea, on the bridge … all the way west, is trying to rebuilt that mindset of 'we all should all be equal' no matter how much we all have. Because if we can do that, we can live like they did. I was asked once, "Who is your biggest influence?" And it is Manōkalanipō. Not my family, not nobody else, it's the *mo'olelo* heard from him, because that is *kupuna* [ancestor, elder] for me. My oldest is Kūkona, my boy.

[2] Dates acquired by HKA from her grandmother while growing up.

So … being on the west side … you know … when Captain Cook came in 1778. In his journals, he writes about how Waimea was pristine, and about how it was the bread basket of the Pacific. Not anywhere else. And this guy came here after traveling the world, and said that. If he going say that, it's gotta have some *ʻiʻo* [truth, significance] to what he's saying. And we see it, there is so much land on the west side, that's why everybody wants to be here. Everybody who farm commercial production of any type of food, because it's sun year round, so why not? Now, because of our natural resources being utilized in the wrong ways, we fail or have failed to effectively and efficiently feed our people. But it's *ʻike* [know, recognize], *mea ʻai* [food] … all those levels of being *kanaka* [Hawaiian person], we failed just for one dollar. I not going on tangents now. So how do we remedy that? We start with our youth. Here, we start with our youth. I run one nonprofit called Kumano I Ke Ala on the west side. We have … we educate roughly 3,000 kids to 5,000 kids a year. And we not hitting 'em all from the perspective or the *kahua* [foundation, background], foundation of farming, but a lot of them we are. At least a thousand of 'em. And the rest is sporadic and centered around *Makahiki* [year; ancient festival beginning about the middle of October and lasting about four months, with sports and religious festivities and a taboo on war]. But we touching them in different areas so that they can be interested to do the kind of work we do. And even if it's just one time, I think it's going to be beneficial. It has been beneficial in the last 10 years we been doing it. We also serve about 150 kids in the paddling community on the west side. Rebuilding our foundation is what Kumano I Ke Ala is. And so, we here doing that. Enough of that tangent.

HKA: Wow, that's awesome. Can you tell me a story about Manōkalanipō or Kūkona?

KM: So … you know … you may not know, but Kamehameha wasn't the first guy to take over Kauaʻi and the rest of the islands. He was actually the second. Kalaunuiohua was the first. Kalaunuiohua was also from Hawaiʻi Island. He was successful all the way until he came up to Kauaʻi. And Kūkona and Manōkalanipō stood in the way. So, the story I know is … Kalaunuiohua's men made it to Poʻipū. They settle at Kaleinapuaʻa … if I not mistaken.

HKA: Where is this *leina* [referring to Kaleinapuaʻa]?

KM: It's in … what is the name of the beach now? PK's, it's next to PK's.

HKA: Where is that?

KM: Brennecke's.

HKA: Yeah … okay, in Poʻipū.

KM: Yeah, Poīpū, in Kōloa.

HKA: Yes.

KM: So they land over there, but Kūkona and his son, Manōkalanipō, was so intelligent that … when they landed, nobody was there on the beach. And so, they probably had four times the amount of people than Kauaʻi had, but they wasn't in the *moʻolelo* [story] that I know. But they wasn't as strategic and, well … Foundationally, they wasn't great warriors. Because we get one place, Hanako on Kauaʻi, that they go and they train. Anyways, they made it there, never see nobody. The batallion leader was looking *mauka* [towards the mountains] and he seen Manōkalanipō on one peak. Half to three-quarters of their guys run and follow. So they went far into the valley and they just kept going. And the further they went, the further they found that Manōkalanipō would just go to every peak and pretty much taunt them. By the time they got all the way in … you know … they were already tired. And so they got ambushed and died. And the war was won. But that's … you know … strategically, if we looking from a strategic lens … those are the type of things normal human beings forget about. Like, we going take water from the river, and we going push it to Mānā to farm sugar, 50 million gallons of water going be taken from our normal flow. So you screwing up one ecosystem for the benefit of nobody else, yeah? For the benefit of corporation. Yeah, and so, I think in the 1900s when Robinson *wen'* [Hawaiian pidgin language meaning went or completed an action or when] … the Fayes decided to create this industry of the sugar plantation, they failed to recognize how it was going to affect our natural resources. They wasn't strategic enough to ensure that our normal ecosystem flow was going to be maintained in the same way through that effort that they wanted for their corporation. For me, as long as we are fair, yeah … and we not being overly greedy or greedy, our *ʻāina* [land] going find it's way to heal. But when we are selfish and greedy, it's going to be very hard for that to happen.

HKA: No more balance, yeah?

KM: No more balance. And it's happening already. I mean, KIUC [Kaua'i Island Utility Cooperative], the water … Lahaina, and water … everybody dealing with this on west side, the Leeward side of every island … they just dealing with the water theft. And we doing it again, here on the west side. KIUC like build all of their hydros trying to make money for who? Not for the people, but they going tell the people that.

*****Stricken from the record is a converstion KN has with KM, HKA, and LM regarding coordination of our interviews*****

HKA: Please disregard this conversation. Okay …

KM: So, the water is … KIUC like do their thing, and they work with AES [Applied Energy Services], who is this global, what the hell do they call themselves … renewable energy corporation … claiming that they finding better ways for energy, but they just making money … you know … and solidifying their funding for longevity. And so, people like myself, the rest of the farmers in Makaweli, Waimea … you know … we against that. But through the years of them taking water, we starting to, not starting to … we been seeing the aftermath of that in our river. I mean we no more as much *'o'opu* [general name for fishes included in the families Eleotridae, Gobiidae, and Blennidae] anymore … you know. We get silt all in the river, the riverbed has gotten four, five … who knows … eight feet higher. And so, now it becomes a hazard for the people living next to the river. When it floods, like how it did last night, it's brutal. I seen one picture from 1950 and 1980, the river actually *wen'* [Hawaiian pidgin language meaning went or completed an action or when] flood and came over that big berm … you know the one they built, it's like 20 feet. Water came over. So, if that was then, it's not if, it's when? When going flood hard again, people going be in jeopardy with their lives … losing their lives, so … But if they return the water, it's going to clean the river, going drege the river itself. It's going to be natural dredge like it used to be. And so, our natural resources gotta be observed better. Like seriously observed better, and maintained better. I don't know if that's answering any of your questions.

HKA: [Laughter.] Yes.

KM: Or if you had any questions about that.

HKA: Yes. And so you're familiar with Mānā and PMRF (Pacific Missile Range Facility) …

KM: Yeah. The water being pushed out to Kinikini. The water that they taking going out in Kinikini. That ecosystem there for *kai* [sea] stuff was pristine … you know … but where the river going out where it shouldn't be going, going ruin the reef. And we no more reef Waimea, but that was normal, that was hundreds, thousands of years they was doing this. Mānā, it's going to be a problem soon. If it already isn't, it's going to be.

HKA: And so, what do you forsee for Mānā … the Mānā area? What kinds of changes … or concerns …?

KM: When we was young, we could go anywhere … Nohili Point, *holoholo* [term used to go fishing], Kinikini, Kokole … we go anywhere and *lawai'a*, go fish. What year was it? Might have been 2014 … I think so … but I went go *holoholo*, and they went close all those beaches, you couldn't'go … but you could go Polihale. So, I went Polihale, and I went walk because I know where get *'opihi* [limpets], I know where get *i'a* [fish]. So, I took my thrownet, I took my bag, I *wen'* [Hawaiian pidgin language meaning went or completed an action or when] get one *'opihi* knife, and I *wen'* go get *'opihi*. And I was in the water, and then two of these soldiers from PMRF came with AK47s, telling me for come out of the water. But me, I know, I not stupid … you come out of the water, they get rights fo' [Hawaiian pidgin language meaning for]take you in. So I just stood in the water, and they had their hand on the trigger. And I was like, "What's up, guys?" And they said, "Ah, you gotta come out, we like talk to you, just come cruise." "Negative, I know I safe in the water, but you should take your hand off of the trigger." And so, I just kept pounding *'opihi*. And for one solid 10, 15 minutes they stood there trying to get me go on the sand, so they could take me in. I just kept walking, pounding *'opihi*, and doing my thing. But that *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stuff, no can have.

HKA: Yeah.

KM: You know what I mean? If you … whoever going be patrolling the beach, for whatever reason they going close 'em down and have all these frickin' securities, shouldn't be somebody that is not from here.

HKA: From here. Yeah.

KM: Everybody is from Kaua‘i, especially from west side, they know the braddah [Hawaiian pidgin language meaning man, boy, or brother], they know the people. One random dummy, because his finger was on the trigger, had two of them …

HKA: That’s crazy.

KM: I was over there … I no scared one gun, but I not going get out of this water. And any random … white guy, who was treated wrong from America, would have pulled one trigger. Guarantee, because they never get their way. We see ’em on Instagram, social media, on Facebook. They dummies, they like shoot people because they was raised wrong, unfortunately. Or they was picked on and bullied. So, that is one big concern. We need to have local people, unfortunately, to regulate what needs to be regulated on PMRF. You need people that know the people. Yeah, because *pilina*, relationships, are very important here. And that’s something they forget or something they never learned, but we are here to remind them and teach them. Yeah, that’s one big concern. They should open the beaches to the people, because the people going regulate for them, guarantee. The right people going regulate.

HKA: Right, exactly.

KM: We’ve always regulated … you know. We get stories that everybody who is not from Kalaheo to the west … yeah … everybody all the way northshore never used to come west side because they was all scared … as they should be … because we take care our own. We get plenty of *kanaka* [Hawaiian person] on the west side because we did that for years, our people have done that for years. Guys come over here and act up, all of us guys lick ’em. They go surf with us Pākala, if you one white-skinned guy you get kicked out or beaten up because that’s how you regulate dummies coming west side. And I think we missing more of that. Unfortunely, it’s the truth, we missing more of that. ’Cause they going keep coming in and thinking they infiltrating, and start putting up … giving us problems in our community because it is not the way they want to live. “Oh, this guy parking on my yard.” “What, you just got here … you COVID, fricking freak.” “2020, you just wen’ [Hawaiian pidgin language meaning went or completed an action or when] move here. Just because you get money on hand, and you just bought one house, and you going tell me, who’s been

living here my whole life, how fo' park and where fo' park, that's not your place." We cannot have that *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stuff happen. And PMRF (Pacific Missile Range Facility) has a lot of those *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] people. So they gotta regulate the guys they bring also. If they not going regulate 'em, send them to places like my nonprofit who can teach them … build relationships within the community so the people can understand. Then you can understand why we are the way we are. Education going be the key to everybody's success. And if we can buld more people like ourselves, that going be on PMRF, but not from here … when they do leave after their three years of service here on Kaua'i at PMRF, they going take what they learn from us wherever they go, and then we building one better world.

HKA: What is your favorite *'ōlelo no'eau* [Hawaiian proverb]?

KM: My favorite *'ōlelo no'eau*, that's a good question.

HKA: Like some of your own.

KM: I get plenty. *'Ōlelo no'eau* … in today's time, the most important *'ōlelo no'eau* I believe … is no be scared to work. Your work ethic cannot be taken away from you, everything else that you have can. If you willing fo' work, nobody can stop you.

HKA: So, you practice *lo'i kalo* [raising taro pondfields], that's one of the Hawaiian traditions that is passed down forever, what else Hawaiian traditions … you or your *kūpuna* [ancestors, elders] engaged in? *Lei* [Necklace made out of flowers, leaves, and/or shells, etc.] making, *'oli* [chant], *lua* [Hawaiian martial arts], what other practices?

KM: My father from Keaukaha, Hawai'i Island. He one Mahi, Mahi are singers, they are all great singers … you know … they're musicians. I never go that route, but I enjoy it. I used to dance *hula* [Hawaiian dance], about 10 years, something like that … but you know … that's not my thing any more. I'm trying to help rebuild youth. I'm farming, I can build *hale* [Hawaiian grass hut]. I'm a master builder.

HKA: Traditional *hale*?

KM: Traditional *hale* … yeah, yeah. I am one of the few master builders …

HKA: So where do you gather materials to build your *hale*?

KM: Kōkeʻe get everything, a lot of what we have is invasives. So our whole push is we going eradicate the invasives to build *hale*, and try to plant natives. Building *hale*, restoring *pā pōhaku* [stone walls], rebuild *heiau*(s) [places of worship, temples], help to restore fishponds. I teach Hawaiian language.

HKA: So what are the fishponds you guys help restore?

KM: So there is one here Kapalawai. It's probably going to be a while till it gets …

HKA: Where is it located?

KM: It's located between Waimea and Pākala.

HKA: That's Makaweli, yeah?

KM: Kekupua, actually. They refer to that area as Makaweli too. Get the fishpond on Oʻahu … at Heʻeia Fishpond.

HKA: Oh, Paepae o Heʻeia.

KM: Yeah, Paepae. I been there since 2004, we been helping them. I don't know … I do all *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stuff. I help coach paddling … So our kids, use the river all the time, and they know about everything … from farming that I do to water theft. We try to educate all of them. They know it's not just one place fo' us enjoy, we gotta take care of our resources. And what better way to start than educating the youth.

HKA: So you educate the youth on all …

KM: Everything on the west side … from plantation … the Fayes, the Robinsons … ADC [State of Hawai‘i, Agribusiness Development Corporation] …

HKA: And the maintaining and *mālama* [caring for] of the … *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] to yeah … the resources?

KM: … everything. That’s what our programming is all about, our nonprofit is created for that.

HKA: Yeah, that’s really strong.

KM: And you can check us out at Kumano I Ke Ala.org.

HKA: [Laughing.]

KM: [Laughing.] You gotta give ’em … you know the *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit].

HKA: So, do you practice any kind of Hawaiian religion?

KM: Yeah. I do, I do.

HKA: And so where do these practices take place?

KM: A lot of ‘em is at *kai* [sea], and up *mauka* [towards the mountain]. Sometimes in Kōke‘e, and also in Nā Pali. You know … *pule* [prayer], *‘oli* [chant], and always for the betterment of our people. Trying just to recenter ourselves, and keep us sane … you know … in this crazy world.

HKA: [Laughter.] So, do you practice any *lā‘au lapa‘au* [Hawaiian medicine]?

KM: Yeah.

HKA: What kind of *lāʻau* [short for Hawaiian medicine, plant], and where do you practice? What do you gather actually?

KM: *ʻUhaloa* [a small, downy, American weed (*Waltheria indica var. americana*)] and *kaunaʻoa* [a native dodder (*Cuscuta sandwichiana*)] is all good stuff for your skin. Even the sand though. *One* [sand] is one big one. If you looking for *one* detoxing, external detox and internal detox, it's the *one* ... it's the biggest one. The whole 17 miles of Mānā that's all *lāʻau* that.

HKA: How do you make the *one*?

KM: You dig one hole maybe a foot deep, however deep you gotta go to bury yourself. You let it dry out. When it's dry, you get inside, and then whoever is there cover you up, and then you sit in that thing for six hours … half an hour is brutal.

HKA: And what does that do, clean you out?

KM: Clean everything out, pull everything out, open up your pores, push out all the toxins that you have. Pretty much, going dehydrate you. And clean you internally. I've done it couple of times this year, and it's brutal, especially in the summer. You know … mentally, spiritually is like taking one … what is that call … half an hour is hot … It's like … what they call that … when you gotta the *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] …

HKA: Oh … cleanse.

KM: Yeah, cleanse. One external and internal cleanse. Yeah, *one.* That's all *lāʻau*, 17 miles of *lāʻau*.

HKA: Yes, yes. The *kai* too, the *kai* is *lāʻau* [*lāʻau lapaʻau* or medicine] ...

KM: All of that.

HKA: You go right inside there, then right to the *kai*, yeah?

KM: I mean, you can go to the *koʻa* [coral, coral head] and all the reefs in Mānā, when low tide and summertime, you going find *paʻakai* [rock salt]. All the *poho* [depression, hole], all those *puka*(s) [holes] in the *koʻa* on the *papa* [reef] they all fill with ocean water, and in the summer, three weeks, it turns into salt. So we used to go gather … you know … we feed ourselves. Get plenty of *limu* [seaweed] … all kind *limu* … *līpoa* [bladelike, branched, brown seaweeds *(Dictyopteris plagiogramma and D. australis*)], *limu kohu* [a soft, succulent, small seaweed (*Asparagopsis taxiformis*)]. That's all *lāʻau*, *kohu* is used for rebuilding … what do you call that … some kids get 'em …

HKA: It's good for your thyroids too.

KM: Yeah. Your thyroids. Yeah. Your thyroids. So we think … well, anyways … I think my son get some thyroid issues. But *limu kohu* is *lāʻau*.

HKA: Speaking of that, I got some *limu kohu* fish I made.

KM: Oh, right on. Thanks, ah.

HKA: [Laughing.] *Lāʻau*.

KM: Yeah. Anytime you talk about *lāʻau*, it's everywhere. *Kaunaʻoa* [a native dodder (*Cuscuta sandwichiana*)] is one big one.

HKA: Yeah. It's good for cancer.

KM: Yeah. Cancer. Yeah, even your *mimi* [urine].

HKA: Yes. I done that one too.

KM: Yeah. Me too. Where you learn … who's your … ʻOhai? Papa Auwae?

HKA: They are from ʻOhai. Keoki (Baclayon) and what's her name? There is another girl he taught as well. She was going to be an attorney, but she became a *lāʻau* teacher. She moved to the Big Island, I forget her name.

KM: Not *ʻUala* ah?

*****Short conversation stricken from the record for information not pertaining to this interview*****

KM: Yeah, ʻOhai was one good teacher. And he's from Kauaʻi.

HKA: I know.

KM: He used to ride on the plane all the time. "Where you going, Hawaiian?" "I going to class." I like, "Right on." And I had his class that day. Sometimes I never go. But he would be writing all his notes. He was one good man, amazing man.

HKA: Yeah. Amazing man.

KM: Amazing.

HKA: The people who he took under him … he's been teaching amazing people … so it's greatly reflected on the *kumu* [teacher].

KM: Oh, yeah. All the time.

HKA: Do you know any other *moʻolelo* [stories] around the area that might be connected to your family … in the Mānā area … Kōkeʻe?

KM: Just get the same stories … you know … Nohili. How he lived at Nohili Point, he had dogs, they couldn't speak until he went into the ocean, and they was trying to warn him. No go because get one storm coming. And he didn't listen. He went anyways. Somehow made 'em back. He couldn't find his dogs, but everytime he walked or ran, the sound of dogs came from his foot, and if you go over there now … like a pah, pah, pah everything you walk on the sand. It's pretty cool. When I first had … you know … hear that, "Wow this is unreal, this is nuts." And I was one little kid.

HKA: This not just folklore, it's real.

KM: No, no, it's real. Yeah, for sure. No, we get plenty of *mo'olelo* [stories], I just no more enought time. I mean, I could sit here and talk to you about everybody … Wai and Ola.

HKA: Yes, Ola.

KM: Ola brought … Ola, was one key component to why Waimea became very fertile and rich in food. So he had one idea to bring water on this side of the peninsula of the river. So get Waimea River, Makaweli, and way deep in Waimea. So everywhere had *lo'i* [taro pondfields], but never have *lo'i* on this peninsula because they couldn't get the water here. So he had an idea to bring one *'auwai* [ditch, canal] from the river that was 15 feet below, 15 feet higher and feed one peninsula so they could get more *kalo* [taro]. And if you go to my shop, my apparel shop in Waimea, right down the road, you going find all these pictures of Waimea, and you can see in the 1900s, 1800s get all *lo'i*. This whole side of this left peninsula. That was due to him believing that he could build one *'auwai* or at least get the right people to build the *'auwai.* And he did, he asked some *Menehune* [legendary race of small people] to build one *'auwai*. "I need it to get around this corner, and from there, I take it" (reflecting what the words might have been from Ola to the *Menehune*). So they went agree to build 'em. And the only thing they didn't agree on is, every single *Menehune* would get fed the same fish. Everybody had to get fed equally. Just like Manōkalanipō. So he was like, "Okay." And unfortunately, he was put into like this coma under the water, until the job was done. And if the job was interrupted, like how it was at 'Alekoko [Menehune Fishpond], they just going leave, as they did in 'Alekoko. Night time not supposed to make noise … anyways, you know how they get all these superstitions, yeah … Oh, no brush your hair at night. No cut your nails at night. No sweep in the *hale* [Hawaiian grass house]. No make noise because those buggas' over there was working. It wasn't one superstition because they doing one job, and if you make noise when you go outside

and play, the job not going get done. That's why get all these superstitions. The hair and the nails was because *kahuna ʻanāʻanā* [sorcerer who practiced black magic]. Take away your stuff …

HKA: Or take away your voice if you whistle, yeah?

KM: So, they did the job and got 'em done, and now we get water on this side of the peninsula. And every single *Menehune* [legendary race of small people]was given one *ʻōpae* [shrimp] … little … *ʻōpae*. So the deal was kept, the agreement was kept.

HKA: Beautiful. So we will end this interview.

KM: I get plenty *moʻolelo* [stories], come back anytime. I get choke *moʻolelo*.

HKA: I know, I could be here all night, all day … *Mahalo nui* [thank you very much] for your time, and we going end this.

KM: *Rajah* [Yes or right on].

HKA: *Mahalo nui*.

ORAL HISTORY INTERVIEW

With

Enoka Chee Fook Karratti [ECFK]

November 29, 2023

Aloha Aina Poi Factory, Waimea, Kauaʻi

By:

Lilia Merrin [LM]

Recording file name IA202241_2023-11-29_Enoka Chee Fook Karratti.MP3

Waimea Town at a Aloha Aina Poi Factory, and music can be heard in the background.

LM: *Welina* [greetings][1] … today is November 29th, 2023, we are on the *mokupuni* [island] of Kauaʻi, in the *moku* [district] of Kona, in the ahupuaʻa of Makaweli …

ECFK: Waimea right now.

LM: Waimea? Okay, *mahalo* [thanks]. I am Lilia. I am subcontracted from Keao NeSmith. And Keao is subcontracted through Kaumaka Anae who represents Internatonal Archaeology. We are conducting Cultural Impact Assessment interviews for the Pacific Missile Range Facility (PMRF) and Kōkeʻe Park Geophysical Observatory Succeeding Lease and Easement Areas. And I am here this morning with … And if you could state your full name please?

ECFK: Enoka Chee Fook Karratti.

LM: *Mahalo* [thanks], and do I have your permission to record this interview?

[1]: Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org /gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

ECFK: Yes.

LM: *Mahalo* [thanks]. And before we start, I would just like to say, *e kala mai*, excuse me, I know we have some *nīnau* [questions] in here that is guiding questions I don't mean to be *maha'oi* or brazen it's not my intention."

ECFK: *Mahalo* [thanks].

LM: Okay, let us begin this interview. I think we start with your *mo'okū'auhau* [genealogy] or *pilina* or connection to this *'āina* [land] or this place.

ECFK: Yup. I was born in Waimea at KVMH (Kaua'i Veterans Memorial Hospital) in 1978. I was raised in Kekaha … Ho'omau Street, Hawaiian Homes … first Hawaiian Homes in Kekaha. And I was born at that time, to a family of two older sisters, and then my parents … both of which is not from Kaua'i. But my dad found employment with PMRF through a contractor at that time, and so he ended up finding the closest town to live in, and that's how we ended up in Kekaha.

LM: Where is your '*ohana* [family] from?

ECFK: So Dad is from O'ahu. From … actually his family was raised in Makiki.There's a … (clears throat) … there's a Karratti Lane on Pensacola Ave. on the right side. So his dad, his grandparents, grew up there. And then his grandparents … his granddad moved out to Waikīkī. So they lived in a house on Lemon Drive[2]. The house is still there surrounded by all these other big buildings. My grandpa lived in that Lemon Drive house, and he grew up in Waikīkī.

LM: I know where Lemon Drive is. Yeah … wow …

ECFK: Trippy yeah?

[2] The road is currently called Lemon Road but might have been called Lemon Drive at one time.

LM: Yeah …

ECFK: That's the only house I think that's still there.

LM: The …

ECFK: On the left, on the *makai* [towards the ocean] side …

LM: Yeah. Yes, yes. I know which one you're talking about. How did your dad find his way here?

ECFK: So Dad … graduated from Farrington. They were actually living in Lanakila Housing in Kalihi, attended Farrington, and ended up moving to Waimānalo, but graduated from Farrington still. So they used to hitchhike from Waimānalo back into Kalihi to go to school. And after he graduated, he went to … at the time it was called Church College in Lā'ie. He got into electronics. And then … a recruiter from the base ended up recruiting him as an electronic technician. So he picked up the job, moved here with one of his friends from Church College. So they roomed together in Kekaha, was working, and then his friends, and two of their girlfriends came here eventually, and they got married, and settled …

LM: About what year you think that was?

ECFK: And so that was … ah … Dad graduated I think in '69 … so in the early '70s.

LM: Early '70s.

ECFK: Yup, because my sisters is two, three years older than me. So yeah, early '70s.

LM: And he worked there for a long time?

ECFK: So Dad ended up working on the base for 30 plus years.

LM: Whoa! [Laughter.]

ECFK: So he just retired. He graduated from that in 2018 something like that. So, yeah … at least 30 something years.

LM: And so what did he do while he was there?

ECFK: So Dad … initally he was working on one of the radars up Makaha Ridge, and he was working on one of the radars on Mānā, and then he ended up jumping on board with the … he became a civil service worker. So he worked for a detachment for the Navy that came out of Keyport, Washington, but they had a station on PMRF (Pacific Missile Range Facility). So they worked on underwater targets. So he went from an electrician technician in that shop to becoming a quality assurance specialist and just rose the ladder, and he ended up running the shop.

LM: Wow.

ECFK: Yeah. And then he retired as that.

LM: Awesome. So you're familiar with the Mānā, PMRF area?

ECFK: Yeah. I used to work there too …

LM: Oh …

ECFK: … back in the early 2000s.

LM: What did you do over there?

ECFK: So I started there as a security guard. I forget what year it was, but early to mid-2000s. And then I ended up moving to the supply group, and then ended working there 2018 … I think. And then I went into teaching.

LM: Teaching … and you teach where now?

ECFK: Now I teach here. Nah, I work for them (Aloha Aina Poi Factory). I was teaching at Chiefess Middle for couple years, and right before COVID hit, and through COVID. And then … ended up jumping on board with Kaina guys and Kumano (Kumano I Ke Ala, an organization with a vision to empower a sustainable west Kaua‘i and restore its cultural resources) … not after COVID but during that one year of COVID and kind of throughout the school system.

LM: Yeah.

ECFK: And then ending up moving with Kaina guys. I been here for what … two years now. Two, three years, something like that.

LM: Nice. Do you have maybe a favorite *‘Ōlelo No‘eau* [Hawaiian Proverb]?

ECFK: I like the *No‘eau* [proverb] that talks about not all knowledge is in one *hālau* [house or *hula* instruction, school].

ECFK/LM: Oh … *‘A‘ohe pau ka ‘ike i ka hālau ho‘okahi* [all knowledge is not taught in the same school].

ECFK: I like it because … of course you not going learn everything in one place. You gotta be able to be in that space, in yourself that you can be open to, and seeing what get for learn, and using what you learn from different spaces, and making one space for yourself for be able to hone all those things you learn.

LM: I forgot to ask you … so you and your *‘ohana* [family] live on this side now? Do you guys live over here?

ECFK: So me and my *‘ohana* live in Waimea Valley, Alawai Road … three kids and a wife. We been here since 2012. So leaving Kekaha was kind of trippy for me. All I knew was Kekaha. I mean I been to Waimea, we play through Waimea. Living in a different town, for me was kind of a trip. Even

moving across the park from where you grew up … is kind of trippy. When me and my wife got married, we was living in Kekaha, she was teaching in Kekaha. So just that kind of new experiences for me was kind of trippy.

LM: And growing up, was there any kind of … did you guys go fishing with your *ʻohana* [family], or any kinds of things you guys practiced?

ECFK: So we grew up camping a lot … ironically, on PMRF (Pacific Missile Range Facility). My father's shop was right next to Nohili Ditch, and so we used to camp a lot over there. We used to throw net in the ditch, you know … fish through that opening in the reef. The ditch empties into the ocean, so we would swim a lot in that area. And then, as I got older, me and my daughter and her friends used to go dive all through that side coming down.

LM: What would you guys catch when you guys would go dive? What is the typical things you would see?

ECFK: *Nenue* [chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus, K. vaigiensis*)], *pāpio* (s) [named for the young stage of (crevally) fish], *ulua* (s) [certain species of crevalle, jack or pompano, an important game fish and food item], *moi* (s) [threadfish *(Polydactylus sexfilis*)]. If we in the ditch, then talapilas

LM: [Chuckles.] And still get.

ECFK: Still get. Well, I haven't fished there for long time, and the way … back then the base was allowing access to the beach … different than what it is now yeah? But I do know from the different times we would go in the early 2000s, had still a good amount of fish. The base shutting down that shore access to the water … for a time … during COVID, helped the population, I think … you know … flourish … so …

LM: Mmhmm. So what about … I know you work here, but what about your *ʻohana* [family], do they … was your *kūpuna* [ancestors] *mahiaʻi* or farmers … did they grow anything?

ECFK: So what I heard … so actually my mom's dad … my mom is from Maui … Hana and Keʻanae … Kaupō too … all her family is from that side. Her dad was one full-Chinese man, and he used to farm *kalo* [taro] at Keʻanae. So I remember growing up … me and my sisters would go when we were younger … my mother would send us to Maui for how ever long. It seemed like forever … so we used to go play with him, farm with him. But I think we did more playing than farming … you know … so that's Mom's side. And then Dad's side, I remember him telling me stories of him going with his grandmother to the ocean to harvest *limu* [Seaweed] … so somewhat of a water people. I am not too familiar if they were like traditional fishermen.

LM: Yeah.

ECFK: *Lāʻau lapaʻau* [Hawaiian medicinal plants] … I know he would go often times with her to the ocean and pick up l*imu* [seaweed] … and go *mauka* [towards the mountain] to grab the … *kanu* [plant] or whatever. But interestingly enough, I had a conversation with Dad about his family's ancestors, and what not. So he told me a story about his grandmother, or great-grandmother was born with one image of a shark on her back. And so his *moʻolelo* [story] came out to be about … I think even in the name … had one shark name about it. Anyway, something tied to the ocean what he was trying to get at.

LM: You know … you take your *ʻohana* to the beach and stuff, do you see a lot of those … you talked about *limu* [seaweed] … do you still see a lot of those resources over here, on this side?

ECFK: Yeah, I think so. I mean … nowadays I take my kids to the ocean … a lot of playing … you know. But because my kids are more *maʻa* [accustomed] at their age, than I was at their age about *mea Hawaiʻi* [Hawaiian things] and everything else. And so am I now, than I was 10, 12, 15 years ago … you know. We're able to recognize stuff, and we're able to talk about it. Talking about abundance wise … I'm sure it's not as abundant as it was before which a lot of things are not as abundance as it was before right. So … to answer that questions, no.

LM: [Laughter.]

ECFK: But still get some.

LM: Yes. I know you started to share *mo'olelo* [story]. I'm gonna show you a list of *wahi pana* [storied places] that Kaumaka put together. I don't know if there is anything you might want to share about any of these places. You can just look through it, it's a few pages long. Is there any story, that brings anything to mind?

ECFK: [Looking through list of places—long pause]. I recognize a lot of the names. For me … what comes to mind … a lot of reference … and I recognize a lot of these names because of them … from young kid they would go out and what not. Just among their conversations of where they go and what they do. Some of the names come out. And even … you know … some of the slangs … not slangs … what you call 'em … when they shorten the names and whatnot …

LM: Oh … yeah, yeah … the newer names.

ECFK: Yeah, you know how we all do that?

LM: Shorten it or change it to you know … *Haole* [Caucasian]. [Laughter.]

ECFK: Yeah. So … as far as these guys … for me, myself … it brings up images of growing up. And we used to ride bike all through out the ridge lines above Kekaha, and behind the school … all the sugarcane roads. We would ride … we were little boys … not knowing that these are the place names of those areas growing out. It was just a dirt road, and we would play … you know. But now, looking at it and knowing … I do wish I knew more of that place names growing up … and so anyway.

LM: No … I was going to say growing up to now … I was going to ask you what kinds of changes have you seen throughout the landscape over time?

ECFK: Landscape-wise …

LM: Or resources … or both.

ECFK: So, both … I think landscape-wise … definitely. I grew up around the sugarcane field lands…landscape. Seeing that transition out … from sugarcane … corn … and whatever diversified ag they are doing now. In my current mind's eye … I cannot say it's a welcome view … you know …. it is what it is. And then resources part … definitely there is a lack of resources … water to be specific that was more abundant back then because of the fields. Had sugar, that's why had water … not that's why had water, but that's why water was abundant but not necessarily for the right reasons.

LM: So … I guess regarding this area … or like even Mānā … how would you envision this area or what recommendations would you give regarding site management protection or what do you forsee this area in the future? How do you envision this place?

ECFK: Nah … would be awesome … if we can find one state of being where what restoration how it used to be would look like. Because you figure … all through here … all kinds of *loʻi* [taro pondfields] fields even through here … all kinds of *loko iʻa*, fishponds, through here … just in Waimea. And then a plain between here and Kekaha was all marsh … even here to Mānā was all marsh. Knowing we no can tell everyone, "Okay pack up all your houses and move out because we going let all the water back in." You know that's not reasonable. But finding a way where we can restore some water to the plains … you know. Because it's like you said … it's like we all know … we move all the invasive species, the natives going come back, naturally going come back … right. And then naturally going be able to manage the *ʻāina* [land] the way its supposed to be. Ideally would be beautiful for see some kind of … you know … the two exists together where they both are able to thrive.

LM: Unify.

ECFK: Yeah. Understanding on the human side … that's a *kūleana* [responsibility, rights, and privilege] to take care of this place. You here because that was here before. You not here because in spite of … you know what I mean. So anyway, some kind of water restoration to the plains. And be able to have space for traditional farming to happen on a large or small scale, because I think for us … for Kumano being in an education system througout the west … it's bringing to life in the kids eyes, "I no gotta go work Big Save … you can learn for farm, and live off of the farming … and undertand

how to take care of yourself … and have Amazon on your phone at the same time." You know nothing wrong with that, we gotta … Anyway …

LM: No …

ECFK: You know what I mean … ah?

LM: Yeah.

ECFK: Ideally, that is where we should be going. But there is a lot of red tapes and hula hoops to dance around.

LM: Are you familiar with the *mo'olelo* [story] of Ola?

ECFK: Yes.

LM: Could you share or any *mo'olelo*?

ECFK: What about Ola you want me to share?

LM: Anything you wanted to share, or even *Menehune* [legendary race of small people who worked at night, building fishponds, roads, temples; if the work was not finished in one night, it remained unfinished], or if there are any other *mo'olelo* you wanted to share connected to this area.

ECFK: Well … for us … for Kumano I coordinate education outreach for the schools at Kumano … and this current year, we are using Ola's *mo'olelo* with Kekaha School's fourth grade. We get on continuous … for the fourth grade level. Long story short, we been talking to them about Ola. We go to the school, we give one little blurb about Ola, then they come visit our farm … now we in the space of Ola. We can connect their brains and their eyes with what they heard. So I think, for us … for me sharing Ola, and his *mo'olelo*, and what he did … and everything that led to Waimea becoming Waimea … we try to instill on the kids … those different values. Anyway, just highlight

those values of self-sacrifice of the bigger picture … you know, like the importance of water, the importance of taking care of each other. For me, I was focusing on … taking care of each other … having them understand that Ola did this for his people, you can do something similiar in your classroom, or in your family … something like that. It's easy for me, for us, to relate to Ola because of the space we in … so welcoming the kids in that same space, trying to open up their mind's eye to what all of this means or could mean to them is important. The *mo'olelo* [story] or the value in caring for others is what I try to share with them.

LM: What about cultural practices or beliefs? Anything that you and your *'ohana* practice regularly or specific places that you folks go to?

ECFK: Cultural practices …

LM: Or traditions.

ECFK: Traditions … my wife dance *hula* [Hawaiian dance] and my kids dance *hula*. That is their thing. We practice *huki i ke kalo* [harvesting taro by pulling]. It's a life style. I think for us … I cannot say specifically, but we chanters. It's important for me to expose my kids to the cultural stuff I wasn't exposed to at their age regardless as much as I grew up not being one *hula* dancer … I don't mind my kids learning and dancing *hula*. Not only their mom likes, but they are learning, and get values that come from it the things that they learn. And I can appreciate it. And at the same token bringing them out with me like yesterday, the boys was off, so they come help us too … Kekaha Elementary. They *ma'a* [accustomed] to what we doing, so it's no longer … you know … I not labeling like we practicing this culture.

LM: No it's just … do.

ECFK: Yeah, it's just … do.

LM: Does your wife gather anywhere like for *hula* [Hawaiian dance]?

ECFK: She enjoys Kōkeʻe and pretty much wherever we go. I remember in the beginning part, when we first got married. I took her behind Berry Flats. So she never been up there before without me. She never been there before I took her there. I used to be like, "You nuts, at least get your bearings straight, you can get lost in here, people get lost." You 20 feet from the road but you wouldn't know it because you just walking in a circle … right? I know Berry Flats was one special place for her. For our family as a whole … it's either *mauka* [towards the mountain] or *makai* [towards the ocean]. And *makai* typically, Kekaha … it's where I grew up, and it's what I know. But now my kids they *maʻa* [accustomed] to Waimea, here … the river mouth … the river mouths. My wife is more like … she likes to see the ocean but she don't like being in the ocean too much, but she enjoys it … she don't enjoy being cold.

LM: I think that's pretty much all the *nīnau* [questions] that I have. If there is anything else you would like to share about Mānā, Kekaha, Waimea … anything that might come to mind.

ECFK: I think Mānā when I used to work security for them [PMRF], we used to drive through Nohili … all the dunes … and I drove through there as a kid, as a high school student. Back in the day, we could drive all through there. But being on the government side of the fence and going through that space, I used to think, "Whoa, too bad the community cannot see or be back here." You know obviously you going get the bad that come with the good, you not going be able to cover it all, but we used to go from Kekaha Elementary … up to the dunes … and the whole *moʻolelo* … slide down and listen to the dogs bark. But I think, that's a special place … that whole stretch, but obviously there are a lot of special places in Hawaiʻi, but growing up on the West, and knowing like that's Niʻihau … no can even go … like that kind of vibe, I think … that gotta change. We gotta … accessible … got to get more easy access to the space. You know … something got to give.

LM: For sure. And then … do you by chance have any recommendations for people we should perhaps talk to?

ECFK: You guys get age limit?

LM: I don't think so … No.

ECFK: Danny Smith. Uncle Danny Smith.

LM: Who's Uncle Danny Smith?

ECFK: Uncle Danny was born and raise in Kekaha. His son an me is classmates, and friends from kindergarten. He's a hunter, he's a fisherman. He was working on the base … in the '60s, '70s. Retired fire chief. He knows a lot of the West in his lifetime. He get one open-eye on both sides of the importance of culture, and what it's like growing up in the plantation era. He's able to get through all those areas, and a lot of those ridge lines … and all those places on the paper you showed me … guarantee he knows those places like the back of his hand. Anyway … Danny Smith from Kekaha.

LM: Okay.

ECFK: You gotta listen good though … he had one accident … but it was a while back. But he is not as strong speaking as he was back then. But you going really enjoy him because he is a really nice guy.

LM: How would we get a hold of him?

ECFK: Go down the road and hang a left.

LM: [Laughter.]

ECFK: Nah … actually Keao would know exactly where he live. He live just up the road from Keao.

LM: I don't want to take too much more of your time, but I wanted to say, *mahalo nui loa* [thank you very much] for sharing your time, your *'ike* [knowledge] and *mana'o* [thoughts] with us … and yeah … I'm going to stop the recording …

ORAL HISTORY INTERVIEW

With

Treston "Hena" Caberto-Raco [THCR]

November 24, 2023

Waiʻawa, Kauaʻi

By

Hannah Kaumakamanōkalanipō Anae [HKA],

Keao NeSmith [KN],

And

Lilia Merrin [LM]

The interview took place in the *ahupua* of Waiʻawa, Kona *moku* [district], *mokupuni* [island] of Kauaʻi.

Recording file name IA202241_2023-11-24_Treston Hena Caberto-Raco .MP3

HKA: Welina kākou [greetings everyone],[1] today is November 24th, 2023. We are here in Waiʻawa on the *mokupuni* [island] of Kauaʻi. I am Kaumakamanōkalanipō Anae, representing International Archaeology, LLC and we are conducting a Cultural Impact Assessment interviews for the Pacific Missile Range Facility (PMRF) and Kōkeʻe Park Geophysical Observatory Succeeding Lease and Easement Areas. And we are also here with Keao and Lilia. And we are here with the person we are interviewing. Can you please say your full name, Hena?

THCR: Oh, my full name, Treston Michael Henakaneali'imekauimekealohapumehanakahelelaniokauaʻi (Hena) Caberto-Raco.

HKA: Mahalo. And, Keao, can you say your full name?

KN: Keao NeSmith.

[1]: Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org /gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

LM: Lilia Merrin.

THCR: Or you can just call me Hena, that works.

HKA: Okay, Hena. Do I have your permission … to record this interview?

THCR: *ʻAe* [Yes].

HKA: Can you say it louder?

THCR: Yes.

HKA: Okay, thank you. Before we start, I'd like to say, of course, *e kala mai* [excuse me] if I seem so *mahaʻoi* [brazen]. And, um, so … it's not my intention. So, let us start this interview. So, how long has your *ʻohana* [family] lived in the area?

THCR: Um, so my dad's guys were born and raised Kekaha and my grandpa … we talking about just Waiʻawa or Kekaha area?

HKA: Kekaha … in this whole area.

THCR: Um, from plantation times, from what I believe, is when my family moved to Kekaha. So, I don't know how many years that would be but …

HKA: Generations.

THCR: Yeah. From my great-great-grandpa maybe, they was living in Kekaha, yeah.

HKA: On both sides, your mom and …

THCR: Uh, that's from my dad's side.

HKA: And how about your mom's side?

THCR: My mom's side, mostly Līhu'e side and then O`ahu they were from before.

HKA: Okay.

THCR: And then but from before that my *'ohana*, Palakiko *'ohana*, is from Maui, west Maui, and our Kahiamoe *'ohana* [family] is from Kohala. My dad's side is Kohala and my mom's side is from Maui … Lahaina side, yeah?

HKA: So are you familiar with this, I mean, you are familiar with this area. Are you familiar also with the Mānā and PMRF?

THCR: Yes, very familiar.

HKA: Okay, can you tell me about that?

THCR: Um, from early childhood memories are, you know, visiting family in Kekaha. We would be living in Kōloa and Līhu'e when I was a child but all of my *'ohana* [family] lived out over here. So, every weekend or weekdays, we would come out and spend our time with the family in Kekaha. So, whether we be up *mauka* [towards the mountain] Kōke'e, in these hills along these valley sides hunting, or going *makai* [towards the ocean] surfing and fishing all on the base, the military base. Before the base used to be open so we could drive from Kekaha Beach all the way to Polihale. And just go drive right on the base, just go around and then go into Polihale. We spent a lot of time camping out there on the base and fishing …

HKA: And what kind of fishing?

THCR: … picking *limu* [seaweed].

HKA: Oh, what kind of *limu*?

THCR: Ah, *limu kohu* [one of the best liked edible seaweeds; (*Asparagopsis taxiformis*)] mostly, and we would be picking ‘*opihi* [limpets], throwing net catching *nenue* [chub or pilot fish (*Kyphosusbigibbus, K. Vaigiensis*)], diving, lobster … Oh, it’s a beautiful reef out over here. But my childhood fondest memory was camping on the base.

HKA: And so, you mentioned, as we were walking up to Hauola Heiau [temple, place of worship], you mentioned that the trail would go to Kōkeʻe. So that’s another place where we’re looking at as well, is Kōkeʻe. Can you tell me about that?

THCR: Um, yeah, it’s a … You know, growing up it’s just someplace that we go for recreation. And then as we got older, you know, like camping and hunting and picking *maile* [a native twining shrub, (*Alyxia olivaeformis*)] and learning about our *mauka* [towards the mountain] land and native plants and stuff like that. And as I got older, it came more of a *kuleana* [right, responsibility, privilege] to *mālama* [to take care of]. I just start learning about the native plants, I got into Hawaiian Studies at KCC (Kauaʻi Community College) so I get little bit more *maʻa* [accustomed, used to] with your *ʻāina* [land, earth], you know … We learning about all this in school but I actually grew up with all of this stuff, so it came natural to me to be *maʻa* to all of that stuff.

HKA: Oh, nice. Um, so you also mentioned that Queen Emma would come through and …

THCR: Yeah, so one of the stories is that she would visit with the Knudsens—the Knudsens had the ranch, Waiʻawa Ranch at the time. I’m not sure what the time period was when they were doing the sugarcane but, yeah, he would lead her up from Waiʻawa, up the trail to go up to Kōkeʻe. And a lot of that history has to go back into the Queen Emma Festival that they have in Kōkeʻe, where the *wahine* [woman, lady] would ride in on horseback and everything, so … You know, that would be interesting to, uh, maybe do a ride with everybody one day … [chuckling].

HKA: [Chuckling.]

THCR: We get to go and ride, you know. We do all these kind of things … and we go hunting, we see the *ʻāina* [land, earth] but we know the stories. But you know, the relationship is only within the people that is going, is doing that. So, people that is outside, they don’t really recognize all the history that

we have back in these hills. They only know outside … seed companies, the landfill, PMRF, they don't really know the *mauka* [towards the mountain] sides. All the different bunkers that we have up on the ridges and the *heiau*(s) [temples, places of worship], … Saki Mana, get Polihale … get few other *heiau* on this side.

HKA: Nice … So, you rode up to Kōkeʻe through this trail?

THCR: Yes.

HKA: You did? And what was up there? What did you see?

THCR: It's just cow trail. We have native plants, a lot of *ʻaʻaliʻi* [native hardwood shrubs or trees (Dodonaea), all species] and *kukui* [candlenut tree (*Aleurites moluccana*)] that you go through. There's really the dry forest on this side so you won't see a lot of the native big trees that you would see further up *mauka* [towards the mountain]. But you would see *ʻilima* [small to large native shrubs (all species of Sida, especially S. fallax)], *ʻaʻaliʻi* … This place is known for having the *peʻapeʻa* [Hawaiian bat (*Lasiurus cinereus*)] too, yeah.

HKA: The bat …

THCR: The bats.

HKA: The hoary bat?

THCR: At night time you see 'em flying around … "Oh, what is that?" But they … they fly all frantic, yeah. So, you can kind of tell that it's those guys.

HKA: They're so tiny though, aren't they?

THCR: Yeah. I mean, they're about like three, four inches.

HKA: Wow, that's pretty neat. So, is there … have you ever seen any snails? You know, like our native snails? Any up there?

THCR: Further up *mauka* [towards the mountain] we see snails. And I'm sure we do, down in these lower lands too. Definitely in our *loʻi* [pondfield, especially for taro] we see certain snails but we're not too *maʻa* [accustomed, used to] with the native snail species. But when we started opening up *loʻi* right in the valley, the first thing we noticed was all the *hinana* [young of *ʻoʻopu*, a fish].

KN: *Hinana*…baby *ʻoʻopu.*

THCR: Baby *ʻoʻopu* [or *hinana*]. And it's funny that they are in the downstream because what would have happened is they got diverted all the way from the Waimea River, go through all the way Kekaha Ditch, go down that crazy waterfall or through the pipe, and then get spit out into the ditch line over here.

HKA: And so how do they … is that all hydro …

THCR: That's …

HKA: … from who?

THCR: That ditch line is controlled or managed by Kekaha Agriculture Association. They manage from Waimea River all the way to Polihale and into the base. That's the water …

HKA: And so, what does that water feed? Who are the people that gets fed that water?

THCR: This water from the olden times was for the plantation.

HKA: And so, how about nowadays?

THCR: Nowadays would be these seed companies and, uh, but not too many … maybe the base? I think the water gets thrown out at Kinikini. I not entirely sure.

HKA: And so, these seed companies, what are they producing?

THCR: It's all for their test corn. I think they producing seed for the mainland.

HKA: For the corn?

THCR: Yeah, for the corn. And they were growing soybeans at one point; alfalfa, they tried to grow, but mostly corn. A lot of the seed companies, they kind of disappeared; not too many … I think they … right in front they trying to do a starter program … You see all the taro farmers? I think they get awarded an acreage of land and if they do good, they going get awarded more land. But I also hear that Aloun Farms going be coming in over here. So …

HKA: They're on Oʻahu.

THCR: It's kind of bittersweet. You like to see food, but at the same time farming practices is everything. And what is the difference between monocropping farming practices between these commercialized guys who's growing real food? They still using synthetic fertilizer, they still spraying, so … Yeah, we might be seeing food that you getting, but what is the growing practices, yeah?

One of the things that we battling here in Waiʻawa is the growing practices that they were using for the plantation times. Our community calls this place Poison Valley, as opposed to Waiʻawa Valley, because of the contamination that's in this valley. They used to house their pesticides and herbicides, and even they had, you know the telephone post. I guess they would dip the telephone post in that kind crazy chemicals over here. So, when they shut that down in 2000, DLNR (Department of Land and Natural Resources) just left, put up a chain-link fence and labeled it a brownfield and said, "Nobody enter."

HKA: Yeah.

THCR: But the problem with that is, is one State agency was labeling it as a brownfield while another agency was listing it as ag, leasing it out to my *ʻohana* [family]. So, in 2010, I brought this to the Hawaiian Homes Commission and I said, "What is the deal with this contamination on our side? We growing mangoes, we growing *loʻi kalo* [taro pondfield] we get *ʻuala* [sweet potato (*Ipomoea batatas*)] all planted in the ground, gardens … "

We were bringing up *hāumana* [students] from Kekaha Elementary School. At the time we were linked up with the fourth-grade program; it's like a leadership program. They were coming up every week. We had Boy's and Girl's Club coming up and Nā Pua Noʻeau kids' camp and stuff … So, we're questioning, you know, if we're bringing up our *hāumana* … The problem is, why does our west side community have to go all the way to the North Shore to learn about our *ʻāina* [land] and cultural resources, when we have our own history on the west side.

HKA: *ʻAe* [Yes].

THCR: I cannot say we have more history because I'm *pili* [connected, associated with] to this side. I like the stories on this side …

HKA: There is a lot.

THCR: Why we gotta go all the way Waipā for go into *loʻi kalo* [taro pondfield]? Why we gotta go, you know, Limahuli and learn about that stuff? We have all of this stuff in our backyard right over here. But our *keiki* [children] in Kekaha isn't connected. And when they are connected, maybe they connected for … I don't want to say the wrong reasons … you know … recreation.

KN: Brief encounters, this kind …

THCR: Yeah, brief encounters. But to share the oral history of the *moʻolelo* [stories] of place, connecting them to place. The name, you know, and everything like that, that is what we gotta plant in them so they get grounded into this community.

HKA: Right.

THCR: And that's the thing with Kekaha … Before used to be a lot different because everything was open. The gates was all open and the community could just roam, pretty much. And everybody would take care. But now with the thing being locked up, people no *mālama* [to take care of]. They come in and out, they take what they like and they leave. When before, it was a different thing when everybody would take care. Everybody would take care the ditch lines, everybody would take care the watercress patches and what. They would grow their own pumpkin patches and people could come and eat. But now it's like, "Oh, the farmer stay back there … oh, the farmer no stay. We go take his stuff and we going leave."

HKA: Yeah … yeah.

THCR: We raising pigs, they going come steal the pigs, or if not, they get their hunting dog.

HKA: So, this *'āina* [land] over here, is leased by your *'ohana* [family]?

THCR: This is Hawaiian Home and we have a lease; we had a lease since 2008. But my grandpa, when the plantation was closing down, they were going into diversify ag. He teamed up with this other guy, Wally Johnson, and they had a company called Far West Ag. And they were growing all the sweet corn and watermelon going out to Kekaha. All before these corn companies came in, they was growing real food. You know, like, they had sweet corn and watermelon. So, my summers were spent in the mango orchards, and in the watermelon fields, and sweet corn fields, picking all that kind stuff. I never wanted to become one farmer.

HKA: [Laughing.]

THCR: You know like, "No way, I going be cowboy!"

HKA: Cowboy? You also surfer too … ? [Laughing.]

THCR: Yeah. [Chuckling.] So, and then, 2005 or something like that, he ended up not … There was a little thing and he ended up selling his part of that company, Far West Ag. So, we lost all the *'āina* [land] because we weren't part of the business. Then somehow, DHHL (Department of Hawaiian Home

Lands) came back to my grandpa because Wally Johnson wasn't *kanaka* [Hawaiian native] and this was all Hawaiian Homelands. My grandpa was Hawaiian, so they asked him if he was interested in taking over inside Waiʻawa Valley; we got that lease in 2008.

HKA: How much acres are you guys leasing?

THCR: We have 20 acres on this side, and eight acres in the back over there, behind the Poison House. I think part of our lease is in the Poison House but after all of the test and everything done like that, it's still under our responsibility. We just don't do anything with that until we can do the remediation, proper remediation and cleanup of that valley. We've teamed up with another nonprofit, Kaunalewa, who is working towards doing brownfield cleanup in the Kekaha community.

Waiʻawa Valley is one of the contaminated sites, brownfield sites, for our community. With the regenerative farming practices we want to do here, it's *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of perfect collaboration between the farmer and the EPA (Environmental Protection Agency) cleanup. If we can do regenerative practices to the *lepo* [dirt, soil], the soil, and feed the community, and do all this cultural revitalization for our community, you know … This *wahi* [place, location] is really, really a big player right now for the future of this west side community, I feel, in my *naʻau* [bowels, gut; mind, heart affections]

HKA: Yeah … yeah.

THCR: When we create the model, then we can spread this to the rest of the community and say, "Hey look: we can clean 'em up and can grow something." You know, we have a space for the community to come and learn and grow, yeah? Get food …

HKA: And be connected to the *ʻāina* [land].

THCR: Learn all the *moʻolelo* [stories] of our history. This goes back, Waiʻawa's history goes back from the original inhabitants of Kauaʻi to the *Menehune* [race of people, and/or legendary race of small

people] time. They get one *heiau* [temple, place of worship], Hauola Heiau, inside over here. Get many, many stories about it but one of the stories is that they talk about of … was an *ali'i* [chief, ruler] and I guess he had collaboration or had little rule over the *Menehune* people. He was able to have them build part of the *heiau* when his son Ola came up with the idea of Kīkīaola Ditch … I feel the Kekaha Ditch replicated the Kīkīaola Ditch, how they brought the Waimea River water to the Waimea Plains to irrigate the *loʻi kalo* [taro pondfield] over there. The Kekaha Ditch is the same thing, they just brought it all the way to the Kekaha Plains. So, this valley is all related back to ag, from before times with the *heiau*, all the way back to ag with Kīkīaola Ditch system, and then you have plantation time with the maybe not so *pono* [correct or proper procedure] practices. You know we get Poison House inside here, and now with the contamination where we gonna bring our people to next as far as agriculture and sustaining ourselves?

HKA: Did they have rice in here too?

THCR: I don't think that had rice but in the old *moʻolelo* [stories], you would hear the stories of the Mānā Plains having floating rafts of *kalo*. So, kind of like the Peru guys with the chinampa bed and stuff like that, you know. So that was really interesting, to hear all the … I guess they dredged a lot of this; this is all wetlands.

HKA: Yeah, that's swampy lands, yeah?

THCR: Was all wetlands and you know … when we talk to our friends that's involved with the fishponds they said, "This is the biggest fishpond on Kauaʻi." Right here was all wetlands where you have, you know … Some places you could sail canoe inside. It was navigable, they said, inside along this *pali* [cliff]. So, occasionally when the thing rains, I say, "Oh, yeah, it does." We would see that it could do that. But with the plantation times … that's why we have the most pristine *lepo* [soil] over here. From turning wetlands into dry, of course your *lepo* is going to be super good. But then …

HKA: They drained it, right?

THCR: Over time yeah, they drained the whole wetlands and then, you know, sugar plantation of course came in and their farming practices was ridiculous. You look at all the plastic they used to lay down

for drip irrigation. At first, they never had that; they would just grow the *kō* [sugarcane], the sugarcane, on raised beds, kind of like flooded … pretty much like *māla* [garden] style, like *lo'i kalo*. Like *māla*, with the ditch around the whole field, and it would be irrigated that way. And then they came up with the drip irrigation; and then they had the heavy equipment where they would just till all that stuff in. So those are all the ag practices that has come about in the area they went plant. And then corn is there, and they were still doing that kind of same practices. What are we taking the next generation to, you know? How are we going to be feeding our people and sustaining ourselves off of this same *'āina* [land]?

HKA: So, can you name the resources you have on this *'āina*?

THCR: We are currently irrigated from the Kekaha Ditch. Kekaha Ditch comes down the hill, right over there and feed into the hydro. Hydro was the first electric on Kauaʻi because … And I guess the first traffic light, was right over there where you pulled in; right over there on the paved road. That was a cane truck crossing over there, so they had a traffic light. And I guess this hydro is also running all the pumps, to pump out all of the water out of the … 'Cause we had all kind wells, yeah. Kekaha is filled with wells. The plantation capped all those wells so they can grow their sugarcane and stuff like that.

It would make it smart if we let the water go back into Waimea and uncap the wells because we have our own *wai* [water] over here. All the taro farmers and the eco system, the Waimea River is the lifeline. That is what feeds everything … eco system. When you take water away from that, everything suffers from that. So, when the water commission came down, we said, "We the furthest one west, before all these … guys came in started farming taro … we the furthest one west farming taro and we benefit from the Kekaha Ditch. But if you were to ask us what we would like, we have our own well water here in the valley. We could run our *kalo* [taro] and stuff like that off of our own well systems and we look at the larger picture; throw the water back into the Waimea River … " So, I'd support that, even though we benefit from … There's a big balance between it. How do we manage the water situation? I think they're going to be piping it. One of the ideas was to pipe it from Waiʻawa Valley to Mānā Plains. And you see, when we walked over there, you see how much animals and life run off of this ditch line? If we were to pipe this land, or this water, all of this land going go dry and barren. Everything going *make* [die], all of our community that sustain

ourself off of this wild game and stuff like that. That's how our community is raised. We're rural over here.

HKA: Yeah, so what you guys had? You guys had *pipi* [beef, cattle] and you guys had goats too?

THCR: We had deer, goats, pigs, cows …

KN: Birds …

THCR: … ducks. We have …

KN: … pheasants.

THCR: … *'alae 'ula* [Hawaiian mud hen (*Gallinula chloropus sandyicensis*)], *kolea*(s) [Pacific golden plover (*Pluvialis dominica*)], we get the *'ūlili* [wandering tattler (*Heteractitis incanus*)], we get … *'auku'u* [black-crowned night heron (*Nyticorax nyticorax hoactli*)].

HKA: *'Ūlili* too?

THCR: Yeah.

HKA: 'Cause they ocean birds, yeah? So they come over here?

THCR: Yeah, well, the ocean is right over there. We get …

HKA: *Ae'o* [Hawaiian stilt bird (*Himantopus mexicanus knudseni*)]?

THCR: … *ae'o* [Hawaiian stilt bird (*Himantopus mexicanus knudseni*)] and what is the … ?

KN: *Pueo* [Hawaiian short-eared owl (*Asio flammeus sandwichensis*)] …

THCR: *Pueo* [Hawaiian short-eared owl (*Asio flammeus sandwichensis*)], we get … with the cliff birds, what is that?

KN: *Koa'e* [white-tailed tropic bird (*Phaethon lepturus dorotheae*)].

THCR: *Koa'e* [white-tailed tropic bird (*Phaethon lepturus dorotheae*)], *koa'e kea*, *koa'e 'ula* …

HKA: Wow …

KN: And then you get the invasives.

THCR: Invasives are all the bats, I mean the parrots. The parrots is a new nuisance that we have come in over the last five years, I say. You know, when we first came in, I would see them high, maybe one or two flying over. I'm like, "Oh, crap, they stay coming on this side, that's weird." Then the next year, would be little bit lower. And the next year, we see them all in the plain. The seed companies got all the grants to chase away all the parrots, like that. We would drive into seed company fields and they would be playing all kind high pitch sounds (making a sound) trying to scare the birds.

HKA: What about our native birds?

THCR: They went chase the birds right into the valley. The parrots weren't even interested in the mangoes until maybe about three years ago.

HKA: Oh, so you get parrots eating your mango over here?

THCR: Yeah.

HKA: So approximately how much mangoes you have?

THCR: We have about eight acres planted. We have about 12 varieties of mango that we growing and we're trying to do more diversified ag. We had about 15 *'ulu* [breadfruit (*Artocarpus altilis*)] trees

planted in this orchard right here, and then the *pipi* [beef, cattle] came in and ate 'em. Oh, no, we had 15 planted and KAA (Kekaha Agriculture Association), the irrigation guys, when Landis Ignacio was still here, told us that they were going to shut off the distribution line for one week; but it was shut off for about a month and a half. All of our *'awa* [*Kava (Piper methysticum*)], *lo'i kalo* [taro pondfield], everything just went *make* [died].

It's been a year to year battle with the State agency that controls the water because we're such a small farmer. We're on Hawaiian Homelands and they manage Kekaha Ag, which is in front, so they have all the seed companies that they manage. But because we on DHHL (Department of Hawaiian Home Lands) land, we cannot be a part of their association because we not one ADC, Agrobusiness Development Corporation. By not being a part of their association, we kind of don't have a voice. And being on DHHL, we have first to water rights. These guys, they understand the law. They know that we as *kalo* farmers [taro farmers] get first to water rights but at the same time, we don't have enough community to voice for us.

HKA: That's why I can see why you like the well, yeah?

THCR: Yeah, so whenever they turn off the whatever, we have the well. We can put one storage tank inside here so we not just constantly draining the well. Whenever that storage tank comes low, it just kicks back on and sucks up water so we can sustain ourselves off of that. But that's the biggest problem that we have when they turn off the water. As a farmer in Mānā, that's the hottest place in Kaua'i. You go two days planting anything, especially when you plant a new crop; one or two days without water is going to wipe out your whole thing. Even mature tree; I get one mature tree, they went shut 'em down for two, three weeks. You see that tree?

HKA:Yeah.

THCR: *Make* [dead] 'cause the place get crispy in the summertime. It's so hot, all this grass is all new grass from the last rains we got the last two months. But before that was all brown, crispy …

HKA: I think it's like that all over the *Pae 'Āina* [Hawaiian Islands].

THCR: Yeah, especially the west sides, you know? West Maui, west O‘ahu ’cause they dry, the dry side.

HKA: Yeah … yeah. So, your dad’s *‘ohana* [family]. You know your *kūpuna* [grandparent, ancestor], were they like, um…do you have any *konohiki* [headman of an *ahupua‘a* land division under the chief], or even *ali’i* [chief, ruler]? I mean, even *maka‘āinana* [commoner], but you know?

THCR: We know that in Kohala, we come from *mahi‘ai* [farmer] *‘ohana* [family].

HKA: Yeah.

THCR: Especially in Lahaina, we get. Come to find out I get one cousin farming *kalo* [taro] in Lahaina that we never knew, and he’s one heavy activist. Not activist but taroist, you know? Planting *kalo* over there in Lahaina, Charlie Palakiko is our *‘ohana* [family]. So, I hear he’s been feeding a lot of people after this Lahaina fires and stuff like that; you know, helping out the community. Just so happen we kind of, we don’t know each other but we doing the same works throughout the *Pae ‘Āina* [Hawaiian Islands], yeah.

HKA: And so, your papa, um …

THCR: My mom’s side is Palakiko, and that’s where we have, that’s through my mom’s side, we have this lease, through that, through my mom’s side.

HKA: But your grandpa is Hawaiian, right?

THCR: Yeah.

HKA: And he’s from this area, right?

THCR: From Kaua’i, he was born and raised in Kaua’i. Oh, I think he was born on O’ahu and moved to Kaua’i when he was eight. But that’s the Palakiko side. My mom’s dad side is Kahiamoe.

HKA: Kahiamoe … wow. And that's Big Island?

THCR: Kohala, yeah.

HKA: We might be related … (chuckling). Can you tell me anything about the Christian *kupuna* and wife of Kaumualiʻi [last independent *aliʻi nui* or high chief of Kauaʻi] or any of, you know … Deborah?

THCR: Kapule?

HKA: Yeah.

THCR: I know that she was living in Wailua, in Coco Palms area, yeah. That's where her house was and stuff like that.

HKA: She was living here too, yeah, Kekaha? Like, I think she was around here. She lived in 1835, Deborah Kapule?

KN: Oh, did she live in Kekaha? I don't know.

HKA: Waimea or Kekaha, yeah? She never live in there either?

KN: I always heard them say they lived in the eastside, Wailua.

HKA: Wailua?

KN: Could be, I don't know.

THCR: With the major *aliʻi* [chief] I knew that they were living, Kaumualiʻi guys down this side, right?

KN: Waimea.

HKA: Waimea.

THCR: ’Cause this is the *ʻāina momona* [fertile land].

HKA: Exactly.

THCR: When you one *aliʻi* [chief] and you like feed your people, you going go to the place that’s *ʻāina momona* [fertile land]. Right here we get the cold *wai* [water] the meanest *lepo* [soil] and we get all the sun. You see these valleys how pristine and quiet, I can imagine how it used to be back in the olden time. Especially Makaweli side and Olokele, and all the way out this side. Right over here was known for have the loads coconut trees. All the way from Kekaha, all the way to Polihale, I think. One of the valleys over here is called Niu Valley, and they would have coconut groves and Kaunalewa had coconut groves … That’s one of the things that we like grow back.

HKA: The sugarcane, they took it all?

THCR: Um, pretty sure. I’m not …

KN: Eventually …

HKA: Wow, that’s so beautiful. Coconut trees is so beautiful.

THCR: Yeah, bring life when no more *wai* [water].

HKA: Yes. So, do you have any *ʻohana* [family] burials that you know about? If so, where?

THCR: There’s definitely *ʻohan*a burials in here.

HKA: Around this *ʻāina*?

THCR: Yes, in this place. There's caves inside here … both sides, actually. I was educated on that when Aunty … when we did that meeting with the Aipoalani and Kilauano *ʻohana* [family]; they are direct descendants. When you guys have your interview with Aunty Gwen, she can share more about, and how much she wants to share about that. But there's definitely *iwi kūpuna* [bones (of the) ancestors] inside here. Yeah, and a lot of the spiritual stuff connected with that side.

HKA: Nice. So, what is your favorite *ʻōlelo noʻeau* [proverb, wise saying]?

THCR: Oh, man … I going have to get back to you on that one. [Chuckling.]

HKA: Okay, okay. Um … what kind of Hawaiian traditions are practiced by you or your *kupuna*? Like you know, *hula* [Hawaiian dance] … I mean even surfing is …

THCR: Surfing …

HKA: Anything you want to share?

THCR: Definitely the *mahiʻai* [farming, farmer] side. I've immersed myself in learning a lot about the native plants, a lot about the canoe plants, and just being *mahiʻai*, yeah? And I do *paniolo* [cowboy] work too. I'm the foreman for Princeville Ranch, so I do a lot of native planting out there on my own time, and … even in here.

HKA: What kind of native plants you plant?

THCR: Um, so over here we had *koa* trees [the largest of native forest trees (*Acacia koa*)]; we have some *ʻōhiʻa* [tree of the *ʻōhiʻa lehua,* which is the flower (*Metrosideros macropus, M. collina subsp. polymorpha*)].

HKA: Where?

THCR: In our nursery we had 'em. But we definitely planted them out and they grow, it's just that water situation. But we planted a lot of *wiliwili* [a Hawaiian leguminous tree (*Erythrina sandwicensis*)], *kukui* … We did a … the guy, Rick from Hui Kū Maoli Ola did a study up at Pu'u ʻŌpae and he found some *ʻiliahi* [Hawaiian sandalwood (*Santalum spp*.)] up there, and yeah, there's a lot of stuff inside the valley that's growing.

HKA: You know, Kauaʻi is a very diverse biosystem, yeah? Do ancient Hawaiian religious practices continue in the Mānā area?

THCR: Yes, for sure.

HKA: Such as …

THCR: Well, fishing practices. A lot of *hula hālau* [hula groups] have come out to give *hoʻokupu* [offering, tribute] out here and hear about the *moʻolelo* [stories] of Waiʻawa and the Mānā Plains.

HKA: What is the *moʻolelo*?

THCR: Uh, specific to place, whether it be here in Waiʻawa or in the Mānā flats, each place has a different story, you know?

HKA: Is there any more stories about over here?

THCR: Waiʻawa, can go back to the days of Kualu-nui-pauku-mokumoku [Kualu of the broken rope, he is the son of Kualu-nui-kini-akua; mentioned in the "Legend of the *Mū* People"], tracing it back to the *Menehune* [race of people, and/or legendary race of small people] times, when Ola was in here. That's one of my favorite stories of Ola on the west side, the *aliʻi*(s) [chiefs], Ola and Kualu, because it brings it back to when that was the original peoples that was here. So, imagine living on Kauaʻi where you have this barren land and how are you going to sustain yourself in this *ʻāina* [land]?

When I got in here in 2009, I was 19-years-old out of high school. I was *pau* [finished] with KCC (Kauaʻi Community College) and I had the opportunity to go to Hilo with my class and everything. I registered and transferred to go to Hilo. I was like well, I get *kuleana* [right, responsibility, privilege]; if we learning about *kuleana* and what it is to do, you know, like, that was just my calling to come back to *ʻāina* [land].

I *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of roughed it for a while and cleared everything with one Weedwacker and chainsaw. At first, I never even had Weedwacker; had machete and what not. This place, this orchard was just almost like how you see it now [chuckling]; but was just covered. Only thing you could go through these trees was just pig tunnels, like this. So at first we cleared it by hand, when I first moved in here and I was just living in one tent. This is my first *loʻi* [taro pondfield] that I dug by pick and shovel. All these rocks, not all of these rocks, but that big seat rock that you see right there was all by *ʻōʻō* [digging stick] and pick and shovels that we would do everything with.

HKA: Wow … a lot of work.

THCR: Yeah, when Keao came up, all of this was … we didn't have the machines that we have now. Over time, it just takes a lot of time. Now we working with the nonprofit, hopefully we can start moving things faster. But this kind work is just taking so long. And with the opportunities ahead of us in this generation, we can just go make money easily; go work construction and do all that kind stuff. And I did, to provide for my family in the beginning. Then when the opportunity came up to be on the ranch, I was like, "I think I going go that direction." It's hard; hard learning one style of living and going back to Western style. Yeah, money is important and we gotta sustain ourselves but we can have balance. There's balance now. You can make money, provide for your *ʻohana* [family] and still *aloha ʻāina* [love of the land or of one's country] while doing that. It's just painting a picture so that they can see it; the image that you see.

HKA: Are you familiar with the expression "Wai kahi o Mānā?'

THCR: I've heard it before.

HKA: It's about the mixing of *poi* [food with a pudding texture made from the taro corm]…

THCR: Yeah, *kahi* [to rub gently with the thumb and finger, and sometimes a technique used to clean the *poi* bowl] *poi*.

HKA: Do you or your *kūpuna* [elder, ancestor] make *poi*?

THCR: Yes. We're very, very into the *taro* scene. I was part of Hui Kalo. So, as I got involved, we would get into Hui Kalo … they would fly us over to the legislation stuffs and listen in to what is happening surrounding *taro* farming. And I actually got this grant that the Hui Kalo got, I guess it was called the Taro Purity and Security Task Force. [Laughing.] You heard about that?

HKA/KN: [Laughing.] No.

THCR: That little branch off the Hui Kalo was made when CTAHR (College of Tropical Agriculture and Human Resources) was trying to patent *kalo* [taro].

KN: Oh, right, right.

THCR: And Kaina guys and a *braddah* [Hawaiian pidgin word meaning an endearing term for brother] from Moloka'i, Hano, they said, "Eh, you guys was patenting Hāloa [son of Wākea, whose origin is from taro, and it is also a variety of long stemmed taro]?" So CTAHR awarded the Hui Kalo, which is Queen Lili'uokalani's Chapter of *kalo* practitioners in Hawai'i, they awarded the Hui Kalo $50,000 to do any kind of research pertaining to what makes the best *poi* [taro paste/pudding]. Whether it be farming practices, growing conditions, fertilizers, inputs that you put in, you know? So, they were flying me all around Hawai'i, interviewing all these farmers, to learn their farming practices, varieties and how to make the best *poi*. Whether it be *ku'i* [to pound] or machine, you know? So, I immersed myself in that for little while, got all involved with the *ku'i* stuff, and we did a bunch of workshops in here. We did *ku'i papa* [wooden board used to pound taro to make *poi*] and *pōhaku* [stone used to pound *poi*] inside here.

HKA: So, you *ku'i* [to pound] your own *poi*?

THCR: Yes. So, we get one mill and *papa*(s) [wooden boards], yeah.

HKA: Oh, nice. So speaking of Hāloa, [son of Wākea, whose origin is from taro, and it is also a variety of long stemmed taro] can you tell me the story of Hāloa, in your own words?

THCR: Yeah. So starting from Papa [Earth mother] and Wākea [Sky father],they have a daughter Ho'ohōkūkalani. Wākea falls in love with his daughter, they have a baby which they *kanu* [plant, bury] into the ground and from there, Hāloanakalaukapalili to Wākea and Ho'ohokukalani pops up. They love the child but they know they cannot *mālama* [to take care of] so they have another child, which is *kanaka*, the first man [Hāloa]. And that is our relationship to the whole story between *kalo* [taro] and *kanaka*, and our relationship to *'āina* [land].

HKA: Inside this sheet there's a lot of places, and I think maybe we can go down the list … You can just pick out what you think you know about those places? Whether it be small or big?

THCR: [Thumbing through pages]. You know growing up a lot of these names. You hear it growing up, you know? But you never really know too much until you immerse yourself into it, like I did in here and Wa'iawa. So, I know a lot of it; a lot of it rings a bell and I know it but … So, what you like me do? [Laughing.]

HKA: [Laughing.] If you see a name and if you want to, can add anything to that name? You know, any little information that you have. Share any type of thing you want to share about that place.

THCR: I guess from where I come from, my last 15 years is in Wai'awa, you know? What I know is here … it's all incorporated to Mānā, I guess. Not sure …

HKA: Okay. So, you …

THCR: [Reading through papers] Yeah, sure, get a lot of good *mana'o* [thought, belief] in this. I guess I just have to read over it.

HKA: If anything just jumps out at you … [chuckling] but if not, it's okay because we got plenty good information.

THCR: Oh, Pu'u 'Ōpae. There's a *mo'olelo* [stories] about Pu'u 'Ōpae, about the connection with Pu'u 'Ōpae and Alekoko fishpond. When they were building Alekoko they, um … and that's another thing, Pu'u 'Ōpae is right above over here. So, the connection with the *Menehune* [race of people, and/or legendary race of small people] people being here and Pu'u 'Ōpae, the *mo'olelo* about the *Menehune* people building Alekoko fishpond; I think the payment of the *Menehun*e was to give them one *'ōpae* [shrimp] from Pu'u 'Ōpae. So that's one of the *mo'olelo* of Pu'u 'Ōpae.

HKA: So, must've been precious then the '*ōpae*, yeah?

THCR: Yeah, must've had nice fresh water for grow '*ōpae* up over there.

HKA: So, are you familiar with the *Menehune* trails?

THCR: Um, I know a lot of the old … I'm not sure if it's *kahiko* [old, ancient] or what, but we do … I know a lot of these old trails. We hunt a lot of these places. I ride horse all through these mountains so I know a lot of these old time trails. I'm not sure if it's *Menehune* [race of people, and/or legendary race of small people] trails or just old game trails. There's definitely trails alongside this *pali* [cliff] that go from here to almost Polihale.

HKA: I know this is going to seem like a strange question but, what is your insight on *Menehune*? You believe they're a race and not just mythical people, right? Do you also believe in the site of a mythical people?

THCR: Oh, yeah, I see it! I know it because of the *mo'olelo* [stories] and our *heiau* [temple, place of worship], you know? So, we cannot disregard that history. And place names in the oral history of the *heiau* and how they were built and who ordered the … that's the *mo'olelo* of the place. That's intertwined. It's just to say, oh, Kaumuali'i was mythical … oh, no, that buggah was real! (Chuckling.) And then we have another you know, the *Mū* [a legendary people of Lā'auhaelemai,

Kauaʻi, often called *Mūʻai maiʻa,* banana-eating *Mū*] and *Wa* [people from Southeast Asia] too, and that's different from *Menehune* [race of people, and/or legendary race of small people].

HKA: But they're also related, yeah? The *Mū* and the *Menehun*e, yeah?

THCR: Yeah, I guess the Wa was the different one … the screaming. The loud mouths, yeah?

KN: [Chuckling.]

HKA: They have that wild ones … is that the one? Hairy … kind of hairy?

THCR: Yeah. You hear a lot of stories about that in Wainiha. But the story of the chanting that would happen is Waiʻawa in this … So Haola Heiau is an amphitheater, a lot of the archeological surveys say. When they would do their heavy ceremonies at the *heiau*, the guys in Wainiha would hear 'em.

HKA: I think this is also, referring to also, they could hear it in O'ahu. At Kawainui, in Kailua.

THCR: Yes, I heard that story too.

HKA: Oh, so it's from here?

THCR: Yes, Waiʻawa; this amphitheater here.

HKA: Beautiful … beautiful.

THCR: And then, you know when us was living over here, you could hear the ocean. When you hear the ocean from over here, you know surfs up! You can go *kai* [ocean, sea] … [laughing].

HKA: [Laughing].

THCR: Hot right now, we go surf!

HKA: You answered so many questions for me. Maybe I'll go to the *Menehune* … is Kahālauaola is that *hālau* or canoe house built by the *Menehune*?

KN: Kahoana.

THCR: Yeah, that's in Kahoana. That's in that side *heiau* [temple, place of worship] I mean that side valley. So, in Hoea there's Hauola and then the other side is the canoe building *heiau*.

HKA: So, you know on this map, you like tell me where we stay?

THCR: We are … [looking at maps].

HKA: Let me mark it.

THCR: Not exactly sure. Someplace over here, though.

HKA: I got other maps … yeah, I got other maps in here too. Can you mark it for me? Oh, you know, I got other maps in there might be better. You might see …

THCR: Yeah, I need little more references, it's kind of … I know this place real good but …

HKA: And then I think get the, one of them get the valleys inside. Is there one with the valleys? Get some valleys in there, no? Oh, shoot! I wish I … actually should have done the one with all the names on top.

THCR: You know what? Here's a … kind of hard to tell.

KN: Where is Kōkeʻe Road from here, that's like the next valley over, yeah?

THCR: Um, two valleys over.

KN: Two more? So, if you find Kōkeʻe Road, then you can go two.

THCR: Oh, yeah.

KN: The thing about this valley, it's real distinct because it funnels like this and then open wide like that with the one open ridge in the middle.

THCR: Yeah and there's a big reservoir in front too, so I trying to look for the reservoir but I can't see it.

HKA: It's not showing it on the map.

THCR: But I know we're in this area right here.

HKA: You know what, just circle that area and then put Waiʻawa.

THCR: Kokole Point is right over here, so we should be … Ho, you know where Kōkeʻe Road stay? Hard for tell, *brah* [Hawaiian pidgin language short for braddah or brother; hypothetically speaking].

KN: Yeah, blurry too, no?

THCR: Kokole Point is right here, right?

KN: Oh, that's all the way Polihale … that's too far. Yeah, this is already too far.

HKA: I got some other maps too, yeah …

THCR: Yeah 'cause look, that's Polihale already, that's the end of the road.

KN: Yeah, yeah, too far. Oh, we not even here, that's the runway. We're further down this way.

HKA: It's not even on the map?

KN: No, it's down here. It's off the charts. [Laughing.]

THCR: But I have a lot of maps I can show you. All the names of these ridges …

HKA: There's a map I saw that has all the names of …

THCR: Each ridge.

HKA: Yeah! I'm so like amazed that this place has like so much …

THCR: I think that's the state map, like the DLNR (Department of Land and Natural Resources) map has that.

KN: Gay and Robinson [referring to the Gay and Robinson 1891 map].

THCR: Yeah, yeah. Mike Faye has a lot of that history too, of the old … he's a … he loves learning about all that old plantation history and the families like that. So maybe if you guys contact him and say, "Hey, we like to learn about all this kind stuff, can show us pictures, or … ?"

HKA: Okay, when we come …

THCR Prior too, though, let him know before.

HKA: Yes, yes. That's what I should have done was to ask you.

THCR: Yeah, I get one whole bunch of stuff …

HKA: So that's what we can do, Keao, we can ask him if he can bring … that's what I usually tell people too but I forgot.

THCR: He get the old photos. He showed me an old photo of the Mānā Plains, had all cattle on the Mānā Plains. And had cowboys ranching. I think I get 'em on my phone but that was super crazy when he showed me that.

HKA: Can you send that to Keao?

THCR: So that's history of … There's a system called Civil Pastoral Systems. As a agricultural … it's a rotation of cows or mammals, which is goats and sheep, like that. You rotate that amongst orchards and planting methods. So the style that I feel would be most beneficial to go back to, is that style of rotational grazing and orchards and stuff like that. We look at the agricultural practices now, we just putting our people back, and back, and back. But at this point, we're smart enough to know that's not *pono* [right, proper] for the *ʻāina* [land], you know?

HKA: They used to do that at Hualālai. Up at Hualālai on the Big Island.

THCR: Yeah, and we have all these … You know, walking up to there, up to the *heiau* [temple or place of worship], we have a lot of the ungulate species that need to be managed. I know I don't totally agree with eradication but I definitely feel management. It needs to be, you know? So, whose *kuleana* [right, responsibility, privilege] is that? If they calling it the King's cattle … Somebody hit one cow on State road, State is saying that's not my cow. But you go and shoot one cow for feed your family and State catch you, they arrest you. You know, it's like, what is the balance between that?

So I actually got, before working in Princeville, there was an opportunity for me to fly and work in Maui, up in Kahikinui, up in there DHHL program over there. And they were catching wild cattle and trying to do a reforestation project. But a lot of the community had backlash with that because they were saying basically that, that's our *pipi* [beef, cattle] and stuff like that. So, what is the balance between managing ungulate populations and so called conservation-native plant restoration projects? 'Cause we want to see our forest, Puʻu Ka Pele—all over here is called Puʻu Ka Pele Forest Reserve. It's not really a Kōkeʻe State Park area, it's the cooler land … stay little bit down, so you don't really have the whole forest. You have forest, but it's not like the wet forest up there, *wao akua* [a distant mountain region, believed inhabited only by spirits (*akua*)] kind.

HKA: What can you tell me about Pu‘u Ka Pele? Because that’s also on top that list.

THCR: Oh, my goodness, that *‘āina* is *‘āina momona* up there too. Beautiful. You got crispy cold mountain air, you have all the native smelling trees in the forest; koa trees, *‘ōhi‘a* … I love being up over there. That’s what makes me who I am, up over there.

HKA: Wow.

THCR: You can go up on there horseback or, you know … You overlooking all of this. You overlooking the Mānā Plains, all Barking Sands, all from Polihale to Kekaha and you overlooking Lehua, Ni‘ihau. You can see majority of a lot of Ni‘ihau island, you know? It’s amazing up over there. Yeah, maybe we gotta go … On Sunday, we’re going to the *lo‘i* [taro pondfield], up Pu‘u ‘Ōpae if you guys want to join us.

KN: Yeah can, easy.

THCR: We going with Uncle Sean.

KN: Oh, okay. Actually, he told me about it.

HKA: Can I go up with my car?

THCR: No, you going to have to catch ride …

ALL: [Laughing.]

KN: You’re going to have to catch horse.

THCR: Yeah for sure. But up over there, that’s beautiful *‘āina*.

HKA: For real? Oh, I would love to go if you guys would have me. [Chuckling.]

THCR: Yeah, of course. So up over there, they're talking about having a hydro—KIUC (Kauai Island Utility Cooperative) is going to develop a hydro over there. And that's, you know … Six, seven years ago KIUC started coming up over here talk story with me to see how I felt about it. From the very beginning I said, "I don't agree with it." And then we had all kind of community meetings and none of the community was showing up. But because they was coming up, I was knowledgeable about it. KIUC would text/email me, "Hey we having meetings tonight … " And come to find out that I didn't support it, I didn't get so many emails afterwards, you know?

But fast forward six, seven years later, it's still the same thing you. And now people are being more aware it's like you know, we were showing up to these meetings seven years ago … just the word going out, we could've put a boot up to this and say, "Stop this." But now it's kind of advanced in their process and it's kind of what happens around the state. You see these projects pop-up, people are against it from the beginning but they still manage to get around the EIS (Environmental Impact Statement) or whatever it is you know? And then the project goes through … To be able to give a lease to a corporation before what that land was used and intended for, which is rehabilitating *kanaka* [Hawaiian person], not rehabilitating, that's our *ʻāina* [land]. That's what we use to feed ourselves. Like we need to be rehabilitated … It's here, we just gotta …

HKA: [Laughing.] If they understood like her umbilical cord is hooked, it's plugged into it.

THCR: Exactly. So yeah, that's another … There's so many different … All I wanted for do when I first started was for plant. This is my first taro patch you know? With pick and shovel, I dig this thing. So, I put my first *huli* [taro top, as used for planting; shoot] in the ground, I was like, that's my soil sample. The buggah grow this big so I pulling *kalo*(s) [taros], "Oh, yeah, we farming."

HKA: What kind *kalo*(s) [taros], you was planting?

THCR: I first started with one batch of Maui Lehua from Waipā. My friend Kaipo went give me one bunch of *huli* and when I went pull 'em, the buggah was like this big, maturity. Because when they grow, they grow from *huli* to mature stages, and then shrink back down when they ready for *huki* [to pull or tug]. When I *huki* these buggahs, over my head! Six feet tall because well, plus we had some shade. So, the buggahs was stretching but the corm was so big inside there! When the water is cold, you get the meanest *lepo* [dirt, soil] and …

HKA: How does it cook, like when you cook it?

THCR: *ʻOno* [savory].

HKA: Oh, my goodness, I never seen *kalo* [taro] that big.

THCR: A lot of our youth programs we do with Nā Pua Noʻeau, she would ask for *kalo*, *ʻuala* [sweet potato], like that, so we would … And then our community was saying, "Oh, what, you feeding our *keiki* contamination … " So, then it went into a whole other loop hole of rabbit hole, of chasing that *manaʻo* [thought, belief], you know? So, it's a big learning curve, but now we back.

HKA: Good … good for you guys.

THCR: Yeah.

HKA: I know this interview has been taking up a while so … Actually, you covered quite a bit of stuff of the … Oh, yeah! How about, you know, the changes throughout? We know how the sugar industry kind of affected the *ʻāina* [land] … you know … the changes … how about the military? You want to share that too? And not just now and then …

THCR: In some aspect you look as far as resource management, they put a *kapu* [restriction, prohibition] of going over there for a lot of people … a lot of the public to go over there, which in some aspect could be good because when you go over there fish now, oh, plenty get. So, I see value behind that but also, military in Hawai'i and occupation of our Hawaiian Islands is something that hits the *naʻau* [bowels, gut; mind, heart affections], regardless of what standpoint that is … I know that they're starting to do more conservation efforts—I'm not really sure how that kind of stuff is happening, but …

Also, there's a lot of burials on the base that I know of. You hear it all the time of stories that, "Oh, we want to put up one post there, one light post there." But they dig three feet. And they find *kūpuna* [referring to *iwi kūpuna* or bones of the ancestors]. So there's that kind of stuff. And yeah, I don't know … I no really feel really good about it but if it's here we have to plant seeds to make it good

for us. What are the things that we going say that they can implement that'll be more cultural sensitive, or resource management sensitive? If we doing these *mauka* [towards the mountain] works, everything that happen that we doing *mauka,* if we doing work Puʻu Ka Pele Forest Reserve, they are connected. So, having the relationship between these entities, whether it be State, the military, DHHL (Department of Hawaiian Home Lands), ADC (Agrobusiness Development Corporation), Kekaha Ag, DLNR (Department of Land and Natural Resources) … we just need more collaboration within this, from Kekaha to Polihale. Whatever entities, these seed companies, everybody is doing their own thing but that's not how it works in *ahupuaʻa* [land division usually extending from the uplands to the sea] style.

Waiʻawa, this is the name of this *ahupuaʻa* [land division usually extending from the uplands to the sea] right here, Waiʻawa is the most desecrated *ahupuaʻa* on this entire island. We have all these seed companies, the largest landfill on Kaua'i, the only landfill … everybody's *ʻōpala* [trash, rubbish] comes to Waiʻawa. You talk about resource management, if anything should be awarded in this community for hosting the landfill in this community, it should be projects like this that is bringing back life into the land. This is one contaminated place; this is one heavy cultural spot. Why not throw money into this kind of place? But you know, there's groups in our Kekaha community that say we going blow $80,000 in one night for Fourth of July. And I was like, you know what I can do with $8,000. Give me $10 you know, we can do a lot. So, there are those kind of things that I feel, oh, my goodness … Waiʻawa, the name of the valley is Waiʻawa. This *ahupuaʻa* is Waiʻawa. We gotta put in more *mana* [spiritual energy, divine power] inside this place.

HKA: The name of this place, tell me the meaning and tell me your insight?

THCR: So, it literally translates into "bitter water," Waiʻawa. I think, I don't know if that goes into the *manaʻo* [thought, belief] of Kane and Lono sharing *ʻawa* [kava], up over here. Some *moʻolelo* [stories] I've read have had that. And then others share, you know, like the Knudsen's more forward, say it was because of the stream 'cause it was dirty, or something like that. There's different interpretations of it but we know that within this well, that we have our own fresh water inside there … life can sustain itself inside here. It's amazing when you're in a *kīpuk*a [opening in a forest] like this and you feel so isolated but at the same time, you can survive. You get water … it's like one oasis inside here. You get taro patches but people no see that from the outside looking

in and they just think it's *kiawe* [algaroba tree (*Prosopis pallida*)] forest. And then when they come inside they say, "Oh, this place is green … oh, get food!"

HKA: This is like the oasis. You know, like Kaunalewa … but this is the real oasis!

THCR: Yeah.

KN: For real …

THCR: Yeah, and to create the model is what we're working for. We start at *pa'a ka piko* [the nexus or steadfast center which is the *piko* or navel] then we can go from here, and out. They can see this and maybe we can get little bit more acreage … then little bit more and we work ourselves all the way to the *kai* [ocean, sea]. We work ourselves all the way *mauka* [toward the mountain]. It's so slow. I know it's happening but …

HKA: You get the *wai*, you can do anything.

THCR: Exactly so, I no see that, that piping project is *pono* [correct or proper procedure] in anyway. If they going do that, leave Wai'awa out of it 'cause I no like any pipes inside here. If there's anything they can say is key to my fight like that, we no like pipe any of this water. You see how much animals live off of this? And this goes all the way to Polihale.

HKA: Yeah. I've noticed all the different scat as we were walking up.

THCR: Yeah, and that's one thing that they wanted to say too …

HKA: To know that they're here. It lets us know that they're here not to say that it's a bad thing.

THCR: Right. They say that you know, oh, you get *kūkae* [feces] in the ditch, and this and that but, eh …

HKA: Fertilizer.

THCR: … it's natural. It cleans itself out if you let it run. But if you put 'em in one ditch and the thing stay stagnant, or in one pipe, then the thing get bacteria.

HKA: That's a natural thing in the environment. 'Cause *'iole* [rat] too, you know what I mean? So, it's not a bad thing

THCR: That's all regenerative practices. As far as … if you concentrate them in the one area, then it becomes sick, like cancer. But if you have free roaming, everything is free, fluid. And that's the way it is now, that's the way it's been, and that's the way it should be.

HKA: *Mahalo* [thanks] for your time and I think I can stop this interview at this time.

ORAL HISTORY INTERVIEW

With

James Kanohoanu Nakaahiki III [JKN]

November 26, 2023

Puʻu ʻŌpae, Kauaʻi

By

Hannnah Kaumakamanōkalanipō Anae [HKA]

And

Keao NeSmith [KN]

Recording file name IA202241_2023-11-26_James Kanohoanu Nakaahiki.MP3 (Note: The interview took place on the mountain in the Puʻu ʻŌpae around *loʻi kalo*. Children can be heard playing in the background at times.)

HKA: *Welina kākou* [greetings everyone],[1] today is November 26, 2023, we are on the *mokupuni* [island] of Kauaʻi, we are in the Kona *moku* [district], at Puʻu ʻŌpae.

JKN: Puʻu ʻŌpae.

HKA: Puʻu ʻŌpae specifically. I am Kaumaka Anae representing Internationa Archaeology, LLC. And we are conducting a Cultural Impact Assessment interview for the Pacific Missile Range Facility (PMRF) and Kōkeʻe Park Geophysical Observatory Succeeding Lease and Easement Areas. And I am here with Keao and Uncle …

JKN: James Nakaahiki the third.

HKA: And he has said full name … we know Keao (NeSmith) … and do I have your permission to interview you … record this interview … ?

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org /gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

JKN: Yes.

HKA: *Mahalo* [Thanks], before we start … I would like to say, *e kala mai* [excuse me] if I seem so *maha'oi* [brazen]. [Chuckles.] It is not my intention.

JKN: No, no, no problem.

HKA: Okay. Let us begin this interview. Uncle James, how long has your *'ohana* [family] lived in the area?

JKN: Whoa. Good question. I'm 68 years old today, and my dad before me, and his dad before him … I'm third genertation, Nakaahiki the third. The number of years I cannot state exactly. It's too many, it's a lot. Is it safe for me to say a hundred years, maybe more.

HKA: *'Ae* [Yes]. Are you famliar with the Mānā area and maybe PMRF?

JKN: Yes, I am.

HKA: Can you tell me about that?

JKN: As for I know, to my knowledge … in a nutshell, they were called the Mānā Plains. All the land below us [relative to the interview location up the mountain at Pu'u 'Ōpae], was all rice paddies, and it was all marsh land. Before the base and everybody else came about, then the Sugar Plantation … I guess … came in. They drained the whole plains to grow sugar.

HKA: You mentioned, you worked at PMRF.

JKN: I was an employee of PMRF in the '70s to late '80s. I was a firefighter out there for the PMRF Missile Range Facility.

HKA: Have you seen any fishing out there? What kind of fish.

JKN: We used to do a lot of fishing. Shoreline fishing, thrownet fishing, gathering *ʻopihi* [limpets], *hāʻukeʻuke* [an edible variety of sea urchin (*Colobocentrotus atratus*)], and all those shell-like things on the shoreline … abundant, they were very abundant.

HKA: Have you seen *limu* [seaweed]?

JKN: *Limu*, yes.

HKA: What kind?

JKN: I cannot tell you the name, the flat one, the *limu kohu* [a soft, succulent, small seaweed (*Asparagopsis taxiformis*)]. Yeah. I don't know the exact name.

HKA: Does your *ʻohana* [family] have genealogical connects to the area or family lands?

JKN: As far as I know, according to genealogical records, I believe some of my ancestors on my grandma's side were residents of Polihale. That would be the Aipoalani and the Kilauano *ʻohana* [family]. They were descendants of Saki. Saki is a group of islands out in South Polynesia … I guess. Supposedly, they migrated from that area … Sakinese. There is a place called Saki Mana. There is a settlement out there where they arrived by canoes … I guess, yeah … no more airplanes those days.

HKA: So that group of islands, what type of … is that Polynesians?

JKN: Polynesians. Yes. They were … dark, dark people. Uncle Andy was really dark-skinned.

HKA: And where was these islands again?

JKN: Sakinese, the Sakinese group of islands … I am not sure where it is.

HKA: Okay.

JKN: That was what I was told and led to believe.

HKA: Were your family *konohiki* [headman of an *ahupua'a* land division under the chief; land or fishing rights under control of the *konohiki*] or had fishing rights, or like *haku 'āina*, (which are) land managers, or *ali'i* [chiefs]?

JKN: Not that I know of. We were just gatherers.

HKA: Do you know of any *'ohana* [family] burials? If so, where?

JKN: Yes, I do know of some. It's right by the area going to Queen's Pond. Queen's Pond Beach used to be where only the Queens used to go back in royalty days, they were the only ones allowed to swim in that pond. It was a saltwater pond specifically for queens.

HKA: And where is it located?

JKN: On the road to Polihale, you can't miss it. There is a monkeypod tree that's there. There is an intersection in the road that splits off, you take a left, you go up for about a quarter mile, before you climb over the dunes before you get to the beach, to the right of that, they are marked graves over there. There is *iwi* [the bones of the dead] in those dunes over there. Supposedly, they belong to the Kilauano *'ohana* and Aipoalani, I believe.

HKA: These queens that used to go there, were they like Deborah Kapule, Kamahelei, and maybe Queen Emma she used to come visit, yeah?

JKN: I'm not sure.

HKA: Now we are going to get into some Hawaiian traditions and cultural practices. What kinds of Hawaiian traditions is practiced by you or your *kūpuna* [elders, ancestors]? *Mālama 'āina* [caring for the land], *hula* [Hawaiian dance], *lei* [necklace made out of flowers, leaves, and/or shells, etc.] making, *'oli* [chant], any type of form?

JKN: Right now pretty much, I am into *mālama ʻāina.* As far of other cultural and arts, I'm not …

HKA: So what do you guys do on this *ʻāina*, here?

JKN: On this farm here?

HKA: Puʻu ʻŌpae, yes.

JKN: We are trying to grow *kalo* [taro], and raise some live stock.

HKA: Such as?

JKN: Sheep. We are experimenting with sheep right now. There is a lot of wild cattle roaming around, but we haven't gone that far into ranching and stuff. Basically, right now, it's just *loʻi* [taro pondfields] and maintaining the irrigation system. Trying to maintain the ditch and irrigation system for future followers, whoever wants to be part of the land, work the land, and grow food.

HKA: How much acres do you guys *mālama* [take care of] here?

JKN: I believe it's 231 acres. The 231 is further down. We have a lease for 231 acres, but right now it's only maybe five acres that we actually fenced in.

HKA: And so that building is part of it too?

JKN: Yes.

HKA: What is over there?

JKN: That's just our shed, our storage and work shed.

HKA: I noticed you guys *mālama* different plants in the area as well.

JKN: Yeah, we trying to. That was here when we came here. People prior to us were trying to raise protea. We just *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of took it over, and whatever survived. It seems to be thriving right now. Basically, we are going to do canoe crops, so right now, we get one *ʻulu* [breadfruit (*Artocarpus altilis*)] tree over there that we trying to grow.

HKA: I notice … I seen some *ʻuhaloa* [a small, downy, American weed (*Waltheria indica var. americana*)].

JKN: *ʻUhaloa* [a small, downy, American weed (*Waltheria indica var. americana*)], yeah. There is some the *kine* too, it grows wild, what's the name of that … *ʻaʻaliʻi* [Native hardwood shrubs or trees (Dodonaea, all species)] … yes.

HKA: Yes.

JKN: It *kine* of grows wild here for whatever reason. We had one person come up here, he's a … he works for the National Botanical Society or Gardens. He pretty much pointed it out to us. I didn't know what the thing look like. I never pay attention when I went to school. Now I going learn the hard way. Now I gotta learn all over again.

HKA: Yeah, join the club. So, of course, you practice this at Puʻu ʻŌpae, do you practice any kind of *ʻoli* [chant] or cultural protocol?

JKN: I do. I was reminded by a great aunty of ours, not even blood related but we call her aunty, Aunty Mahi Poepoe. She was from Molokaʻi. She was a pretty powerful lady. She could … believe it or not … she could see, she could feel, she could … yeah … we learned a lot from her. She came over and she made it her mission to bring awareness to the *ʻohana* [family] what needs to be done. She pointed out a lot of places to us like Polihale, Waimea, Kōkeʻe … so yeah. Actually, when we went down to Polihale over there by the Queen's Pond, she made us do a protocol. You offer prayer and then you throw *paʻakai* [Hawaiian salt, rock salt]. She said the *paʻakai* is part of the earth it opens up the portal … as they would say … to get in touch with the spirits. Ask for permission to enter, and … what your intentions are … why you are here. Then when you leave you do the opposite, you give thanks, and give *paʻakai* again to close the portal … I believe.

HKA: Yeah, make sense to me. Was any of your *kūpuna* [ancestors, elders] *mahi'ai* or farmers?

JKN: Not that I know of.

HKA: How about *lawai'a* [fishermen]?

JKN: Yeah, I had uncles. I had an uncle, he was a fisherman.

HKA: Where he used to fish?

JKN: All over. A lot at Polihale, on the base … yeah. He was a net fisherman. He used to surround *akule* [big-eyed or goggle-eyed scad fish (*Trachurops crumenophthalmus*)]. Thrownet fisherman. That would be my Uncle Benny. We call him Uncle Benny. His real name is Benjamin. That's one of my dad's brothers. My dad had one, two, three … big family … five brothers … I think … and couple sisters. But never get to know all of them because we were like babies when some of them passed and moved away.

HKA: So he used to go *akule* fishing?

JKN: My Uncle Benny, yeah. He always brought the family together to go akule fishing. He go surround and *hukilau* [a seine; to fish with the seine. *Lit.*, pull ropes (*lau*)], or they pick up with the boat if no can bring it to shore. Then we all used to go to his house and *hemo* [unfasten, loosen] fish. Whatever you *hemo* is yours. He never did sell one fish … not one fish … it was all given away. But he used to do it often, every weekend if he could.

HKA: He only surround or he go *'upena kiloi* [throw net] too, like throw net?

JKN: Throw net. He was a net fisherman.

HKA: He go like what *nenue* [chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus, K. vaigiensis*) …

JKN: Yeah. *Nenue*, *moi* [threadfish (*Polydactylus sexfilis*)] … *kala* [surgeonfish, unicorn fish, Teuthidae], *palani* [a surgeonfish (*Acanthurus dussumieri*)] … Yeah, he had the eye. Couple of my other uncles used to go too. But my dad wasn't so much fisherman.

HKA: Any *paniolo*, cowboys in your family … or raised cattle?

JKN: Not so much. We had horses. I mean it's not like a whole pasture full of horses, but maybe one or two.

HKA: To get you guys to places.

KN: Tie 'em in the bush, yeah?

JKN: Yeah, Keao remembers.

KN: They used to break away sometimes, come inside our yard.

JKN: We used to tie the horse in the back before never had houses … yeah … in the homestead.

KN: We used to go feed 'em.

JKN: Yeah, that was back in the days.

KN: That was good fun.

JKN: So you guys get homestead land. I am on homestead land, yes.

HKA: Nice, and in Kekaha … yeah?

JKN: Yeah.

HKA: Was it generational, did your father live on homestead land as well?

JKN: No, they did not. We had a big family, six of us. Plantation worker … yeah, he couldn't afford. He was on the list, and actually, I took his spot on the list when I became of age. Yeah, he gave me the spot, he just couldn't afford to build Hawaiian Homes.

HKA: So he was working for the plantation, what was he doing for the plantation?

JKN: All his life, yeah. Truck driver, equipment operator, he used to drive the crane, load the cane on the trailers, yeah.

HKA: So you were raised in that Plantation Era, can you tell me about that?

JKN: Hard work. Was hard work and poor times.

HKA: What was around those areas? I know you guys had stuff like swimming pools, communiy centers …

JKN: Oh, yes.

HKA: Was it like a little town that the plantation started? You guys had gas station …

JKN: Oh, the community was … yeah. They did provide for the community. Everything was evolved around the mill. Sugar was king. Although it wasn't the best interest for the people.

KN: For the land for sure.

JKN: But they … that's all they had. It raised a lot of families.

KN: It kept us tight, together actually.

JKN: Yeah, so they had swimming pool. They had two pools actually, one in Mānā. I don't know if Keao remembers that one.

KN: Yeah. I even talked about it.

JKN: Mānā pool.

KN:That's the only one had the high dive.

JKN: It was down the road, yeah.Water was like … I think … it was spring water … right above … higher.

KN: Exactly. Cold too.

JKN: On the bottom of the ridge.

KN: You think Kekaha was a desert, but had cold water from the spring.

JKN: Oh, yeah.

HKA: It's different from Kekahawai'ole on Big Island …

JKN: Oh, yeah.

KN: Yeah. That's all lava field.

JKN: Yeah, yeah,.

HKA: Yeah.

KN: The beach over there is nice though, Kekaha Beach.

JKN: Yeah, it was for the community, the westside. So, I was telling Keao, they were the ones maintaining all these roads and reservoir … the plantations … because they had sugar(cane) all up here. They had sugar(cane) at one time.

HKA: As far as you can remember, who was the *luna*(s) [foreman, overseer] of the plantation?

JKN: [Chuckles.] Who else? The Englishmen. The Caucasians, of course.

HKA: There was a lot of ethnic cultures, yeah?

JKN: Oh, yes, yes. Filipino Camp, Japanese Camp, Chinese … Puerto Rican … Budinkys [Puerto Rican].

KN: Portuguese.

JKN: One of my uncles was a Budinky.

HKA: They are *paniolo*(s) [cowboys] too as well.

JKN: They had a ranch. Plantation had a ranch.

KN: You remember the rodeo rink, Kekaha.

JKN: Yeah, had one arena.

KN: Mmmhmm. And the stables …

JKN: Was thriving at one time. What ever happened?

KN: Was good on Sundays. You remember Sundays used to have rodeo?

JKN: Mmmhmm.

KN: So, we would be in church, and we could hear in the distance, you could hear the rodeo going on.

JKN/HKA: [Laughing.]

JKN: Lot of history, lot of history Kekaha.

HKA: So, are you Mormon, are you LDS (Latter-Day Saints) as well?

JKN: Yes, I am. Not too active though. [Laughter.] My church is up here. Eh, as long as you get 'em in spirit, yeah?

KN: True that.

HKA: Yeah, exactly, and to tell you the truth … you so close.

JKN: Yeah. Too close, ah? [Chuckle].

HKA: [Chuckle]. So, your mom, what did she do?

JKN: She was a home maker. She did work at one time. The canneries. Pineapple was also king on the island at one time. So, yeah, she did do work in the cannery.

HKA: Okay.

JKN: When she wasn't having babies. You know my dad …

HKA: Oh, yeah, you have a big family.

JKN: Yeah, six.

KN: Beautiful mom, his mom. Awesome lady. I remember her growing up.

JKN: Filipino.

HKA: Really.

JKN: Yes, full-blooded Filipino. I am Hawaiian-Filipino. Half-half.

HKA: Did any of your family gather shells to make *lei*(s) [necklaces made of flowers, leaves, shells, etc]?

JKN: Not really, my dad had some *puka* [hole or shells with holes] shells. I wasn't interested in those cultural things.

KN: Where did you guys go for *puka* shells, Polihale?

JKN: Polihale.

KN: Yeah, same like me.

JKN: Queen's Pond, with my dad.

KN: Queen's Pond.

JKN: My dad used to do shoreline fishing … shoreline … in his old Willy's jeep, we would drive down. You could drive on the sand in those days.

HKA: Some people drive on the sand …

JKN: Still yet …

HKA: Yeah, I see ’em like by Kekaha when I was walking on the beach.

KN: We used to always … that was one of the pride and joys of the westside of Kaua‘i.

JKN: Yeah.

KN: Yeah, we could always go on the beach.

JKN: I have driven from Kekaha …

KN: Go, plug in your fishing pole, camp … all the way.

JKN: … to Barking Sands.

KN: Barking Sands.

JKN: Yes, all along the shoreline. But then you gotta access the base … yeah … you gotta go through the base roads. Some parts of the base, there is no roads along the coastline. Yeah, those were the days.

KN: What kind restrictions you remember growing up because of the base for the public?

JKN: Restrictions … well you had to check in at the gate, so signing in.

KN: You could pass around on the beach at Nohili?

JKN: Yeah, in fact when my kids were little, we actually camped by Nohili Ditch, and in front of Sandia all that.

HKA: About what year was that?

JKN: Oh, shoot … how old were they … late ’70s … yeah, late ’70s … they were only six, seven years old.

KN: But then they shut down, they blocked the access for a while in the ’80s, ’90s … I think. You could only go so far, then get one fence, and get the security guard, and he tell you, “You gotta go back on the beach.”

JKN: Yeah.

KN: You couldn’t go around, now you can.

JKN: After more people was accessing the beach, the coastline, then they put some restrictions on it. Yeah, and then when 9/11 came, they was like … total shut down.

HKA: Oh, that’s when it really shut down?

JKN: Yeah.

HKA: Oh, so not too long ago.

JKN: No. No.

HKA: Wow.

KN: ’Cause when growing up, church, you remember, we used to go camp over there Kinikini?

JKN: Yeah, Kinikini.

KN: Church camp.

JKN: My sons remember camping. In fact, my sons ask, "Can we go fish Kinikini?" My oldest son, still goes on the base and still goes fishing. He said, "Well you cannot drive there anymore, you gotta walk." You gotta park outside, and then walk in.

KN: But they get the cabins that military personnel they can stay for vacation on the beach close to the runway. That area was totally restricted to the public. I think now can?

JKN: No, now no can.

KN: See, so …

JKN: You still cannot.

KN: That is restricted. So, you cannot just walk on the beach, keep walking all you want, or go all the way to Polihale, get certain points you gotta stop, and no access.

JKN: Yeah.

KN: And then to get on to Navy Housing …

JKN: Navy Housing, yeah.

KN: … cannot.

JKN: Cannot. There's a a blockade over by the …

KN: You gotta get one special permit?

JKN: Yeah, you can get on to the base, but there is actually a blockade on the beach. They put a berm over there, right by where the rifle range is. That would be … Nohili … no, not Nohili … what point that is …

KN: Before … that's Kokole Bay.

JKN: Kokole. Yeah, they blocked that area off … you cannot … drive further pass that.

HKA: Would be nice if could yeah, again?

JKN: Yeah.

KN: I remember to, they had the … what do you call … you remember the big boats they had with the pontoons on the beach?

JKN: Oh yeah. Like they do on O'ahu at Bellows and stuff.

HKA: Amphibious.

JKN: Yeah. Amphibious … landing.

KN: Massive pontoon … stay going, and get plenty of spray all around, and the thing go right on the beach.

HKA: Remind me of Normandy.

JKN: Yeah, it's like an air boat, get two big fans, and the thing just drives right up to the sand. Right up to the shore.

KN: RIMPAC (Rim of the Pacific) exercises.

JKN: But I remember when I was little, they had maneuvers right in Kekaha, right outside Kekaha, Second Ditch. They had landing crafts, you know the kind you see in the World War II movies? This barges, flat barges come in, and then the gate drops down. Yeah, they landed right there in Kekaha. They even had paratroopers.

KN: Yeah.

JKN: Jumping parachutes in the air. Mānā stretch, there were alfalfa fields, the plantation was raising alfalfa for the cattle. They used to raise cattle before. Yeah, the military made a big presence. In fact, the biggest presence that people remember is Uncle Joe Manini up here. His … I don't know if you guys remember passing that Quonset hut?

HKA: Yeah.

JKN: Yeah. So when they would do … when they coming on shore … can you imagine, all these big ships out there, all these landing crafts … you probably could see it clear from here … I can see 'em … they would bring in their aircrafts, helicopters 46s, H-1s, whatever … and they would do maneuvers up here … the military, a lot of things they would do was coastline and ridgeline, yeah … that's their mission and objections, yeah …

KN: The Chinooks, yeah.

JKN: The Chinooks, yeah … the 53s, 46s, and 47s. So they were landing troops up here on Hawaiian Homes Land. Uncle Joe Manini, he wasn't for that, he did not agree, and he actually went to … I don't know if you guys know that … he went to battle with them. He had his rifle with him, and he told them to get off of his land. Yeah, he probably … yeah.

KN: That's Eben's dad.

JKN: Eben, yeah.

HKA: So, you know any stories about Mānā, and the region?

JKN: Mānā, what would be a good story?

KN: You ever heard about the mirage?

JKN: No, I have not.

KN: Oh, the Mirage of Mānā because get the heat and stuff like that?

JKN: Oh. No.

KN: Okay.

HKA: Limaloa is the … *akua* [divine, godly] yeah … of that mirage? Have you heard about the Lohiʻau, Pele, and Hiʻiaka ordeal, about Kauaʻi in this area, any stories about that?

JKN: Pele?

HKA: Yeah, and Hiʻiaka … well, actually, there are stories about Pele, but Hiʻiaka too yeah, when she came to fetch Lohiʻau.

JKN: I don't know that. Who was Lohiʻau sister or somthing.

HKA: Lohiʻau was the lover of Pele, and Pele sent Hiʻiaka to come and get him …

JKN: I see.

HKA: … from over here.

JKN: Yeah.

HKA: And Hōpoe.

JKN: Aunty Mahi used to tell us some stories. She had some great stories, or knowledge or whatever. I remember one time she was telling us that there's a, there's a lava tube that is connected to the west … and I'm not sure where it comes out … but that's where they used to escape from the north shore

or whatever, if they were trapped in by enemies … maybe it was by Lohiʻau, Pele's lover or something … and today that's the Wet Caves in Hāʻena. There is a passageway that comes out I forget where, Polihale probably.

HKA: From Hāʻena to over here.

JKN: Yeah.

HKA: Yeah, I believe in that. Did you hear anything about the epidemic or diseases after Contact … you know in the stories of your ancestors? They probably lived through that time about the epidemics from the foreigners and the diminishing of the population? Was there any stories carried in your *ʻohana* [family].

JKN: Yes.

HKA: Can you tell me about that?

JKN: Koʻolau the Leper. Supposedly he is family to us. The story is that Koʻolau refused to go to Molokaʻi for whatever reason, and he fled to Kalalau Valley. I don't know why but they sent soldiers to go get him, but they could never capture him. Piʻilani, the wife of Koʻolau, she helped him escape. I am not sure if they escaped to Niʻihau or whatever but yeah … the Legend of Koʻolau and Piʻilani. They eluded the soldiers, he was never caught. But one story my uncle, who was a fisherman, Uncle Benny … he told us when we were visiting sites and places with Aunty Mahi … Koʻolau is buried on Kauaʻi in Kekaha. Right by the intersection.

KN: That's where their homestead was, Piʻilani guys.

JKN: Get one *papa* [flat area] over there, it's a sand dune, and it's in line with Poheo. So it's Poheo Point on Kauaʻi and Poheo Point, Niʻihau. That's what she told us. Uncle Benny told us, if we find his rifle, we going find him … supposedly, that's where he was buried. I believe he told us that this is all grave sites. They used to do … I not sure if you guys familiar with this … *kīlua*(s), *kīlua* would be mass *imu* [underground oven]. I guess, when they had a plague or something, they would burn

all these bodies so the disease don't spread. So he said that's what they did over there. I don't know if they burned him or he was buried. They said, "If you guys find his rifle over here, that's where you guys going find him, you going find his bones." Supposedly, that's where he was buried. Yeah, so there was one big open pit over there Uncle Benny told us about. I guess, as a child, he had seen. Yeah, interesting.

HKA: Do you know about the *Mū* [legendary people of Lāʻauhaelemai, Kauaʻi] and the *Menehune* [legendary race of small people who worked at night, building fish ponds, roads, temples] in the Mānā area?

JKN: *Menehune*, yeah. And the what you said *moʻo* [water spirit, lizard]?

HKA: The *Mū*?

JKN: The *Mū*.

HKA: Yeah, they are supposed to be connected to the *Menehune* yeah.

JKN: Oh, this tribe of people yeah. They not that small though from what they researched, yeah.

HKA: Yeah.

JKN: The legend is that they were little people, but they weren't that little. They were hard workers, they don't work in the day, and they only come out at night … for whatever reason, yeah.

HKA: Cooler.

JKN: Cooler. They smart, see how smart they was.

HKA: [Laughing.]

JKN: They could dig tunnels, yeah.

HKA: When you digging tunnels, you no need the sun.

JKN: Even the Chinese, the *Pākē*(s) [China or Chinese people], yeah.

HKA: I gave you a list of these places, if you know any of them, can you add to that?

JKN: Which one was that?

HKA: You can just go through them, take your time.

JKN: [Looking through a list of place names] This is all …

HKA: Yeah, the different places.

JKN: This is all definitions of places.

HKA: In the back get too.

JKN: Niu Ridge is that, right over there.

HKA: So, Niu Ridge there were a lot of coconuts, I gather … supposedly.

KN: Especially down the flat side, *makai* [towards the ocean].

HKA: Oh, maybe because they like the sand … yeah … the *niu* [coconut].

JKN: Niu Ridge … I guess … yeah, coconut. You right, okay, *niu* … supposedly there is a canoe house on this ridge. Yes, yes.

HKA: And is that the one with the *Menehune*.

JKN: I'm not sure, Eben Manini, Erna's brother knows exacly where it is. There is a formation of a *pahale* [enclosure in front of a house], supposedly it's a canoe *hale* [house]. I know Aunty Mahi once told us that on these ridges of Polihale, they used to dig out those canoes up on top the ridge. They select the tree, fell the tree, dig out the canoe … they used to just slide 'em down the ridge, and launch it at Polihale.

HKA: Used to have Kahālauaola canoe house, and it was … in the valley of Kawaʻahiki at Puʻukapele …

JKN: Yeah, Puʻukapele, right.

KN: Puʻukapele is that way [pointing in a northerly direction].

HKA: Right?

JKN: Yeah, right up here.

HKA: This area where the canoe house was at Kahālauaola.

KN: Kahālauaola.

JKN: That might be it, but I'm sure there are more. That would be the ridge, but Polihale is couple ridges over … Polihale Ridge. That might be it, I'm not sure.

HKA: This is just research I was doing.

JKN: Yeah. Saki Mānā, yeah … Saki, yeah.

HKA: If you see anything let me know. You wanna talk about if you see some place, things your remember of those places?

JKN: Makahoa, Kaunalewa, this is all up here … Wailau. Puʻu ʻŌpae, Shrimp Hill, I didn't know that. ʻ*Ōpae* …

KN: [Chuckles.] *ʻŌpae*.

HKA: Gotta have had *ʻōpae* [shrimp] over here.

JKN: Gotta have had shrimp, if not, gotta bring 'em back.

KN: That was the favorite food of the *Menehune.* They love the *ʻōpae*. Puʻukapele that's the homestead of the *Menehun*e.

HKA: Yeah, so they right next to their food source yeah?

JKN: Mmhmm.

HKA: [To KN] Was it you who said about the trading of one shrimp.

KN: Hena.

HKA: Hena was saying. That was pretty cool, the trading of the shrimp. One shrimp. [Laughing.]

JKN: Yeah, amazing. [Chuckles.]

HKA: If you see anything, if anything jumps at you.

JKN: No. This is all knowledge to me, I never even know any of these things. [Chuckles.] I know that Polihale is house also spirit, yeah? *Poli* is spirit, *hale* is house. Aunty Mahi did mention it to us.

HKA: *Poli* can be bosom too yeah.

JKN: *Poli*?

KN: When you go … especially when you come from the ocean … you come on the boat … you coming into Polihale … get the two ridges … this side get Hā‘ele‘ele … look like …

HKA: One bosom.

KN: Yeah. And everybody live down here, so that was the *hale* [house] … so it’s like when you carry one baby like this [gestures like cradling a baby] … so that is the *hale* of the baby … and then down the beach is all the … *po‘e*.

JKN: Oh, I was mistaken.

KN: But that is true because as a *leina* [or leina-a-ka-‘uhane or place where spirits leap] that’s where the spirits jump.

JKN: Yeah, leaping … leaping into the other world.

HKA: *Leina ka ‘uhane.*

KN: They follow the sunset. They come from the east side, Anahola side, they pass cross the top over here, they end up over there at Polihale, and that’s where they go in the ocean.That’s why one of our friends, you remember, Dana Olores.

JKN: Yes.

KN: He wen’ [Hawaiian pidgin meaning went or completed an action] go *make* [to die] yeah, he had cancer, he knew he was dying, he drove his truck all the way to Polihale, he took his dogs, tied up his dogs, and sit down …

JKN: Oh, he knew …

KN: Yeah, he knew.

JKN: … where his spirit needed to be to get to the next …

KN: Typical Dana, he was like that. Heavy, *nō* [intensiying part].

JKN/HKA: Yeah.

JKN: House of bosom, yeah … make sense. That's why all the Polynesians … the people from Polynesia would come here with there canoes. Because there is a *hula* [Hawaiian dance] platform over there. Aipoalani, they were *hula* masters, yeah.

KN: Yeah.

HKA: Geez, that's what I would like to see.

JKN: Well, it's overgrown, but if you go climb up, there is a platform.

KN: Get some more.

JKN: I don't know if the *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] guys … Doreen … not Doreen.

KN: Yeah, Golden.

JKN: Golden, she was trying to …

KN: Doreen … Nohili … yeah, the daughter.

JKN: Trying to restore the area.

KN: With Kunane guys.

JKN: Yeah.

KN: But get some more along Nā Pali and some of the valleys, like Miloli‘i, get one other *heiau* [place of worship, shrine], one *papa* [flat area], one flat one, and that’s a *pahula* [place where *hula* is danced and ancestors are recognized]. So the Polihale one is a *pahula* and the Miloli‘i one is another *pahula*. Aunty Margaret when she was young, they used to go along the rocks, to that one, that *pahula*. That’s how she was educated in *hula* [Hawaiian dance], was Polihale and over there. But that’s for Kunane tell. Get some more *pahula* along the way, Nā Pali, all the whole way.

JKN: I’m the least knowledgable. I’m sorry …

HKA: No, you giving me some good information. Alot of people think they don’t have any information, but they do, and you gave me a lot of good information.

JKN: Yeah. It’s from what I can remember .

HKA: Yes. Is there anything you want to add in the historic period, the time of the plantations … and anything you want to add in that portion?

JKN: Not really, but maybe one thing. My *‘ohana* [family], the Nakaahikis they weren’t *luna*(s) [foremen, overseers], we were warriors, we were workers … you know … my *tūtū* [grandparent] man, if anything, was a locomotive driver. So he used to drive the train that carried the cane, so I guess, that was a pretty high up job driving one train … you know. All his sons, my dad, Uncle Benny, and all them … they shovel all the coal in the fire box to keep the train going. They all had to shovel the coal for him so he could drive the train and create steam, steam train … yeah, that was my *tūtū* man. But he was [chuckle] a “happy go lucky” guy.

KN: What was his name?

JKN: James.

KN: The first.

JKN: The first.

KN: Okay.

JKN: James Kanohoanu, Kanohoanu is my middle name.

HKA: Kanohoanu.

JKN: Kanohoanu.

HKA: And what does that mean?

JKN: You gotta go ask sister Gwen. Something hard head, I don't know. We been known to be very head strong, hard headed … quick tempered. Well, anyway, my *tūtū* [grandparent] man, he was train driver, and I don't know if it made a bad influence on him, because he liked nice cars, new cars.

KN: He stay buried at the Hawaiian cemetery?

JKN: Yeah. So get him, my *tūtū* [grandparent] lady …

KN: By your guys plot?

JKN: … yeah … and my dad right in the back.

HKA: So all your guys *'ohana* [family] buried at Kekaha cemetery.

JKN: Yeah, all in one area.

KN: Ours is next to theirs. [Chuckles.]

HKA: Oh, nice. So, you guys plenty *lū'au*(s) [feasts, parties]?

JKN: Yes.

KN: Mean. Uncle Benny did the best.

JKN: Yeah.

HKA: Because he get all the fish yeah?

JKN: Yeah.

KN: He get all the connections.

JKN: *Kālua* [to bake in the underground oven].

KN: *Kālua*. Even right now, all his nets still stay hanging at Uncle Benny's house.

JKN: Still hanging over there.

KN: Yeah, still hanging in his whole garage.

JKN: Yeah.

KN: All the time, if he wasn't fishing, he was fixing net.

JKN: Fixing net.

KN: Fixing net, making net, sitting in his garage going. Pass the house he was always like that.

HKA: Gotta *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] that's why, gotta patch all the time.

JKN: Yeah.

HKA: My dad did that all the time that's why.

JKN: No can have *puka* [hole] net when you go fishing.

HKA: Yeah, you no like the fish run away.

JKN: [Chuckle].

HKA: What are the good and bad changes of the military occupation and sugar industry?

JKN: The good was, it provided jobs for families to raise their families, jobs and opportunities in the work force. But the bad would be taking away all the cultural significance and practices.

HKA: How about the *ʻāina* [land], the positive and negative?

JKN: The *āina*, whoo … drastic changes … I cannot say if it's good or bad … I cannot tell right now. One bad thing is the landfill.

HKA: Can you describe the landfill as a child until now?

JKN: Yes, it wasn't that high. [Laughing.] But then again, there wasn't that much people on the island … from 30,000, 40,000, 50,000 … now, I don't know what it is, 60,000 probably. More people means more trash generated. And then we had couple hurricanes that really built up the landfill … you know. Why would you want to put a landfill on a flat piece of land?

HKA: By the ocean, yeah.

JKN: By the ocean. And it has grown significantly. It's 70, 80 feet up in the air now.

HKA: It's own *pu'u* [hill] yeah?

KN/JKN/HKA: [Chuckles.]

JKN: Pu'u 'Ōpala [Trash Hill]. Pu'u 'Ōpala we call 'em. And then there has been a lot more urban development, but that's progress, yeah.

HKA: Progress or population.

JKN: Population.

HKA: So anything else you want to add?

JKN: No, I think I said enough. I no like say too much, I might get myself in trouble over here.

HKA: We'll end this interview right here and I want to *mahalo* [thank] you for your *'ike* [knowledge] and *mana'o* [thoughts]. *Mahalo*.

JKN: You are welcome.

ORAL HISTORY INTERVIEW

With

Sean Mokuonahiala Anadrade [SMA]

November 26, 2023

Puʻu ʻŌpae, Kauaʻi

By

Hannnah Kaumakamanōkalanipō Anae [HKA]

And

Keao NeSmith [KN]

Recording file name IA202241_2023-11-26_Sean Mokuonahiala Anadrade.MP3. (Note: The interview took place on the mountain in the Puʻu ʻŌpae around *loʻi kalo*. Children can be heard playing in the background at times.)

HKA: *Welina kākou* [greeting everyone][1], today is November 26, 2023 we are on the *mokupuni* [island] of Kauaʻi, in the Kona *moku* [district], and we are up here at Puʻu ʻŌpae. I am Kaumaka Anae representing International Archaeology, LLC. And we are conducting a Cultural Impact Assessment interview for the Pacific Missile Range Facility (PMRF) and Kōkeʻe Park Geophysical Observatory Succeeding Lease ad Easement Areas. And I am here with Sean. Sean can you say your full name.

SMA: Sean Mokunahiala Andrade

HKA: *Mahalo* [Thanks]. Do I have your permission to record this interview?

SMA: Yes.

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org /gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

HKA: Let us begin this interview. We are going to start with *moʻokūʻauhau* [genealogy] and *pilina* [connection] to the *ʻāina* [land]. How long has your *ʻohana* [family] lived in the area?

SMA: On the west side of Kauaʻi, my mom is from Waimea Valley, born and raised in Waimea. So that is pretty much my connection as far as to the west side.

HKA: So where is your dad from?

SMA: My dad is from Kalaheo. My grandfather is Joseph Andrade … my dad is Joseph Andrade Jr. lives in Kalaheo, had a homestead in Kalaheo, raised cattle. So I lived most of my life in Kalaheo … all my life basically in Kalaheo.

HKA: Ranching, that was your dad's specialty?

SMA: Ranching growing up was … yeah, a specialty, yeah … the thing our family did. Actually my great-great grandfather worked for Robinson, and was one of the *luna*(s) [foremen, overseers] for Robinson back in the day when they did cattle ranching. He was also a saddlemaker, a Hawaiian saddlemaker. That's some of the relationship on my dad's side too. My great grandparents actually lived in Makaweli on this side which is right after Waimea. There is some connection too on the west side from my great-great grandparents and my great-grandfather.

HKA: And so they were all Andrade as well right?

SMA: Yeah.

HKA: And your mom's *ʻohana*?

SMA: My mom's *ʻohana* is Yorkman. Actually, my grandfather came from Maui, Craddock Yorkman. He came from Maui. My grandmother, Luka Hoʻopai, she came from Oʻahu, and was actually *hānai*(ed) [fostered, adopted] here by the Aona family. They raised their family in Waimea Valley … where my mother was born and raised … I was also born in Waimea.

HKA: What did your mom's family do, and your mom as well?

SMA: My grandmother was a stay-at-home mom for the most part. My grandfather was a police chief. He was one of the first police chiefs for Kauaʻi. That's what he did.

HKA: Nice.

KN: What years was that? Early 1900s.

SMA: Yeah. Yeah, so he passed before I was born. I was born in '69. So I don't know. I have documents that have all that stuff , I just don't know it off the top of my head.

HKA: No worry. So how long have they lived in the area? So it was multi-generational right?

SMA: Yeah.

HKA: So what, at least five generations? At least, yeah?

SMA: Yeah, yeah.

HKA: So it is like 100 or more years … so like you guys are *kupa* [native born, attached to a place] of this *ʻāina* [land]. [Chuckles.] Are you familiar with the Mānā area and PMRF (Pacific Missile Range)?

SMA: I am, a little bit … with PMRF … and what Mānā used to be … a little. Growing up in our younger years, having the springs accessible … you know … remembering of the Mānā Camp … their own spring water swimming pool.

HKA: And that was Plantation Era.

SMA: Plantation Era. And the springs was all Plantation Era when they tried to control it and utiltize it, and eventually everything shut down. Today they capped all of that stuff. That is something I would

like to see come back. But f course, the Mānā area is a flood zone, it's a swamp. Capping off the springs and doing all that stuff, will help to keep it drier. I'd like to see it come back. I'd like to see what it once was. Back in the old days, they could actually canoe from Waimea River all the way to Mānā. Of course, today that would be probably hard to do, but I would like to see that happen.

HKA: Good if they could have a canal that actually could do that.

SMA: Yeah. Right. That would be beautiful.

HKA: Were your *kūpuna* [elders, ancestors] like *konohiki* [headman of an ahupua'a land division under the chief; land or fishing rights under control of the *konohiki*]?

SMA: Not to my knowledge.

HKA: Any *ali'i* [chief] in your *'ohana*, *ali'i* line or anything?

SMA: Not to my knowledge. Not that I know of. I don't think so.

HKA: Okay. Any *'ohana* burials that you know of, like even in the cemeteries, or ancient?

SMA: I do not actually. Only of current. The Hawaiian cemetery in Kekaha.

HKA: Where are your parents buried?

SMA: My parents, both of them are still alive.

HKA: Oh, I'm sorry.

SMA: My grandparents are in Kekaha cemetery. And that's on my mom's side, yeah. My dad's side is in Kalaheo cemetery, Catholic cemetery.

HKA: At the church.

SMA: Right across the church in Kalaheo.

HKA: Yeah.

SMA: Yeah.

HKA: What kind of Hawaiian traditions do you … you *mahi'ai* [farmer] right over, so you practicing growing agriculture here … do you practice it just here or other places?

SMA: At home. At home too. At home we have about 10 acres at home.

HKA: Where is home?

SMA: Kalaheo, in Kalaheo I've always enjoyed raising animals. So the farming part, I have always enjoyed. Doesn't matter the animal, I have always enjoyed that. As far as the farming part, I have been growing up, watching *'ohana* [family], my *tūtū* [grandparent] man, cousins from both ends of the island, from Wainiha Valley to Makaweli Valley all raising *kalo* [taro]. I have always been asked to help in the *lo'i*(s) [taro pondfields], but as a young kid, you don't want to work in the *lo'i*(s). For one, I was *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of afraid of toads at a young age.

HKA: [Chuckling.]

SMA: I was like, "I'm not getting in." But it's funny, the little things I seen, I watched at the corner of my eye as a young child, I'm starting to practice some of that today. So, it's been a learning experience for me to actually start to learn how to plant kalo, raise *kalo*, so it's pretty rewarding. We still learning, we still trying to figure it out. We've had some success, I guess you can say. At first, that very first crop that we had planted and harvested, and did on our own was amazing. It was the best *poi* [a smooth paste made out of the root from usually the taro plant], I had ever eaten. It was *Lehua* [a variety of taro] … everything just lined up, it was perfect. When we share with community

members and *ʻohana* [family], and people who eat *poi* daily, they could not believe it, and we had so much compliments about it reminding them of their childhood … because that is what *poi* is supposed to taste like. Although, sometimes it doesn't look very successful and we are trying to figure out our end, but the end result is like, "Oh, my gosh." So we are trying to get to that first batch … keep up with that first.

KN: Is this the first planting?

SMA: No, second planting.

KN: Second planting?

SMA: In this *loʻi*. That is the first.

KN: First planting on that one, the middle one or that one?

SMA: The middle one, we took out of that, we harvested out of that couple months ago.

KN: Okay.

SMA: But the first one is …

KN: Looking good though.

SMA: Yeah, and it gets better every time. Although the flooding and stuff that we just had *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of screwed this *loʻi* [taro pondfield] up right here with all the big rains we had last week it *kine* of messed us up because we just planted too. Really screwed us up. But live and learn, we still learning about the area. We've been with Puʻu ʻŌpae anyway, I'm also with Kekaha Hawaiian Homes Association (KHHA), and I am the chairperson for this project, and we have a lease with DHHL (Department of Hawaiian Home Lands) for 231 acres total. My Uncle Gilroy Yorkman, Kawai

Warren, and a bunch of others who were part of KHHA (Kekaha Hawaiian Homelands Association) back in the day, got this lease and started the process in 2010. Over time there was a lot of red-tape dealing with the State. A lot of challenges. As you can see there is a challenge with us getting here … you know … trying to be here. With our project here, it *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of opened up my eyes on where I wanna be, and what I wanna do. This section here is called the nursery, Kawai guys called this the nursery. This is where a lot of learning was taking place to *kine* of understand the land. The land is bare, it's not very high in nutrients so we are trying to keep things organic as possible, as natural as possible. We still have a lot of work to do with reforestation. We got 75 acres of reforestation. We got 50 acres pastoral which we will do cattle, sheep, and chickens. We've got 50 acres of orchards which will be probably fruit trees and stuff like that. Ten acres in the front or so is a cultural center. We got a mix of another 20 someting acres of more *lo'i*(s) that we want to do. So this is just the testing and beginnning stages of what we trying to get to. This is the place where … our deal with DHHL (Department of Hawaiian Home Lands), with Hawaiian Home Lands, the deal they made back in the day was, this is where we gonna help rehabilitate Hawaiians for the day that their put on their lands. If you don't know how to farm and you want to farm, you can come here and learn. If you're gonna be here to do pastoral, we can teach you that too. That is *kine* of the area why we are here in a way, in this area.

HKA: So what kind of animals you are raising in Kalaheo?

SMA: In Kalaheo we have sheep, chickens, we got egg layers. We have tilapia which tilapia is actually going to be part of the system too where we going to put them into ponds, and have that water, tilapia water help nourish the ground and the plants in the area. So, that's our game plan. I also raise cattle myself. And also, I just recently stopped … there are new owners to this lease I had in Kalaheo, and they said we could be month to month, but I wasn't comfortable with the month to month because I had 30 mother cows. Now finding 100 acres to put 100 mother cows next month is not going to happen. Instead of being stressed out about that stuff, I decided to find some place else. Everybody knew I was looking, so people started offering to buy my herd too. So I decided, it might be best if I did sell the herd. I kept all my equipment and stuff for this up here. The idea up here on the pastoral part was to upkeep, that was going to be my section until … my Uncle Gilroy passed away, and Kawai Warren *kine* of passed it on to me. Now, I'm doing the overall, the whole thing. My thing was going to be the 50 acres pastoral, and I was all good with that. But now I'm

learning how to plant *kalo* [taro], take care of the Earth itself, the *ʻāina* [land] itself. There is just a lot to do. We are trying to do it with … our charter schools … with those students, the *haumāna* [students] from the charter schools.

HKA: You guys ever thought about using charcoal?

SMA: Yeah, that too.

HKA: In your planting.

SMA: That too, that's another method we are looking at. The reason we went with the tilapia one is we seen a lot of gain in a lot of ways. We have fish to eat one, the waste water would help nourish everything …

HKA: You going put 'em in the *loʻi* [taro pondfield]?

SMA: I did have 'em in this *loʻi*, actually. The first harvest, I put 400 hundred inside, in this *loʻi*.

HKA: You can grow the *kalo* on mounds

SMA: Yeah, on mounds, yeah.

HKA: And then the fish can swim all inside.

SMA: Yeah. So we did that. The only thing I'm a little bit concerned about is the eggs hatching and getting out …

HKA: Jumping all over.

SMA: … there is a lot of tilapia in our ditch system anyway, but I didn't want to add to that. I wanted to be a little more in control of it. We got one up here we actually going to line and raise tilapia inside.

KN: You can also do *āhole* [an endemic fish (*Kuhlia sandvicensis*) found in both fresh and salt water], *ʻanae* [full-sized *ʻamaʻama* mullet fish]. The natives …

HKA: *ʻOʻopu* [general name for fishes included in the families Eleotridae].

KN: Get nitrous fixing grass you can plant, it's a long grass, but the seeds underneath fix the soil. If you plant it directly around your *loʻi* [taro pondfield], then the buggah' going feed the soil into the *loʻi* too. We did that in Waimea because dry over there, that's mostly dry land. Mean, brah, the *kalo* [taro] huge. I would love to help.

SMA: We definitley need all that information because we are pretty much at our infancy stage. We are still learning, trying to understand, trying to do things naturally. But the tilapia, the thought was, when we harvest the tilapia, that would be a good catch for the kids too. They come with their little bamboo poles. So that would be something of excitement for the kids.

HKA: They would love that.

SMA: Yeah.

HKA: You know tilapia, it survives the world wars.

RN: You can fish 'em all you like, over harvest because the thing *make* [to die], you put 'em inside.

SMA: Yeah. That too. So we lost water, the big rains, dried up pretty quickly, we didnʻt have water. So during the week … we come here every weekend … by the time we came the following weekend, this was dry, so we had dry tilapia inside. Which … ah …

RN: Which is okay, you grind 'em into, you till 'em into the soil.

SMA: Yeah. So it works out that way too.

HKA: Are you familiar with Mānā and PMRF (Pacific Missile Range Facility), I asked you that question … as a young boy, what are the changes you have seen in the area?

SMA: Since I was a younger child, it was … accessibility for one, was a lot easier. Going back to the springs again … I don't know if it has anything to do with PMRF … the springs growing up, was more accessible and available for community members to go and use. We used to go actually swim in that … up until they cemented like pipes on it, up until that point when they were ready to cap it off. I was a really young child when the last time I was there.

HKA: Was it flowing or stagnant?

SMA: Oh yeah, was flowing.

HKA: Was flowing. Gushing?

SMA: Gushing out of the pipe. Cold, very cold. Clean water. We would drink 'em. We actually went to the beach. We were camping on the base.

HKA: When was this '70s, '80s?

SMA: In the '70s, early '70s. We were camping. Our whole family was camping. My uncle Kamaile, and my uncle Gilroy took me and a couple of my other cousins, and we were all swimming that day, we jumped in the jeep, we drove through PMRF (Pacific Missile Range), went to Queen's Pond, jumped in the ocean there again, and drove back out straight to the spring water.

HKA: So refreshing.

SMA: Yeah, so refreshing. We actually rinsed off and swam there for a little bit. So that was nice as a youngster. But today, I really don't know the difference because I haven't … I don't like going in there, so I stay away from PMRF. It seems like it's so hard to get in. It just seems that way. I don't think it is, but it just seems that way.

HKA: Yeah. You have to get the pass.

SMA: Yeah.

HKA: When it was so readily available to you.

SMA: Yeah.

HKA: Are you familiar with the expression, "*Waikahi o Mānā*," or the single pouring of water for the mixing of *poi*?

SMA: No.

HKA: You doing it now. [Laughing.] Are you also familiar about them raising *kalo* [taro] on rafts in the swampy areas of Mānā?

SMA: Yeah, I did a little research myself about Mānā … I don't know if you call that research … but I read stories about that happening. Back in the early days, of course, the floods would come through Mānā, and they had to find a way to keep the *kalo.* So they did it on rafts. They had trees, weaved it together, anchored it down so it wouldn't float away. I did hear of that story. They canoeing it over from Waimea to Mānā. I've read stories of migrating birds, geese, and ducks landing here by the thousands up until it dried out. I have read that. I would love to see it happen again.

HKA: And so any of your family *lawai'a* [fishermen], fishermen?

SMA: I guess so, but not serious fishermen. We grew up doing that too. We grew up throwing net all over the place. We grew up throwing poles and laying net. Going prawning up Makaweli and up Waimea River.

HKA: What, the prawns are big over there?

SMA: Yeah, was.

HKA: How big.

SMA: I was one little kid. [Gesturing with hands.] The body, the head was good size. They were all blue. There used to be a lot growing up, but today …

HKA: And where did those prawns come from … their origin … somebody brought them in?

SMA: Yeah, orginally it was from Tahiti, Tahitian prawns. That's where it originally came from. When I was a young kid, there were so many of them that we'd come back with bags full. Even *ʻoʻopu* [general name for fishes included in the families Eleotridae] back in the day. It's definitely not like today. Once at Makaweli, I was a young child, I was able to swim with *hinana* [young of *ʻoʻopu*, a fish, formerly caught in nets and greatly relished] by the millions, in the river, Makaweli side. You could see them everywhere. I went underwater, opened my eyes, and I could see this shimmering all around me. I'm lucky to say that I have experienced that. I don't think that anyone has seen *hinana* in that amount since I can think, I don't know.

HKA: It's just like a dream, yeah?

SMA: Yeah.

HKA: How about *ʻōpae*?

SMA: *ʻŌpae* [shrimp] too, Waimea River. My mom loves to eat *ʻōpae*, with little bit of Hawaiian salt *paʻakai* [Hawaiian salt], round onion, and little bit of chili pepper. All you had to do was … My grandmother's house was in Waimea Valley, the break water was right across, all you had to do was walk over, walk down the break water, to the river, align with buffalo grass … walk at the edge of the buffalo grass, where it is in the water, go with the scoop net, reach over, just scoop it in the grass, and you would have like a good handful of *ʻōpae*. This is like Waimea River, you just saw Waimea River that close to the ocean. Just a lot yeah. My mom would sit at the kitchen table, and eat it live.

HKA: You just made my mouth water. [Chuckles.]

SMA: Those days are gone. It's gonna take a lot to bring it back. I think can.

HKA: I think get *ʻōpae*, just hidden.

SMA: I know get. There is still *ʻōpae*, quite a bit in Wainiha, that side of the island for sure. Some people are saying, there are still some here too. I havent gone up the valley in a long, long time. I talked to cousin Johnna Aona, "I want to take my kids up to Makaweli." She said, "Just go. Just tell them who you are if anybody questions you. Just tell them who you."

HKA: What kinds of fishes were you guys catching when you would lay net?

SMA: All kinds.

HKA: Plenty reef fish and stuff like that?

SMA: Not so much reef fish. Would be more *pāpio*(s) [the young stage of growth of *ulua*, a fish].

HKA: Casting *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit].

SMA: The reason is, a lot of sand from Waimea. The places we'd lay is not by the reef, would be by the sand.

HKA: So *ʻōio* [ladyfish, bonefish (*Albula vulpes*)], yeah?

SMA: *ʻŌio*, some *moi* [threadfish (*Polydactylus sexfilis*)] … just travelers, those sort of fish. We go crabbing too actually, a lot off of the Waimea landing.

HKA: What kind crab?

SMA: The *haole* crab [or *kūhonu* crab, An edible spotted-back crab (*Portunus sanguinolentus*)], the white crab. That used to be choke too. You would fill up …

HKA: You guys get *ʻaʻama* [a large, black, edible crab (*Grapsus grapsus tenuicrustatus*)] too, yeah?

SMA: Not so much on this side.

HKA: The rocky places.

SMA: Yeah. Mullet we used to throw net at the river mouth. Blind throws and catch mullet when we were teenagers. That too, there used to be a lot. When I got married, and I had kids, I wasn't so active. It changes yeah? So I was more active with coaching and stuff like that, more community service stuff. But I'm trying to get back like what it used to be for me as a child, geting my feet dirty.

HKA: When when you was a child, your *ʻohana* [family] used to gather for *limu*?

SMA: Not too much, not too much. That wouldn't be our family thing. When we going have one party or we are going to get together, going be, we going catch crab, we going catch prawn, *ʻōpae* [shrimp], *ʻoʻopu* [general name for fishes included in the families Eleotridae] that's the kind of stuff our family was gathering. Of course, had *kalo* [taro], other family members that was raising *kalo*, that was easy to get, so we didn't have to. So that was *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of our family gathering on this side.

HKA: You guys probably had a lot of pig too yeah, because you guys were raising animals too.

SMA: Yeah, yeah, actually raising animals too … *kālua* [to bake in the ground oven] … did a lot of that … *laulau*, making *laulau*(s) [wrapping, wrapped package; packages of ti leaves or banana leaves containing pork, beef, salted fish, or taro tops, baked in the ground oven, steamed or broiled; any cloth, net, or leaves used as a wrapper or carrier; to wrap or carry in such bundles].

HKA: How about *ʻopihi* [limpets]?

SMA: *ʻOpihi* [limpets] was the favorite, up until I got gout.

SMA/KN/HKA: [Chuckling.]

HKA: As a child?

SMA: As a child, growing up, picking *ʻopihi* was pretty easy. That too had quite a bit. Today, it's few and in between. What's different too is, all the islands are a little different. I actually worked on Maui for a little while and it was *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of amazinig to see how Maui was a little more cautious about their harvesting and gathering. *ʻOpihi*, you could find *ʻopih*i, big *ʻopihi.* Over here you cannot find those, you have to go dive for 'em to find those.

HKA: So you guys *paniolo* too yeah, you said. So what kinds of Hawaiian cultural practices … *lei* [a necklace made of flowers, leaves, and/or shells, etc.] making, *ʻoli* [chant], *hula* [Hawaiian dance] … anybody in your family …

SMA: No. The unfortunate thing was, we are part of that generation that was never taught. We would get family get togethers. As a young child, at some point in the get together at my grandmothers … eventually the kitchen door would close, and all the kids would have to stay out. We would all try to listen to try to see what they were talking about, and everything would be spoke in Hawaiian, but it could never be passed. My mother's generation could understand Hawaiian, but cannot speak. My grandmother, they all could speak, but they never ever passed it down. A lot of that stuff died out, I guess.

KN: His grandmother was know for … I remember her growing up too … was known for gathering stuff for *lūʻau*(s) [feast, party], and stuff like that. So she was *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of known for that.

HKA: Do you know any of the *moʻolelo* [Stories] in this area? Have you you heard of the *hālau* [Long house as for canoe or hula instruction] or canoe house of the *Menehune* [Legendary race of small people who worked at night, building fish ponds, roads, temples]?

SMA: I've heard, I've read a little bit about it. I actually want to go find where it is. I want to go find some of those spots. There is stories here about *heiau*(s) [temples, places of worship] in this area too. There is supposed to be three in this area. According to old maps there are two on this side. I know they found one on this side, up this way. There is supposed to be two up this way, but I think both of them got bulldozed when plantation days … I think.

HKA: So what is that ridge where you thought the *heiau* [place of worship, temple] was?

KN: Niu?

SMA: Niu Ridge.

KN: Pu'ukapele too is a *heiau* site.

SMA/HKA: Yeah.

SMA: That's other things … as our group, we talk about, we going have to go *mālama* [care for] that too. We going have to figure out where it is, open it up, in a sense so that people can understand who are passing through, can see that this is not a place to disturb or play around, or whatever it is. I don't know what it looks like. We definitely got to go *mālama* that too.

HKA: That would be good to *kilo* [observe] or watch because you might see … if you got clear skies … you might see certain constellations or solstice, rising of the sun and stuff … where everything is situated on the *'āina* [land]. Do you know about anything in the historic period when there was famine or diseases, some stories about that?

SMA: No, not a lot about diseases that the Hawaiians endured back in the day originally. I haven't had time to read on all that stuff.

HKA: What is your take on the sugar companies and the military their presence here, the positives and the negatives?

SMA: The positive, the plantation?

KN: And the military.

SMA: The positive, I don't know any positive in that.

HKA: How about the negative?

SMA: Just the impact they left behind. Basically, they came, took over the lands, raised their sugarcane, when the lease was up, left, along with cleaning not cleaning up, and taking care of what they should have when they left. The unfortunate part was, in my role today being part of KHHA (Kekaha Hawaiian Homes Association), being involved with the west side community, there's so much left behind. Today there is plastics littered throughout these fields from the plantation. I guess the one benefit would be, they brought water down here. There is a filter system above us that's *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of operational, there is some kind of infrastructure, piping and water going down. I guess that's a plus. But the impact of what they left behind, the land is infertile, it's left bare open for years, for the sun to beat down on it, so nothing else will grow. The microorganisms, everything in the ground … nothing. It took me almost two years to find one worm in this whole area, one worm. We up to more today, it's been four years since we trying to understand this whole place and keep it flowing … I guess … keeping the water open and flowing … and just understanding the seasons. So we think we got it down now. We think we understand it.

KN: I think a good thing to do as well is harvest earthworms. Just have earthworms.

SMA: Yeah. I am starting to, at home, within my filters in from my aquaponics, my tilapias, I'm finding a lot of those. So I am going to start figuring a way to pull it out of my filters. Anyway, the other parts of the negatives … not only the plastics left throughout, but the metals left throughout, the poisons that we don't know about. PMRF (Pacific Missile Range Facility), the benefits maybe one of the few benefits or the only benefit there would be is, there is a military presence for Hawai‘i. The negatives, where do we start … we know that they are pumping water out most of the time to

keep the area dry and not in such a swamp zone. There is a lot of negatives of being in that location, the closure of the swamp area, that's one.

HKA: What would like to see in the future as well, and what is your concerns?

SMA: What I would like to see, my own personal opinion, I would like to see, maybe the base, PMRF (Pacific Missile Range Facility) not be here. My vision always go back to what it was. I am searching for my culture because I have been … I guess … denied that in a way. Yeah, so I'm trying to find, and get it back to what it once was, back in the day. I wish I lived in that era. I would like Mānā to be, what Mānā once was, a swamp area, raising *kalo* [taro] on rafts again. Hopefully bringing back the swamps and the migrating birds and all that stuff. Just what it once was. Open up the springs, let it flow. The other thing negative with the plantations is, all of the pesticides that is within the ground, and within the ditch ways … within the ground, ends up in the ditchways, and naturally ends up in the ocean which kills everything there too. There are still remnants of that. I don't know how we get back to what it once was but it's going to take us removing things that's here, that was placed here years after. PMRF unfortunately, would be one to remove. I don't know why they put it there anyway to begin with. I don't know but that is my own vision. I'd like to see it removed, but I don't know if it's ever going to happen. What would be the outcome of that, I don't know. Even with all the radars and stuff … I don't know … all eyesores. Who know what type of radiation or whatever is being put off too. I don't know. There is a lot of stuff I don't know. I do know it's not what it once was. That's where I am with PMRF. I know that it employs a lot of our locals, I know a lot of funding comes to Kauaʻi, Hawaiʻi, but is it all worth it? Is it all worth it for our people especially. Because we are the ones that are losing out, not any other nationality that comes here because they don't know, but we're the ones.

HKA: *Mahalo* [Thanks]. We will end our interview right here. I thank you so much for your time.

SMA: No, *mahalo*, thank you.

ORAL HISTORY INTERVIEW

With

Edwin Ray A‘alona Dela Cruz [ERAD]

November 28, 2023

Līhu‘e, Kaua‘i

By

Hannah Kaumakamanōkalanipō Anae [HKA]

The interview began in the Līhu‘e Kaua‘i, at the premises of the political center. We had to leave when it closed, so we went to a nearby park, and it rained. Most of the interview was done in HKA’s rental car.

Recording file names IA202241_2023-11-28_Edwin Ray Aalona Dela Cruz(1).MP3,
IA202241_2023-11-28_Edwin Ray Aalona Dela Cruz(2).MP3, and
IA202241_2023-11-28_Edwin Ray Aalona Dela Cruz(3).m4a

HKA: *Welina kākou* [greetings everyone],[1] today is November 28, 2023, and we are on the *mokupuni* [island] of Kaua‘i, in the *kūlanakauhale* [town, city] of Līhu‘e. I am Kaumaka Anae representing International Archaeology, LLC and we are conducting a Cultural Impact Assessment interview for the Pacific Missile Range Facility (PMRF) and Kōke‘e Park Geophysical Observatory Succeeding Lease and Easement Areas. And I am here with A‘alona Dela Cruz, and, A‘alona, can you say your full name?

ERAD: Edwin Ray A‘alona Dela Cruz.

HKA: And do I have your permission to record this interview?

ERAD: Yes.

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org /gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

HKA: *Mahalo nui* [Thank you very much]. Before we start, I would like to say, *e kala mai* [excuse me], if I seem *maha'oi* or brazen it's not my intention, it's just for the purpose of this interview.

ERAD: Okay.

HKA: Let's begin. So, what we are going to start off with is *mo'okū'auhau* [genealogy] or your *pilina* [connection] to this *'āina* [land]? How long have your *'ohana* [family] lived in the area … Waimea?

ERAD: Waimea Valley, yeah. My grandfather was born in Waimea or Makaweli. My family worked for the Robinsons. So … long time.

HKA: And are you familiar with the Mānā and PMRF (Pacific Missile Range Facility) area?

ERAD: Yes.

HKA: And can you tell me about that area?

ERAD: As far as I know … the PMRF was, ah …

HKA: We are going to have to take a pause.

*****We were interupted by the security guard who informed us that the whole block closes at 4:30 pm, so we had to leave. We resumed the interview at a park nearby.*****

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HKA: Again, we are returning because we got kicked out from where we was. [Chuckles.]

ERAD: [Chuckles.]

HKA: And so now we are at a different park. So … we are going to continue our interview … and so … how long has your *ʻohana* [family] lived in the area? Waimea Valley yeah?

ERAD: Waimea Valley. Makaweli with the Robinsons and Waimea … probably from the ’20s, ’30s maybe.

HKA: Wow … and so … how about your *ʻohana* ... multi-generational, so …

ERAD: My mom’s side. So my mom moved back to … She was born in Jacksonville, North Carolina, Camp Lejeune. And then they moved back to Hawaiʻi, Oʻahu, when she was three years old. And I don’t know how old she was when they moved to Kauaʻi … probably in the … ballpark ’50s probably.

HKA: Okay.

ERAD: Fifties, ’60s maybe … somewhere around there.

HKA: So where was your dad from?

ERAD: My dad is from here. My mom is from … Well, my mom’s mom come from Oʻahu … Big Island like that.

HKA: So your dad … where did his family …

ERAD: My grandmother was born here. Her parents were …

HKA: What town?

ERAD: My dad is from here … I’m sorry … Waimea. My grandmother was born in Makaweli, east of Waimea, on the Robinson property.

HKA: Yes.

ERAD: And … before that, her parents was from Hiroshima, Japan. My dad's dad was born in Iriga Palacinan, Phillippines, and moved to Hawai'i when he was 17 years old so about 1924 … I think it is.

HKA: Okay … And so … the last question we were talking about was … are you familiar with PMRF (Pacific Missile Range Facility) and the Mānā area, and can you tell me about that?

ERAD: Yeah. So as far as the Navy Base being there … a lot of stories about the area … as far as the pre-military base … I guess … It was an Army base, Airforce base, and now Navy, yeah. As far as the military part … I think they been there since the '40s … they took over … I think was …

HKA: And the Mānā Plains … what do you remeber about that, and how it used to be?

ERAD: The Mānā Plains … that whole area was mostly just sugar in my time.

HKA: Yes.

ERAD: And now it's just corn and now it's just growing wild … and what ever else they are doing down there. But as far as the Navy part of it, I don't know what's changed … and expansion. I know there's areas where you could go on the base freely from the beach … you know … stay on the beach. Since 9/11, they closed off access to driving on the beach.

HKA: Okay. And before I forget … what is your experience … your personal encounters … like boating at PMRF and fishing on the Mānā side?

ERAD: You sure, you like go over this?

*****Short conversation redacted from the interview*****

ERAD: All and all it's pretty okay encounters. When they have missile launches, they hold us up for like an hour, and I understand why they do it in general … But they stop us one hour prior to the launch,

and it only takes me 15 minutes to get across the range. A lot of the times, people that I know who work on the security side of it or on the base, they know me, they know the speed of my boat, and they let me through. A lot of times, no matter what they do, the Navy is like, "No, shut it down." So it *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of impedes us and my job. But also, days where I'm not working, I have never been stopped, just because … lucky, lucky … I guess. There was one incident where I was coming North back to Kīkīaola … over from Nā Pali back to Kīkīaola … and I saw the security boat standing by off of Makaha. And I maneuvered to see if they would give chase. They didn't give chase, so I kept going, and when I got to Nohili Point … Navy police, blue lights, 50 caliber … yelling at me, scolding me for not answering my radio, telling me the Coast Guard was trying to get ahold of me. So, I went up to the Coast Guard, same thing … blue lights, 50 caliber … a little confrontation there about them pointing it somewhere else versus at me. He kept it, and I said, "Can you please point that somewhere away from my 16 American passengers?" And at that point someone told him not to point it at me so … They asked for my documents, my Captain's license … documents, the boat documents … handed it over to them … and they looked through … gave me back my documents, and I went on my way. And … this was like 2005, '06 maybe, maybe even '07, somewhere around that time. And in 2008 I moved to O'ahu and was working doing the shuttle from Sand Island to Pier Four for the Coast Guard. And in the original exam center one day someoe asked me … because I go by my Hawaiian name … they asked me, "A'alona, what is your English name? What is your legal name?" I said, "Oh, Edwin Dela Cruz. They go, "Oh." I go, "Why?" Before they had a chance to answer I go, "What, PMRF [Pacific Missile Range Facility]?" And they go, "Yeah." They said the CO, XO, whoever is in charge of the base trying to get my license revoked because I ran through the range and shut down a multi-million dollar operation. Needless to say, everybody was pissed off, which is fine, but they didn't do their job, I just did what … So they told me that the Coast Guard told the Navy that it was their fault, they messed up so they had no reason to pull my license. That's the hard part of … me with the Navy, is stuff like that. Other than that … besides not providing beach access for us like it used to be … you know.

HKA: Yeah.

ERAD: Yeah, yeah.

HKA: Did you go fishing over there?

ERAD: Throughout my life we would go fishing over there. We used to fish from Kekaha Beach along the shoreline.

HKA: What kind fishing?

ERAD: Shoreline fishing, throw net … dive.

HKA: What kind fish … *pāpio* [the young stage of growth of *ulua*, a fish] like that for the casting?

ERAD: *Pāpio*, *ʻōʻio* [ladyfish, bonefish (*Albula vulpes*)], *moi* [threadfish (*Polydactylus sexfilis*)], *taʻape* [blueline snapper, bluestripe snapper], *toʻau* [black snapper; blacktail snapper] … I remember when I was probably about seven or eight years old, I caught one nice, big *kūmū* [goatfish (*Parupeneus porphyreus*). *Palani* [a surgeonfish (*Acanthurus dussumieri*)], *kala* [surgeonfish, unicorn fish, Teuthidae; *Naso hexacanthus*, *N. unicornis*, *N. brevirostris*] … we used to catch with the *līpoa limu* [bladelike, branched, brown seaweeds (*Dictyopteris plagiogramma and D. australis*)] … put ’em on the hook throw ’em out when I go with my dad them guys.

*****The battery on the recorder was dying, so I had to use my iPhone to record the interview.*****

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[black snapper; blacktail snapper]lueline snapper, bluestripe snapper][threadfish (*Polydactylus sexfilis*)] …

he young stage of growth of *ulua*, a fish] …

adyfish, bonefish (*Albula vulpes*)], *pāpio*, and you got one good *kūmū* [goatfish (*Parupeneus porphyreus*), yeah? And you guys had the *līpoa* [bladelike, branched, brown seaweeds (*Dictyopteris plagiogramma and D. australis*)] … what kinds of other seaweeds did you guys have?*Codium edule*, is a green seaweed], *limu kohu* [a soft, succulent, small seaweed (*Asparagopsis taxiformis*)] … we would pick *ʻopihi* [limpets], *hāʻukeʻuke* [an edible variety of sea urchin (*Colobocentrotus atratus*)], *wana* [sea urchin, as (*Diadema paucispinum*) and (*Echinothrix diadema*)] … I mean we did all aspects of fishing over there. *Toʻau* [black snapper; blacktail snapper] … I trying to

remember what kind fish had over there, but I know the … *āholehole* [young stage of the *āhole*, Hawaiian flagtail] … and then … we would catch the *nenue* [chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus, K. vaigiensis*) and *kala* [surgeonfish, unicorn fish, Teuthidae] … the *palani* [a surgeonfish (*Acanthurus dussumieri*)] … I trying to think …

HKA: You guys did some diving too?

ERAD: A lot of diving.

HKA: You guys got like squid [referring to octopus also known as *he'e* or *tako*] too?

ERAD: *He'e* [octopus (*Polypus sp*.), commonly known as squid], lobsters …

HKA: How about the *wana*, fat?

ERAD: Yeah.

HKA: Yeah.

ERAD: That's my favorite. [Chuckles.]

HKA: Me too … Do you know if your *'ohana* [family] had land in the area?

ERAD: Not here … not ancestral land.

HKA: Besides *lawai'a* [fishing], what other practices did you guys do? Like did your parents or your mom do *hula* [Hawaiian dance]? *Lua* [Hawaiian martial arts]? Any *lei* [necklace made out of flowers, leaves, and/or shells, etc] making?

ERAD: My mom danced *hula*. My family are entertainers on O'ahu.

HKA: What is your mom's name again?

ERAD: Lorna Dela Cruz. Her maiden name is Shepherd. And our family on Oʻahu is … Michael Dela Cruz who has his *hālau* [*hula* group or school]. But … my mother dance, and I am a *lua* [Hawaiian martial arts] practioner. I get am involved with a lot of cultural groups … PVS (Polynesian Voyaging Society).

HKA: Polynesian Voyaging Society?

ERAD: Yes. I have never done any of the long voyages … I miss the opportunities … I had other engagements during the opportunities came up … so … I couldn't go. But it is nice to be involved … And then I studied *lāʻau lapaʻau* [Hawaiian medicine] with Kumu [Teacher] ʻOhai.

HKA: What kinds of plants did you work with … the *lāʻau* [plants]?

ERAD: I worked with *kaunaʻoa* [a native dodder (*Cuscuta sandwichiana*), belonging to the morning-glory family, a leafless, parasitic vine, growing densely on other plants], more of the *kalika* [garlic], *nīʻoi* [chili pepper] …

HKA: Ginger and chili pepper …

ERAD: Chili pepper …

HKA: What about the *ʻuhaloa* [a small, downy, American weed (*Waltheria indica var. americana*), with ovate leaves and small, clustered yellow flowers], you guys get plenty? And the *ilima* [small to large native shrubs (all species of Sida, especially *S. fallax*), you guys get plenty?

ERAD: I never really get that far. I worked with him for a little while and then life, yeah … two *keiki*(s) [children], started studying for my captain's upgrade and stuff like that …

HKA: So what *kine* [[Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] … you did the *kalika* [garlic], you did the ginger, and always *nīʻoi* [chili pepper] he uses in all his potions yeah?

ERAD: *Nīʻoi* and *kalika* is the strongest warriors … for fight any kind of illness … yeah.

HKA: And then of course … the *ʻōlena* [turmeric (*Curcuma domestica*, also incorrectly called *C. longa*), a kind of ginger distributed from India into Polynesia], yeah?

ERAD: *ʻŌlena*.

HKA: It's for imflammatory … what else you guys used to use 'em for?

ERAD: One of the things I learned, it was good for the immflammation but specifically, my son would go surfing, and he would come home with an ear infection or his ear stay sore. So, we would put some in his ear with the cotton, and we would take it out, and the next morning he's back in the water again.

HKA: So how did you guys … make it into …?

ERAD: We would juice it. If I couldn't get the root, I would use the (powdered) tumeric and just dillute it down. And even till today, I keep some in my icebox for my son. He old enough to go get his own, but if he cannot, I have … my daughter, my grandson. My mom always has, and she has her little patch in her back yard. If we need, we can always go get, yeah.

HKA: How about *kukui* nut [candlenut tree (*Aleurites moluccana*)], you guys use that too?

ERAD: I never made *kukui* oil, but I do use *kukui* oil just on my skin, because I on the ocean all the time, and it comes dry. And then, the *ʻinamona* [relish made of the cooked kernel of candlenut (*kukui)* mashed with salt]. I made *ʻinamona* once before with a friend of mine on Oʻahu.

HKA: You roast 'em [referring to the *kukui*]?

ERAD: Roast 'em, yeah. That was a pretty cool experience to make the *'inamona*.

HKA: You have … like some of the stuff you named, like the *limu kohu* [a soft, succulent, small seaweed (*Asparagopsis taxiformis*)], that's also an aquatic *lā'au lapa'au* [Hawaiian medicine]. That's really good too.

ERAD: Yup. The *pōpolo* [black nightshade *(Solanum nigrum*, often incorrectly called *S. nodiflorum*) a smooth cosmopolitan herb], the *pōpolo* berries, my mom always … The weeds in the yard, I lawn mower 'em when I was younger. My mom, "Don't lawn mower that, that's the *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit], that's the medicine."

HKA: Yup, and the *pōpolo* and *'uhaloa* [a small, downy, American weed (*Waltheria indica var. americana*), good for the *hānō* [asthma, to weeze], yeah?

ERAD: We also went and harvested *māmaki* [small native trees (*Pipturus spp.*)] and *'awa* [kava (*Piper methysticum*)]. Two of my *lua* [Hawaiian martial arts] brothers would go hike up behind Blue Hole Ka'āpoko, and get one area up there. So we would go and harvest the *'awa* and then we would replant. And had one area up on the *pali* [cliff], all *māmaki*.

HKA: This is what *mauna* [mountain]?

ERAD: The Wailua area up behind Blue Hole Road, get the Ka'āpoko Tunnel over there. The tunnels goes from Wailua to Hanalei. And we would … well, I not going tell you where but … [chuckles]. I just kidding, I just kidding.

HKA: No, no, you don't have to … seriously.

ERAD: No, but up in that area there though, we used to go. I haven't been up there for 15 years … I think … maybe even more than that. Maybe 20 years we never go hike up there. I wouldn't know how it

looks. We made our own trail, so it wasn't like a beaten trail. We had to … they knew the area where it was at … So, we *kine* [[Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of made our own trail to find the spot.

HKA: Did you guys camp at Polihale when you guys were young?

ERAD: Yeah.

HKA: I noticed a lot of the families did that, yeah?

ERAD: Mmmhmm. Yeah, so my dad and his friends … like Uncle Paddy Boy Mālama, we would camp there in the whole summers … the last day of school to the first day of school … and then more on the weekends. We would just … I don't know how they pulled it off, camping that long. My brother and I try now, we can hardly pull off a week. Whenever they went to work, we would stay back and watch everybody. All the boats was on the beach, if too big to be on the beach, it would be anchored offshore. In the morning we eat breakfast and everybody just start loading up on the boats, and we go shell hunting, hunting, fishing … anything and everything you can imagine. That was a typical summer at Polihale.

HKA: I noticed that was a really important place for the families. So, living in Waimea, you remember the plantation days, yeah? So was there a lot of family get togethers?

ERAD: Yeah. Now days not as much, but same thing … everybody so busy working. A lot of … even *hānai* [foster, adopted] family … just the community getting together … every community is family … don't need to be blood related … like *hānai* … the Ho'okanos … you know … the Okadas … I mean the names go on and on in Waimea … Waimea Town, Waimea Valley … you know … the Setos, the Kagawas, that was one other close family. My dad and his friends played baseball. My dad and my uncles were all fishermen … owned boats and stuff like that. We always got together a lot.

HKA: So you guys all used to fish together? So, did you guys do any *akule* [big-eyed or goggle-eyed scad fish (*Trachurops crumenophthalmus*)] fishing?

ERAD: Yes. A lot of *akule* [big-eyed or goggle-eyed scad fish (*Trachurops crumenophthalmus*)] fishing, but it would be from shore. We would be out to the schools (referring to schools of fish). We would meet at Polihale, and *hukilau* [a seine; to fish with the seine. Lit., pull (huki) ropes (*lau*)]. We used to go out on the boat at night and hook *akule*.

HKA: That is good fun. So, let me get back to my questions, I going …

ERAD: [Cough.]

HKA: So, do you know if there was any religious practices in the Mānā area? Like ancient Hawaiian kind? I know there is Christianity.

ERAD: I know the *heiau* [place of worship, shrine, temple] is there, the last valley … right where the spring is at … the spring where they tapped, to provide the water for the … What I was told by archaeologists and historians, that was the most sacred water out of the island of Kauaʻi, and that was what they use for the showers and bathrooms at the State Park area. That's the valley right there by the *heiau* [place of worship, temple].

HKA: What's the name of the *heiau*?

ERAD: I cannot remember the name, it's just Polihale Heiau.

HKA: There is a *hula pā* [a place where they do certain *hula* or Hawaiian dance rites and/or rituals] over there too?

ERAD: The *hula pā*, I'm not sure, but get the one in the other end, down in Kēʻē. The story I was told … I'm not sure how … I wasn't there … you know that *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of thing … They call it like the Stairway to the Heavens [referring to Polihale Heiau] … it was a five-tier *heiau* … all the departing points for the *ʻuhane* [spirit] … Kaʻena Point, Oʻahu … they would come to Kauaʻi, go to the *heiau*, and

jump off the Pōʻāina [Pō is the realm of the *akua* or god, and *ʻāina* is land]. And then … there is supposed to be an underwater mountain range, out at sea, straight out there, that they consider Pōʻāina.

HKA: Wow … that's interesting.

ERAD: That's an old story I have been told.

HKA: *Leina-ka-ʻuhane* [or *leina-a-ka-ʻuhane* (a place name on every island), place where spirits leaped into the nether world; *lit.*, leap of the soul], yeah? There were supposed to be several *leina-ka-ʻuhane* here, get the *Lei walo* [place at an *ʻulu* tree where the spirits leaped into the nether world], the one with the *ʻulu* [breadfruit] tree … the *ʻulu* grove?

ERAD: Oh, I'm not sure.

HKA: Was any of your family *mahiʻai* or farmers?

ERAD: Home gardens? That's about it, yeah.

HKA: What did they grow?

ERAD: My grandpa Flor and grandma Mary, on the Dela Cruz side, we had string beans, bush beans, radishes, egg plant, okra …

HKA: Where Makaweli?

ERAD: No, Waimea Valley. Makaweli, was my grandmother when she was young.

HKA: Okay.

ERAD: We always … we had *ʻualа* [sweet potato] … a lot of the vegetables and stuff … I don't remember what the names were … but there was like the big rooted vegetables, my father called them candy. Like one potato … you peel 'em, you cut, and you eat. I cannot remember the name of 'em though.

HKA: Nice … Do you know any of the *moʻolelo* [stories] like in the area? Oh, let's start off with … you know about the *Menehune* [legendary race of small people who worked at night, building fish ponds, roads, temples]?

ERAD: Okay.

HKA: People say that they are … a race, and people say also … you know … that they are a small people. There is a race but also small mysterious people.

ERAD: Okay. Mythical.

HKA: Yeah, mythical. What is your take on that?

ERAD: Just by the stories that everyone hears. They work at night, if they didn't finish the job by sunrise, if would never be finished. And … always thought it was a possibility … you know. I always make fun, my father was the last *Menehune*.

HKA: [Chuckles.]

ERAD: But … I read somewhere one article that Kaumualiʻi did a census, and he counted 65 *Menehune*. So that throws off the mythical side of it. Again, I wasn't there to see them caught but … who am I to correct?

HKA: Yeah, yeah. But a lot of people think … they are regular people too … so, if they did a census, and we did not find any little people in the archaeological record as well …

ERAD: Right, right.

HKA: … or Hawaiian record, so that is another thing, but … yeah. I just wanted to see what was your take.

ERAD: Right, right.

HKA: How about crab and stuff?

ERAD: Yeah. I just went go Nā Pali … go *kona* crab.

HKA: How big the *kona* crab over there? The season open, it's in season, right?

ERAD: Yeah. Some big *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit]. We got some big *kine*. We went last year … I think we caught … 30 something pieces, half-day … three sets … three strings … three sets … pull 'em up, go home. And then this last one we went, we got 65.

HKA: So how you prepare 'em?

ERAD: My father make 'em raw, kim chee. I like that. Or I cook … the way I cook my lobster. All my crab and all my lobster, everything … beer steam. I just put oil in the pot, crush the garlic, throw 'em inside … head down, body up so all the juices, all the *shino* [Japanese for fat and essence in the head of the crab also known in Hawaiian as *kōh*i or fat and richness of food] stay inside …

HKA: Best part, the head.

ERAD: … throw Hawaiian Salt on top … put the cover on … the oil start cracking … then I shake the pot, and I pour one beer on top and let 'em steam. Yeah. [Chuckles.]

HKA: [Chuckles.] Did you guys ever make it or mix it with the *wana* [sea urchin]?

ERAD: No, I've never tried that.

HKA: Yeah. [Chuckles.]

ERAD: [Chuckles.]

HKA: Whoa, man. Did any of your family *paniolo* [cowboy, ranch]? Any ranchers?

ERAD: No, not that I know.

HKA: Mainly *lawai'a* yeah, mainly fishermen?

ERAD: Yeah. My dad hunted a little bit. I went hunting with my uncles, but I wouldn't consider myself a hunter. Definitely *lawai'a* [fisherman]. I would rather swim with the sharks than run with the pigs. [Chuckles.]

HKA: You guys used to eat *pipipi* [general name for small mollusks, including *Theodoxus neglectus*] or what?

ERAD: Oh, yeah. And the *kūpe'e* [an edible marine snail (*Nerita polita*)].

HKA: Oh, and the *kūpe'e* [an edible marine snail (*Nerita polita*)]. Get plenty *kūpe'e* over there?

ERAD: Yeah. Nā Pali get couple places, but I get more on this side, the south side of the island. Yeah. You know … thinking now about the areas where we used to camp by Nohili Point … we used to camp there … as long as it was the weekends and they didn't have operations … from Friday 6:00 p.m. until Monday 6:00 a.m. we could camp. But the shoreline over there is perfect *kūpe'e* grounds. And I never did … I never know it at the time … my father guys never did go get that. Another thing over there is the … I cannot think of the Hawaiian name … sea cucumber …

HKA: Oh, the *loli* [sea slug, sea cucumber, beche-de-mer, trepang (*Holothuria spp*.)].

ERAD: The one you can eat. I thought the *loli* was the sea cucumber in general.

HKA: It is sea cucumber in general.

ERAD: And so, Nā Pali get plenty of that. Get certain areas by the base you can find it.

HKA: People don't make it now … because they don't know how to prepare it. People don't know you can even eat that, right?

ERAD: Yeah. My dad … makes it, and I love it.

HKA: Does he pickle it?

ERAD: Yeah. Lemon juice and shredded daikon [pickled raddish, Korean/Japanese dish], and he just sashimi [cut in thin pieces, Japanese style of slicing] the *loli*. Oh, I get one small container left, I rationing 'em. [Laughter.]

HKA: [Laughter.] Oh, my goodness, that's awesome … see, that's why you guys basically can live off the land. You and I notice on Kaua'i, it's possible to live off the land.

ERAD: Mmmhmm.

HKA: You know … get the *pipi* [beef, cattle] too that's roaming around up there.

ERAD: Yup, the wild *pipi*, yup.

HKA: And then you guys get … you know … it's sustainable … we just gotta take care of the *'āina* [land], yeah? That's the thing, we take care of the *'āina*, it's sustainable …

ERAD: Yeah.

HKA: Did any of your *kūpuna* gather shells to make *lei*(s) [necklaces made out of flowers, leaves, and/or shells, etc.] and stuff?

ERAD: My mom gather shells. My grandmother always … My grandmother was raised with the Ni‘ihauan(s) too yeah, or she had a lot of contact with them working with the Robinsons … And so, she went to Ni‘ihau when she was young, because she was the caretaker for the old lady. She would pick shells or even seeds, like the black-eyed suzies and the … the sheep’s eye … So she would collect all these … but never had enough to make a full *lei* of the seeds. But … my mom would collect shells, not really to make *lei* … just for decorations … arts and crafts *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stuff. My dad would pick *puka* shells [*puka* is hole, and *puka* shells are holes in the shells] from Polihale. And he made a *lei* for my mom with the Triton’s Trumpet as the centerpiece, and three gray shells representing the three of us … my mom, my dad, and me. My mom gave me that *lei* when I was 18 … it was after I graduated. I have always been into picking. My mom picks *puka* shells at Polihale, Queen’s Pond area, and towards Nohili Point. And now it’s more scarce, unless you know where to go. And now that they opened up access to Nohili Point, more people are going and picking so … for me … I used to pick and sew *kūpe‘e* [an edible marine snail (*Nerita polita*)], I have a few *kūpe‘e lei*(s) [necklaces or garlands made with shells, flowers, and/or leaves, etc.] that I made for my kids when they were younger … the smaller shells … the bigger shells for me … and then my daughter’s mother at the time. I haven’t sewn (*lei*) in a while … shell (*lei*).

HKA: Wow … that’s something you guys used to do. That’s the things I like to talk about because that’s practices that happened in that area that still can happen …

ERAD: Yes.

HKA: … because it’s still there and need to be taken cared of, especially if the military are stewards of the *‘āina* [land] too, yeah?

ERAD: Yes. Yes. We get ‘em on record right now yeah? [Chuckles.]

HKA: Yeah. [Chuckles.] Are you familiar with the planting of *kalo* [taro] on the rafts … you know in the swampy areas?

ERAD: So all … from Polihale Beach to Waimea was all wetlands, was all swamp … yeah. So, was early aquaculture … so what you call that … aquaculture right?

HKA: Yeah, aquaculture … because the fish … use to fertilize yeah?

ERAD: Fertilize yeah. And so they talked about … these are stories I don't know if I read or if … A good friend of mine is Randy Wichman, Fredrick Wichman's son, he's a historian involved with Nā Pali ʻOhana … another group I'm involved with … Keao too ,yeah. I don't know if it was him who told me the story, or I read the story, or somebody else told me the story about how the people at Polihale would get the dry fish, and come to Waimea and trade for … whatever they needed.

HKA: Kalo?

ERAD: Yeah. Somebody was telling me the story too … their *kupuna* [ancestor, elder] was … my friend, Gene was telling me … his *kupuna* was Keaweamahi, the last governess of Kauaʻi and Waimea. And his *kupuna* would go from the *halenui* [big house] at Waimea River around to Nuʻalolo … and the only thing she would bring back from Nuʻalolo … I don't know if it was *ʻāholehole* [young stage of the endemic fish (*Kuhlia sandvicensis*) found in both fresh and salt water] or *moi* [threadfish (*Polydactylus sexfilis*)].

HKA: Might be *moi* because the freshwater … Even the *ʻāholehole*, the freshwater.

ERAD: I'm trying to think because we were discussing it … he probably went over because the water was too dirty in Waimea. I don't know back then if the water was dirty like it is now. I trying to think what *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] … was it *ʻōʻio* [ladyfish, bonefish (*Albula vulpes*)]?

HKA: *ʻŌʻio*, get sand over there?

ERAD: Yeah.

HKA: And the *ʻōʻio*, they like the sand … yeah … they bottom feeders.

ERAD: *He‘e* [octopus (*Polypus sp*.), squid] that’s what was. And I was telling him … proabably because Waimea, the water is so dirty that they no can see to catch … That’s what it was *he‘e*.

HKA: Is there a lot of *leho* [cowry shell] like cowry shell?

ERAD: Yeah.

HKA: You know the *he‘e*, they attracted to the cowry shell yeah … that’s why you make *lūhe‘e* [fishing for octopus with line and cowry lure; the octopus lure]. I have the same to at my house, where I live it’s called Kaluapuleho … they attract the *he‘e* I get plenty of squid my house too.

ERAD: Oh. Wow.

HKA: Yeah.

ERAD: I made one, a lure for my brother, Kyle, he is 10 years younger than me. I forgot what project it was for. So, I helped him make.

HKA: A *lūhe‘e* [fishing for octopus with line and cowry lure; the octopus lure]?

ERAD: Yeah. So, real … not strong enough to use, but good enough to do a presentation for his class. Where I took one *pōhaku* [stone], I took one guava stick, sharpen the one side, I got *nī‘au* [midrib of coconut leaf or frond] for wrap ‘em, and so the thing was all wobbly and everything like that, and then I put the ti leaf for like the tail. I think my stepmother still has it on the shelf. But I made one for him, and somebody heard about it, and they wanted me to make one for them … Funny how that this just came up because my son, about a month ago sent me a video of Mike Sakamoto on his show. He goes, “Dad, I like do this, I like make this.”

HKA: A *lūhe‘e* [fishing for octopus with line and cowry lure; the octopus lure]?

ERAD: *Lūheʻe.* I said, "Whoa, okay, I gotta' look how fo' make 'em." YouTube, look how fo' make 'em good, strong, *paʻa* [firm, solid]. I guess all the Indonesian, Philippines … the videos are … I look but it's different from …

HKA: Hawaiian, yeah?

ERAD: … traditional. I bought one crafting book that showed … from the Kauaʻi Museum years ago … that showed how it supposed to look. And that's how I made my brother's one. I wanna get a drill hole, and all that stuff … but I want to make it more … to catch it, we gotta' go more modern, but try to stay traditional on the style so. But I gotta go look and do some research. Interesting …

HKA: [Laughter.] Eh, try da'[Hawaiian pidgin for the] *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] … I wonder if the bamboo will work.

ERAD: Like …

HKA: Sometimes the bamboo, you can carve out of the bamboo, yeah. I have thick bamboo.

ERAD: Okay, okay.

HKA: I don't know. [Chuckles.] Because it's easier to carve out of the bamboo, yeah? That's why they make the Hawaiian stamps out of the bamboo.

ERAD: Right, right. I go check 'em out. I always open to suggestions to try.

HKA: But usually when it is more fresh yeah the bamboo. Then you can burn 'em or dry 'em out to make it more hard. But when it's fresh, it's easy to carve. [Chuckles.]

ERAD: Right, right. [Chuckles.]

HKA: You know in your guys community … did you guys often share food … like when you guys catch fish yeah?

ERAD: Yeah. My dad and his friends would go out and catch. They were commercial fishermen.

HKA: So they used to go for *ʻahi* [Hawaiian tuna fishes, especially the yellowfin tuna (*Thunnus albacares*)]?

ERAD: Whether is it's *ʻahi* [Hawaiian tuna especially the yellow-fin tuna (*Thunnus albacares*)], or go dive for *menpachi* [Japanese name for *ʻūʻū*, all soldier-fishes of the genus *Myripristis*] … the reef fish. And they would sell, and we also had the *hui* [group of people] who would come and get. And I think they did it … like for me, I don't like to sell fish … I definitely don't like to sell lobster … even crab. I go and I catch for eat … you know … then if it's more than enough for me to eat … my dad, my mom … I call it paying taxes to my dad and my mom … paying him for the eduation he gave me … you know … and my son … what I teach my son … pay taxes to my dad too … and you know … People ask me they like buy, and it's hard for me to sell. I remember one time when we were taking my kids fishing on the boat, I wanted them to know what it felt like to catch fish … I told them catching, not fishing. I get one picture of my son … he's probably about six or seven years old … he leaning back and like the pole is bent and the tip stay in the water. One *nenue* [chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus, K. vaigiensis*)] that big (gesturing with his hands.)

HKA: Wow.

ERAD: Pound for pound I think the nenue is the best fight fish. So we fill up the cooler. And my *wahine* [woman] at the time … at work they asking, they like buy. I told her, "Give 'em." She came back and she told me, "He gave me $60, $70." I told her, "No, give 'em back, I don't want the money." He said, "No, go put gas, go buy hook." I said, "Oh, in that sense, I guess, I don't feel so bad, okay." Then one of her Tongan friends, I guess he found out … the *nenue*, the *humunukunukuʻeleʻele* [blue striped or black durgon; variety of the *humuhumu* (*Rhinecanthus aculeatus, R. rectangulus*)], he wanted them all, and he gave me one … bag *ʻawa* [kava (*Piper methysticum*)] …

HKA: What is that *humuhumunukunuku*?

ERAD: The blue-striped durgon, *humuhumunukunuku'ele'ele*?

HKA: *'Ele'ele* instead of *āpua'a*.

ERAD: Yeah, yeah. The black one.

HKA: I know which one you talking about.

ERAD: The one always with the *nenue* [chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus, K. vaigiensis*)].

HKA: The *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of nice one.

ERAD: The one … with the tail on the top and the bottom. Yeah, so he gave me couple pounds of *'awa* [kava (*Piper methysticum*)]. You know, this I don't mind.

HKA: Yeah, bartering … 'cause that's traditional. Yeah, that's good. I like that *kine* of communities …

ERAD: My mom's neighbor, I would always offer him fish … certain *kine* fish he like … he's particular. So we give him and he would always give us smoked meat and smoked sausage. Whatever … too much I had would go to my family first and then to *kūpuna* [elders, ancestors], yeah.

HKA: Wow. So that's neat. Do you know the *mo'olelo* [story] of Ke-one-kani-o-Nohili, which is the Resonant Sands of Nohili? Sometimes people say, that's why it's Barking Sands but …

ERAD: Right. I know a version of the story.

HKA: Okay. Can you tell it to me?

ERAD: The one that I learned when I was really young is … There was a fisherman, who lived at Nohili Point or that area, and he was one of the first, if not the first *kanaka* [Hawaiian person] to have dogs as pets, instead of for food. He really loved his dogs. Everyday he would tie up his dogs before he would go out and fish. He would play with his dogs, tie ‘em up, and go. This was a regular thing. One day when he went out *holoholo* [another term used for “to go fishing”], a storm had blown over. It was raining so hard, he couldn’t see the island. Essentially, he didn’t know where he was, he never had his bearings, but he could hear his dogs barking. So, however long the storm was, finally the storm passed, and his dogs barking kept him close to home. When he came in to shore, the first thing he wanted to do was untie his dogs, and love them up because they saved his life. And he couldn’t find them. He looked around, and looked around, could not find them, he heard barking, and he could not find them. And he never found his dogs till today, that is why you can hear the dogs barking.

HKA: Nice … You talked about the *hui* [group] with the Nu‘alolo ‘Ohana that you are involved with, can you tell me about that?

ERAD: I been in the industry since 1992, and I worked for a company called Nā Pali Explorer. We were one of the three companies that were allowed to land at Nu‘alolo … picnic on the beach, do a narrated walk through the remains of the village at Nu‘alolo, and snorkel from the beach. Part of that permit was, we would provide transportation I guess for Nā Pali ‘Ohana, and while they were out there, we would bring out ice and any kinds of supplies they needed. They would make a call to whoever, and they would bring it down to the boat, and we would bring it out. At the end of the camping trip, we would load up the boat, and I mean … the boat was full … with cargo net and … I was young, I was 19. So from that point, I worked for that company years and years, and just *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of built up … got really close with Sabra and her husband … Randy, and Vicky … all the *‘ohana* [family].

HKA: And this *‘ohana* come from?

ERAD: This is all random people … from the Nā Pali ‘Ohana.

HKA: Where they come from, like all over Kaua‘i?

ERAD: All over Kauaʻi. I think Randy guys are from North Shore, and Sabra is from Līhuʻe side, I'm not sure what parts of the island everybody came from … but a lot of them was North Shore people. We had Aunty Lu Koerte from Kekaha, David, Nalani … But over the years I built up a relationship with them, and just became a part of them. My day off, if they camping … I go out on my boat, work, hang out, *walaʻau* [talk story], and just enjoy. Most times, I couldn't stay overnight, so I would leave. When I could stay over night, then I would. I would stay away from them because part of the permitting, and everything like that. So, I technically wasn't there but, yeah.

HKA: Wow, that's pretty cool. So, any other organizations you belong to?

ERAD: The more we talk stories the more things come up. I think that was pretty much it … Lua, Nā Pali ʻOhana, PVS, being involved with Kumu ʻOhai for a little while … Yeah, I guess that's the main ones. We have our little cultural *hui*(s) [groups] like Keao, and some of our people that work with me in the industry, but we were closer even when we weren't working for the same company … we still met each other, hung out, walaʻau … and became another *ʻohana* [family].

HKA: Nice. Are you familiar with Limaloa, the *akua* [divine, godly] of mirage? When you driving on the plains of Māna, and you can see this mirage? Have you ever heard about that?

ERAD: Of *akua*.

HKA: Yeah. Of Limaloa because there is a story of Limaloa and I think Pele.

ERAD: It's been so long since I heard stories from my uncles, but that does not ring a bell.

HKA: Okay. How about Hiʻiaka and the Pele saga? Because she came over here to fetch Lohiʻau [Hiʻiaka fetching Pele's lover, Lohiʻau on Kauaʻi].

ERAD: I've heard the story, but I heard it so long ago … once or twice … so it doesn't stick in my head. I'm glad you bring it up because it's stories I need to go back and research to know, but also to share.

HKA: Or connect to, yeah?

ERAD: Yeah.

HKA: Another question I was going to ask you, in fact this is the last question I am going to ask you … what is your recommendations or things you would like to see for furture generations in the area of Mānā, PMRF (Pacific Missile Range Facility), in Kōkeʻe … in the area of the project?

ERAD: Definitely better access. I guess … you know … we had it so good back then. And back then being pre-9/11 … up until that point. They closed the base, and we couldn't even dive off shore, couldn't anchor offshore for couple of years or however it was. All the *manō* [shark] got a little bit more frisky, because no more boats chasing them, so it's like they took over. They (referring to the sharks) took the area back. When it first opened … you shoot one fish, the sharks all over you already. So to be able to go back to how it was … not that it's our space, but they were not as frisky as they were before. They more frisky than they were before and now they getting back to that not so frisky because people are utilitzing the area.

HKA: Which is a natural thing between them and human kind interaction, and that natural relationship went away because they was less interaction with the *manō* [shark].

ERAD: Right, right exactly. The main thing is … I don't want to say lenient, but get more lenient on the access like … it's an unenforced law, you are not supposed to drive on the beach. I'm in the … I'm not quite *kupuna* [elder], but yet for me to lug all my gear to go fishing … the parking area is … the shore … you like go more down … you going have to walk in the soft sand. You know, stuff like that … or open up the end so we don't have to come through the base, we can drive from the side and come in … to have access to all these spots to fish. I remeber my dad … get all my dad's lobster holes and everything too. We went from shore with one scuba tank. We swim out on the surface, get to the spot, turn on our air, dive down, we clean the hole, come out, and fill our cooler with lobsters from couple t-bars. Now we cannot. We cannot drive to that area anymore.

HKA: So you want more access, better access … a little more leniency?

ERAD: Yeah.

HKA: So you can do your gathering like you used to do.

ERAD: Gathering, camping … actually I would love to camp at Nohili Point again … on the Flats, at the grassy area before the gates and stuff. I like take my kids there, my boys like … because all my family like to go *holoholo* [another term used for "to go fishing"]. Go camp on the beach at Majors Bay like we used to and stuff like that. We lost 'em, we lost all of that because of 9/11.

HKA: So I will end this right now. *Mahalo nui* [thank you very much].

ERAD: *Mahalo* [thanks].

ORAL HISTORY INTERVIEW

With

Eben Kawaikea Manini [EKM]

November 27, 2023

Kekaha Neighborhood Center Pavillion, Kekaha, Kauaʻi

By:

Keao NeSmith [KN]

And

Hannnah Kaumakamanōkalanipō Anae [HKA]

Recording file names IA202241_2023-11-27_Eben K Manini(1).wav and IA202241_2023-11-27_Eben K Manini(2).MP3

KN: *Aloha nō* [intensified greeting],[1] this is Keao NeSmith, and I am sitting here at Kekaha Neighborhood Center Pavillion, *moku* [district] of Kona, Kauaʻi … *ahupuaʻa* [land section] of Kekaha. And we are sitting here with Kaumaka Anae, of International Archaeology, and I am a subcontractor under International Archaeology; and we are interviewing today. Can you say your name?

EKM: Eben Kawaikea Manini.

KN: And *mahalo nui* [thank you very much], and is there anything else we need to … as far as the identifiers … *pau* [finish]? Ah … yes, and the reason we are meeting is to discuss the Lease and Easement Impact Statement for the PMRF (Pacific Missile Range Facility) Facility at Nohili, Kauaʻi. And we are here to talk about what the local people of this area know about this place … about all of this west side … *mauka* [toward the mountain] to *makai* [toward the ocean]. Ah, so

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

let's start with the first question, so tell us about your mom and dad … what are their names, and where are they from?

EKM: So my dad is Joseph Punilei Manini Sr. born and raised on the island of Kauaʻi for many generations.

KN: Where?

EKM: In Waimea, Kauaʻi … majority in the valley. He was actually born in Olokele Valley which we relate to Makaweli Valley in this day and age. And my mom was born on the island of Oʻahu. Her family came from Maui. And on her Hawaiian side, they were actually known to be from the Island of Nihoa, her genealogy. On her dad's side would be from Tennessee … which I have some Native American Indian and some Caucasian background in her family. She moved over to Kauaʻi back in the day before meeting my dad where they got married, and had eight children.

KN: Your mom from Nihoa, you know the family name from Nihoa?

EKM: I know her grandpa was Kealohanui.

KN: So you related to Lei Wann them guys?

EKM: My sister Erna would know exactly all of the genealogy names. But … yes, she has family Oʻahu, Maui, and possibly Kauaʻi as well.

KN: Nihoa, because they have a Nihoa family. You're the second *ʻohana* [family] I came across that actually had a definite Nihoa connection. That's awesome.

EKM: That would be my mom's mother's side.

KN: And so that's Presley Wann, and the mother Lei, Aunty BG, she runs Limahuli over there. And then your dad's side born Olokele in the house?

EKM: Private house, my dad was born in Olokele Valley.

KN: And his *kūpuna* [elders, ancestors] going back are they Kauaʻi too?

EKM: Kauaʻi. A lot in Kauaʻi and many generations.

KN: Waimea too … area?

EKM: Majority is Waimea. Although we had *ʻohana* [family] also in Wainiha.

KN: See, that's why too Preseley Wann is all Wainiha too.

EKM: Yes.

KN: Could be, could be. Anyway … *mahalo* [thanks]. And let's see … What are your experiences with this area, as you grew up … ah … all the way.from say Waimea, all the way to Polihale … Nā Pali … *mauka* [towards the mountain] … *makai* [towards the ocean]?

EKM: I have numerous background in this area as … born and raised in Waimea … in the valley. And then our family has property at Puʻu ʻŌpae. We first went up there in 1968 where, ah … this is where I reside to this day. I been living there on property for about 20 years now, permanently. As far as growing up in my youth … Waimea, doing sports, delivering newspaper, coming to church in Kekaha … the Mormon Church … the Church of Jesus Christ of Latter-Day Saints from my youth and througout my teenage years. I did sports in Kekaha as well when we had little league games throughout the west side of Kauaʻi. Also, there used to be a horse arena for rodeos near the sugar mill location. So my dad would rope a lot and my siblings would do a lot of activities in the arena. Occasionally, we would do horseback riding all the way out to Mānā Camp, which used to have a swimming pool there. We would use the old governement road adjacent to the backdrop of the mountain range; from the Mānā Plains Flats we would ride all the way down. There would be a whole day of activities, usually on Saturdays, and we would swim in the pool, then ride all the way back on the highway pass the Missile Range area … we would return back at the arena. Also,

I remember going swimming in all the freshwater swimming holes in that back section there too where the mango trees are.

KN: More Kekaha side or Polihale way?

EKM: Kekaha.

KN: Kekaha Way?

EKM: More towards … they call it now the Magazines … where the Magazines are for the military. The Pacific Missile Range has their bunkers possibly in there … it's all fenced off, so it is private there, but that would be the location. Also going to Polihale for family picnics and, ah … celebrating some of the holidays … maybe Easter at times. I remember driving back to Queens Pond as well. I was never a very good swimmer back when I was younger, so I was not allowed to go into the rough ocean, when, at times Polihale can be rough, and then Queen's Pond would be a lot calmer and little bit safer to swim at that location. So I remember seeing a lot of the … the old Kauaʻi where we still had a lot of *kaunaʻoa* [a native dodder (*Cuscuta sandwichiana*), belonging to the morning-glory family, a leafless, parasitic vine, growing densely on other plants] growing all along side the roadway going to Polihale on the dunes, the sand dunes. Where now it's a whole lot different with invasive species. As far as the base, the Pacific Missile Range Base Area, we would go on base with permitting to cut *kiawe* [algaroba tree (*Prosopis pallida*), a legume from Peru, first planted in 1828 in Hawaiʻi, where, in dry areas] posts, which is an introduced species of trees to make fence posts for our ranch up in Puʻu ʻŌpae. So we have permits to gather wood posts from the base in areas where they needed to cut back some of the invasive species encroachment on their facilities where they would be near the fuel farm or closer to the airstrip. This is again, when I was very young, and remember it going all the through almost my teenage years. Also, in the back of Kekaha where the Hawaiian Homes (Department of Hawaiian Home Lands) now has homes there, the latest improvement location, we would also cut firewood in that area. Near that location too, there used to be a firing range … right now, I think the County calls it MacArthur Park … would be just *mauka* [towards the mountain] of the MacArthur Park. So from that location back to the old Kekaha Plantation Slaughter House, in that range we would be cutting a lot of fence posts as well.

KN: That's now the area, Kekaha Gardens, yeah?

EKM: Yes, they extended it backside of Kekaha Gardens.

KN: That used to be all ponds and swamp, yeah, before?

EKM: Yes, yes. There were also some areas that significant berms that …

KN: Many sand dunes.

EKM: Yes! My dad would say had cultural significant areas that we would not cut in those areas for respect of what is there … whether it would be burials or it would be *heiau*(s) [place of worship, shrine] in that areas, or special locations where he would *pule* [pray] a lot, and we would be inspired, or you would have locations passed down through you, through generations prior. My grandfather, Benjamin Pinihakapunilei Manini Sr., he would go on the flatlands all in back of … from Waimea to Kekaha when there still used to be swamp lands. And they would oar down with a flat-bottom boat where they would actually catch *ʻōpae* and some of the brackish-water fish that would be present in the area.

KN: I wonder what kinds of fish, like *āhole* [an endemic fish (*Kuhlia sandvicensis*) found in both fresh and salt water] maybe …

EKM: I know it was brackish, and he used to love to throw net.

KN: *Awa* [milkfish (*Chanos chanos*)] maybe … *ʻanae* [full-sized *ʻama*ʻ*ama* mullet fish]?

EKM: Yeah.

KN: Yeah, maybe.

EKM: So he would catch fish.

KN: Mullet?

EKM: And I remember had lots of shrimp, though.

KN: Okay.

EKM: And that was the story … he would go gather food.

KN: Because that water I remember … the few ponds that we did see before had Kekaha Gardens was actually clear, the water I remember seeing … so I imagine that's good environment for *ʻōpae* and stuff like that.

EKM: Yes. So the water clarity was clear because the land is lower than sea level with the outside sand build up from the ocean. So I was told that the water used to be brackish, and there used to be even salt solidification sometimes on the dried off dirt areas during summertime. But there was a lot of interior freshwater springs that eventually the plantations capped to allow sugarcane to grow in this very marsh area so they dug canals to dry out the land mass so it could be cultivated. Of course, this is just new generations, new ideas, new development and building. I was told through *kūpuna* [elders, ancestors] in the past that there were certain varieties of *kalo* [taro] that could grow in brackish water. And then they'd build up mounds on higher locations within this marshy, boggy area where they would actually grow *kalo*. So at least there would be food and sustainable for the people who would live adjacent to this region alongside the mountain area. Not necessarily *pali* [cliff] but higher elevation, up along the whole mountain range from Waimea to Polihale.

KN: Interesting you mention the high points, the high elevated points, because that area by Kekaha Gardens, all of this area in the historical record that was the highest point, because it came to sand dunes … like you just said, and it would come to one mound, and on top of there in the historical record anyway, old maps like that … is one *heiau* [place of worship, shrine] over there called, Lolomauna … so that's interesting. I imagine that from there you get one good view looking across the plain, yeah …

EKM: Yes.

KN: … to all these lower spots.

EKM: Yes. The higher and lower spots may not be mounds, would be lower … but definitely drier where some of the native birds would actually rest to be out of the water as well. My stories that was passed down through my family, my grandfather would say … had a lot of native Hawaiian ducks in the area, possible had *nēnē* [Hawaiian goose (*Nesochen sandvicensis*), protected and rare on Maui and in Hawai‘i uplands (down to 40 at one time and about 1,000 in 1978)] back in the day too because they like to eat the swamp … the grown wheats.

KN: Out there had *‘alae ‘ula* [Hawaiian gallinule or mudhen (*Gallinula chloropus sandvicensis*), distinguished from *‘alae kea* reddish bill and frontal plate; endangered] … *‘alae kea* [Hawaiian coot (*Fulica americana alai*), a marsh and pond bird, distinguished front *‘alae ‘ula* by its ivory-white frontal knob; endangered].

EKM: It is a good possibility all of the original native birds that may have migrated here or live here would be in that because the food was a lot, was flourishing.

KN: But that’s the kind of bird you don’t see. But now they have that one area by PMRF (Pacific Missile Range Facility) now where they trying to restore the wetland, yeah …

EKM: Yes.

KN: … and that one attracts a lot of birds …

EKM: It does.

KN: … which is good.

EKM: And the way that pond is designed would have been similar … I would imagine … to how the interior of that pond looked like …

KN: Must have looked like. Exactly.

EKM: … that whole region would have been very similar.

KN: Same like me … everytime I see that … I think to myself, "Wow this whole area must have looked like this."

EKM: Yes, yes … and that was passed down … of course … only through stories. Another story would be linked to all the *ʻōpae* that was linked to the whole region of this flatland, marshy areas would be … if you look *mauka* [towards the mountains] where we are located to the north, there is a big hill, it is called, Puʻu ʻŌpae. The reason for the name Puʻu ʻŌpae is that this is the location where all of this *ʻōpae* shrimp flourished in this lowland was gathered, and exchanged on the top of that mountain … with the mountain people …

KN: *Menehune* [legendary race of small people who worked at night, building fish ponds, roads, temples]?

EKM: … *Menehune* or other people that were there. Some people say, "*Menehune* is small." They're not small … I would say, "They were maybe smaller than the migration that came with Hawaiʻi Loa which they may have been seven or eight feet tall." But I believe the *Menehune* would stand about my height, which is a little bit over six feet tall, and not little minaiture dwarfs … that's my personal opinion.

KN: But compare to those *kanaka* [Hawaiian person or people], they would be small. [Laughter.]

EKM: They would be small, yes, smaller in stature, yes. But I found some of the artifacts up our property from ancient times, and they would fit in my hand a certain way … so knowingly … probably the person using it would be similar to my stature. Also, my brother has found very large adzes in the past … kind of showing that the person that had carried it must have been very large, maybe close seven to eight feet tall and well over 300 pounds.

KN: About where, without being too specific, about where would some of these *koʻi* [axe, adze; adze-like, sharp, projecting, as a forehead], maybe *poi* pounders [stone used to pound taro into *poi*, a paste-like staple of the Hawaiian diet], would have been found?

EKM: Artifacts that I knew about would be nearing the *puʻu* [hill, peak] I mentioned …

KN: Puʻu ʻŌpae?

EKM: Yes, Puʻu ʻŌpae.

KN: Okay. So up *mauka* [towards the mountain] then … on the ridge … on the ridge.

EKM: Yes, about five miles inland from our location.

KN: So that would mean there must have been settlements back in the day.

EKM: Yes.

KN: And it's *kauhale* [group of houses comprising a Hawaiian home, formerly consisting of men's eating house, women's eating house, sleeping house, cook-house, canoe house, etc; later the term referred to but a single house] maybe a family would live there or something, right? Is that right?

EKM: Yes, yes. Some of the archaeological sites in the museum, in the Kauaʻi Museum, would show villages near this mountain range that I talk about. There is this specific energy that some people may admit to or some may not, but definitely there is different energies you would feel at times in this location where you can almost feel welcomed or almost denied to be in the location at that period of time. And I relate it more towards moon phases that can change the outcome of your presence. At times it can be very uncomfortable when you just know, "I have to leave."

KN: Would you say … that's also the experience on other ridges, other than Puʻu ʻŌpae?

EKM: Yes.

KN: Any way going all the way to Mānā.

EKM: I have experienced that in numerous places on the island. This whole region that we are discussing today, and also in the deep Alakaʻi Swamp near the summit, I've felt these energies as well, because I have worked in Conservaton professionally for 12 years. Working with rare and endangered plants and invasive species. That I was doing during my age of 40s, right now, I'm shy of 60 years old. As far as more artifact down lower, there is still some of the old, ancient walls where the people may have had homes or may have had *hale* [house]. I pointed out one of the *hale*(s) where archaeologists came down about a year and a half ago with the Department of Hawaiian Homes (Department of Hawaiian Home Lands) for their project for the hydroelectric. They measured it out, and they claimed to have found, or what we have identified as canoe hale where they would build canoes. As a little boy, I would ride my bicycle and walk a lot in this mountain range up here, and there was a lot more walls back in the day. But over the years, the plantation needed to make more sugar for their expenses … to be more profitable, so some of the walls that were there, were eventually removed and sugarcane was planted in the areas. I did go with a few archaeologists to try and find the locations that they had actually recorded on the GPS (Global Positioning System) mapping, but all of the sites were sort of leveled down. But I will explain what I would have seen back in the day, this would have been back in the early '70s. And then now … of course … it's not present anymore. So future development may have to keep in mind that if something was there, they might not want to build homes on the location.

KN: What do you know about the little villages that used to be there, Mānā side, because we know about the one village by Polihale turn off, and the swimming pool, and I had a grandaunty that used to live over there too … but I think there is at least a couple other villages, do you know much about that?

EKM: The little villages, I'm not aware of that, I can't remember, and my dad would not say too much about the actual location of the villages … but what he would teach me is where there would be numerous burials in the sand dunes. He would teach us not to cut wood there.

KN: Is this *mauka* [towards the mountains] or *makai* [towards the ocean]?

EKM: Would be closer to … the one I'm referring to would be right near Queen's Pond.

KN: Okay.

EKM: And *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of near Nohili Dunes.

KN: Okay.

EKM: So there are some rare and endangered plants over that berm that the State and Federal government should be protecting. And that's why I think people with trucks and ATVs should not be out there because they could easily destroy this rare species.

KN: Yeah. Well, does that also extend to military activities too then?

EKM: Yes, it should be for all. It's protection of *iwi* [human skeletal remains], or for any endangered species … all should apply because there is a Federal law protecting it.

KN: Because we know they get RIMPAC (Rim of the Pacific) exercises, they run their troops up and down the beach, their machinery … you know … amphibious boats and stuff like that.

EKM: Yes, they do. They normally restrict the area to the general public when they have their … I like to put it … as their war games for training for military purposes. So a lot of the general public is not allowed to visit the area during their practices. But I remember growing up, I used to love to find like military bullets … shell casings.

KN: Me too. I liked to do that too. [Chuckles.]

EKM: We would find projectiles of the head of the actual …

KN: The lead part.

EKM: The lead part or the copperhead.

KN: Same.

EKM: Or that's what hits the sand and eventually comes out … but then again exposed … or the actual shell casing.

KN: Not too smart, but that was fun. [Laughter.]

EKM: Yes. But that would be present in some of these areas where it is blocked off to the general public for their practices. Also, as a Native Hawaiian, I will be honest with you … I never been to Nohili, the *heiau* area. I know it's blocked off from Native Hawaiians, and I am a Native Hawaiian, a law-abiding one. And I never go there for any reason. Even pre … um …

KN: Pre-9/11 [before the attacks of September 11, 2001] when access to PMRF was not as strict.

EKM: Pre-9/11, thank you. Pre-9/11 you still needed permits to go in the area.

KN: And then after 9/11 was even worst.

EKM: And then it was lockdown … to basically no entry for people that don't work on the premises, for families maybe … for people that don't work … Yet I have clearance because I work at the airport with the same FBI background checks. I work at the harbor with my transportation information pass, that I do the full-background check. I'm a legal firearms owner. I follow and abide all the rules that are set up by the government. And then I am not allowed to go to this location. I don't think it's fair as a Native *Kanaka Maoli* [Native Hawaiian, indigenous] …

KN: From here.

EKM: Yes, from here … and not being welcomed on my homelands.

KN: They're the *malihini* [visitors], not us.

EKM: I am *hapa* [half], so I can still sometimes say, "I am half."

KN: You straddle both sides. [Chuckles.]

EKM: But the thing is, I cannot enter both ways … as a *malihini* [visitor], as my grandfather was part of the United States Navy, which is my mom's dad, Luther Curtis. He actually, was blown off his ship in Pearl Harbor, he lived and survived throughout the entire war. My dad's grandfather fought in World War I. My grandfather and his brothers would be in World War II. My uncle and dad was in the Korean War Era.

KN: Your *kupuna* [elder, ancestor] who was blasted off the ship in Pearl Harbor, what's his name?

EKM: So that would be my grandfather, my mom's dad, and that's how I have my *hapa* [half; half Caucasian, half Hawaiian] in me.

KN: What's his name.

EKM: Luther Curtis.

KN: Oh, Luther Curtis. All right … that's a good story.

EKM: Yes, so he was blown off, and that's how he survived … he was swimming in the water the entire time trying to survive, and he had PTSD (Post-traumatic Stress Disorder) for the rest of his life.

KN: Awg … shucks.

EKM: Because of what he shared with our *'ohana* [family] that a lot of what he shared was never documented in all of the movies and documentaries I see of what he witnessed was going on in the water, and was very hard for him to fall asleep at night for the rest of his life. He eventually, after the war, he lived through it, he went back to Tennessee where he ended up falling in love with his original high school sweetheart. Which my mom, and grandma was left in Hawai'i to survive, and eventually my mom, Beverly Ann Curtis Manini, came over to Kaua'i with other *'ohana*, where they met my dad … my parents met each other, and eventually got married.

KN: I have an uncle who survived Vietnam but till today he cannot sleep all through the night. He gets anxious in the middle of the night and gets up because he's … muscle memory for him is to be on guard, so he cannot have a restful night sleeping … PTSD (Post-traumatic Stress Disorder) from Vietnam War … so I can relate to that. Can I ask you what you know about … anything related to military activity at Kaʻula, Niʻihau, and Lehua?

EKM: I've heard the military is classified so you don't always get to see it happening when it does occur, but my understanding is they would … shoot ordinances on Kaʻula …

KN: Kaʻula.

EKM: Yes, thank you … on Kaʻula. They would also have permission from the Robinson Family to put a weather dome port on the northern side of the island, I believe …

KN: Niʻihau.

EKM: Yeah … Niʻihau, thank you. On Niʻihau possible the early '80s where they had to install radars to see any encroaching enemy from the backside of Niʻihau due to the curvature of the Earth. The satellites was not as great as it is now, so I don't think they need that feature anymore … unless the satellites should be disarmed, and you may have to go back to traditional ways … with scanning the radar. Also, I recall a lot of our area out here … although it's classified, there is a lot of submarine activities in our waters around Kauaʻi, but usually around Nihoa and Niʻihau. On occasions we would be fishing back in the '80s and '90s on the fishing boat in the channel between Kauaʻi and Niʻihau, and we would see submarines that would surface. Occasionally there would be retrievals of test fire torpedos that they would retrieve that is all a part of their training that they go through, whether it's weekly, monthly, or whenever it's called upon for doing. Growing up in Waimea delivering newspaper in the community, we would have to pick up our newspaper near the area where it's called the laundromat in Waimea, right at the Hofgaard Park. Is it Hofgaard?

KN: Yeah.

EKM: Yeah, so they would drop off the newspaper there. So we would have to wait for delivery to come in before we could distribute papers throughout our zone where we deliver, and then we would see the flatbed trailers hauling the exposed test fire or dummy torpedos … it would be exposed, and they would just haul it right on the road. And that was a normal thing as was back in the day … a lot of the things they would do, is not like the regulations we have now. Occasionally now, if it is hauled on the road, it's on the same trailer, but it is contained. It's usually blocked off, so you cannot see what it is. So we would see the propeller on the back and the thing was … you know … well over 30 feet long … and sometimes there would be two or three in back on the trailer hauling back towards the base. And sometimes I think they would pick it up at Port Allen which was retrieved after shooting. And then, I don't know if they rebuild it or ship it out, but that's all classified, but it is all part of their trainning exercises that they do possibly year round or during RIMPAC (Rim of the Pacific) when they have numerous …

KN: Even more so, yeah?

EKM: … impact … I would say … on the waters outside of Kaua'i, Ni'ihau area. And then I also remember from on top of the hill where I live, you could see helicopters landing at the base. So you would see helicopters leave from a ship and land on the island. And it could be anybody landing, it could be our alllies, whether it would be Japan, Korea, or whoever it was back in the day. They could freely come to the island, probably not even going through background checks or even having any resistance … basically to walk freely on the land … yet, as a Native Hawaiian we are not able to do that. Which is not fair.

KN: Can I interrupt you for a moment, just to say that we are using my laptop recorder … I'm using the program Audacity to record this interview, but I'm running out of juice on my laptop. So if we get cut off, I'll call it a pause, and then we will switch to my iPhone, which we can use Voice Memo to record. Is that okay, because we on fire right now. We don't want to stop the groove we got going. Let me ask real fast about … there are … because you provided so much information, this is really awesome … can I go back to your family one more time … going back to your family past … is your on either side … *ali'i* [chiefly] family?

EKM: I can't really say … but my understanding with my background is … we were healers … for sure … it could be *ali'i* in possibly the healing side of things …

KN: Okay.

EKM: Both sides … both my mom … on her side … on her grandpa's side, he was a well-known healer. I know my granduncle was also a healer for using herbal medicine, or even the old way of *kāhea* [to invoke, cry out].

KN: What's his name?

EKM: He would have been Herbert.

KN: Manini?

EKM: Herbert Manini, yes. He would also attend Kekaha ward church (Church of Jesus Christ of Latter-Day Saints) back in the day. He is buried on the Temple grounds in Lā'ie. Yeah, he died in the '80s I believe.

KN: Okay.

EKM: So he was one of the last ones to do the full healing of practice …

KN: *Kāhea*?

EKM: Yeah, *kāhea*. He was capable of that. As far as my grandfather … he's buried in the Kekaha Hawaiian Cemetery with my brother, Hōkūlani, who died as an infant.

KN: What's the name of that one?

EKM: Benjamin Pinihaka Manini Sr. He would be buried just inside where your dad is buried … just inside, the two of them are buried there.

KN: I have a list here of some places going this way from Kekaha towards Mānā [KN showing EKM a list of place names on his laptop]… I go scroll like this … if you could scan your eyes through some of the place names … if anything stands out … if you know of any story or *mo'olelo* [stories] … or any information that you know firsthand or stuff that say your dad told you about any of these areas, can you tell us? And there is a good chance that we might get cut off, but that's okay, we'll transfer.

EKM: Okay.

KN: So starting there, and then you go down to scan the names.

EKM: Okay. And … just for the record too, some of the names that are current may not have been the original names.

KN: Sure. Go ahead and use whatever names you know.

EKM: I just wanted to point that out because I was asked the question by another person doing research for the KIUC [Kaua'i Island Utility Cooperative] project and then he referred to an area that I did not recognize the name, but when they showed it on the map, then I related it to another name. But it's okay, I would actually tell people that every generation may change a name, and if there is another *ali'i* or chief that may take over, he may change it completely. So as long as we're talking about the same area, I think it's most important, instead of the exact location because it is still in the region we're referring to.

KN: Okay. Go for it. I just handed you a map, it's Google Earth Map of the area of Nohili, Polihale, coastal, up *mauka* [towards the mountains], not all the way up, though … but it includes Makaha Ridge. If this helps, go through the list, and if this helps you jog your memory, then great. It's a series of maps here, mostly around the area of PMRF (Pacific Missile Range Facility).

EKM: Okay. And bear with me because I am Hawaiian but I don't speech fluent Hawaiian so I will try my best in pronouncing some of it.

KN: Okay … give it your best shot. You can also use this [KN shows EKM a map].

EKM: I live at Puʻu ʻŌpae, and then one of these going be the valley just adjacent to me.

KN: So that's Hāʻeleʻele or Haleʻieʻie?

EKM: One of that two, and then …

KN: I believe it would be Haleʻieʻie because Hāʻeleʻele is further.

EKM: So one of them … there are actually terraces in that valley where looks like people either lived or farmed. That is the location Iʻm pretty sure if it is the valley I am thinking about or referring to … that's where the plantation back in the day piped the water that came out of the springs and out of the mountain past these archaeological remains … where I was told that people lived there, but eventually they had no water because they took that water for the Mānā Camp which house the plantation workers. So there are still walls that are in there that were from the people back in the day. There is also another link … in the split in that … I believe in the Mahana Valley. In there … there were also archaeological sites that I remember seeing back in the day when I would walk all the mountain looking for military bullets … [chuckles] … and also, the miltary ammo cans we would find, and my dad would use it as little tool boxes … the 30 mm and 50 mm cans that the Vietnam and Korean War Era … they left a lot of this debris back on the property. As it comes lower, there is still some fruit trees, some Native Hawaiian orange fruit trees that are in some of these valleys that is still present till this day. A lot of them died off due to the cattle that was raised all in the same land area that the plantations raised for almost a hundred years, they had the area doing ranching. We do ranching above it in a different section of this property. There's another area that … it's a lot right now, that's why I'm trying to think … Kaunalewa, the Valley of Kaunalewa … where it comes out … that particular area has walls in that valley too.

***Interview resumes; refer to recording IA202241_2023-11-27_Eben K Manini(2).MP3 ***

EKM: On the ridge line where the plantations used to do sugarcane … as a little boy I remember seeing walls … and then some of the walls in this day and age is gone. It may have been pushed back or

removed for planting sugarcane. But I recall seeing numerous walls in the area in the ’70s, and now maybe there’s just a few left. I pointed it out to some of the archaeologists and at least one of them said it was a canoe *hale* up on the hill.

KN: Above Kaunalewa?

EKM: Above Kaunalewa to the Polihale side, on that ridge line, yeah.

KN: Okay. So that would mean, there are multiple canoe *hale*?

EKM: There should be multiple …

KN: So, Puʻu ʻŌpae had and then this area get … must be more, yeah?

EKM: I would think there is more along the way. In my opinion, I would think there is more because different ridge lines we would find a lot of the old artifact, the adze … used to dig out the canoe or harvest the wood from the forest. We had back in the day, large *koa* [the largest of native forest trees (*Acacia koa*)] forest. There’s areas where there’s quarries, where they would make the adze with the basalt rock. So you would see all of the chippings piled up where they would actually shape the stones, the artifacts. They would turn the stone into an artifact, mostly adze for digging. And at times, we would find some unfinished, then some fully finished, and some then broken or damaged from being used, and maybe it would crack. But all of these are still present up on the *ʻāina* [land], in these hills, and in the valleys. In Kaunalewa was a story that my dad told me about a grass hut that’s supposed to be on the plains … on the flatter area, not on the hill. And he would say … if I see the *hale* [house, building] not to go to the *hale*. I never saw the actual grass *hale*, but I did in my lifetime twice, see another structure that is near where this *hale* should be.

KN: I have heard from Aunty Maha over here a story just like that one time when it was many years ago, like in the late ’70s she told us the story of going Polihale night time because the family was camping, they had to come back grab stuff … on their drive back through the cane roads, they got lost, because sometimes … you know … you got to turn yeah? They got lost and ended up going somewhere … and in the distance they saw a house that they never seen before, but there was no

where else for them to go, and they had to approach the house … and they got so terrified that they turned around. And that's one story … sounds similar to your story.

EKM: Yes, very similar. The house that I saw was very large, like a mansion.

KN: Hers one too.

EKM: And it was two stories.

KN: Hers one too.

EKM: And also, I saw it twice in my life. I think … I was between 18 and 19, the first time I saw it. And then the second time, I was near 50 years old. I saw it at least twice. The house still looked the same, yet if you come another day, the whole area back when I was 18, was sugarcane. I would tell my dad, I saw like a manager's house or something.

KN: Same. Aunty Maha's description was very much like that as well. Which is bizarre yeah … I mean … why a modern style house, yeah, instead of a grass house?

EKM: Yeah, in the middle of a field.

KN: But if you go in the daytime, you would never find it.

EKM: And it's all cane.

KN: Yeah.

EKM: It's just back to cane again. In the modern time, when I was about 50, it was corn. But that's the thing … you see it …

KN: Oh, even when it was corn?

EKM: Because when I was 50, it was corn.

KN: Yeah.

EKM: The cane was done.

KN: Yeah.

EKM: And it was there. And I couldn't understand, but I remember my dad saying don't go to it, because if it disappears, you may disappear with it.

KN: Yeah.

EKM: I don't know, what it represents, only certain people can see it … or it's just a time when you can see it? Maybe if you're completely cleansed or *pono* [righteous, upright]?

KN: Maybe it's a similar experience to the night marchers phenomena?

EKM: Yes.

KN: How sometimes they say, "Only happen certain night, certain month, and under certain conditions but not in any other situations."

EKM: I agree … I agree with that one though … for sure.

KN: For the record, "My laptop has now given up … and we are know recording on Kaumaka's device." I don't believe we lost any of the conversation, so carry on.

EKM: Okay, so what I remember seeing that area which is on the plains and heading back towards that mountain range we are relating to … I think … I touched on everything on what I saw, and how I felt, and what I heard in the past … as far as the grass hut, I never saw the grass hut, it was always

a modern structure that was magnificent … really, really beautiful. I mean it's almost like very attracting where one would want to go, but when I was young … it's like you shouldn't go, because it is like we don't live in that kind of location, and so you're not welcomed to go … but it was welcoming when I saw it. Another place I want to relate to is further back here more where the traffic lights was back in the day. So there was a *heiau* [place of worship, shrine] on that hill as well … one of the *Pō heiau*(s) was back there.

KN: Hukipō.

EKM: Hukipō is there too, I remember my dad sharing a story.… There's a lot of big old trees that are still present there. There was burials in that backside hill mountain range over there, and I believe there are still some today, *iwi* [human skeletal remains] inside the mountain there … in the *'āina* [land] … in the tunnels or caves that might be there. So that particular area … I remember my dad sharing a story that after they buried one of the *kūpuna* or men, that lived in this area, he passed away … what they did was, they buried him there, and they would always hear him singing. He would sing regularly and it would be so loud, that a lot of people in Kekaha town ould not sleep because it would be that loud.

KN: Echo through the valley?

EKM: Echo through the valley and then come on out. So … according to my dad, they took his body or his *iwi*, and then they moved him up into Waimea Valley. I cannot tell you the exact name of the location where they buried him, but I know if I was to drive up there or walk up there, I could tell you exactly what valley it is in. In the location, till this day, if you go up there … occasionally you would hear singing in the location.

KN: What kind of music?

EKM: It's Hawaiian. Acapella.

KN: Hawaiian songs?

EKM: You can hear him, just singing. You can hear this language, just going. And you can be thinking like, "I'm hearing something." But I was told …

KN: Not chanting, just singing?

EKM: Singing or chanting … it's a combination.

KN: Okay.

EKM: And you can still hear him, and according to my dad, it's the person they moved from Kekaha to that location.

KN: Because it didn't happen before that?

EKM: It didn't happen before. Now there's also another location near where I grew up alongside the mountain, where it's right under Panini's, which is a *heiau* [place of worship, temple] up there as well. There's also singing.

KN: By where the houses are?

EKM: Yes, just below the houses.

KN: The houses took over where the *heiau* was? Is that right?

EKM: That *heiau* is present in one of the people's yards.

KN: Okay. (Chuckles.) That's the area we went the other day. *****KN speaking to HKA.*****

EBN: It may not be approachable how the property lines are … it supposed to be a flat right by the cliff.

KN: Okay. Got it.

EBN: It looks almost like a little putting range.

KN: Yeah.

EBN: But that what I was told is the *heiau* [place of worship, temple] right there.

KN: Make sense.

EBN: Now … there also used to be a *hale* [house] right behind it that Bishop Takahashi from the Kekaha Mormon Church would have to occasionally go up to bless, because the people living in the house couldn't go in certain rooms of the house. I think it's for whatever cultural things was happening in that period or in that state … I want to say … because they're not in the present yet, they are active in what they do … they are not allowed to go into certain rooms. So, he would have to go bless, and he would see people in their home … which was probably this home was built upon this sacred *hale* or whatever was there … where they would prepare to present their offering or respectful duties to the *heiau* itself. But below that, we would also hear singing. So somewhere in there, there is probably a person chanting or singing that still may reside in that mountain range there. A lot of the graves there were broken into way back in the day for archaeological studies. Some of them where shipped off to the Smithsonian Institute. Artifacts and other things were disturbed. Some of the caves was exposed because we had a cattle pasture along that cliff line … and then we would drive cattle, and we would see the exposed *iwi* [human skeletal remains] all in this location as well. As far as going down again back towards Polihale, I've seen two areas back in the '80s that had *iwi* in the upper caves, in the location where … KIUC (Kaua'i Island Utility Cooperative) wanted to do a hydro line coming down from the upper mountain range. I mentioned it to them, my son and I went back, I could not find the exact cave anymore because there are a lot of wild goats in the area, and seems like the goats desecrated the caves where the *iwi* used to be. Now, I only could find bedding areas of the goats all with a lot of goat poop all in that vicinity. But I did mention to them the approximate location where it was, so if they were to put waterlines or things, maybe to avoid at least where I saw in the past out of respect. Even though it's not there, I still want to make sure we're mindful of what would have been there before the present. Along that same ridge line going Polihale from there to the Magazine location where the military base is now, there's still some significant cement areas where some of the artillery guns were set up to defend Hawai'i back in…probably during World War II. So, the platforms of the concrete are still there. I

don't know if the area was ever checked for foreign matter in the soil. This whole area there is all…supposed to be all Department of Hawaiian Homes (Department of Hawaiian Home Lands) property which is trust lands for the Native Hawaiian people. The modern maps that I've seen just a few weeks back in Waimea High School…the DLNR (Department of Land and Natural Resources) came to present their new…proposal for Kaua'i…that lands are not even declared on their personal maps…its defined as Kekaha Game Management. But it's not, it's actually Department of Hawaiian Homes trust lands for the beneficiaries. I just want to make sure on record that people know that if a State entity is making a decision to allow things to continue, that it should include the beneficiaries as well because it could easily be soiled or polluted by any other activity or unnecessary mishaps. Along this same ridge line my son and I saw debris on one of the ridges. We went over about three weeks after that … this happened about …

KN: Military debris or plantation debris?

EKM: Military debris. About one and a half to two years ago we went down to go check along the edge of the drop, which is little bit *pali* [cliff], but visible from the highway … you will see debris that looks like house debris or hurricane debris, but actually it's a destroyed rocket that impacted the *ʻāina* [land] right there. It's completely blown up with aluminum pieces just scattered all over the hillside. I reached out to the Pacific Missile Range. The person that called me … within a month he was relocated or reassigned … so, no follow-up. I called the NTSB (National Transportation Safety Board) on O'ahu, I told them the location, they asked me to contact the base … because NTSB should know about everything that hit, I did not know if it was foreign or not, I wasn't getting a clear answer. My son and I went back down the cliff, we started walking the area, taking pictures. Some of the material had identification on it. So, it does belong to the United States. I sent that picture back to the base … Pacific Missile Range. Eventually they contacted DHHL, Department of Hawaiian Home Lands, and ADC (Air Defense Command) representative. ADC representative contacted me saying, "Oh, it's not on Hawaiian Homes Land so don't worry about it." I mentioned to that person, I have the old map from the 1920s and from the 1990s, and both maps show that the projectile or the debris is on DHHL property … but their new maps are showing different … as is the new DHHL map that they posted over in Waimea High School a couple weeks back. So, it's just like their changing boundary lines for things that may have happened in the past. I remember my dad being in opposition for some of the rockets they would launch off of Nohili Dunes, because they do it quite regularly. His concern was … there might be one that goes crazy,

and might impact us because we lived on the property. It was always said, "Don't worry about it, don't worry about it." Now I don't know if my dad knew if there was a rocket that actually impacted, because when we did our research, my son and I … we went online to look how the debris we see, to measure out how much debris, and try to estimate what this rocket looked like … the rocket would have been more than 40 feet tall. So, this …

KN: Good size.

EKM: It's a good size rocket and then the one we saw that he could actually … it was allowed for the general public to see … it was actually launched off of a … it was either a ship or a sub … because they don't show the whole thing … and it was launching off of the water…so it's coming from either a ship or a sub…and it's supposed to be like one of the earlier nuclear type mini warheads.

KN: So, you think soon after World War II era?

EKM: The model of what we saw or what we compare would have probably been Korean War or right after Korean War.

KN: Okay. Fifties, '60's?

EKM: Fifties, '60's type of rocket, because then it changed later. As a mechanic for more than 25 years, we go through a lot of fittings, aluminums, air conditioning, you name it … lot of the material on it was almost technology from the '80s even though this rocket should have been back from the '60s … it shows how much ahead the technology was before it came to the general public. That's what I was saying because I left … everything I saw there … I left … because it is supposed to be cleaned up and people take responsibility for who it belongs to … this is a military *ʻōpala* [rubbish, trash] … it should be cleaned up because at some day or age maybe Hawaiian people will be back on the land or maybe not with an award but maybe they should be allowed to visit their home … like I should be able to visit Nohili even though I cannot. But by changing the boundary to quiet people down, I don't think is the answer … it's still the military needs to clean their mess. It also reflects back on Oʻahu with the fuel tanks. Yeah … jumping over to here … my dad would tell stories how during World War II there's a fuel farm on the base, on Pacific Missile Range that has

tanks under the ground … so my question would be … has those tanks been checked for leakage because of its age or were they decommissioned from the ones during the war? Because my grandfather Benjamin, my dad's father, was part of the people digging up the ground to put the tanks in, and they would come across a lot of *iwi* [human skeletal remains] when they were doing that … all they had to do was put it on the side because war was at hand … and they somehow buried it somewhere else … I don't know if it was all together or separately but the objective was to put that tank in the ground, and then what they did was drop bombs on top of the tank after it was buried to make sure it wouldn't blow up, but that was only with the projectiles back in that day and age. It wasn't like what we can now … where we can shoot down like 80, 90, 100 feet even, but those are old technology. But that was things that happened on these lands where this permit is requesting a renewal of these areas … where they have desecrated in the past … where they restrict certain families from visiting. They have Hawaiian families working there … don't get me wrong … some of the Hawaiian families were there for three generations now.

KN: Yeah, but that doesn't guarantee anything, that doesn't guarantee.…

EKM: It does not guarantee their ability to visit in the future. As we know after 9/11, everything tightened up. Yet for me, I only worked there one summer back in the day, and I was never hired even though I applied. I was never allowed to just visit on my own. I figure, "You know what, just stay away, that's the best thing, you're not in their way." But the thing is, we have the right to visit, especially Nohili Dunes area. It should be open for the General Public Day, like they have Fourth of July Celebration for the general public. Where's our Hawaiian Day to go and visit where they can allow us to go on?

KN: Free range.

EKM: Free range, just like Fourth of July … this is for you show your genealogy, you show you are not a criminal, or violent person with your federal background check like I possess right now … it's what I have because it's my job. And at least be allowed once a year if you choose … this is the day … then you make effort to go that day. Not go any day of the year … I ask out of respect … yes, you have an operation to do, but give the native people that opportunity to go once or twice a year. If there are too much people, again impact … then we may have to divide it up in different periods because if you have *koko* [blood], you may be from anywhere on the planet … you still have the

right to go visit … it's your heritage. And we all related in one way or another if we truly believe in Adam and Eve … then we all tie back in … respectfully. Yes, but please … they should think about like another opportunity for the Hawaiians … not to go to the restaurant Shenanigans and watch the fireworks, but go to our cultural location, where we want to feel our ancestors … the energy of them … and not be chased away on the beach when you want to go down to Queen's Pond … and they say, "This area is closed, you gotta get out of here." Because it has been pushed back more and more over time from the '80s until now. You can't go as close to Nohili as you could back in the day to even fish. But sometimes we just want to feel the *mana* [spiritual energy] of the area. As far as other locations, my dad would say had more guns going towards Polihale on the ridge lines than had.… He claims there was a small railroad track on the *pali* [cliff] where the guns could go from one pillbox to the other pillbox. I never scaled those cliffs or *pali* over there so I don't know too much about that, but he would say that the pillboxes up there was all concrete and they could run this track with the gun going from … the turret gun going from one bunker to the other bunker, and then hide again in the bunker so it wouldn't be attacked by air … all of this was during World War II. But I know the ones I've talked about over where I have visited within the last 10 years, are still there … not of it was fully decommissioned … which means, if you are a Native Hawaiian, that's *ʻōpala* [rubbish, trash] on the land … or it changes the whole effect of the how the water will flow … or what was there before … or what you can do in the future …

KN: Or gathering rights.

EKM: Yes. Because all of this now is taking away areas where vegetation could flourish, because now it's all like a concrete bed area. You said, you folks were there this past weekend so up at Puʻu ʻŌpae.

KN: Puʻu ʻŌpae.

EKM: So, as you would drive further down, almost to the drop off on the edges, that's where these things would be located. If you ever go back, you are going to see tall telephone poles … some of the things I am talking about is right there … all the big concrete slabs … some of the metals are still there yet … it's almost like you could put ammunition projectiles to hang it on racks, it's still there yet. It's history, the thing is … is that … is it safe to be there? Or the contaminants in the soil … has it been tested? Or why is it still there? World War II has long passed. In the area above, we

have found shrapnel from projectiles fired probably from the ocean into inland. So, where we are … I, myself has found a projectile when I was about 12 or 13 years old. I did not know what I found, because I found a lot of small bullets like you spoke of earlier, but this was like the mother lode. I found the biggest bullet ever and I was so proud … so I dug it out of the ground because I see the back half of it and a piece of metal was showing … I dug it out of the ground, I flipped it over, it was hollow. So, I thought that was a bullet, but it was not. It was actually the projectile from the ocean inland.

KN: The test one, instead of a live one.

EKM: Yes, so the hollowed out … after I got a size 14 boot up my butt from my dad when I brought it home all proud … "Dad, look what I found." And I got a swift kick in my butt, and then a slap in the head. [Quoting his father.] "Because you know, you could have died." Because if the hollowed-out part was solid, when I dug it, it could have blown up, and I would have been dead.

KN: Yeah.

EKM: And I did not know this. So anyway, I still have that projectile till this day. I remember the tears and the pain up my spine from that boot giving me a swift kick, and my dad was close to 300 pounds … so, yeah, it was a pretty good hit. [Laughter.]

KN: Yeah.

EKM: Very memorable.

KN: Sounds right.

EKM: [Quoting his father]. "Whenever you see this … ever … don't touch it." Part of the projectile had like rifling on it … where it would spin out of the gun. His theory of being an ex-military said it probably came from the guns from the ocean, shooting inland. So, there's shrapnel throughout the mountain range up here. I found one of the projectiles … believe it or not … my son, on one of his birthdays, might have been 22 or 23 years old … he, myself, and his girlfriend…he just wanted to

go hike down the ridge line, because he never went down there … so I said, "Okay, we go." So, we took the whole day, we walked down … believe it or not … he found one too. Now, the internal part that I mentioned … the one I found wasn't there, his was hollowed but there was a lot of pieces … almost ball bearings all scattered on the ground. So, it was, like, it was disarmed.

KN: Like shrap … what you call…like shotgun.

EKM: Yeah, like shotgun blast … like thick, though … like marbles. But it was left on the ground, it was disarmed or deactivated, but some of the remains was still on the ground. What they used to take out the core, I would guess … yes, of the explosives … so it made this thing unaffected of exploding … but he wanted to take it home for his memorabilia. So, I said, "*Brah* [Hawaiian pidgin language short for braddah or brother; hypothetically speaking], that's a long walk." And the thing is almost like 40, 50 pounds of heavy steel. And he carried it all the way back out, because that's his. So, in our family we have two, one that I found and he found as an adult. But it's there. And occasionally you will see the, head or the trigger mechanism which is made of almost brass. When it blows, its's almost like lead, and it flies. And I found one of those on the roads when I was repairing the road. It actually, unturned … almost like a compass with a reading … almost like lat. (latitude) to long. (longitude) numbers … And before my dad died, he said they turned that dial for the coordinates of where that projectile supposed to hit. So up there, like I said, eventually we are going to have Native Hawaiian there … but little do they know … our area was soiled by the military.

KN: Ordinance.

EKM: Ordinance. And it's still not cleaned and yet they still utilize our *ʻāina* [land] in the modern day, but not have cleaned their *ʻōpala* [rubbish, trash] of the past. We all know about Kahoʻolawe. We no talk about Puʻu ʻŌpae area. They talk about Waimea Valley, Mokihana … Mokihana was also a target area … public hunting is done there now.

KN: Yeah. And of course, Kaʻula is still happening today.

EKM: Kaʻula is happening to this day. Okay.

KN: And we don't know about Niʻihau. They could have been doing this all along.

EKM: And Lehua as well. They might have hit Lehua.

KN: Yeah. Exactly.

EKM: So, there could be strays. But in our area, they never went in with the metal detectors to check to remove all of the unexploded ordinances. In Mokihana, they burnt the whole mountain back in the day, after the war. According to my dad, as a cowboy with Robinson, they went with the minesweepers and checked the whole mountain for any, and if they found any … they would put a charge near it to ignite it, and if it was big they knew it was live … and if it was small, it was a dud or not active. Well, all the years that followed, after that burning of that forest, the grass grew back … the Provisional Government did not want the community to go there because there still could be some that snuck under the dirt at a different trajectory … which could be underground.

KN: So prior to '59 …

EKM: Prior to Statehood.

KN: …Territory days?

EKM: Territory days. They allowed Robinson to use the area for their cattle for ranching … so if the cattle steps on it, and blows … it's a lost to cattle, and not the general public. So, my dad, as a cowboy, *paniolo* with Robinson, they would go in there, and occasionally they would find an ordinance. They would tie their handkerchief up in a tree … a lot of it was *haole koa* [or *koa haole*, a common roadside shrub or small tree (*Leucaena leucocephala*)], and the *koa* was very tall so you could stand on the top of your saddle seat, and the tree would still be above your head at times.

KN: So, it was a marker.

EKM: Yes. So, you tie your handkerchief so you can see it from a distance, and then they would call the ordinance from Oʻahu to come over. The cowboys would bring them back so they could identify

the target, then they would set a charge, and according to my dad … on three occasions that he knows of … he knows personally … one was live, two was duds. So again, the charge is set, is a small charge … it's a bang … and if it doesn't increase to a big explosion, then that projectile was already disarmed or dud, maybe it got soiled from water or whatever it might be … so it's contaminated, it can't explode. But one of the three was live. Hunting up there, I found projectiles on that mountain, and I would tell the hunters that I know … according to my dad's story was … you only ride your horse on the horse trails, because if you go off the trail, you might step on an exploded one that still could ignite with the wake of your animal and yourself. Now, the general public goes there weekly since the 1980s because the State of Hawai'i made it public hunting. And nobody talks about the unexploded ordinances that could be there … which this is all military again related with continuation of the new extended lease that Pacific Missile Range wants.

KN: Can I interrupt you now only in the interest of time? So, we been like now … almost an hour and a half … we could easily go another four hours … [laughter] …which is awesome … and maybe another time we will have that opportunity. But if we can bring this interview to a close right now, and then … we'll provide you the transcript when we get those prepared and stuff like that … and then we are getting ready for another interview after this. *Mahalo nui* [Thank you very much]. You the best.

EKM: Okay. *Mahalo* [Thanks].

ORAL HISTORY INTERVIEW

With

Bill "Billy" Dan DeCosta [BDD]

November 28, 2023

Office of Councilman Billy Dan DeCosta, Līhuʻe, Kauaʻi

By

Hannnah Kaumakamanōkalanipō Anae [HKA]

Recording file name IA202241_2023-11-28_Billy Dan DeCosta.MP3

HKA: *Welina kākou* [greetings everyone],[1] today is November 28, 2023 we are on the *mokupuni* [island] of Kauaʻi, in the *kūlanakauhale* [city or town] of ... Līhuʻe ... I am Kaumaka Anae representing International Archaeology, LLC. We are conducting Cultural Impact Assessment interviews for Pacific Missile Range Facility (PMRF) and Kōkeʻe Geophysical Park Observatory (KPGO) Succeeding Lease and Easement Areas. I am here with Billy DeCosta, and Billy can you say your full name?

BDD: My name is Bill Dan DeCosta.

HKA: And do I have your permission to record this interview?

BDD: Yes, you have my permission.

HKA; : Before we start, I would like to say, *e kala mai* [excuse me] if I seem so *mahaʻoi* or brazen, but it's not my intention it's just for this interview purposes. So let us begin. First is *moʻokūʻauhau* [genealogy], your genealogy or *pilina* [connection] to the *ʻāina* [land], Mānā area, or Kona area of this island which is Waimea, Kekaha ... in that area ... what is your connection?

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org /gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

BDD: I grew up in the area right outside of Waimea. I believe it's two miles east of Waimea called Pākala, Makaweli is another name for it. It was under the Robinson Sugar Plantation. We lived on the beach of Pākala neighborhood.

HKA: About how long have you lived there?

BDD: My dad was born and raised in Pākala. I lived there all my life until I moved away to college until I came back. I live currently on Kauaʻi.

HKA: What is your familiarity of Mānā and the Pacific Missile Range Facility?

BDD: Mānā is the largest white sand beach in the state. We would go out that area during the *moi* [threadfish (*Polydactylus sexfilis*)] season, and fish for *moi*. We would throw net and get *ʻopihi* [limpets]. We would camp on the beach. Polihale was our retreat on the west side of the island. The east side, they would do Hāʻena and the Nā Pali Coastline, that was their retreat. So, in everybody's *moku* [district] we have an area where we culturally gather and take resources. The Mānā area was very abundant at one time. Mānā is also known for their wild goats that actually come down the beach today. We used to hunt those goats all the time. We have wild cattle in the valley. It's a very good food source. The one thing I believe that most people don't know about Mānā area that during the Plantation Era there was a cold pond ... there was a spring that ejected cold water out of the ground. After we would swim at the beach, or fish the *moi*, or throw net, or gather *ʻopihi* we would go take one cold shower in the cold pond.

HKA: Isn't that refreshing. So refreshing yeah?

BDD: Yeah. Those are ... I think ... memories that a lot of the kids today don't know about that was special. Of course, the great surf in that area that ... Majors Bay and Polihale have excellent breaks out there for surfing.

HKA: So the *moi*, there must be a lot of water going into the ocean too because they like a little bit of the freshwater?

BDD: We have freshwater that actually comes up from the Nā Pali Coast. I'm not sure if we have the same amount, Pre-Plantation, during the Plantation, and Post Plantation. I know when you take the Zodiac Tour you would see a lot of the old waterfalls that are petroglyphed into the mountains so you knew where the water used to flow. And then there is still some of the rivers that ... Miloli'i, Nu'alolo ... there is still some water that comes down.

HKA: You must have seen a lot of different fish when you were growing up.

BDD: Oh, yeah. The aquatic resources on that side was very bountiful. I must say, there are still good grounds till today actually. We do have access that the base give us and that is very important. It is more of a controlled access. I cannot tell you if it's better or not for the community. Maybe with the controlled access, the fishing and the gathering is more abundant. I believe maybe if it was free-access, the abundance wouldn't be as much ... I don't know. I do know growing up, we did a lot of self-managing ourselves. Our *kūpuna* [ancestors, elders] .. .as you Native Hawaiians would say ... would tell us, "You take what you need for your family, don't take more than you need, and leave back." So, I like to practice that till today with my own children.

HKA: So did you guys [BDD and his family] gather *limu* [seaweed]?

BDD: *Limu* too.

HKA: What kind of *limu*?

BDD: *Ogo* [*limu*, Manauea (*Gracilaria coronopifolia*), a small red seaweed], we did the red *limu*. A lot of time, a lot of people don't know, the scissors is your best friend when you harvest *limu*, you don't pull *limu*, you cut with the scissors, and you don't cut it too short. The *limu* is supposed to look like waving fans in the air, like fingers. When you cut it too short, you can ruin the *limu* ... and when you pull. Like to do with our sea turtles ... when you get too much sea turtles, they really over graze the *limu*. So everything has to have a balance, yeah? I remember when I was a boy growing up until about seven years old, we used to harvest turtle. The turtle go into the bang-bang net, get all the fish, but we bringing the turtle home.

HKA: It's like the beef of the sea.

BDD: That's the best, better than fried chicken. Better than steak on the grill. Grandma would make a pot of turtle stew ... whoa. The fat was green, greenish-yellow. Plenty people don't know that. All of our environmentalists, they don't know that this was the ways of our generation, how we grew up.

HKA: Did your family have family lands? Where?

BDD: My parents worked for the plantation. My mom had family land up in the Kalaheo area ... acreage of land ... they were ranchers and pineapple growers. My dad guys [BDD dad's family] had a property by the ocean, but it wasn't their own property. He was a supervisor for the plantation.

The plantations brought in the Portuguese to supervise the different ethnicities throughout the Plantation Era. When the different ethnicities came, the Chinese, the Japanese, the Filipinos. They all came with their dialects, and their own ethics and morals. They became a melting pot of this diverse group of people that got along. The missionaries wanted to intervene with a nationality that could work on both sides. One with the large White land owner and two with the ethnicities. Because the Portuguese had experience with sugar plantations in the Madeira Islands, they knew how to grow and cultivate sugar. They were the *luna*(s) or supervisors, foremen, stuff like that ... My dad was one of them. My grandfather actucally, John Costa was the last remaining Sheriff of Pākala who had a permit to carry a firearm on his white horse. He was the sheriff that would ride around and police the town. His motto of being a sheriff was, "I don't tell people what to do, I mentor good behavior, and the community tells each other what to do. The community governs each other." And that's how we grew up right? Aunties and uncles *hānai*(ed) [fostered, adopted] us they tell us what to do. "Eh, boy you get too much fish in the net. Boy, one throw enough, you get 32 fish. What you going do with all that fish? No be throwing again." Before we no sell fish, nobody sell fish, maybe the *'ahi* [Hawaiian tuna fishes, especially the yellow-fin tuna (*Thunnus albacares*)], because that's big fish, good money. All the reef fish, we poke fish, dive, the *'uhu*(s) [the parrot fishes, of which *Scarus perspicillatu*s is among the most abundant and largest], the *kala* [surgeonfish, unicorn fish, Teuthidae], the *nenue* [chub fish, also known as rudder or pilot fish (*Kyphosus bigibbus*, *K. vaigiensis*)]. We no sell fish.

HKA: Yeah, we share with the families.

BDD: We share. Just like pig hunting ... I'm an avid pig hunter ... if you ask anybody, not to brag but if you ask anybody, our name, the DeCostas, they noted for some of the best pig hunters on the west side ... my dad never did sell pig.They always go share. The Filipinos share the vegetables in their garden. The guys who poke the fish, the divers, they share the *uhu* [the parrot fishes, of which *Scarus perspicillatu*s is among the most abundant and largest] or the *kala* [surgeonfish, unicorn fish, Teuthidae], the one with the horn. Put 'em on the grill, I don't know if you ever had that.

HKA: Yeah.

BDD: You put 'em with the guts and all on the grill.

HKA: Yeah.

BDD: Chili pepper water and vinegar ... whoa that's the best.

HKA: Sometimes I clean the *na'au* [intestines] of the *kala*, and I put 'em in for the soup *'ono* [delicious].

BDD: Woof. Nobody realize that *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] stuff. And then my mom's two first cousins, her dad's brother had two sons, and they were *paniolo*(s) [cowboys] on the west side. The plains of Mānā and Kekaha where they raise the cattle for the AMFAC Sugar Plantation. So I used to ride my horse when I was young out in those valleys overlooking Mānā and herd the cattle, put them in the corrals, take 'em out to be shipped out on the barge to go to the mainland. I had an experience growing up in that area in that *moku* [district].

HKA: You mentioned earlier, your ancestor named Addie, had the sugar ....

BDD: Yes. Addie Citrol, she was married to Jack Citrol, but Addie was a DeCosta. She married this European guy.

HKA: And how is she related to you? She is one of your great aunts?

BDD: She is one of my dad's great aunties from the Portuguese side. Addie, we believe as a family ... Addie through generations, because the Portuguese was the cultivators of sugar in the Madeira Islands, they needed a boiling point for sugar ... for some reason, I guess ... Jack ended up getting the credit for that. But we have something on our family legacy that the DeCosta Family gets residuals from this formula that they melting and cooking sugar at a certain temperature, crystalizing it. They yield a higher sweetness to the sugar. That was the C and H Sugar. Pretty interesting, we have little bit of a story. I guess, every family crest has a story ... that's a little bit of our story.

HKA: Do you know where your *ʻohana* [family] burials or any ....

BDD: I married a Hawaiian girl, I don't know too much aboutt the burials on the west side or any place on the island.

HKA: Or just like cemeteries ... like where your grandparents are buried?

BDD: Yeah, in Kekaha. The local cemetery outside of the Catholic church in Kekaha. And then we have the veteran's cemetery because my dad was in the military. A lot of the family members join the military so they have the veteran's in Hanapēpē. But out in Kekaha they have several cemeteries. There is a cemetery on the beach going out to Kekaha, next to the Kekaha Boat House. And if you want to talk Nā Pali and you want to talk Polihale, the cliffs going to Nuʻalolo, there is a lot of those areas where royalty was buried in the caves out there. There is a lot of cultural significance of families, generations still enjoy to do a boat cruise with their famiy to go visit their ancestors who could easily be buried in one of those caves.

HKA: Did your family practice any type of *lāʻau lapaʻau*, Hawaiian medicine?

BDD: No.

HKA: No *koʻokoʻolau* [all kinds of beggar ticks (*Bidens spp.*), most native, a few introduced, some used medicinally by Hawaiians, as a tonic in tea] tea or *māmaki* [small native trees (*Pipturus spp.)* with broad white-backed leaves and white mulberry-like fruit]?

BDD: If it was, I don't know too much about the Native Hawaian language that you use, because the Portuguese may have another terminology that they use ... right ... growing up.

HKA: Plants maybe your grandma or parents used?

BDD: I know they used to make the tea with the *māmaki* [small native trees (*Pipturus spp*.)], and I remember that. I know the one that they call the *lonomea* [a native tree (*Sapindus oahuensis*), to 10 m high, with ovate leaves 10 by 20 and 5 by 13 cm; it is found only on Oʻahu and Kauaʻi], which was one black olive that they could make soap and it was a laxative for the stomach. Of course, the *kukui* nut [candlenut] grandma guys [grandma guys is meaning grandma and the others in the family within grandma's generation] used to use little bit of that .... in the *poke* [diced fish with other ingredients].

HKA: *ʻInamona* [relish made of the cooked kernel of candlenut (*kukui*) mashed with salt (perhaps a contraction of *ʻīnaʻi momona*, sweet garnish)].

BDD: Yeah. *ʻInamona*. That would help with the constipation and stuff. There is a lot of little stuff. Of course, grandma guys they weren't native Hawaiian but because they were from the same community and the different ethnicities all inter-mingling ... so maybe when my grandmother would share sweetbread from the Portuguese side, or my mom's mom Trinidad Martin Escobar, when she would share her Montecao ... a Montecao is a sugar cookie, and is almost flaky, and it's made with homemade alcohol .... so when they would bring the Montecao, the Japanese would trade the sushi ... the Filipino would trade the Pinakbet or the Dinuguan with the blood meat ... and the Native Hawaiian, they would trade the *poke* with the *ʻinamona*. A couple times my grandma would have a shell *lei* [necklace or garland made of shells, flowers, leaves, and/or feathers etc.] on the shelf, and we would be like, "Oh grandma what is that?" "That would be from one of the Niʻihau families sharing because they were so appreciative." At one time we would think, "That's just one shell *lei*, oh, easy, we can go pick the shell today." Today that thing is worth more than gold. Yeah, they worth more than gold.

HKA: That's so amazing yeah, and so beautiful gesture too.

BDD: Anything you make with your hands. A lot of people don't understand yeah ... we have the vine we call *maile* [a native twining shrub, *Alyxia olivaeformis*] and *mokihana* [a native tree (*Pelea anisata*), found only on Kauaʻi, belonging to the citrus family] is the berry. I know how to pick *maile*. I have a funny story because my youngest boy never got into Kamehameha but when they had Founder's Day, they called me to pick *maile*, I took my boy, who never passed the interview, he was eighth grade, and I took him to go pick *maile*. He said, "Dad what we picking *maile* for?" I said, "Oh, Kamehameha Schools get Founder's Day, and your mom, she's a graduate of Kamehameha, and she like donate some *lei*(s) [necklaces or garlands made of shells, flowers, leaves, and/or feathers etc.]." He said, "Dad let the Kamehameha guys [the students and/or teachers of the Kamehameha Schools or affiliates of the school] come pick their own *maile*. They never let me get into Kamehameha. I stay over here picking *maile*, and I go public school." I said, "No, no, no boy ..." I teached my boy how to pick *maile*. A lot of the *maile* we picked, we twist with our hand, we hold tight, then we pull, and we break the stem with our fingernails so the new shoots come out. My grandpa taught me this. My grandpa always made us carry this sock, like a white sock, we call 'em a durham bag, it was a tobacco bag before. We would carry a pocket of fertilizer, we would get from the sugar plantation, everytime we take maile from the bush, we would take one small pinch of fertilizer, throw 'em down by the plant, and that would be for the next guy ... because that *maile* branch with the fertilizer, you already picked the *maile* ... but you fertilize it for the next guy. Amazing how beautiful the *maile*. Hawaiians say, "*Mālama* the *ʻāina* [Care for the land], *mālama* what you gather." Same like when we go hunt, you catch one fat pig, and stay *hāpai*, pregnant, you supposed to let 'em go. It's hard to say that and couple times I never let 'em go, because how you going take the dogs off? But you wanna try and *mālama* your own.

HKA: You're not going to waste it either.

BDD: Yeah. *Mālama* your own management of your resources.

HKA: Like mullet season, taking the mullet when the *wahine* [female] carrying all their eggs.

BDD: When they all carrying the eggs. You cannot do that. When you pick lobster, you look at 'em and get all that orange eggs, you got to put that lobster back. We used to take the fin, and broke one fin off the back, and you know why? So the next guy get lobster, "Eh, no more the fin." Then know that this is a mother, because sometimes they no more the eggs.

HKA: Yeah, that's true.

BDD: So that was one good practice, how we used to do it before. You might not ask me this question, but PMRF (Pacfic Missile Range Facility) are the stewards of that land. They have a responsibility to care for the land. I not just talking about the land, they are responsible to care for the people's cultural gathering and harvesting rights. That's their job. They are only temporary stewards of that place. They need to make sure that the people can still practice what they used to.

HKA: Yeah. There is a lot of people who used to fish out there.

BDD: Big time. Camping too. We used to camp out there, now we cannot camp since ... 9/11—9/11 has long passed. Maybe it's time they open up some camping. Because 9/11 has passed. Let me tell you, you can record me on this ... the base, I mean pass the base is Polihale State Park ... the State gives out permits, the permits are taken online, you cannot discriminate whether you local or whether you non-local. Mainlanders can request a permit. Sometimes Polihale State Beach no more room for the locals to camp. But on the base, if they would give out so much local permits to people with one driver's license, then they could let the locals go camp, so just think about that in your cultural survey.

HKA: I will get that.

BDD: Right there, you no need get that, I tell you what it is.

HKA: Are you aware of the *mo'olelo* [stories] of the *Menehune* [Legendary race of small people who worked at night]?

BDD: The stories? Yeah, of course.

HKA: Can you give some of your *mana'o* [thoughts or beliefs]?

BDD: The *Menehune*(s), they're true you know. There is many stories that they built the tunnels and the stone walls, they were actually here before the Native Hawaiians, they were a generation, they

actually got *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of moved out ... I know there are some *moʻolelo*(s) that said they lived up in the caves, higher up to escape from being over ran by the Native Hawaiians. I never really ... experienced them but the stories are very impressive. Get the one about the lizard, the lady in the water. She's a half lizard, half lady.

HKA: Sheʻs a *moʻo* [water spirit, lizard].

BDD: Yeah, and some people can actually see 'em.

HKA: Where is this at?

BDD: Out there on the west side, in the ocean, in the different areas. I've never experienced it.

HKA: She's in the salt water, not the fresh water?

BDD: No, freshwater.

HKA: Freshwater yeah, because the *moʻo*, they usually in the freshwater.

BDD: I told you get the Miloliʻi Stream that come down to the ocean. You get the Nuʻalolo come down, so you get quite a bit of river esturary. The stream that come into the water so ...

HKA: So, that's where she lives. You know her name?

BDD: I don't know. Maybe she knows my name.

HKA: That's a good summary of the *Menehune* [Legendary race of small people who worked at night]. Have you heard about Pele, Hiʻiaka, and Lohiʻau saga? Hiʻiaka comes to fetch Lohiʻau, Pele's lover on Kauaʻi?

BDD: If you refresh my memory. I used to tell a lot of stories when I was the environmental teacher, for 10 years up in Kōkeʻe for the Department of Education. I taught environmental studies. I know some of the stories, but I haven't taught it in a while now so I *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of forgot it. I know there was a story up in Kōkeʻe ... I wouldn't know where to begin ... but there is a lot of *moʻolelo*(s) [stories], I guess the Westerners call it folk tales, but I think we view it as a more true stories.

HKA: I do.

BDD: They call it the folk tales.

HKA: Yeah. *Moʻolelo*. Folklore. Are you aware of the epidemic or diseases after Contact? I know a lot of the Hawaiian population was decimated.

BDD: Common history.

HKA: Yes, common history, but in that specific area, in the *moku* [district] of Kona?

BDD: I honestly cannot answer that. I'm sure it happened throughout Kauaʻi.

*****Stricken from the record because no information was generated about the epidemic*****

HKA: How about the Plantation Era .... you were around during that time? So what was your experience? Your family was part of that Era too right?

BDD: Yes.

HKA: Growing up during that time, how was that?

BDD: You want me to tie it to any medical history or plague? I remember growing up, we did not go to the hospital all the time. We had *ʻōpū huli* [a "turned stomach," believed caused by falls, especially of

small children, resulting in a kink or turning of the stomach, with attendant vomiting; a symptom is said to be a shortening of one leg; the cure is massage and binding of the stomach; this diagnosis and treatment are said to have been learned from the Portuguese], and the Hawaiian aunty would come and rub 'em with here oil, salt, and bless with the ti leaf. I think the missionaries will call it 'bush' or the stomach was in a knot. The *'ōpū huli* stomach they turn 'em and massage. If you go to one western medicine, they would operate and cut the gut, and sew 'em back together. There is so many different ... I have had injuries growing up that we blessed with the Hawaiian doctor ... rub the shoulder and pray, and it goes away ... it's amazing. I ain't saying it's better than western medicine, but it is an alternative. I experienced it, and the generation before experienced it. It's because it's real.

*****Conversation stricken from the record because I was checking on his to make sure we are not going over into his work time.*****

HKA: You told me about the conservation methods that you would do when you went fishing and gathering for the lobster and stuff like that ... and the plants ...

BDD: One other one too ... when we would go hunt the goat, and there was one white goat ... we never shoot the white goat. It was called a spotting goat. So you don't shoot the white goat because with the naked eye, you can see the white goat 400, 500 yards away.

HKA: Really.

BDD: Yeah, never shoot any animal that is white.

HKA: Why?

BDD: Because he's the spotter for the herd.

HKA: Yeah, for the herd, that's right.

BDD: Look in the mountain with your naked eye, hard *fo'* [Hawaiian pidgin meaning for] see one brown or black goat because it blends in with the topographic coloring of the geography. The white goat stands out.

HKA; Yeah, yeah, you right. That's smart.

BDD: You know what is one other one I tell you?

HKA: Yeah, tell me. You know what, you tell me things.

BDD: *Akule* [big-eyed or goggle-eyed scad fish (*Trachurops crumenophthalmus*)], the mainland people throw away that fish, it's a bait fish for them. The *ʻōʻio* [ladyfish, bonefish (*Albula vulpes*)], they throw away that fish, that's a bonefish ... best eating fish. The *ʻōʻio*, *lomi ʻōʻio*. My grandmother them used to make fried fish cake, patties out of the *ʻōʻio*. *Akule*, we would make *poke* [diced fish with other ingredients] out of the akule, it's a poor man's *poke*. Dried *akul*e in the saddle bag when we go hunt, we get the dried *akule*. We get the dry *akule* in the dry box with only salt. There is so much that ... I think ...a lot of people don't know, because they weren't raised like us. You went to college in the mainland?

HKA: I went to college here and on the mainland.

BDD: You was on the mainland.

HKA: Yeah.

BDD: You notice when we are in the mainland, we are very unique. We are almost like one magnet. People are attracted to us. Why? I always though because I was good looking. But it's not ... we are different. Our whole mindset is different. How we take care our own kind, our people, take care each other, take care the land. We have a connection to the land. We feed off the land. Our food come from the land. People no understand that because for generations they paid for their food. Granted ... I think ... the western people find our upbringing attractive, because they are like, "Who the hell is raised like this to have this kind of a mindset?"

HKA: You right because when I was up there, I had a lot of people coming to my house.

BDD: Yeah, they find us unique. We get food, and we feed each other. No more the *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit]. "Oh you got to contribute ... everybody put $10.00 in." When we cook, we don't care about the money. We just cook and we take care each other.

HKA: That's why they used to come my house, and I used to feed them all the time. I used to make char siu, saimin all the time ...

BDD: I used to go fishing in the Mad River up in the Arcata area.

HKA: Yes.

BDD: Catch steel-head salmon, bring 'em home, bake 'em with mayonnaise, bacon, and if I could find lup cheong [Chinese sausage]. Everybody would come over and eat the salmon. Steam broccoli, mash potato. The next day, I making salmon sandwiches, like how we mix the tuna to make with mayonnaise ... chop the onions, chop the salmon, grade the carrots, make the *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] cracker dip. They like. "What is this?" "Oh, from the salmon, from the night before." I think that's why we got along with the Native American Indians up there, because they also strong with the land and stuff.

HKA: Get the Hoopa's yeah up there?

BDD: Yeah. They have their own little village up there. They have a reservation.

HKA: Yeah. Wilitz. They have 'em up Trinidad too. That's where they have the Indian Bingo.

BDD: Yeah.

HKA: On top those beautiful lands. So when you went to Humboldt what did you major in?

BDD: I went up there to do forestry because they have a good forestry program.

HKA: Yes.

BDD: But I ended up doing Business. [Eating the fish HKA gave him.] This is good fish, amazing.

HKA: It's naturally dried from air and sun. I no dry 'em in the dehydrator ... ah, ah.

BDD: Dehydrator. I made one dry box. My puppy just *wen'* [Hawaiian pidgin for went or completed an action] rip up my dry box. I put 'em off the ground so get the sun and the wind.

*****Conversation stricken from the record because the information does not pertain to this interview.****

BDD: Before my father them guys [BDD's father and his family] cherish the Hawaiian Salt so much they only keep 'em *fo'* [Hawaiian pidgin meaning for] put steak on the grill or in the *poke* [diced fish with other ingredients].

HKA: You guys [people of Kauaʻi] get the natural salt, yeah?

BDD: Yeah, big time.

HKA: I buy mine's from the store.

BDD: If I knew you was coming, I would have give you, I get at my house. I thought I was going to deal with Keao.

*****Conversation stricken from the record because the information is not pertinent to this interview*****

BDD: Get one other freshwater crustacean called the *hīhīwai* [endemic grainy snail (*Neritinu graposa*)], you know what is that?

HKA: *Hīhīwai* yes. It's like a freshwater ...

HKA/BDD: *'Opihi* [Limpet].

BDD: Live under the rock in the cold water.

HKA: Somebody was saying it was in Miloli'i .... Kipi.

BDD: In the colder waters. The *Haole*(s) [Caucsians], the hippies they learned how to eat it. So they *wen'* [Hawaiian pidgin for went or completed an action] over harvest 'em. So Kipi know you stay on Kaua'i.

HKA: I was just at his house today. With him, his mom, and his dad.

BDD: They good people.

HKA: I graduated with Kipi, Kamehameha. Oh, they are wonderful people, I love those people.

BDD: I should take one picture ... look at this girl she stay knocking at my door, asking me questions.

HKA: I told him I was coming over here to see you. [Laughing.]

BDD: My wife knows Kipi, they work nurse together. He told me, he bought one place Texas yeah?

HKA: Kipi?

BDD: Yeah. He bought one place Texas, the *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] retirement place ... 10 acres. Him and the wife go back and forth.

HKA: I didn't even know that. He didn't mention that when I saw him.

BDD: Kipi get all *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit]. He retired now.

HKA: Yeah. Police yeah?

BDD: DLNR (Department of Land and Natural Resources), game warden.

HKA: Oh, yeah ...

BDD: What else I was going tell you. Even like crab, Kona crab.

HKA: You guys [people of Kauaʻi] get Kona crab out here?

BDD: We get the Samoan crab [mud crab] in the river.

HKA: And you guys [people of Kauaʻi] get plenty of *ʻaʻama* [a large, black, edible crab (*Grapsus grapsus tenuicrustatus*)] of course.

BDD: Black crab, we would eat it raw. Sweet.

HKA: You gotta make sure you salt ’em ... and get really ...

BDD: Soft.

*****Conversation stricken from the record because the information is not pertinent to this interview*****

BDD: You know how we raised off the land ... who wasn’t raised off the land, who depend on currency, they look at us as being not as wealthy as them. They have their currency, they buy their stuff, they buy this package of beef jerky or fish jerky, whatever they going buy with the currency, we never had ’em ... only now we getting that mindset. How we were raised was from the land ... you take care the *ʻāina* [land] and it take care of you, the American currency, you no need. They like you

feel dependent on the currency. Just like the base, they want us to feel dependent that we need them. I think they need us more than we need them. If you ask me what I like see happen, I want to see them open up some camping on those beaches to local families with the IDs, and we can go back camp. I wanna see more access for surfing and for harvesting fish. They need to stop regulating so much. If you like know the hidden agenda, I tell you ... in reality that's my hidden agenda. Yeah, they provide a sense of security. Yes, they provide a whole bunch of jobs. I don't believe they should be restrictive of all the access, the harvesting, and the gathering of that area.

HKA: There was a lot (gathering and harvesting) happening, and that was a Kuleana Right.

BDD: Yeah. I not Hawaiian, but I get Kuleana Right. I been down there for three, four generations.

HKA: You were practicing that all your life until it got restricted ...

BDD: Only the new base Commander is pretty good, but the guy before this current one, they was way too strict. So I want to ask you a question.

*****Conversation stricken from the record because the information is not pertinent to this interview*****

BDD: What they do with all their trash?

HKA: What trash?

BDD: Take care their own trash. They put their trash in our landfill, our County.

HKA: *Pu'u 'ōpala* [Hill of trash].

BDD: Right next to them. We like them take care of their own trash. Maybe pay a higher fee for them to put their trash in our landfill. Be more cognitive of what they are putting in the landfill. Red Hill, the spill of fuel ... The fuel they have down there ... how secure is their fuel operation? Just stuff like that right? What else I can tell you ... I hope you enjoyed the interview.

HKA: Yes, I did. [Chuckles.]

BDD: No, no I mean you come from one generation of family when the canoe plant and animals was bought by your history of people, thousands of years ago. I'm new, I came maybe early 1900s or tip of the 1800s so only here four or five generations. I think we share a lot of the common values, ethics, and morals of the land stewardship because it is all how we were raised. My forefathers and foregrandmas came to be with yours, who was already here. You know there was a facade ... like one bullshit message. Do you know why they bought the Chinese, Japanese, and Filipinos to work the sugar plantations? Because the Hawaians never like work. They said the Hawaiians was lazy. You know why the Hawaiians never like work, you like I tell you why? Because they never understand, what they doing planting sugar, and we no even use sugar. Hawaiians no use sugar, that's a western ingredient ... you think about it. What you put sugar in? My wife, you know why she's attracted to me? The way I think, she loves my train of thought. She listen to me all day. I'm telling you something, one Kanahele man, he had green eyes, his mother slept with a whiteman. That's how they get the *'ehu* [reddish tinge in hair] hair and green eyes. The Kanahele man, I think his name was Johnny, he was my father's really good friend. My father was a supervisor and before you carry 90 pound tank ... He told my father, "Willy, you guys [Willy and the supervisors] killing the kids, the tank too heavy Willy." Gotta get the *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] plastic tank. You know what the Hawaiian guy told my father ... That's when they converted to the plastic tank. It was 90 pounds, you try carry ... I carried it in the summertime ... cement ... 90 pounds, the tank filled with the Roundup. The Hawaiian they believe, they not going waste their time planting one agricultural product ...

HKA: That they not going...

BDD/HKA: ... eat.

BDD: Then the western money, *fo'* [Hawaiian pidgin meaning for] buy what? What they needed to buy? So, they not lazy it's a persona they put on the people. So they brought all this other cultural people because in their country, they were being paid peanuts and they were ran like slaves. They all ran away to come here. They were actually slaves too here. Lucky for the Chinese and Japanese who had striked. I believe they were getting paid cents per day to getting paid a dollar a day, something like that. They were only getting paid five cents per day. They strike and then they got a dollar.

And then the Portuguese came ... like I told you ... because they were the liaison between the Chinese, Japanese, and Filipinos. They were starting to ... the culture or nationalities started to bond too tight and they could not break their code of how they run the community. That's why our local government was always ran by Japanese, because for long time the Japanese during the Plantation Era, had a hold on how to run things, they were very smart. So, the westerners could not break them, they never could. That's why they bought all these white people in to bridge the gap.

HKA: That's why they were so much laws against them, to keep them down.

BDD: Suppress.

HKA: There were laws to suppress them, and it was noted in history too.

BDD: I might hurt your feelings little bit. But this is what I believe, the Hawaiian they were too smart for the whiteman's way, but where they went wrong was they had forget what their ancestors *wen'* [Hawaiian pidgin for went or completed an action] teach them. "Which was use your hand *fo'* [Hawaiian pidgin meaning for] go gather and hunt to get your riches. Don't use your hand *fo'* one handout." Today, the young Hawaiians stay like this. "What you going give me?" Nobody giong give you ... you got to go get it. So, what that tells you sitting on that chair? You better go earn what this interview is telling you. Get the rights for the people from that base, so when they apply for their permit, the people on Kaua'i can get some of this ... back. Whatever they need back. I'm not saying, "Open it up, have a free for all." Have one Koa group manage 'em. You know when the *moi* [threadfish (*Polydactylus sexfilis*)] season open up, we going have access. We going have one group of uncles and aunties that gonna take care of the clip board, and we going allow .... That's what we like. We like camping on the beach. We like 25 permits on the weekend. We going be camping in this area. We can drive the car on the beach. We no more that with the State. This is what we like.

HKA: In the CIA (Cultural Impact Assessment), they'll be a section for recommendations and these things will be listed there.

BDD: How many interview you had so far?

HKA: You are either the sixth or seventh person.

BDD: Two questions I have, anybody more interesting than me, and number two, you gave everybody fish and dry *aku* [bonito, skipjack (*Katsuwonus pelamis*)] right, how many people you interviewed *wen'* [Hawaiian pidgin for went or completed an action] sit and eat your stuff?

HKA: Nobody, only you .... Thank you for eating it right now.

BDD: Thank you for sharing. Because you know those guys, if they were really from the *'āina* they would eat it, because this ... is like gold. You made 'em, this is from the *'āina*, and I don't get this very often.

HKA: Awg. Thank you.

BDD: I appreciate.

*****Conversation stricken from the record because the information is not pertinent to this interview*****

HKA: I'll end this interview here unless you have anything else you want to talk about.

BDD: I talked about some of the surfing access, the camping on the beach, the harvesting of the *moi* [threadfish (*Polydactylus sexfilis*)], the thrownet, the fishing, *'opihi* [limpets] harvest ... I not sure ... I know the base has a restaurant, I know they open it to the public, that's nice. Taking care their own trash ... being good stewards of the land with their trash. Making sure that their water source and their fuel source is very well cared for. Their fuel source cannot contaminate their water source. I'm pretty sure it's not underground, it's probably above ground. The transparency of when we have world issues ... one time we had one ... I believe practice missile launch, west side ... RIMPAC (Rim of the Pacific) ... there was one Russian boat out there, was in the newspaper, Russian boat ... the people deserve to know if there is stuff going down, and if there is this outside countries..we like know, we no like wait or hear the week after in the papers, the Russian ship was sitting outside

... we like know ... what if something happens, we want to prep and prepare. Maybe one good one would be..A night to mingle. They have a restaurant, maybe make ... A night to mingle ... the military can do a little dinner and invite the community leaders, just some community people to come down and mingle, come out with us, ask some questions. Bring some family for a day at the pool. If you going be stewards of the land, then be stewards of the community, and know your community.

ORAL HISTORY INTERVIEW

With

Michael Andreas Faye [MAF]

November 29, 2023

Office of Mike Faye at Kekaha Agriculture Association, Kekaha (Waiʻawa), Kauaʻi

By

Hannnah Kaumakamanōkalanipō Anae [HKA]

Recording file name IA202241_2023-11-29_Michael Faye.MP3

HKA: *Welina kākou* [greetings everyone],[1] today is November 29, 2023 we are on the *mokupuni* [island] of Kauaʻi, in the *kūlanakauhale* [City or town] of … Kekaha … I am Kaumaka Anae representing International Archaeology, LLC. We are conducting Cultural Impact Assessment interviews for Pacific Missile Range Facility (PMRF) and Kōkeʻe Geophysical Park Observatory Succeeding Lease and Easement Areas. I am here with Mike, and Mike can you say your full name?

MAF: Michael Andreas Faye.

HKA: *Mahalo* [thanks]. Do I have your permission to record this interview?

MAF: Yes.

HKA: Before we start, I would like to say, *e kala mai* [excuse me] if I seem so *mahaʻoi* [brazen], but it's for the purpose of this interview.

MAF: Okay.

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org /gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

HKA: It is not my intention.

MAF: [Chuckle]. Okay.

HKA: [Chuckle]. Okay, so I'm going to start of with *moʻokūʻauhau* [genealogy], your family, and connection to this *ʻāina* [land]. How long has your family been in the area?

MAF: Since about 1880.

HKA: Wow, that's a long time.

MAF: Actually, longer than that … 1850. [He uses a 10-key calculator to figure the exact years].

HKA: Two hundred something years?

MAF: No, 170 years. [Chuckles.]

HKA: [Chuckles.] So, where were your *ʻohana* living when they first got here?

MAF: Right here, Waiʻawa. [Chuckles.] Believe it or not.

HKA: I been to Waiʻawa.

MAF: The Hawaiian Homes Waiʻawa up here.

HKA: Yeah, I been to Hauola Heiau.

MAF: Oh, yeah, yeah, yeah … My wife danced there one time. They did a historic association, Kauaʻi Historical Society … I used to take them on field trips, and we went up there. Was pretty moving. [Chuckles.]

HKA: Oh, wow.

MAF: We had cleared it out. She danced for the Punuas on the other side. He (Victor Punua) did the research. I don't know what is called in Hawaiian, a chant where they recite the names of all the places and things. There is a name for it, I don't know what … He talked to all the Hawaiian families over here and got it. They did a dance to that. [Chuckles.]

HKA: That is neat. So, you are really familiar with this area, I mean look at your maps too [referring to the maps in his very large office] … what you remember or what your family did in this area?

MAF: Well … it *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of started with my grandfather's uncle who was Valdemar Knudsen. Valdemar had come to Hawai'i for health reasons, wound up being hired by whichever king, which ever Kamehameha [Alexander Liholiho Kamehameha IV or Lot Kapuaiwa, Kamehameha V] ruling in the 1850s, and he became the *konohiki* [headman of an ahupua'a land division under the chief] of this Waimea district. Primarily, *kine* of like John Parker too … rid the mountains and area of cattle … so he, rancher went up, would harvest, and get cattle, rendered them into tallow parts of it, took care of collecting taxes, that sort of stuff. In the 1870s when Hawai'i signed the Reciprocity Treaty … you know … everybody jumped on the sugar market. It's *kine* of like hemp today. Royals and everybody … and … this land all out here is all Crown Land … you know that yeah? So they wanted to grow sugar. Valdemar wrote to his nephew, my grandfather, H. P. Faye, who was in Norway. At the time … I don't know if I have all the chronology just right but … they were looking for workers, they being the people in Hawai'i … looking around the world for different workers. They were trying … seeing if they could get Europeans to come out here and be field workers. And it just happened that my grandfather's family in Norway, was a fairly successful ship builder and just *kine* of brokerage company. So they put out a notice for Norwegians to sign-up as contract laborers come to Hawai'i. So they signed a bunch of people up and H. P., my grandfather, H. P. Faye was selected to *kine* of lead the group. He brings them down here to Hawai'i. And comes across the U.S. on a train. They hit the western U.S. just as the silver boom is going off, so a bunch of Norwegians jumped ship, and they stayed there.

He brought some here, met up with his cousin … I believe … on Maui. And they began spreading these Norwegians out to the different plantations. Early on, when the first guys arrived, days … his

cousin was escorting a group someplace on Maui, on east Maui … and was crossing one of the little streams, and got washed away, and drowned, and died. So he never liked Maui after that. They wind up coming over here with the rest of them, and tries to get established here. He doesn't do very well with his uncle, and winds up working for the Robinsons … and back to Maui.

Eventually, he obtained a Royal Lease down in Mānā, and started growing sugar around there. He came in 1880, by 1885 he had established the H. P. Faye Limited in Mānā. Prior to him getting there, there was a rice farmer out here, Pah On. So he would hire … he would work with Pah On, provide him labor with cleaing the rocks. We got a picture of him. Right below there, where the tunnels are, and its just this rocky field [chuckles], full of rocks, and no bulldozers or anything. So anyway, he started out there, brought in some other Norwegians to help him manage it. I don't know where they got the laborers from, probably a lot of Chinese, and other Hawaiian families that were living around there. He had a house out in Mānā, eventually married a Scottish gal who was living in Kilauea, Moloa'a actually, and brought her out here. They raised eight children. Five … I think … were born out at Mānā, and my father and his next older brother was born at Pōki'i, right over here. And … believe it or not … in 1910 … I don't know what the heck was going on … but they packed up and took the family back to Norway. Everybody, the Japanese maids that took care of the kids, the Chinese cook [chuckles], and they go back to Norway … and had one more kid over there. In the meantime, he's traveling back and forth to Norway one or twice a year … beleive it or not. That didn't work out, so he wound up coming back here. And the wife stopped him at Berkley, California, my grandmother, and established herself there. The kids could go to school, college whatever. But he kept coming back and forth to Hawai'i. I think … you know … the 10 years or 15 years living in Mānā was way the heck out there [chuckles]. It must have been tough for her.

But in the meantime … in the 1890s, all these independent growers of sugarcane consolidated into Kekaha Sugar Company, and he became the first manager. So I would like to tell the story that, "Here's this Norwegian coming to the Kingdom of Hawai'i, realizes the American Dream in the Republic of Hawai'i." [Chuckles.] Yeah, he choose the Hawaiian Dream, in the Republic of Hawai'i. I think one of the reasons he left … I don't know … if he could really fathom the American democratic democracy. He lived … king on Norwary, king over here, strong rulers over here. But anyway … his kids, the eldest … So H. P. Faye during World War One, there is a really, really strong Anti-German sentiment going around. And the factory and company for Kekaha Sugar at

the time was H. Hackfeld and Co., who were mostly owned by German nationals. And the government apparently was going to take over the company because they didn't want to have the German Nationals. So he and a couple of people, he was getting wealthy at that time, got together and purchased it, and renamed it AMFAC or American Factors.

So as time goes on … the eldest son, eventually rises and becomes the head of AMFAC … the number two boy, runs Kekaha Sugar, which in the 1930s was considered one of the most valuable assets the territory had … it was just spitting out money. My Uncle Lindsay (Faye) ran it from about 1930 to about 1960 … I think..and coincidentally, his son ran it for a while. And now, I'm basically running what's left of it … as far as … the infrastructure and assets is concerned, not the farming part. My father ran Waimea Sugar, which is in Waimea, that H. P. had purchased along the line. That plantation had been started by the Rowell family, the missionary Rowell family … As all these plantations, they needed water, and so they dug or installed the Waimea Ditches, basically the second ditch taking water … you know … out of the Waimea River … first being the Menehune Ditch, Peekauai [pronounced: Peʻekaʻuāʻi], and then Waimea. And I think … H. P. was like … had to be super jealous of them being able to pull the water out. So, I think he purchased it with the intention of incorporating it into Kekaha . That never happened so it ran independently. He buys it in the early 1900s. By 1908, he had already designed, constructed Kekaha Ditch coming out of the Waimea Valley … which … you know … brings water by way of gravity … all the way to Polihale, it's 29 miles. So if you *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of layed it out from Kekaha to past Hanamāʻulu, all by gravity. He ran Kekaha or he had people run it for him … then ran Waimea, and he died in 1928. As I said, the boys, the five boys in one fashion or another, continued … you know … within the businesses. One of the questions … I'm the second youngest of the second youngest. So, it stretches way out. It's not my great-grandfather, it's my grandfather who did that … so that's my paternal connection over here.

On my mother's side, she was from Honolulu. Her grandfather was Charles McCarthy. McCarthy came from … I don't know where the hell he came from … he winds up in Hawaiʻi, he winds up working for Liliʻuokalani. And … is supposedly … I don't know how true it is … they said that he was in charge of the palace guards at the time of the Overthrow. He was supposedly on King Street … or something like that … in Honolulu. He heard the marines marching, the cadence of their marching … swoosh … swoosh. So, supposedly he goes outside, and goes in the middle of the

road, and uses his whistle to have his troops fall in behind him, and they don't. So, he retreats to the palace and that's when Lili'uokalani says, "I'm going to be in the hands of … the government's going to take care of me," blah, blah, blah … you know … "Save yourselves." He dashes out, he hides out in the boonies in Pearl City. The next child that is born there is named after … her name is Pearl Lydia, after Lili'uokalani's name. He eventually becomes governor of the territory in the 1920s. And actually is the first person to have, the first Governor to live in Washington Place after Lili'uokalani dies. And they disburse her belongings. In fact, we have quite a bit of family in the Puget Sound area. We don't get together with that side of the family, but when we do, the conversation often is surrounding, "What are we going to do with our stuff from Lili'uokalani or 'Iolani Palace?" I usually recommend (for them) to send it back to the palace … you know … nowadays. They possess some stuff, yeah. For McCarthy … I think … he didn't really like the idea of people picking over Lili'uokalani's personal things. There is supposedly a whole list of stuff they sold. I think one of the family members has a list, and he buys a tea set … what the hell you're gonna do with a tea set … you know? [Chuckles.]

HKA: [Chuckles.]

MAF: So for me, I was … you know … born and raised in Waimea, Saint Theresa School … *Kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of connection to this land … in the day … in those days when you turn 14 or 15, you expected to work at the plantation in the summertimes … so I started off at Waimea Sugar, me and three or four other plantation kids, boys. Then my father died when I was in high school. I sat out one year, and one of the foremen from Kekaha, saw me walking around. Hong Min Hee saw me walking around, and he goes, "Mike what you doing you not working?" Chinese guys … you know … "You supposed to be working." We had sold Waimea sugar to Kekaha by then. "No, no, I can get you one job." "Supposed to be only plantation employees." "No, no, no, no worry, go see Spike Roduit." [Chuckles.] So sure enough, I go in there the next Monday, I was issued by hoe, my file, and … So I spent the next six summers … I think … working over here, and it was a … You know … I knew I wasn't going to wind up being a *huki lepo* [pull or tug dirt] or something like that. So, I took it as an opportunity to be … you know … out and about. Our job was … they call us the *huki lepo* gang, and it was kind of the replant. So with sugar, after they finished harvesting, they would either plant it with a ratoon crop right … are you familiar with that? They just let the cane come back up …

HKA: Yeah.

MAF: … reshape the rows, make it come up, but where the trucks went and everything, it's usally mashed down, and ground is hard as cement. We would have to go back in there and plant the seed … the cane by hand in those areas, or wherever it was like bolohead. We hated ratoon fields because they were hard work. The planted fields, they would just … do away with the old stools, and just replant … with cane, those were way easier to deal with. I did that for more than six years. It was good fun. I probably walked down every square foot of this property [chuckles] at one time or another. I graduated UH (University of Hawai‘i). My first real job was at Pioneer Mill, Lahaina.

HKA: What was you graduate from, what was your degree at UH?

MAF: I got a degree in finance.

HKA: Business administration?

MAF: Business administration. So, I got hired over there as a AMFAC trainee … in the new-fangled computer, the IT (Information Technology) Department. And to be honest, when I was at UH, I paid some kid to do my deck of cards, because I couldn't make it work. [Laughing.]

HKA: [Laughing.] And so what year was this?

MAF: This was 1975. But they had a little computer, they were called Data Point Computers. It was a real small thing, 16k max of storage, but predated Microsoft, and predated Apple. It was a pretty cool machine. AMFAC was trying to get computers into each of their plantations. At that point, I did not work for the plantation, I worked for Mother AMFAC. Which is also *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of cool because we'd talk to our bosses … there is one of us on each plantation … we talked to our bosses about, "We gotta get together … you know … so we can learn." We would travel regularly to all the different plantations to compare notes and stuff. So, I got on here to Kekaha, Līhu‘e … used to be KLOPP yeah … Kekaha, Līhu‘e, O‘ahu, Pioneer, and Puna. So we would fly around and check all that *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means

whatchamacallit] of stuff out. And it got us to go in to all the departments to see if we could somehow improve the paper flow. Then I got transferred to Līhuʻe Plantation. And Līhuʻe eventually hired me, because I worked there for … I don't know … five years or something like that … until …

So, Waimea Sugar remained in the Faye family hands. And H. P. did something way different than most of the other *Haole* [White, Caucasian] at the time … instead of setting it up as a trust, he set it up as a corporation. And so from small kid time, we all owned stock in this. We became very *kine* of corporate literate. While we *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of stayed within our family … siloed so to speak … still till today, there is political intrigue and stuff … who gets on the board … who's going to be chairman … and all that *kine* of stuff. The place never made any money. Nobody got rich off of it. But the family sold the Waimea Sugar Plantation operations to Kekaha. They kept the land. 1981 … I think it was … '80 or '81 I got hired by Kikiaola Land Company, the successor company that owned the land underneath. It was like totally back water … *kine* of a piece of property. We had the old plantation camp, the remains of the mill, the remains of the dairy, which is now Meadow Gold running it. Anyway, I *kine* of inherited managing that job. I hired an architect planner friend of mine, this guys Bob Fox to update an old master plan of the property that my father had created back in the early 1960s … it's a 20-year-old plan. So, we got that thing updated, presented to a meeting, and basically the Board of Directors gave approval of it. Two weeks later, we got hit by a hurrican, the first one. ʻIwa …

HKA: ʻIwa.

MAF: … *kine* of bust everything up. But from there … one of the elements of that master plan was a plantation style hotel. Just a one-page, eight-and-a-half-by-eleven drawing of just the concept of some camp houses, but from there we grew Waimea Plantation Cottages … came out of that whole thing. And so, I ran that until the family got tired … until the next hurricane came. Then we had to rebuild it all over again. The family intrigue and politics, and all that … basically they wanted me out … so I cut a deal with them … I developed … we did all the work ourselves in-house. So *kine* of developed the construction … a maintainance department into a construction company. I said, "Sell me the construction company, give me a contract to do the maintenance for a couple of years, and lease me the land. I'll be out of your hair." So my wife and I formed, Kikiaola Construction.

We had Wranglers Steak House already. So from 1996 until 2018, I did Kikiaola Construction. That was *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of fun because we got into stuctural moving along the way. Currently, we do most of the structural moving in the state. I have an office on the Big Island. Moved buidings over there. Got into working on old buildings so we became experts in single-wall construction and historic buildings … and … all that *kine* of stuff. Then I got hired here … I don't know if Keao mentioned … my predecessor, this guy, Landis Ignacio had run or had been involved with running this place for like 20 years.

HKA: And this place you talking is?

MAF: Kekaha, Kekaha Ag (Kekaha Agriculture Association).

HKA: Kekaha Ag. Okay.

MAF: Kekaha Ag comes about … you know … when sugar went out in 2001 thereabouts … one of the things I did when I was at Kikiaola Land Company … we had several hundred acres of cane land … when the long sugar leases came up, I moved them from sugar into the corn, because they were paying way more money. I just thought it was *kine* of a cool thing to do. I *kine* a think … I had something to do with the establishment of the corn industry out here. 'Cause when the sugar went down it reminds me of … you know … the Oklahoma Sooners when they shot the gun, and everybody went out to grab their land claims? *Kine* of the same thing. These guys, on their own, partitioned the whole plantation up, and who was going to get what. Corteva, Pioneer, Syngenta, all people had leased land to … got them going … Wally Johnson, another guy up here … Robinsons from across the river. They just *kine* of came across the river and said, "We're taking that cane," that was growing. This group of about five or six companies formed. They realized that the infrastucture was too much for any one company to handle. So they created Kekaha Ag Association to run a common infrastructure which involves all the roads, our drainage ditches, the irrigation systems, Kōkeʻe Ditch, Kekaha Ditch or Waimea Ditch … whichever you want to call it … the power plants … what else did we do … Pretty much that … we got that organized … got it … In the meantime, the State transferred the land from DLNR (Department of Land and Natural Resources) into the new Agribusiness Development Corp. Kekaha Ag Association, which is a non … it's a not for profit agricultural cooperative. And it's taxed by the IRS and the State. But anyway,

they formed that, Landis was running it. There is a connection there too. Landis' grandfather was my fathers's right hand field man.

HKA: So Landis is the last name?

MAF: No, Ignacio.

HKA: Ignacio, Landis Ignacio.

MAF: The Portuguese, they can either take the mother's name or the father's name right? So half of the kids, were Pavao and half of the kids took Ignacio name. Landis always had this dream to put hydro-electric plants along the Kōkeʻe Ditch. The Kitano hydro goes way back to the plantation days. I think my uncle probably started it, or it started when he was running the plantation I should say. It was *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of on the back burner. Landis tried to do that. By the time they tried to do that, or maybe before … the laws of the United States and the State of Hawaiʻi decided who had preference to water. The water rights is a pretty complicated situation.

HKA: The land is owned by the people, but the water is a whole different thing yeah?

MAF: Yeah. So, what happened was Kauai Electric or KIUC [Kauaʻi Island Utility Cooperative] did not like the idea of a competing power generation entity, so they teamed up with Hawaiian Homes who has a constitutional prior right to water. We got sued because they were wasting water. We're taking the same amount of water that were were taking like during the Plantation Era, like 50 million gallons a day, and basically spreading it around this land down here, the Mānā Plains, and then pumping it down into the ocean. So Earth Justice with several local groups sued, said, "You are wasting water." The end result was the Waimea Watershed Agreement. That was negotiated with Landis. Landis had all that possibility of hydro basically pulled out from under him. My personal feeling is that pretty much killed him, because within a few months after that settlement agreement was signed, he just dropped dead. So, they looked for somebody, took them about six or eight months. I knew some of the management people over here because my construction company did a lot of work around here, and they said, "Mike, we haven't seen your name as an applicant." I said,

"Yeah, I know, I'm having too much fun doing what I'm doing." They said, "No, no, no, you should put your name in." So I did, and I got hired. I been here … for what … six years now, five and half years.

HKA: So this building, you guys are going to turn this building over to the DOE (Department of Education), yeah?

MAF: That's the theory.

HKA: And so what was it before [referring to the building]?

MAF: There were three main seed corn companies. This is all the GMO (Genetically Modified Organism) research *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of stuff that people don't like. Pioneer, Syngenta, and then BASF (Badische Anilin und Soda Fabrik).

HKA: BASF is a chemical company yeah?

MAF: Yeah.

HKA: Even Monsanto right? Because they used to do the wear-dated carpet, Monsanto did. And then they did the chemical on the carpet too, BASF. I used to sell carpet that's why.

MAF: Oh … [laughter].

HKA: [Laughter.]

MAF: For some reason BASF had an idea to do corn research. I guess there's lots of money in it. So they put this building up, designed specifically for what they wanted. In the seed corn, you have what they call 'regulated' seeds, and then 'non-regulated'. So, this building, what we see on this side, is pretty much duplicated on the other side. The other side was 'non-regulated' and this is the

'regulated' side. You can't mix them, and the Department of Agriculture really keeps a close eye on what happens. Anyway, they decided to get out of here, basically sold it for a song to a family owned, a large family owned seed company, Beck's … Beck's Superior Hybrids. Becks ran it for a few years, and they decided to get out of here. So I thought … I was licking my chops … and said, "Cool, I'm gonna get this building basically for free." I was willing for offer, or have Kekaha Ag offer … you know … couple million for it. As soon as they saw someone being interested in it, the price started going up and up. Eventually, people convinced the DOE to buy it, because they were trying to do these ag institutes on each of the islands. They were going to have to build them from scratch, they figured each campus was going to be 20 plus million, and could get this for a quarter of that. They bought it *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of for this ag institute, but at the same time they are trying to get the farm to school program going.

HKA: Farm to table.

MAF: Farm to table. But they couldn't really make it happend because of all the procurement issues … you know … with State run stuff. So the best thing they thought to do, was buy this, turn it over to us to develop and manage on their behalf. So that's what we're *kine* of doing. I'm in here under a use of facilities agreement. Which is *kine* of like, if you were to go sell brownies at a football game … you know … [laughter].

HKA: [Laughter.]

MAF I told the guy, "This document doesn't say anything." He said, "No, no, no just use it." I said, "Oh, okay." That's why I haven't hung anything on the walls, because I don't know how long we're going to be here to be honest.

HKA: So, is the chemical companies still in this area? BASF?

MAF: No, BASF is gone. Pioneer merged with DOW Chemical. I don't know why the corn companies are mixed up with chemical companies. I don't know. They merged and then they reorganized themselves. So Dow Chemical and Pioneer Chemical … I think … became DOW Chemical. The

agro-science part got spun off as a wholly owned corporation called Corteva. Syngenta, across the street, huge company, got bought out by ChemChina. Those kinds of deals that go through the United States something or other. They went, "No, no, no we cannot have Chinese owning a farm right next door to PMRF." The other Syngenta property is up in Kunia, overlooking Pearl Harbor, next to Schofield Barracks. [Laughter.]

HKA: [Laughter.]

MAF: They said, "No, no, no you can't do that." Syngenta had to spin off the Hawai'i operations. Another large private family company, Hartung Brothers, bought the Syngenta interest in Hawai'i. So, that's all we got left down here, is those two companies. They are way different than they were even 10 years ago. Syngenta, across the road, is run by a young local guy, Josh Uyehara … who is between my two children in age. Apparently, I don't remember this, but he used to come to my house, to our house, was friend of my son's, and they used to play video games and stuff. I probably must have been yelling at you guys to get out and do something healthy, instead of these stupid video games. He's my boss now. [Laughter.]

HKA: [Laughter.]

MAF: One of these borderline genius *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of people. He runs that. They are doing alfalfa, they do all kinds of stuff. Way different company. Corteva, they are moving a lot of their stuff into the shadehouses, into the greenhouses. My construction company put up a whole pile of them in different locations. It's clear that they can do their agriculture research better within these very controlled environments. When the plant gets about that big [hand gesture], they know everything they need about it. They grow some out in the fields, but way smaller footprint. Then you see how they farm versus like somebody like Aloun, big vegetable grower.

HKA: On O'ahu.

MAF: On O'ahu. They got squeezed out of O'ahu so they are here. We helped them get into … on Robinson property, which is like gold. Extremely good, Robinson's got a lot of water, higher lands

which is way better than these plains out here. On the other side of the river. Aloun, they come in … for them it's production, money, *kala* [money] for … They gotta make it work. The seed companies, this is R and D (Research and Development).

HKA: BMP is Best Management Practices?

MAF: Yes, that are set up for ag. Okay, so next question. Sorry.

HKA: [Laughter.] No, no.

MAF: Long winded answer.

HKA: That's good. So growing up, did you go fishing?

MAF: I was not a water person at all.

HKA: You are totally *mahi'ai* [farmer]. Did your family ranch?

MAF: We had a small ranch up in the Kalaheo area.

HKA: What did you guys raise?

MAF: Cattle. My mother wanted 10 acres to raise horses. My father said, "Horses will never make a poor man rich, and it will make a rich man poor," something like that. [Chuckles.]

HKA: [Chuckles.]

MAF: So we had horses and stuff like that. My mother was very active in saddle clubs and stuff like that. She died really, really, young. She was 46, and so I was 14 … I think … 15. Yeah, so she died really young, and that kind of ended that whole ranch thing. We eventually sold it. Our home was right on the water, but Waimea has really dirty water from the river. I guess my parents were really

busy. They instilled the fear of God in us, we are not to go in the ocean … don't go in the ocean. [Chuckles.]

HKA: Do you remember the … well you were probably around during the sugar time, the plantation time … can you describe that time to me?

MAF: It was structured. I think everybody worked for *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of a purpose. Waimea Sugar was a small plantation, we only had 45 employees. Kekaha, next door, had 300. But I would call it structured. We grew up pretty much knowing the ethnic differences … everybody teased each other about it … about each other, but nobody disliked anybody. To me it was a great upbringing. I gotta say, I was definitely privileged because I was the plantation manager's child's son. So, my life was different from everybody else's. But you know what? We always wound up in the camp playing agates or things like that. [Chuckles.] Like I said, it was structured, your org chart was very structured … you had a manager, you had your office staff, you had your field supe, factory supe, your supervisors, and all the people going down from there. Everybody worked … I'm a Buza man, so I work for Mr. Buza … or I work for Peralta, something like that. I think it was somewhat stable, because you knew you were going to get paid every week or … I cannot remember how pay was back then. I would say, disciplined and organized … and culturally diverse, because you had all these different people around … from Japanese bon dances to *lūʻau*(s) [big feasts, parties] to Filipino things. I grew up with … we had yard men, Joe Tsuyama, an old Japanese man, and Jose Cuaresma. Before I knew English words, I knew all the bad Japanese words and the bad Filipino words. But you grow up like that … you think you're culturally astute to all these different things. I went to Carnegie Mellon University in Pittsburgh, *kine* of like the first time I left Hawaiʻi. And there were two groups of people I have never ever come across in Hawaiʻi, the Jews and Black people. Pittsburgh was half Jewish and half Black. [Laughing.] That made me *kine* of … and when people come to Hawaiʻi how different the things are over here, because I didn't know anything about this kosher food and stuff like that, that they eat over there. I had no idea. I had a better appreciation for visitors coming over here and asking, "How come you guys eating salty seed?" Stealing money to buy Yick Lung Li Hing Mui, or the big bag $1.75. [Laughing.]

HKA: [Laughing.] Or like mochi crunch or something. Yeah. So what is your view of the military or your interactions?

MAF: For me, we have always been supportive of the base all the way back to when we became part of the United States … you know … because my grandfather was out here, and the sand dunes … he couldn't see any use for that. It was a military reserve coming into the United States. My uncle was running Kekaha Sugar or was it junior number two at the time, helps that Australlian pilot, Kingston-Smith or something like … Flight of the Southern Cross … out of PMRF (Pacific Missile Range Facility] … I don't know if you know that story.

HKA: No. Can you tell me … ?

MAF: Apparently, they were trying to around the world flight. They landed the plane here, and their last leg was from here down to Kwajalein or the island that Amelia Earhart was trying to hit, some island down there. So apparently, they were getting it ready at her plantation. Of course, *kōkua* [help] everything they could, fuel, food, and what ever. Apparently, the navigator liked to drink. They take off in the morning when it's cooler, so they can get more fuel into the airplane. They tried to find the navigator, and he's gone. They go up to Waimea Valley and he's in a bar at Waimea Valley. [Laughing.]

HKA: [Laughing.]

MAF: They bring him down … "Get in the airplane." They take off on the dunes, and they built some *kine* [Hawaiian pidgin language meaning sort of or somewhat, and it sometimes means whatchamacallit] of runway on the dunes. They took the plane off, then the crowd watching it, and it sinks below the dunes. I go, "Oh, my God, the thing crashed." Struggle, struggle so close to there water, finally could get some elevation, and off it flew. They found their destination and so they didn't die or anything like that. But it's been a close relationship. I remember going out there as a kid, when they were doing the missile training and things. They would invite the community out there, and they would do this flybys and stuff. My father-in-law just passed, was a young teenager during the World War Two, and would pick up slop and stuff like that out there. *Kine* of fast forward, a lot of anit-military kind of people … I got the Kikiaola Land Company … I was running Kikiaola Land at the time … I got our Board of Directors to write a public letter stating that we supported the base. We have always supported it. I have been in my Rotary Club for 40 something years. Back in the day, the Commanding Officer was always part of the Rotary, and got to be good friends with several of them. I generally have a nice pass to go out there. I don't have my CAC

(Common Access Card) card anymore, but mines get renewed all the time, either for Kikiaola Construction because we are out there doing work or because of now, our relationship. But on a larger thing, to me, it's good for the community because again it's financial stability, it gives good jobs for community people, high paying jobs, most of the positions are very stable. We fought hard because there was a period when they thought about shutting it down, and we worked hard to lobby that they keep it. I think the Base Commander at the time was a friend of mine. He explained to me what he was doing to reposition the base, and at that point … I think it was under Point Magoo or something like that … and got it transferred to Pear Harbor, and that's been a really good situation. The base people intergrate with the community fairly well. I think, the *Haole* [Caucasian] sailors and all that love the local girls, the local girls love the *Haole* sailors … and vice versa. So you get a good ethnic mixing as well … if you wanna call it that. There has never been any real *pilikia* [trouble] between this community and base people. People wanting to fight. There is a relatively small presence … so, it's not like Schofield Barracks … compared to Wahiawa. They're small, and I think the Navy programs are good stewards of the land pretty much. We actually don't like working on there because you got to go jump through too many hoops, because environmental stuff. We used to open up one of the ditches there, and it was like we just take one of our excavators, go on the base, and just do it. But you have to go through all these inspections. We can't go there because it's a *nēnē* [Hawaiian goose (*Nesochen sandvicensis*)] nesting area. But as stewards of the land, I think they're, in my opinion, they're doing as good, if not better than anybody else would. When Inouye was around, a lot of pork came this way, that was good.

HKA: I guess we can end it here. And I thank you for your time, *mahalo* [thanks].

MAF: Okay.

ORAL HISTORY INTERVIEW

With

Christine Faye [CF]

March 25, 2026

Waimea Plantation Cottages, ʻAhupuaʻa of Waimea, Kona Moku, Mokupuni of Kauaʻi

By

Hannah Kaumakamanōkalanipō Anae [HKA]

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HKA: *Welina Mai Kākou* (Greetings everyone). [1] Today is Wednesday, March 25th, 2026, and I am Kaumaka Anae, representing International Archaeology, LLC. I am conducting interviews in support of a cultural impact assessments for PMRF (Pacific Missile Range Facility) and KPGO (Kōkeʻe Park Geophysical Observatory) Succeeding Lease and Easement Areas. We are at the Waimea Plantation Cottages in the *ʻahupuaʻa* (land division) of Waimea, Kona *moku* (district), on the *mokupuni* (island) of Kauaʻi, and I am here with Christine. Christine, can you please state your full name?

CF: My name is Christine Faye, F-A-Y-E. I know it's not pronounced that way.

HKA: *Mahalo* (thank you). And do I have your permission to record this interview?

CF: Yes, you do.

HKA: *Mahalo*. The interview encompasses a series of questions, and I'd like to say, *e kala mai* (excuse me) if I seem *mahaʻoi* (brazen) or *nīele* (inquisitive); it's not my intention, it's just for the purpose

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

of this interview. The first thing I want to start off with is your *pilina* (connection) not just to the Kōkeʻe area, Waimea, Kekaha, or the broader Kauaʻi. Your *pilina* is usually through *moʻokūʻauhau* (genealogy), your *hana* (work), or your life ways. Can you please explain?

CF: Yeah. My great-grandfather's uncle was Valdemar Knudsen, and he originally had the lease on the properties you're talking about, going from Kōkeʻe down to Kekaha, all the way to Miloliʻi. He ran cattle on the ranch, and when he decided to get into sugar, he talked a lot of his nephews from Norway into coming down, and my great-grandfather was one of them. So, my family's been here, starting at Mānā (the plains area on the west side of Kauaʻi). I'm the fourth generation; there's two more below me. My great-grandfather, my grandfather, and my father were all plantation managers at Kekaha Sugar, and Kōkeʻe is part of Kekaha Sugar.

HKA: And so that's your *moʻokūʻauhau*. And I understand you do work; you're connected to Kōkeʻe … on the board?

CF: No, I'm not on the board. I'm the executive director of Hui O Laka (a nonprofit organization supporting Kōkeʻe State Park), which my great-aunt and her cousin started

HKA: And your great-aunt's name?

CF: Isabel Faye, and her cousin was Ruth Knudsen-Hanner.

HKA: Did you spend a lot of time up there at Kōkeʻe?

CF: Yeah, the family tradition was to go and spend the summers up there. Kekaha's very hot, and the reason you have leasehold properties up there from the state is because of the tradition the Knudsens started by spending the summers up there. Their lease was finished in 1907, so frantically before that lease expired, they made sure that the parks, like Puʻu Kapele Park and all the recreational areas, were established. They spent a lot of time with politicians trying to show them what could be done, that the area needed to be cared for. They spent a lot of time getting rid of the wild cattle and doing goat hunting and things like that to preserve the area.

HKA: Your *kupuna* (ancestors, elders) did a lot of work in this area, and a lot of *mālama* (caring for) of the parks and the lands they cared for.

CF: Well, that was in 1907, then it became part of the territorial system. I think Puʻu Kapele was the first territorial park, a major park up in the mountains. And then later there's a whole bunch of different game preserves and parks, they're all adjacent to each other. They go from Polihale down to Nāpali, and then up to Kōkeʻe, and then up to Waiʻaleʻale, because Waiʻaleʻale is a conservation district, I believe.

HKA: Wow, that's a lot. And so, during the time your ancestor Knudsen was here, he had a house in Kekaha?

CF: He had a house at Waiawa. Past Kekaha, and if you look from the dump, it's directly back. And you can see there's like a "W" shape, and I think there was a *heiau* (place of worship) there — the one where the Menehune (legendary people, a race of small people) got paid for making the Menehune Ditch. I guess there's a famous proverb about them shouting so loudly it could be heard on Oʻahu.

HKA: Oh, wow. That's pretty cool. And that's at the base of the mountain, yeah?

CF: Their house was where the spring is. It's foothills, really. Back in that time, everybody lived along the foothills because that's where the springs were. There's no water at the ocean. It would only be fishing villages, I mean, shelters and stuff. You could canoe to Waimea, I believe. But normally there were three lakes in Mānā.

HKA: Three lakes. And what were the names of the lakes?

CF: Oh, let's see. One was Mānā. One was — Limaloa, the one with the famous village and the mirage. What was the other one? I can't remember.

HKA: Not Kaunalewa? Yeah.

CF: It might be Kaunalewa. But there's a village at Kaunalewa too.

HKA: Wow.

CF: Sorry, I didn't really go back and look at anything because I wasn't sure what you were covering.

HKA: Oh, no, that's okay. These are like ancient places.

CF: Well, they were there until 1920. They are on the maps.

HKA: They're on the maps. I guess the Gay and Robinson map is really good at naming all these places.

CF: Well, actually, they made a nice plantation map — it was like a survey, I think, before the lease for 1920. So, it really shows you where all the camps and buildings were. Because there was rice farming in the — they call them swamps. But the whole area was famous for the way they did things, it was so different from any place else.

HKA: Yeah, very unique. Because I heard about the *kalo* (taro) growing on the rafts and stuff like that. And you might find something similar in the southeastern islands of Asia.

CF: Yeah, and the other thing was that all the houses faced a certain way — they had two doors and not one.

HKA: So that all the spirits can go through.

CF: Yeah. That's from Eric Knudsen's book about Valdemar, about his father.

HKA: And that's your ancestor?

CF: Well, he's not my ancestor directly. His sister was married to — we're related sideways more. I mean, you know, we have Knudsen blood, but we're not — he's not my ancestor. Sideways.

HKA: So, did your ancestors, or do you practice any type of cultural practices? *Mālama ʻāina, hula* (Hawaiian dance) ….

CF: No, but you know, we moved around a lot, and this place always called to me. My favorite place has always been Kōkeʻe. And you know, there's things there. And so, you know, always that respect — basically the basic protocol of at least announcing you're there before you pick or do things of that nature.

HKA: Yeah. Because there's things there. That's a practice.

CF: Yeah. I mean, that's probably the only practice I have. But there are things there. But the landscape here is really awesome. It always surprises me. I always feel so lucky that I can drive up and down Kōkeʻe, and I always try to do it at the best times of day — outside when the tourists are going up in the middle of the day. It's just always beautiful. You can say you've seen one sunset and you've seen them all, but that's not true. They're always awesome — the clouds and everything and being able to see Niʻihau.

HKA: Yeah, it is beautiful. I love it there, too.

CF: We were always lucky because my dad had a fishing boat, so I got to see it offshore as well.

HKA: Wow. So, as you were growing up, you guys went fishing?

CF: He got a boat in 1980. And that's when we did a lot of fishing.

HKA: So, like *ahi* (yellowfin tuna), deep sea fish?

CF: Yeah, trolling. My grandfather fished. So not reef fish and stuff like that. *Ahi*, *ono* (wahoo), *ulua* (pompano, jack, crevalle fish), *mahi mahi* (dolphinfish), *pāpio* (juvenile ulua), *aku* (skipjack tuna), whatever we could catch. Out of Kīkīaola Harbor

HKA: Oh, Kīkīaola Harbor

CF: Yeah. But Dad used to go with his father. I didn't get to go too often. You know, women are not considered good luck. So usually when they were having a really rough time catching. The first time I went out on his boat, they caught a 180-pound *ahi*. And it's like, every time I went, they caught something, but they'd only bring me if they weren't catching something.

HKA: [Jokingly] Ah, you guys, traitors!

CF: That's how it was. That's how fishermen are, they're really superstitious. And sometimes Dad couldn't find anybody to go out with him, so he'd throw us all on board.

HKA: So, have you seen *hālau* (hula group; hula school) up there at Kōkeʻe?

CF: Yeah, actually, we used to run a festival. Hui O Laka used to do the Eō Emalani, you know, to honor Emalani's (Queen Emma) trip through the Alakaʻi Swamp.

HKA: Right. And she actually — I heard she was at Waiawa and she used to go to the hill and then go up with her horse.

CF: No, she went up on one occasion. She went on another occasion, I think with her husband when he was still alive; they landed at Polihale, and they cruised around that way. But this was a very particular journey she wanted to do, and not many people had been through the swamp at that time. A lot of the trails had been abandoned, so they had to — actually, Valdemar Knudsen found a guide to take her through. And it was only supposed to be a few people, and it turned into like a hundred people, and it was a nightmare.

HKA: I bet. Yeah.

CF: The guide said he'd never guide anybody again, no matter who it was. It was only supposed to be overnight. They were supposed to camp at Waineke, then take off from there, and go in and out. But they ended up having to spend the night in the swamp. Which talk about spooky.

HKA: Yeah, it is.

CF: It's bad enough when it gets all foggy and eerie. And she went in January.

HKA: Wow. Why did she choose that time?

CF: Because she happened to be here. She was apparently quite adventuresome.

HKA: Yeah, she was. Because actually she used to go to Punalu‘u too. That's where I'm from, on O‘ahu, and my family is all from over there, and she used to spend time with my great-grandmother them.

CF: So, after that trip is when she ran for election, against Kalākaua, yeah.

HKA: Oh, it was crazy. That was crazy, too. That's another crazy story. Do you have *‘ōlelo no‘eau* (Hawaiian proverb)?

CF: [Laughs] I can barely speak English. Don't expect me to speak Hawaiian, too.

HKA: Oh, you don't have to say it in Hawaiian. You can say it any way, like "hard work always pays" or something like that.

CF: We have a lot in my family, and it's mostly because we're Norwegian. Things like — my father, and I'm sure his father used to say the same — basically, you don't brag about what you do. Don't toot your own horn.

HKA: Yes, yes, that's a good one. I've heard that one quite a bit. Have you seen any type of practices being done besides *hula*? You guys have the *hula* festival up there at Kōke‘e. Any type of practices up at Kōke‘e?

CF: I think most of the practices right now are by conservation groups. There's a lot of bad things that go on up there, but the good things are that a lot of people are, whether they're participating under

the wings of DLNR (Department of Land and Natural Resources) or not, there's people out there trying to improve things. You have, like, the Kauaʻi forest birds, and KISC (Kauaʻi Invasive Species Committee) with the *ʻōhiʻa* (a native Hawaiian tree, *Metrosideros polymorpha*) thing. I get really mad at them, though — how about the *koa* (native forest tree [*Acacia koa*]) trees that are being hit by the same kind of fungus too? I don't know, but Kauaʻi just keeps under the radar. At least some of the corn companies, I think it's Corteva, have been doing heavy-duty research and working on trying to develop *koa* with DNA that can survive what's been killing them. I mean they are dying like flies up there.

HKA: The *koa* trees?

CF: Yeah, they live to a certain age, and then this fungus gets to their root system, just like the *ʻōhiʻa*, and then you can see all the leaves start to disappear and the tree just turns white. It's dead. And a lot of it's people walking off-trail. If they would just stay on the trails, but they're going all over the place. And then you've got the hunting dogs and have got it all over them.

HKA: And they're transferring it, yeah. And I found with the *ʻōhiʻa*, there's not just one thing that's happening to them — it's like a number of diseases. They have the two-eyed spotted leafhopper, and it's an ovipositor, depositing its eggs into the leaves and stuff like that.

CF: Yeah, there's just tons of diseases. I remember my grandfather on my mother's side; he was in the pineapple industry. And I remember him saying something — this is when the stink bugs first came to the island in the '60s — he was saying, "Mark my words, within five years we'll have it too." It's just that people can't help themselves about transporting plants. No matter what you do, there's somebody sneaking something in.

HKA: Right, yeah. I mean, even like snakes and other things.

CF: Birds, everything.

HKA: And we have an issue over here with the rhinoceros coconut beetle. Coconut trees are being devastated.

CF: Yeah, we've been trying to preserve them. I mean, they're actually too old — they should be replaced. They're over 100 years old. It's hitting all the palms, not just coconuts, but other trees too. And a lot of it's just people who won't deal with their rubbish piles. That's where they're breeding. You can do your own work, you cannot expect someone else to do it for you. If you want these things to survive, you've got to do your own part. I grew up in sugar plantations, so they had plenty of diseases too. That's why they were always making new varieties to try to be disease resistant. Because it's too expensive to try to spray everything. People always say that sugar plantations used a lot of herbicide and whatnot, and it's like they only used it when the plants were young. After that, for the next year and a half or more, they didn't do anything because it was too expensive.

HKA: Yeah. So, at PMRF, have you been there?

CF: They brought a bunch of people. I've gone a few times for different reasons. I'm trying to think of what the bus trip was. I think it was just people from Mānā because they're caring for and everything — so they gave us a tour, and it was a whole bunch of people from Mānā.

HKA: How long ago was that?

CF: It was a long time ago. Maybe 10 years ago.

HKA: Yeah, they have the Japanese graveyard, and then across from there they have a crypt now.

CF: But they took us to Nohili.

HKA: Oh, the dunes.

CF: Yeah, so that was the first time I'd really seen the dunes since I was small, since they kind of started — basically since they gated it.

HKA: Does it look any different?

CF: Oh, well, when I was small, people were still going there and riding, you know. So now it's covered in vegetation when I saw it, which I don't know if it's good for dunes, but at least they keep people from — I mean, I don't know if you've ever been at Polihale during a three-day weekend. It's not just people. It's people driving all over the beach and over the dunes. They're just destroying everything. So, I don't go there anymore. It hurts to look at it. It hurts my heart. So, in a way, whatever they have at PMRF — unless there's an explosion — everything they have there, they've taken care of.

HKA: Yeah.

CF: Yeah, no, they haven't been bad neighbors. I mean, they help when we've had natural disasters and things like that.

HKA: Yeah. Like when the hurricanes hit?

CF: Yeah. I know my dad had to go — it just depends on who the captain is and what their focus is — but I remember him having to go get them to come out during Hurricane Iwa. He needed a generator for the hospital. That was in '82.

HKA: I remember that.

CF: Yeah. Because back then the plantation managers were civil defense for their areas. They had a big responsibility. Now I'm really scared because you're seeing it on both Maui and Oʻahu — the county governments are not capable of doing what the plantation organization could do. Because you have almost a quasi-military operation when you have a sugar plantation. You've got all these divisions and people.

HKA: And they're all working together on a regular basis.

CF: So, it's different. The only thing that would be similar would be the military, but then the military is not really trained for that kind of community work either.

HKA: Right, right. And the plantation used to function because they'd always be working with families.

CF: Yeah, so a lot of people are screaming and yelling in Waialua right now, some of them worked for the plantation — that's why they remember what would happen if something happened. And what they're finding out is basically true: all you can count on is your neighbors. Wait until they find out what FEMA will offer them. It's nothing. Especially if you're self-employed, and all those farmers are self-employed.

HKA: Right. On Oʻahu, there's people helping people.

CF: But that's how it's supposed to be

HKA: Yeah, that's how it's supposed to be.

CF: To me, Oʻahu is getting a lot more help than Maui ever got, than Lahaina got. It was more like, oh, you have to stay away. And then at least now they can go back home and clean up. That's farming, and they always give the worst land for farming. The water is just as bad, but at least people can go over there and help. The fire — they couldn't do anything, they were taken out of there, and they couldn't go home. At least these guys can go pitch a tent in their yard.

Yeah. The hurricanes are bad. I've been through two of them, so I know. Whenever you have roof damage, your electrical is compromised, so it's not legal. You have to put a box somewhere like start over again, like you're constructing a house. And yeah, some people live that way for a long time. The county kind of had to relax a lot of rules, but it's really hard now because you have the Department of Health and all the federal rules.

HKA: Right. So, you want to talk more about your family and the history of your family here? At Kōkeʻe, Kekaha? Well, let's start since we're down at PMRF.

CF: I mean, my dad was in — AMFAC (American Factors, a major plantation company) was very corporate, so he worked for AMFAC.

HKA: And what was your dad's name?

CF: Tony Faye — he was Lindsay Anton Faye Jr. My grandfather was Lindsay Anton Faye, and my great-grandfather was Hans Peter Faye. So, my great-grandfather started at Mānā. It was the last piece of land that he could rent from his uncle — it was rocky, it was really bad land. And he was determined to make it on his own. He'd worked for a brother-in-law in Maui, at Pā'ia. And I think, two years growing for Gay and Robinson in Hanapēpē Valley. He just realized he was doing all this hard work, they were getting most of the money, and he said you've got to work for yourself this is crazy.

By then he had kind of a stake, so his uncle had been away. So, originally, he had come in 1880 to work with his uncle, but they'd gone on a trip because he'd leased most of his land. So, it takes a while to get from New York to here, and so he did not get the memo. He ended up on Maui for two years, two years with Gay and Robinson, and then he came and started at Mānā. He didn't have enough money, so his father — he'd come from a fairly well-to-do family, but there was a fire in Oslo, their warehouses burned down, ships and stuff. It was like a really big setback for the family. So, he asked his father if he could come and try to make his fortune here in Hawai'i. His father couldn't give him much, but he gave him some money and a suitcase full of clothing, basically. And there was one piece of clothing he had never worn — he said it was like a banker's suit. So, he wore that to Honolulu, and he went to Paul Isenberg, who was German and very successful at Līhu'e Plantation, and by then owned Kōloa, and was part owner of Hackfeld and Company, which eventually became AMFAC. And he walked in and asked to borrow money, because that's how you did sugar — you borrowed money, and when the crop came in and you got your money, then you paid off all your debt and started over again. To the very end, that is how sugar operations worked. He went in, I think he wanted to borrow $2,000, and I think Paul Isenberg looked him up and down and said, "Well, you know how to come and ask for money." He was very impressed. My great-grandfather said he never wore the suit again.

So, with it he bought — I think there was a canoe landing, it must have been by Major's Bay — and he bought lumber and stuff like that. He built some houses and that's one of them [referring to structures at Waimea Plantation Cottages]. Then there's one by the swimming pool that we brought over from Mānā. It was next to a spring, and that's where he started. The lobby — the first part — is from then. The back part is the bedrooms that were added in the '30s. This is part of the bedrooms.

He basically set himself up and got his sugarcane in the ground. It must not have been much, because back then, you did not have to have much. He got it in the ground, and then he rented the rice farmers — Paong Leong — his men to help him harvest. And I guess he did that for a number of years. He had two other Norwegians that worked with him, and he just kept growing like that. And I guess he didn't have enough water from the spring. And he hired a Hawaiian man who was a water finder. He didn't know if he believed it or not, but he said it was just the weirdest thing — the man found water. He apparently crawled around the ground with his ear to the ground, and that's how he found the water. There was nobody out there, there was just him and his two friends, and basically the village of Mānā.

HKA: What did he find, springs?

CF: Yeah, probably another spring. That allowed him to expand his fields. So, pretty much for a while all he was doing was turning around, putting his money back into his operations, and increasing it.

And then he met my great-grandmother, who was Scottish. They were in Kīlauea. Her father was a blacksmith for Kīlauea Sugar Plantation. They probably met here. There were a bunch of Norwegians in this area — a bunch of schoolteachers in Waimea who were Norwegian. So, it was kind of a little colony of them. One of the more famous residents of Waimea back at that time was C.B. Hofgaard. There's a park in Waimea named after him. He ran a fairly large size store and had stables where you could rent carriages to see the sights. We had the Waimea Landing here. People would rent carriages to go to Polihale to see the Barking Sands, or to see Olokele Canyon. You didn't go up to Waimea Canyon — there was no way up there except by horse or foot, but there was a carriage road in there. And there was also a carriage road or you could ride horses into Hanapēpē Valley to see Manawaiopuna Falls. That's the big falls that everybody sees pictures of. Up until World War II, people could go to these places. After that, it was kind of closed off. Waimea Canyon didn't become a tourist thing until they put a road up there.

HKA: When did they put a road up there?

CF: I'll get there. So anyway, the closet relative only or people they had nearby were basically the Knudsens at Waiawa. And HP — we call him HP because there's a lot of Hans-Peter Fayes through each generation, so he was called HP or Hans. Well, he met his wife on Niʻihau at a house party.

Because the steamship used to go around once a week, house parties generally lasted a week. You'd be dropped off and picked up on the next round. I guess it was Francis Sinclair's employee, one of the men who worked for HP earlier, E.K. Bull, who was managing the Niʻihau Ranch while the Francis Sinclair and his wife had gone to London to print her book with botanical illustrations — the first one on Hawaiian flora. They were gone for a while. And he'd asked permission if he could have some of his friends over, and they had a little house party. That's where HP met her. And apparently, he blazed a trail between Mānā and Kīlauea. He'd go for the weekend. The courtship lasted fairly short time because it was quite an effort. They say, you could see the dust of his galloping as he went through. Anyways, they were married and eventually had eight children, two of them born in Mānā. They socialized a lot with the Knudsen family. And they were pretty much the only people, and the kids became close because there were not that many people out here.

And then HP, in 1898, there were several planters on the plain — and the Wilcoxs' and Isenbergs had gone in and purchased a mill for Kekaha — they were all operating independently, and then they decided to put the whole thing together. At that time, they were also facing issues with water. They had been tapping into the springs and making artesian wells, with a lot of windmills drawing water up from the ground. And it started to get salty because freshwater floats on salt water. They drew it all up. It got to the point where the saltwater reached the roots of the cane and the cane wasn't producing well, in fact starting to die off. So, they had to figure out a way to bring water over there. Anyway, when they put it all together, HP moved to Kekaha into another planter's house — the old Meyer house, it was kind of a big estate. When you're going up to Kōkeʻe, there's a bend and then it goes into the valley. That's Pōkiʻi, and his house was there at that bend. A very large house. We have a picture in the lobby of it.

One of the things that people don't understand is they think the price of lumber and everything is very expensive now — it was always expensive. You didn't just throw away buildings. You would even dismantle them, store the boards to be recycled and reused. Not only is that something pretty much everybody did in Hawaiʻi at that time, but the Norwegians were famous for moving buildings even in Norway. So, it's just that respect for the materials and the houses. That plantation, my God, until the end — when you're washing all that cane, you get all this dirt coming out. They would take all that dirt after it dried out and put it in fields that needed dirt, if there was too much sand or something. They were always improving, always trying to improve somehow, whether it was using science, they used everything they could to stay in business. It's hard work, I mean you saw it with

the Hawaiians out there; they were growing taro on rafts. But they also had the reputation of never cooking their taro, they would trade it for taro already cooked, because they were famous fishermen. So, they would trade for taro. Especially down in Nāpali where you couldn't fish most of the year because it was too rough. There was always that.

But anyway, the Knudsens, when they acquired the property, there was only one house at Kōkeʻe that was a grass house — the birdcatchers used to live in it — in Hale Manu. And it had been rebuilt for people who had the lease before him. He went there, starting going up there, and the whole family started going up there. Not all the time, but they would go. My great-grandfather would be commuting because he had to stay down below, but the family would go up. And I think we finally leased part of it from the Knudsens and built a house in 1904 up there. They had already built wood buildings and things. In fact, the grass house was there until about 1900, or a version of the house, because you kind of rebuild it.

And the cowboys — the Hawaiian cowboys — all played an integral part because they were the ones moving everybody up and down the mountain. The Knudsens had a trail that went up Huia and then went straight up, and then there was an old canoe road, because there were only two villages up in that area. One was Puʻu ʻŌpae [a place name in the uplands], and the other was at Puʻu Kapele at the horseshoe turn, and that was where they raised the *koa* (a large native Hawaiian tree, *Acacia koa*). Because our *koa* doesn't grow the same as on the other islands — it grows kind of twisty and turny, and it's lower. So, if you prune off all the extra growth, you can make it grow tall and straight for canoes. They would rough-shape the canoe, and bring it down on this trail to the village where it was going, and then finish the canoes there. But the road actually still exists. The plantation had it as a road, and my dad took us down it once. The Baldwins and Toulans who were descended from that branch of the Knudsen family — they rode horses up there until maybe 2000.

HKA: Wow. That's neat.

CF: Yeah. But we do have a photograph of it. They did actually bring wagons sometimes, and they would take the wheels off and drag the wagon up the steep parts and when it got up to the top, then put wheels back on. And the reason you needed the cowboys is because you still had a lot of wild cattle.

HKA: They still have wild cattle. Someone told me they still catch wild cattle.

CF: It's theirs, Manini's or old Kekaha Sugar cattle. There's still some on the road when you drive up to Kōkeʻe. But this is the original wild cattle — the scary kind. They used to attack people.

HKA: Yeah, yeah. I was in Waiwa and they told me to watch out, there's wild cattle. Because I just had to deal with them just recently. We were walking to the hill and they said, there's wild cattle here.

CF: It's probably not from Kekaha Sugar, I'm sure they got rid of all of theirs. They're probably from those two ranchers; they're not very good ranchers as far as fencing. There is some on the road too when you're driving up Kōkeʻe. There's a lot of deer, too. Yeah, so anyway, the cowboys would go ahead and make sure the cattle weren't around or shoot them or whatever they needed to do. And then they would hunt them all summer, too, for extra food. Otherwise, they ate out of cans and whatnot. They would be in tents. Only the real small children would be inside. It was just so hot. In fact, the Knudsens used to call Hale Manu, Little Norway, because it had that coolness. But yeah, during the summer, it can be just as warm as down here. The nights cool off really nicely.

But yeah, there's a lot of stories — a lot of them have been written down, they're in books and things like that. If you want to know a lot of the legends up there, I would recommend Bruce Wichman's book — F.B. Wichman. He went by Bruce, his father is Fred. I did the illustrations for a lot of his books. He has the four legends books, there is one about the chiefs, and the one I'm thinking you might want is the one he did for the Historical Society, which is the stories of Kōkeʻe. Those are good because they really pinpoint the spots. But it's been out of print for a long time, so it might be hard to find. And then there's *Kauaʻi Ancient Place Names*— that one has pretty much all there is.

HKA: And then there's a Menehune one, yeah?

CF: No, he didn't do a separate Menehune one. He included many Menehune stories in the other books, the legend ones. Because he had the Pele stories, and you know from Polihale, that's where Pele's sisters — the one that was chased from Tahiti up here — they landed there. I think all the place names along those ridges and valleys are reflective of them.

HKA: Yeah. And he has the mirage story.

CF: Yeah. And he has the mirage. You know, Polihale — we used to go out there with Army blankets, and the kids, we'd be there till way after dark. A bunch of different families and everything, do the campfire, and then they'd lay out the Army blanket, and we'd all be stacked in the blanket with one over us, just looking at the stars. And if we left, we went just to the beach, and he'd say, "Okay, look for bats. Look for bats." There used to be a whole bunch of bats out there.

HKA: Wow. What, these big bats?

CF: The Hawaiian bats.

HKA: The *ʻōpeʻapeʻa* (the Hawaiian hoary bat, *Lasiurus semotus*)? Tiny yeah?

CF: No, not that tiny — I have one in the museum. The wingspan is about this big [demonstrates], and it's like a little mouse. I mean, I see them all the time. People from other places that have bats, they'll see them before we will. They fly like moths. And they're about the size of some of the real big moths. They will see them, will be looking at the stars, and say, "There is a bat." But when you go up here where the two roads join, there's bats in there. They like hanging in the eucalyptus trees. Sometimes you've got to pick the exact time — when the birds go home and before it's totally pitch black, that's when the bats come out. And they're solitary, but when they come from the trees, they're all in a group. I've seen clouds of them leaving. And then I've had them follow me, follow my headlights. They're fast, I mean, they are amazing.

HKA: I only seen one or two.

CF: I remember being on Oʻahu when I was in college, we lived on the side of Punchbowl, there were bats. They don't like people — they kind of hang and do their own thing. But they're bug eaters. The reason why they follow your car sometimes because your headlights are attracting the moths.

Yeah. So even my grandfather, when he was here at Kekaha, the family spent the summers at Kōkeʻe. The Knudsens, same thing — the next generation spent the summers at Kōkeʻe.

Everybody, you know. And by then they had the leases, so you had a whole little summer community that came there.

HKA: What did you guys do up at Kōkeʻe?

CF: Hike, walk around, whatever. Pick blackberries. Somebody had planted blackberries in their yard during the war, and when they came back five years later, the blackberries had covered over the house and gone into the forest. I remember in the ’60s, my dad took us to pick *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) at this one place and there were blackberries everywhere. He said, “The state doesn’t do anything about this. They’re never going to be able to stop this.”

HKA: And still yet?

CF: Yeah, because they didn’t pull it when they should have. It’s extremely invasive. It’s got thorns, it shreds you, it sends out these big runners, it can claw its way up the bases of trees and fill the understory so things like *maile* don’t grow. And if it does grow, it’s hiding up in the trees, and you can’t get at it. I guess, I learned early about the bad things?

HKA: Yeah. And our forest is sensitive. Our plants aren’t meant to fight off those other things?

CF: Yeah, I know that whole story. I work at the museum; we have to talk about that all the time. My dad brought us up the same way. We didn’t spend whole summers, but when we moved back, we moved so often — we lived on Kauaʻi in the ’60s, ’61. Then we went to Waipahu, then Līhuʻe. But when we were at Līhuʻe from about ’68, ’69 to the mid-’70s for me, dad still stayed here. We went to Kōkeʻe a lot because he was the caretaker. We got to do that *mauka* (toward the mountain) to *makai* (toward the ocean) thing, and it just makes so much sense to be up there in the summer. It’s just so hot down here. None of us would ever dream of going up there in the middle of winter. Thanksgiving would be about the latest you might go up, but it was already really cold. Because it was just a camphouse — a big camphouse. With my great-grandfather having eight children, everything was big. A lot of bedrooms. Yeah, so we kind of had that nice going up and down, and then the family — HP bought a property in Hanalei when they had a big auction. There was all this

accretion of sand, and I guess the government decided to auction it off for beach houses. He and his father-in-law bought adjacent lots and just built one big house on it. We were one of the last to have to sell our beach house.

HKA: Where, in Hanalei?

CF: Right in the middle of the bay. Probably the best spot. So as kids, we were lucky to have that same tradition — at least two weeks were spent out there as well. So even when we were on Oʻahu, we still came for the summer. We'd come not the whole summer, but we'd come. My mother didn't like Kōkeʻe, so we'd go up for the day, at least. Then sometimes we'd go up for a little bit if my grandfather wanted to go up, because he had his own cabin next to ours, and he had a little house next to the Hanalei house, too, because that's how he spent his money. Actually, we had a tidal wave hit the house in '57, and out of all the material that was running around the yard, he made a house.

HKA: Oh, really? Wow. That's good.

CF: Yeah, he paid for the house to be fixed and during his life he got to use it. That's why I say we value the price of the lumber. But they didn't tear the house down — all they did was, since the upstairs was good, the downstairs got hit by the wave and it pushed it back. Same with our Kōkeʻe house — it fell off the hill in a windstorm, and they just rebuilt it where it landed. Same with the Hanalei house. It's like something telling you that maybe you shouldn't have your house where it was.

Yeah, so there's quite a tradition. Even during the war, my grandfather got to go up to Kōkeʻe because he was the manager and they had their ditch system. The family put in the ditch system as well, Kekaha Sugar. Then the ditch system that came from the river to supply all the sugarcane. But yeah, it was a very rich life. I mean, it was not all fun and games, but it was. My dad didn't become a manager until I was out of college, so I didn't — my classmates were all in the public schools, like the other plantation kids, I did not have that experience. My two younger sisters did get that experience.

HKA: That's good history. Good history here all over — not just in Kōkeʻe and Kekaha, but all over — Hanalei, Oʻahu.

CF: Yeah, that is why I feel for Waialua; actually, we were there for three months. The HSPA (Hawaiʻi Sugar Planters' Association) had a training program, and Dad was in it, I think, the longest of anybody, because he got picked to do special projects for plantations — irrigation projects. We were at Waialua for three months. And my mom took me one time, I think it was about 2000 or so — I had a show with some other artists at the Honolulu Academy of Arts. And she said — because a big pastime in my family's life seemed to be, let's go see our old house, because we lived in so many. I think we lived in about 30 houses. And so, we would go and see. I think they'd just tore down our house on Waipahu Street — it was right next to the mill — the bulldozer tracks were all over them. And my mom and I are sitting there looking at it, and I'm looking down and I'm like, oh, no wonder you let us walk to the theater. It's actually just right there. For us when we were six, it was a long walk. It was just fun, you know, during the whole Arakawas …. We always had to walk from school, but not to school, and ah, it was so long [laughs].

HKA: [Laughs] Yeah. And your work, you're an artist. So, do you draw natural plants and animals? What type of drawing?

CF: I don't do people. I do landscapes. I like gardens, flowers, color and stuff like that.

HKA: You did work at the art academy in Honolulu?

CF: A long time ago. And then I had to start — I ran into some political issues here and ended up pretty much running out of money. I started working for other people. By then, computers were kind of taking over a lot of my work. A lot of people thought they were all artists because they could use a computer. I keep looking at banners on the side of the road, and they're really pretty but you cannot read them. What's the point? They put so much stuff on them. I haven't a clue, I am going 50 miles an hour, what are you trying to tell me?

HKA: Is there anything else you want to share?

CF: I do have some thoughts. I know there's a lot of politics between the state, PMRF, and the county, but I think that if PMRF wants to be — they do a really good job here at the base. I think they've done a lot of environmental things beyond what anybody else does. I mean, I think they have tried to be good stewards considering who they are. But I'd really like them to do it at Kōkeʻe, too, especially maintaining the trails and things of that nature, because the state can't and will never do it. Right now, it really upsets me because I listen to the tourists. Those trails exist because of the plantation ditch system, or to go from one house to another, visiting friends that were all over the place. They were horse trails, not foot trails. In my day they became foot trails, but none of those trails are used anymore. And all these tourists are trying to use the same six trails, which haven't been maintained. That's why there's so many accidents. There needs to be better, more logical trail development, and maybe more effort. I'm all in favor of all the fencing they've been doing for conservation, and it would be nice if they did more.

HKA: [Next interviewee arrives] Oh, come in, come in. That's Uncle Kane. You know, so I'm going to end our interview right here, and I thank you so much, Mahalo.

ORAL HISTORY INTERVIEW

With

Clisson Kunāne Aipoalani [CKA]

March 23, 2026

Waimea Plantation Cottages, Waimea, Kauaʻi

By

Hannah Kaumakamanōkalanipō Anae [HKA]

Recording file name: IA2026025_Interview_Clisson Kunane Aipoalani.mp3

HKA: *Welina Mai Kākou* (Greetings everyone) [1]. Today is Monday, March 23rd, 2026. I am Kaumaka Anae, representing International Archaeology, LLC, and I am conducting interviews in support of two cultural impact assessments for the PMRF (Pacific Missile Range Facility) and KPGO (Kōkeʻe Park Geophysical Observatory) Succeeding lease and easement areas. We are at the Waimea Plantation Cottages in the *ahupuaʻa* (land division) of Waimea, Kona *moku* (district) on the *mokupuni* (island) of Kauaʻi, and I am here with Uncle Kunāne. Uncle Kunāne, can you please state your full name?

CKA: *ʻAe* (Yes), *ʻO wau koʻu inoa* (my name is) Clisson Kunāne Aipoalani.

HKA: And do I have your permission to record this interview?

CKA: *ʻAe*, yes.

HKA: The interview encompasses a series of questions, and I would like to say, *e kala mai* (excuse me) in advance if I seem *mahaʻoi* (brazen). Not my intention, it's just for the purpose of the interview. Okay — and so usually, when I do interviews, I start with the *pīlina* (connection) to the *ʻāina* (land), whether it be *moʻokūʻauhau* (genealogy), whether it be lifeways, or *hana* (work). Can you tell me your *pīlina* to PMRF, Kōkeʻe, or Kauaʻi in general?

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

CKA: My *moʻokūʻauhau*, my connection here, is my *tūtū man* (grandfather or closely related male ancestor) Kainoapuka, who originated in the valleys of Kalalau. And then from there, he migrated. When he came out of Kalalau, he came to the west side, to Polihale, where they settled in that Polihale area, and his siblings went north shore, and they ended up in Waipā.

HKA: And so that is your *moʻokūʻauhau*, your *pīlina*, your connection, but you also have that *hana*, the work side.

CKA: Yeah, I actually started working for Kekaha Sugar Plantation. *Kala mai*, I forget what year I started because it was some time ago, and then from there, after the plantation closed, I went and worked at the Pacific Missile Range Facility in Mānā, and I retired from there, and that's where I am now.

HKA: What did you do there?

CKA: At Pacific Missile Range, I was the procurement agent, like a purchasing agent. I would order nuts and bolts for tank parts and airplane parts, from the very least to the very expensive items. Of course, being a government agency, all of this needed to be filled out properly — we needed to have bids. It was not something where we could just go out and buy. We needed to have transparency, so it was a matter of having items go out for bid, and then we would make the decision on purchase.

HKA: And you spent a lot of time at PMRF, as that was your job?

CKA: Yeah, I stayed out there for 17 years after the plantation's closure.

HKA: And have you seen any changes there? Does it look pretty much like how it used to be?

CKA: The real noticeable change was in the personnel of the U.S. government. At one time they had a lot of sailors, and the base itself had everything — it was a town in itself — but eventually it dwindled out. I think right now they only have security personnel working there, not so much the Navy that used to be out there, as far as the numbers.

HKA: Yeah, bigger presence before.

CKA: Yeah, the bigger presence.

HKA: And you also have *ʻohana* (family) that is very connected to the area out there.

CKA: Yes, I do. Out there at the Polihale area, my grandfather settled in that area, so our family had their home there, and naturally when our *ʻohana* (family) *hala* (passed away), they were buried out there. So, we do maintain today a gravesite of our *kūpuna* (ancestors, elders) that are buried there, and we have, that we know of and that is documented, about 12 known burial sites of our *kūpuna* out there.

HKA: At Polihale?

CKA: At Polihale. However, just recently my nephew and others, working with DLNR (Department of Land and Natural Resources), went out there to survey the area, and they were able to find 42 marked graves, but unmarked, meaning not knowing who actually are buried there. They did a survey out in that area. That area is, to me, very sacred, and we are the caretakers of the area. Our family organization is Nā Papa o Mānā, and we are caretakers of the area of Polihale.

HKA: And so, have you been involved with some of the reinterment that they did at the crypt on the base?

CKA: Yes. We did, out there at Mānā. The Navy was very instrumental in providing us a place where we could reinter our *iwi* (bones) — those that show themselves, were unearthed due to wind, rain, the elements, and the sea. And whenever they would have a project where they needed to build an area, they would have that area surveyed and culturally inspected to see if there were any *iwi* out there. If there were, we were called upon — not only our *ʻohana*, but of course the Burial Council of Kauaʻi and Niʻihau. At the time I was working out there, I just happened to be a member of the Kauaʻi Burial Council. So, I was given the okay that whenever they did have any *iwi* or artifacts, we were there on base and were able to make the decision, with the approval of the Kauaʻi Burial Council, of what should be done with any *iwi* or artifacts that were unearthed at the time.

HKA: Uncle, what is your favorite *ʻōlelo noʻeau* (Hawaiian proverb)? Something that is you.

CKA: My mantra, that *ʻōlelo noʻeau*, is *E mālama ʻoe i ka ʻāina, e mālama ka ʻāina iāʻoe.* [Take care of the land, the land takes care of you]. With that in mind, whatever projects or things happen out there at the base, I really try to keep abreast of what is happening out there, just in case they need to do any disturbance of the area. Because for me and why I say it is my mantra is because I was always taught and was told, this is where we came from — mother earth. We all know through the biblical sense that man, Adam was created from the earth, and from his rib the woman was created, and so it was all due to the earth. So, I like to *mālama* (care for) the *ʻāina* (land), make sure that it's taken care of; and if it is not, if there are ways to remedy the situation of whatever project might be proposed that might disturb, we make sure it's done in the right way, the *kanaka* (Hawaiian people) way — make sure that is done correctly. At one time when I was working at the base, I was working for the government, there were things done out there — they had provided my livelihood, put food on my table. So, sometimes the decision was push and pull, especially if it was something as delicate as our *iwi* concern. But I still said, I'm Hawaiian first and I do the *kanaka* thing first. If can, can. If no can, no can.

HKA: And what kind of Hawaiian traditions are practiced by you and your *kūpuna*? Your *tūtū man* did *hula* (Hawaiian dance), right, the one who came out of Kalalau?

CKA: Yes, yes. My *tūtū man* Kainoapuka was also a *hula* instructor when he was living in Kalalau. He taught also school, the *keiki* (children) out there. And so, there is a *hula pā* (a place where hula ceremonially took place) —

HKA: He taught school?

CKA: Yeah, to the *keiki* that were out there. I have stories from my grandma, there were times when the ocean would be rough, so he couldn't traverse into Kalalau through the ocean. He had to go up to Kōkeʻe. There is a mountain ridge out there at Kalalau, on the left side of the mountain, where he would tie a rope and lower himself down to the valley so that he could teach. And when the ocean was calm enough, the *kūpuna* would bring him back to Polihale via canoe. Otherwise, he had to climb up again on the *pali* (cliff), come out of Kōkeʻe, and then come back home. Like I said, he was a *hula* teacher. My grandmother Kawehiwa Kaholoiki was taught the *hula* out there at the

hula pā at Polihale. From there she came out, and then my mama, Margaret Kamala Kilauano, was taught the *hula* with her sister, Edna Kilauano. They both had a *hula hālau* (Hawaiian dance school) that they taught women of the plantation — we had *Kepanī* (Japanese), we had Portuguese, we had Filipino — they were the ones that taught the *hula* to those ladies who wanted to learn.

HKA: Wow. So, I imagine they gathered for their *hula* and things like that. Do you know if they gathered in Kōkeʻe?

CKA: They would, of course, they would use the flowers and fauna of Kōkeʻe, especially the *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) known on Kauaʻi, along with the *mokihana* (special native tree found only on Kauaʻi [*Pelea anisata*]). Their way of gathering was unique — they would make sure they would replant, or the way they gathered, like with *huki* (pick, pull) the *maile*, it was not cutting all the branches and bringing it down like how it's done today. It's very sad when the *hula hālau*, especially during Merrie Monarch season; not all, I would not say all, but those who would be in a hurry or rush, they would cut the *maile* branches and bring it down, and that would destroy our plants up there. I remember learning with two clothespins — you take it apart, you would *huki*, and you would strip it. They would do that and they would be doing an *oli* (chant) while stripping the *maile* to get it off the bark. My mom said it was a nice time to be with the *hālau*, a good time when they would all gather and do it as one, collectively. And when they were done, they would only take what they needed — don't overuse the place — and then make sure that the next time they went back to gather for lei making, they would go to a different area, let the area rest, let the area come back again, regenerate itself. They would go to Mākaha Ridge, they would go to different parts of Kōkeʻe, they would go inland. They had places where they would traverse and do it in a cycle so that it would give time for the land to heal and regenerate itself again.

HKA: And so *mokihana*, how do you pick the *mokihana*?

CKA: Very carefully. It was handpicked. And of course, people with sensitive skin, some got burned by it. But again, they did it in a cycle way.

HKA: And it's the sap, yeah?

CKA: It's a sap, yeah. You've got to be careful with the sap, especially when wearing the *maile* and *mokihana*.

HKA: Interesting. And did they pick other things from the ocean side?

CKA: The ocean side out there at Polihale and Nohili, yeah. I remember going camping a lot out there. My grandfather, we used to just take *pa'akai* (salt) and our *poi* (pounded taro), and of course water. The rest they would gather — they would *kala'i* (gather) the *hā'uke'uke* (sea urchin [*Colobocentrotus atratus*]), the *pipipi* (little marine snail), the *'ōpihi* (limpet), the *loli waiwai* (sea cucumber). And of course, fishing — we would literally live off the *'āina*. We would gather our food from the ocean, bring our *pa'akai* and our *poi*, and have our camp. And when we went camp, we didn't camp one or two days — we stayed there for one or two weeks. It was gathering and doing family time out there.

HKA: And would you mostly go during the summer?

CKA: Yeah, during the summer months when the ocean was calm. It was a seasonal thing. Oh yeah, it brings back really good memories, especially out there at Barking Sands — the Nohili Dunes.

HKA: What kind of memories do you have?

CKA: Oh, plenty memories, especially knowing we were going out to Barking Sands. We were excited because we would climb the mounds, and then we would get old cardboard boxes and slide down the dunes. That was a big thrill. Because those dunes, for us when we were small, were high. Every step you would take, maybe two steps down because the sand was soft. But we made it, and oh yeah, it was enjoyable. Not only that, we fished, and we *kanikapila* (played music) in the evening, and just to be with *'ohana*.

HKA: Different families.

CKA: Different families, yes. What I remember is, what was nice about it is, we would always have a *kupuna* who would take care of the *keiki*, because our *kupuna* would be by themselves and they

would *wala'au* (talk story, converse). I am sad to say that at that time, the *'ōlelo* (Hawaiian language) was not spoken. Our *kūpuna*, my mom's era, were the only ones that could speak it, and when we tried to learn, they didn't forbid us to learn, but they really didn't teach us, because they would say, "*'A'ole* (no), English is what you need to learn, because this is what it is today." That was back during the '40s, and we did not get to really learn the Hawaiian, our mother tongue, our language. No can help at the time; it was a different time. Regretting is not the word — it's just that if I want to, today you can go and learn. But for me, I think my time is over.

HKA: Yeah, because languages are easier when you're younger. You get older, it's a little harder. Have you ever seen any type of religious practices done in the Mānā area?

CKA: Religious practices, I did not see. *Hula*, yes. Like I said when we were out there at Polihale camping, we would get together, not only for *kanikapila*, but we learned chants, we learned some of our Hawaiian numbers, we learned some things. That's how I got to know the *hula*. But I was not a *hula* person.

HKA: Right.

CKA: I sang. I was the musician of the *hula*.

HKA: And Uncle, I remember one time, you talked about, I think, your *tūtū man* Kainoapuka — the *hula pā* was like different levels of the *hula*. Can you explain that?

CKA: Yes. The *hula pā* out there at Polihale was tiered into three different levels in between the valley. The first tier — from what I was told, this is where my *tūtū* lady Kawehiwa, when she was about 12 or 13 — she was taken there to be taught and to learn the *hula*. The entryway was along the line of a stone wall, and today you can see the stone wall remnants of the *hula pā*. To enter, you had to crawl through a little hole that was in the wall.

HKA: So, you had to *'o'opa* (hula step involving duck walk, crawl)?

CKA: Yeah, you had to *'o'opa*, and you had to *oli* (chant) your way in. The traditional protocol was to

ask permission — you would *oli* from outside and wait for the *oli* from inside to see if you were accepted to come in. Once they would respond to welcome you in, then you would *ʻoʻopa* all the way in. From what I was told by my mama, that first tier was where you learn the basics of the *hula*, whether it's rhythmic, whether you learn the steps or the motions. Once you learned the basics, you go to the next level where you learn the *ʻōlapa* (style of dancing), the *oli*, the words — you're graduating. After you get to that level, then you go to the third level where you *ʻūniki* (graduate). On the third level, just so happen, I was about seven, my mama took me up there to visit the *hula pā*, and that's when I saw the flat area with rocks where they would graduate and *ʻūniki*. What I understand is, Kauaʻi being the oldest island, my interpretation, what I was taught is the *hula* was taught here on the island. The *hula pā* here and the other one up there in Hāʻena. The *hula* was taught here. The *kumu* (teacher) from other islands would gather. That's why there's a point up there at Polihale where there's a *kuahu* (altar or platform). In front of the *kuahu* you could see people coming in from the west side from Niʻihau coming towards Polihale, and you could see people from the east side coming from Nāpali coming into Polihale. This is where they would come and gather, go up and learn the *hula*, then go back to the islands and teach the *hula*. That was what I was told.

HKA: Wow, that's pretty neat.

CKA: Yeah. I was very small, very young. I'll share a picture with Kaumaka — this is one of the times that we went up very recently, this is the *hula pā* on the very top of that area.

HKA: How did you get up there?

CKA: We traversed. Took us about three or four hours.

HKA: And this is at Polihale?

CKA: Yes, this is Polihale, right in between the valley on top, and there was a group of us that went. This is where we started. I will share this picture with you.

HKA: Yes, please. I really wish I could have been there.

CKA: Yeah, and so this group is *Mālama o Polihale* (Care for Polihale). It's a separate group from our *'ohana*, but there are people from our *'ohana* in this group that went up there. Their idea is wanting to clear the area again. For me, it's good, it's like the Hui Laka, how they take care, that is what they want to do here. But on the bottom, I was telling them, leave it as is, because at one time we did clear the area on the bottom part, and people thought it was for camping. They camped in there, and it was very *pilau* (disgusting, dirty) inside. I mean, I'm talking about people using it as a bathroom and things. So yeah, I like the idea, but it's a lot of work — *kiawe* (Algaroba tree [*Prosopis pallida*]). It's plenty work. I don't think I'll see that in my lifetime, but at least I got to see it again.

HKA: And that third level is high up, yeah?

CKA: Yeah, that's the third level. The walls are about eight feet, and then it's flat, maybe about 20 feet, and then another eight feet, you know, going up. The rocks are very loose now.

HKA: About 24 to 30 feet maybe? That's so interesting. And so, you're the singer, you're a musician.

CKA: Well, that's what I was. I can sing.

HKA: And your ancestors that danced, they made their own leis, yeah?

CKA: Yeah, they all needed to know how, and where to go gather the items for their leis, whether it'd be seashells, or flowers and fauna.

HKA: And even the *limu* (seaweed), because Polihale was known for that — the *pāhapaha* (sea lettuce [*Ulva fasciata* and *Monostroma oxyspermum*]) of Polihale.

CKA: *Pāhapaha o Polihale* (Sea lettuce of Polihale [the limu was so abundant and popular at Polihale that if you wore it as a lei, people know you have been to Polihale]). Yeah, and that *limu* — it's like sea lettuce but more elongated. You gather that, and then you dry it. And when you want to use it again, you just wet it and it'll come back to its form again.

HKA: Wow. And they say, like, you know you've been to Polihale because you get the *limu* on top of you, yeah?

CKA: Yeah, that's the saying.

HKA: That's so interesting. And Polihale is also known for *leina a ka ʻuhane* (leaping place for spirits to enter the nether world), yeah? You want to talk about that too?

CKA: Um, yeah. Out there at Polihale, there's a mountain ridge that has three rock formations that we were taught. The first rock formation is in the shape of a pyramid. [Note: CKA referenced photographs shared in a prior interview; the descriptions of the three rock formations and their associated names — Makaʻiʻo, Iesu Christo, and Hemolele — are documented fully in the August 12, 2025 interview with CKA.]

HKA: Can I use that from the other interview into this interview? Is that okay?

CKA: Yes. Okay then, you remember. Yeah.

HKA: And then, Uncle, the *ʻuhane* (spirit) used to come from all over, yeah?

CKA: I would think so.

HKA: Right. So, the thing is, that mountain was — *Hā*, the mountain over there where the *ʻuhane* used to travel and come down to Polihale. Oh, I can't think of it now. Is it Hā ʻeleʻele?

CKA: Hā ʻeleʻele, yeah, sounds familiar.

HKA: So, what I'm trying to figure out is, if these spirits came around Kōkeʻe, or you know, in Kalalau and up in that area, I'm trying to connect.

CKA: Connect. Yeah. Our *ʻohana* was free spirited, right? So, they can come from all over. This was

their *ʻāina*, their place, so wherever they wanted to put their feet, they would go.

HKA: Yes. Your *ʻohana*, they were *lawaiʻa* (fishermen) too. So, you guys spent a lot of time on those shores — netting, diving. Was there a lot of *heʻe* (octopus) out there?

CKA: Oh yeah, *heʻe*, yes.

HKA: Reef fish too, was there a lot of reef fish?

CKA: Yeah, a lot of reef fish.

HKA: How about *akule* (big-eyed scad)?

CKA: *Akule*, I was just going to mention that. Like I said, when we were camping, that's what they would go fishing for.

HKA: Right, they'd camp when the *akule* run comes.

CKA: And today, because of the situation with the base having security, our fishing is not as plentiful as before. And a lot of our *lawaiʻa* (fisherman) *kūpuna* passed on, so not too many fishermen out there now. Not a lot of our young people have picked that up. But there's still some of us that go out there, not only to *kaulāʻi* [fish with a line] but to go and *hukilau* (to fish, pull seine net).

HKA: You guys go *hukilau*?

CKA: Not like before though. Now, it's just go, lay your net, gather the net, put it on the boat, and come home, and then *hukilau*, not on the ocean. Everybody go and clean net. It's *ʻohana*, yeah — everyone goes and cleans it.

HKA: So, that is reef fish you guys catch?

CKA: Yes, yes. Sometimes there is *moi* (threadfish [*Polydactylus sexfilis*]) inside [the net], yeah?

HKA: *Uhu* (parrot fish [*Scarus perspicillatus*]).

CKA: *ʻŌʻio* (bonefish or ladyfish [*Albula vulpes*]).

HKA: Yes.

CKA: And what is that stripe one, I forgot?

HKA: *Weke* (*Mullidae*, surmullets, or goatfish).

CKA: Yes, yes, yes. And so, as I was saying, because the place is secured, it's actually a blessing in disguise that the Navy is there to do the security, only in the sense that this is where our fish can multiply and replenish — they can go out to the north side and come back to the west side and rejuvenate. The breeding grounds are kept, and we're not out there taking more than we need, as far as fishing is concerned, the big boats and stuff. That is one good point that I see is happening, the fish can multiply and replenish out there, and they come back a lot. And not only that, the *hāʻukeʻuke* out there, like brother IZ sang the song, fat.

HKA: Wow, Uncle, your guys' *hāʻukeʻuke* is fat.

CKA: Yeah, yeah. Nice orange.

HKA: And that's around the summertime too, right? That's when the *wāna* (sea urchin, *Echinometra mathaei*) is fat too.

CKA: The *ʻōpihi*, the — you know, those *ʻōpihi* shells for necklaces — big, big. I mean, it's nice. And like I said, with the Navy out there, they still allow people to go in for gathering. You can go in and get a pass. The only restriction is when they have operations, but other than that — and that's one of the main things that I was very adamant about — making sure that the fishing rights and

the rights of our Native people is not prohibited.

HKA: We have access.

CKA: We have access. The situation where they have the lease, and I can see them putting out their dos and don'ts — not only security for the base, but security for us as Native people to the area to go out and not interfere in the relationship of their operations, yet don't interfere in our relationship of our gathering. It's been working, to me from what I've seen from my time out there. Working there and making sure these things could be, I've never seen anyone turned away — if there's no operation, they're not going to say, no, you cannot go. They say, yes, you can go.

HKA: Or maybe, you cannot go now, but when operations are done, you can come back.

CKA: Yes. The access is the main thing. Because it's *wahi pana* (cultural site) — it's places that we've been, that our *kupuna* have been. It's where our *kupuna* lies even today.

HKA: And that spirit — our spirit — is still there. You know, any *mo'olelo* (story, history) on Mānā, stories of the area?

CKA: Outside of Barking Sands itself, the story of Barking Sands, there is the story about the waters, the road.

HKA: The mirage.

CKA: Yes, the mirage. Is that to do with Limaloa?

HKA: Yeah, can you say that story? How about Kōke'e? Are there any stories up there?

CKA: Kōke'e that I know of? I don't really know too much about Kōke'e. If I do again, I will share.

HKA: Have you been to Kōke'e in your younger days?

CKA: Oh yes. We went up there camping, and at one time I was with the *hālau*. We would go with the *hālau* for gathering again, for making our leis, our *lei po'o* (head garland), going up there for family time at the Kōke'e Park. And sharing the area with our *kama'āina* (local residents, people of the land) when they visit the Kōke'e-Waimēa Canyon area, the Kalalau Lookout, especially Kalalau — that's a sacred place for our *'ohana* because of our *tūtū man*. Yeah, I been up there doing things like that.

HKA: Yeah. And then, I wanted to ask you: do you feel that there's a difference between cultural and natural resources?

CKA: Cultural and natural resources. Speaking from the *hula* perspective — items culturally that reflect the natural. You would take a piece of rock, which is a cultural thing, and you can relate to it through something that's natural. You're performing a *hula* and explaining what it is. So, to me, there is a connection between cultural and natural resources. Let me just go that far.

HKA: The connection between culture and natural resources. For example, if there's no *limu*, we cannot pick any *limu*, and gathering *limu* is a cultural practice, yeah?

CKA: Right, right. Same thing when we go up to gather the *palapalai* (fern [*Microlepia strigosa*]) — you're gathering that to make your *lei po'o* or whatever, and that enhances your practice, your *hula*. Not only that — it's a cultural thing, a cultural practice.

HKA: Yes, it's a cultural practice. But some people say that cultural resources and natural resources are one and the same — because without the natural, we cannot practice the cultural. The *pīlina*, they're really connected — hard to distinguish. That's why I like to hear the *kanaka* perspective. I want people, when they hear these interviews, to think about these things. Because we don't take the time these days to think about these questions, and I really think it's important to sit down and think about it.

CKA: Funny, I'm listening to you. You know Kumu Tuti, yeah?

HKA: Yeah, Kanahele. She was my teacher.

CKA: She was such a wealth of information — she did my mama's interview, and she made a CD with my mama's interview that I have today.

HKA: I love her. You know what's so funny? I got *chicken skin* [goosebumps] right now. A girl that interviewed, I said, "You look like Kumu Tuti." She said, "I'm related to her. Yeah, that's my auntie." And then now you're telling me about her. She was my *kumu* (teacher) for Hawaiian language. She always told us: think Hawaiian. If you're trying to learn the Hawaiian language, first think Hawaiian. That's the first thing you do.

CKA: I know it's outside the book, but yes.

HKA: That's why I know things are meant to be, that we're supposed to be sitting here talking about these things. Then I wanted to ask you another question. In your opinion, does the renewal of the military leases impact cultural resources?

CKA: From my perspective, I stick to my mantra — take care of the land, the land takes care of us. For the lease part, from what I've experienced, I've never had a problem, meaning I've never heard or have been called out to go address something happening out there that wasn't supposed to be happening. The lease itself hasn't affected me personally, as far as having it renewed. But with the change in government today and their thinking and their priorities, is that going to change what I am used to from back in the '40s what I had learned, and what I was comfortable with? Will the government be doing exactly what they were doing that I was comfortable with? But with today's climate and the uncertainty, I do not know what their intentions will be. So, if it still remains the same as back in the day, I have no problem. But if they have new intentions and new ideas that might affect the land, *ʻaʻole* for me. I would not be comfortable. But right now, today, I can sit here and tell you I am if it still is the same, and it still stays in the guidelines of what was already established.

HKA: So, if it stays this way, then you don't believe there will be an impact on cultural resources?

CKA: Yes, unless they change their intentions and make more projects — naturally they're going to have to grade or do things, and they'll need to do impact studies, and find out if there are *iwi*

kūpuna (ancestral bones) — all of those things. I much rather they do not disturb any further.

HKA: And the Kōkeʻe Park Geophysical Observatory, that one was a long time ago. To find *kupuna* who would know that I think most of them have *hala* (passed).

CKA: Yeah.

HKA: And then, you were working at Kekaha Sugar. How long did Kekaha Sugar last?

CKA: Kekaha Sugar was founded in 1898 until the end of the sugar industry in 2000. When I came back around 1972, so about 28 years. And then when was the closure — it was AMFAC (American Factors) Sugar that was closed down. I continued working for AMFAC but went into the land company. But the sugar side closed in 2000.

HKA: We can look that up. So, cultural sites of Mānā. We've got Nohili.

CKA: We've got Nohili.

HKA: We've got Polihale.

CKA: Polihale. You also have, alongside of Polihale — remember, before, the whole area was all swamp, all waterways, so everybody was living alongside the mountainside. There is a birthing stone over there that I was taken to.

HKA: Where at Polihale?

CKA: No, in Mānā, in the district of Mānā. As you're going out to Polihale, you make a left to go in, but you're looking straight ahead — there's a nice big mountain directly across, and that's a *lele* (leaping place). Right on the left side is where this birthing rock is located, that my *tūtū* took us to. It's in the form almost like a saddle, almost like a chair, like a stir-up-type rock, where people sit down to give birth.

HKA: To give birth, wow!

CKA: And I can attest to that, because when we went out on a *huakaʻi* (journey, excursion) with my *tūtū* when she was taking us to show us places, my cousin — unbeknownst at the time — she didn't know what it was. She went up there and sat down and said, "Oh, this is so comfortable." My *tūtū* was busy telling other stories, and when she turned, she said, *Auē* (Oh dear, alas)," and saw my cousin sitting there, she just smiled. Not sure if you know Gwyneth Cardijon, but she was the mama of this girl that was sitting on it. And then my *tūtū* turned to my cousin and she told them. And she said, "How can, tūtū, no can" — *Auē*, and it happened. Anyway, it's just one of those things.

HKA: Yeah, because people go to birthing stones so that they can —

CKA: And it's not only to get pregnant, but to give birth also.

HKA: Yes, to give birth and get pregnant, that's why Molokaʻi has a famous one over there.

CKA: Yeah, so I didn't realize we had one right here in Mānā. I knew there was one on the other side, but I didn't realize there was one on this side until my *tūtū* showed us. Not too many people know about that area or that particular place.

CKA: I'm going to send you a picture of the *hula pā* and some other things.

HKA: You have my number. *Mahalo nui* (Thank you very much). I'm going to end this right here.

ORAL HISTORY INTERVIEW

With

Daynette Dee Sumie Puanani Morikawa [DSM]

April 1, 2026

State Capitol, Honolulu, Oʻahu

By

Hannah Kaumakamanōkalanipō Anae [HKA]

Recording file name: IA2026025_Interview_Daynette Dee Sumie Puanani Morikawa (Ah Puck).mp3

HKA: *Welina mai kākou* (Greetings everyone).[1] Today is Wednesday, April 1st, 2026. I am Kaumaka Anae, representing International Archaeology, LLC. I am conducting interviews in support of a cultural impact assessment for the PMRF (Pacific Missile Range Facility) and KPGO (Kōkeʻe Park Geophysical Observatory), succeeding lease and easement areas. We are at the State Capitol in Honolulu on the *mokupuni* (island) of Oʻahu, and I am here with Representative Morikawa. Can you please state your full name?

DSM: Daynette Sumie Puanani Morikawa.

HKA: *Mahalo* (Thank you). And do I have your permission to record this interview?

DSM: Yes.

HKA: *Mahalo*. This interview encompasses a series of questions, and if I seem *nīele* (inquisitive, nosy) or *mahaʻoi* (brazen), it's not my intention. It's just for the purpose of the interview. So, the first thing I want to start off with is *pilina* (connection) — your connection to Kauaʻi, or PMRF, or it could be your *moʻokūʻauhau* (genealogy), it could be your life ways. What is your genealogy,

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

your *mo‘okū‘auhau*? What is your connection to PMRF or the broader Kaua‘i?

DSM: I moved to Kaua‘i in 1974 to live with my mom, so I really don’t have a connection to the island of Kaua‘i in that sense. But I married a westside boy who lived in Waimea, and after working for 36 years with county government, I decided to run for political office, which was the representative for district — at the time district 16, now 17. And I won my first election, so ever since 2010, 2011 would be when I started to serve. My affiliation with PMRF began in the political sense because they are in my district. However, prior to being a political representative, I used PMRF numerous times for fishing, mostly for fishing because it was really the best fishing spot that I knew of. Until 9/11, and then we couldn’t access that area.

HKA: And so, you lived with your mom?

DSM: Yes, I lived with my mom until I graduated. Then I think a couple years later, maybe a year later, I married a Kaua‘i boy. And we had a son, but we divorced shortly after.

HKA: And your mom, she grew up on Kaua‘i?

DSM: No, she actually is from Honoka‘a, and that’s where she met my dad who was from Waipi‘o Valley. And I guess she met a man, a contractor on the Big Island, and they moved — my parents were divorced — and she moved to Kaua‘i to stay with her new husband.

HKA: Oh. And what is her name?

DSM: Elaine Taira.

HKA: Oh, nice. And so, you’re very familiar with Mānā and PMRF?

DSM: Yes.

HKA: And you went camping and fishing?

DSM: Oh, yes. We used to go camping at Majors Bay, Kinikini, of course, Polihale.

HKA: And Kinikini, that's a ditch, yeah?

DSM: Yeah.

HKA: And you know the story of that ditch? It was being taken care of by a *Pākē* (Chinese) man — a Chinese man — and they called him Kinikini.

DSM: Oh, really? Nice, nice.

HKA: So, you're familiar with the area and the fishing. What kind of fishing did you guys do?

DSM: Oh, mostly *moi* (threadfish [*Polydactylus sexfilis*]), because the *moi* was really plentiful back then. But *pāpio* (juvenile jack fish), *ʻōʻīo* (bonefish [*Albula vulpes*]). Oh, yeah, line fishing, yeah. Dunking more than anything. But you could catch anything down there. You could catch *kala* (surgeon or unicorn fish [*Naso unicornis*]) from the shore. Of course, *nēnue* (rudderfish [*Kyphosus spp.*]). The fish were just plentiful down there. And it's better now because it's like a sanctuary, because not too many people can access the area and drive on the beach like we used to.

HKA: Yeah, you guys drive on the beach?

DSM: Yes. Although it's illegal, we still do, because if you look at the beaches on Kauaʻi, they're just miles of beach. And if you were to walk, you wouldn't be able to get to areas to fish. So, people drive. And so far, they haven't really enforced illegal driving. But that's what we do.

HKA: And so, you guys fish there. And have you been to Kōkeʻe?

DSM: Uh-huh.

HKA: And what do you guys do up at Kōkeʻe?

DSM: When I go, I love to make *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) *lei* (garland). So, I'm a gatherer — *maile* gatherer, *mokihana* (special native tree found only on Kauaʻi [*Pelea anisate*]). I make *lei* for special occasions with permits. And there are times when you go up to pick the plums during plum season.

HKA: What kind of plums are those?

DSM: Oh, the regular — well, they call it Kōkeʻe plums, but they're small plums.

HKA: The purple ones?

DSM: Yeah, like the ones you buy in the market, but they're sweeter, but they're small. They don't come really big. So yeah, there's a lot of trees up there. So, we do a lot of that, and peaches, too.

HKA: Oh, they have peaches at Kōkeʻe?

DSM: Yeah, you pick the small ones and you pickle them. Because they don't come big like the peaches you imagine in the stores.

HKA: Wow.

DSM: And then trout fishing.

HKA: And they have plenty trout up there.

DSM: Yes. They raise the trout — I think they hatch the eggs here on Oʻahu, then they send them to Kōkeʻe, release them in the reservoir, Puʻu Lua Reservoir, and that's where they grow. And people, when the season comes around, you can go into the reservoir and fish. But the fish have leaked out into the streams in other areas of Kōkeʻe, too

HKA: And so, even out by PMRF, was there any *ʻōpihi* (limpet) or *limu* (seaweed)?

DSM: Yes, but I never did do that kind of gathering out there. I have a fear of that kind of ocean gathering because of my family history — my great-grandpa drowned while picking *ʻōpihi*, and it's just not something I —

HKA: Yeah — sometimes it's rough where you go pick; they live by the rough areas.

DSM: Yes.

HKA: So, do you have an *ʻōlelo noʻeau* (Hawaiian proverb or saying) that you have in your family, whether it be Hawaiian or whether it be English?

DSM: No, I never really thought about it because when I grew up, my grandparents forbid us to speak Hawaiian. We weren't allowed to speak Hawaiian. They were the only ones that could, so whatever we picked up, we didn't really understand, except, you know, *nuha* (sulky, sullen) and *pilikia* (trouble) — that kind of words. Otherwise, the language itself, no, I wouldn't understand any family-type phrases. Because my parents separated and divorced when we were so young, we didn't have too much family history that we could learn about.

HKA: And did you guys' camp in the summertime?

DSM: Mm-hmm, at PMRF. Almost every week.

HKA: Usually in the summer, though, yeah?

DSM: Yeah, and that was before 9/11. We would go whenever we could because as long as you showed your ID, you could go and park, drive up to your spot and fish.

HKA: And besides fishing, did you guys do any planting? Did you guys *mahiʻai* (farm, plant)? How about *hula* (Hawaiian dance)?

DSM: No.

HKA: Any other type of Hawaiian cultural activities?

DSM: No, I just knew people who we tried to help them preserve their — what do you call that — the bones of their ancestors, *iwi kūpuna* (ancestral bones). And along PMRF, Polihale, in that area.

HKA: You mean like the Aipoalani family?

DSM: Yes, yes.

HKA: And the Kilauano.

DSM: Yes, so I worked with them briefly — and DLNR (Department of Land and Natural Resources) to try to see how we could preserve their family areas at Polihale.

HKA: They have the *heiau* (place of worship). Do you know about the *heiau* over there?

DSM: I know Thomas Nizo very well. And I trust that he is probably the best they could have as far as cultural protection and knowledge. And even before that, it was — gosh, I forgot her name. But they've always had somebody good to manage the cultural aspect of PMRF and the community.

HKA: Yeah. Him, Kaulana, and Tara.

DSM: Yes, Kaulana's mom was there before.

HKA: They're all doing good jobs out there. And have you seen any cultural practices out there, like *hula* or anything?

DSM: No, because I'm not a *hula* person. No, I didn't get involved with *hula*.

***** DSM sympathetically offers HKA a cough drop *****

HKA: Any *lā'au lapa'au* (Hawaiian herbal medicine), Hawaiian medicine?

DSM: No.

HKA: Okay. And then, were you around during the time of the sugar plantations?

DSM: No. Well, I was there at the end of the Kekaha sugar plantation, because my husband and I used to go and watch them wash the cane some nights. It was fun to watch the thing go up, the truck unload. But that's the only part I remember about the sugar cane industry. And of course, we would drive through the sugar cane roads because my husband was a hunter. And to get to Polihale, you'd have beautiful, thriving sugar cane in that area. The Mānā Plains was a terrific growing area.

HKA: And do you remember when there was a lot of water — like there was a water system going from Waimea to Polihale?

DSM: The Waimea ditch system. I actually was able to see it from the helicopter — how the ditch ran along the mountainside and back down into Mānā Plains. And we are trying to — well, me and Senator Kouchi have managed to get funding to make sure that those ditches are maintained, because there was a bad flood in Kekaha. And we learned after the sugar cane company shut down that if you don't maintain those ditches, the town will flood. It was a bad flood. So, we have an organization out there, the KAA — they call it the Kaua'i Agriculture Association. They're contracted by the Department of Agriculture, and now ADC (Agricultural Development Corporation), to maintain those ditches. That's all in the PMRF area, too.

HKA: Right, right. And did you guys catch crab?

DSM: Believe it or not, yes. My son actually dug up a Kona crab in the sand. He was only nine years old, I think. He saw this little red thing in the sand. He started digging and digging and digging. The thing went all the way down to his shoulder. And he finally brought it up — it was a Kona

crab. A nice-sized Kona crab on the shore. And lobsters — you can catch lobsters on your line.

HKA: When did he catch that crab?

DSM: He was nine. He was born in ’88, so that had to be in the ’90s, before the hurricane, I believe.

HKA: Yeah. Even when there was a lot of Kona crab, you still don’t see Kona crab inside the sand.

DSM: And he actually found a sole too, that upside-down fish. It was in the reef, so he was able to just pick it off the reef and bring it in. And it was huge.

HKA: So, do you know any *mo‘olelo* (stories, history), stories about the area? Any other experiences?

DSM: No, I don’t. My husband would have a lot because they did a lot in that area. At the — they call it — it was a really cold spring water swimming pool. And they have a lot of ghost stories, but I personally never really experienced that.

HKA: How about stories of you guys being out there, can you remember any other things besides the Kona crab?

DSM: Well, I know that the fishing was great. But because there’s a limit on how much you can catch, we of course stuck with that limit.

HKA: Do you guys go for *akule* (big-eyed or goggle-eyed scad fish [*Selar crumenophthalmus*])?

DSM: No, *akule* does come in closer by the harbor areas, but not necessarily there. I think the fish are smart, right? They’re going to stay where they can be protected. And all of that area is not protected — there’s no real reef. So, they hide.

HKA: The *moi* usually stays in the hole.

DSM: And the turning sand.

HKA: So, any *wahi pana* (sacred places, cultural sites) or sites that you can think of? Like, there's the *heiau*, or the *pā*, the *hula pā* (place where *hula* ceremonially took place), right? At Polihale.

DSM: That is the only one I know of. Only because PMRF wanted us to come in — a bunch of us political people, county and state — and showed us what they do out there and how they preserve it. But that's the only thing I knew about there.

HKA: How about anything at Kōkeʻe? Any type of sites?

DSM: No. Everything at Kōkeʻe could be sacred, so you just got to say your "excuse me" and then — yeah.

HKA: Yeah. Do you do protocols when you guys go gather?

DSM: I don't do that formally, but every now and then I'll talk to myself — I mean, I'm talking to the forest, but I'm alone. It just comes with the Hawaiian style, yeah.

HKA: Any stories of the *aliʻi* (chiefs) over there?

DSM: No. I only knew that Kaumualiʻi was a big part of Kauaʻi, so I helped the community get that statue put up at — not Russian Fort anymore — Pāʻulaʻula. So, we have him looking out at the west side of Kauaʻi and Niʻihau.

HKA: Oh, nice. Yeah, usually when I get there — the park is closed now — but usually when I get there, I go and I do an *oli* (chant not accompanied by dance).

DSM: Oh, good for you. And yeah, that was Aunty Aletha Kaohi. She was with some of the community members trying to do fundraising to get that statue to become a reality, and I had just been elected. And I told Aunty, "I don't make political promises because I feel that if you're going to

promise, you have to deliver, but this time I will promise you that I will work as hard as I can to get you this grant," and they got it. So, they were able to do the statue for around $200,000. That was my first real promise to a community person.

HKA: Oh, that's so neat. *Mahalo*.

DSM: Sure, sure. And come to find out, her granddaughter is my husband's niece. Yeah, so there was a connection there, too. That's why I'm glad that she passed it on to her granddaughter.

HKA: She contributed a lot. And she did that report, too, yeah?

DSM: Yeah.

HKA: That was awesome — with Kalani Flores.

DSM: Mhm.

HKA: Yeah. Anything you want to share?

DSM: Only that I think PMRF has — ever since I have known PMRF — always come in with good leaders. Very, very *pono* (correct, righteous, balanced), sensitive to the culture, to the community. They listen. And I think because of the relationship, time after time — they change like every three years or so, a new captain comes in — but so far, even this recent younger captain, he is respectful of — Kaulana and Thomas Nizo, as young as he is, he listens and he does follow the protocol, which I'm very, very happy for, because if you had somebody that just wanted to be the one and not listen to anybody, you would never get along in the community. But in that sense, PMRF has been the best neighbor. That's why I will always defend them when it comes to any legislation or policy that targets military areas. And I have made it clear here that I will not get involved in anything that will hurt PMRF.

HKA: Well, thank you so much. *Mahalo*. Thank you for this interview.

DSM: Sure.

ORAL HISTORY INTERVIEW

With

Keith Pomeroy Robinson [KPR]

March 24, 2026

Waimea Plantation Cottages, *ahupua'a* Waimea, Kona *moku*, Kaua'i

By

Hannah Kaumakamanōkalanipō Anae [HKA]

Recording file name: IA2026025_Interview_Keith Pomeroy Robinson.mp3

Also present: KPR's nephew James, James' half-brother, and half-sister.

HKA: *Welina mai kākou* (Greetings everyone).[1] Today is Tuesday, March 24th, 2026. I'm Kaumaka Anae, representing International Archaeology LLC, and I'm conducting interviews in support of a Cultural Impact Assessment for the PMRF (Pacific Missile Range Facility) and KPGO (Kōke'e Park Geophysical Observatory) succeeding lease and easement areas. We are at the Waimea Plantation Cottages in *ahupua'a* (land division) Waimea, Kona *moku* (district) on *mokupuni* (island) Kaua'i, and I am here with Uncle Keith. Uncle Keith, can you please state your full name?

KPR: Keith Pomeroy Robinson.

HKA: *Mahalo* (thanks), and do I have your permission to record this interview?

KPR: Yeah, under some conditions. I'm not terribly eager to have it released all over the country, just for you people, for your own use.

HKA: Okay, *mahalo*. The interview encompasses a series of questions, and I would like to say *kala mai* (excuse me) in advance if I seem *maha'oi* (brazen), but it's just for the purpose of this

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

interview. So, first I want to start off with your *pilina* (connection), or your connection, whether it be *mo'okū'auhau* (genealogy), your work, your lifeway, your *pilina* to not just PMRF or the KPGO, but also to Kaua'i.

KPR: Well, I don't have a huge connection with PMRF or with the Kōke'e Observatory. I was born and raised here, spent all my life here except for nine years of high school and college and army on the mainland, but other than that, I've been around here on Kaua'i and Ni'ihau all my life and have a certain amount of knowledge as a result. I run an endangered species wildlife reserve up on the southwestern mountains of Kaua'i and that's mostly where my interest is: native Hawaiian endangered species.

HKA: And what kind of plants do you work with?

KPR: Native Hawaiian plants and trees. They divide into, depending on who tells the story, there are between 2,200 and 2,800 native species of Hawaiian plants and trees that are found nowhere else in the world, only on the Hawaiian Islands. This number further subdivides into as many as six subspecies of each species, and some of those subspecies are very distinctive looking. Those things can be roughly subdivided into three categories. One-third, approximately 600 to 800 species —this is very approximate — are holding their own and in no danger of any kind. Another third, another 600 to 800 species — again I am being very approximate here, very vague — are declining steadily and relentlessly but are not yet rare enough to be classified as endangered. And then finally, there's the 600 or 800 species that I work with, which are down to the last one, two, ten, one hundred —that kind of way —and scratching down the wall of extinction and leaving fingernail marks as they go. So, that's basically the work that I do. When I began my work back in the 1970s and 1980s, native Hawaiian species and varieties were going extinct at an average rate of one every nine months. In the years since then, that extinction rate has accelerated. So, that's where it is. I try to bring a few into my endangered species reserve and put them on life support for as long as I can. Eventually, I'll die and the species will go extinct.

HKA: Where is your reserve at?

KPR: It's up somewhere in the mountains back here. I'm going to be very guarded and careful because I do work that none of the eco-Nazis have ever done. And as a result, there have been a number of

attempts —not just on me, on other people as well. Anytime a private landowner or private businessman does endangered species work that the activists and the government are not doing, he automatically becomes a target, and his land can be seized, can legally be seized. The only defense private landowners have against such eco-Nazi seizures of their conservation work is to hide it, or else to pre-emptively raze and destroy it. Hawai'i has no law protecting the rights and property of anyone who does endangered species rescues that the government and eco-Nazis are too lazy and incompetent to do themselves. So, as a result, I hide a lot of my work from the eco-Nazis, using methods copied from the underground French Resistance in WWII. It's a heck of a mess, but that's the situation that exists today.

HKA: Have you done work in Kōke'e?

KPR: Yes.

HKA: And what kind of plants have you seen there? What are the names of the plants?

KPR: Yes, of course. I know a good deal about some of them, but I normally keep my work pretty private and secret.

HKA: Okay. Is there any *lā'au lapa'au* (Hawaiian medicinal plants) there? I'm sure there is, yeah?

KPR: I don't go for ethnobotanicals much. I'm primarily interested in species that were here before the first Polynesians ever saw the place. Most of the ones that really need the help now. The so-called canoe species — the species that came with the Polynesians, and there are about 34 of those species that came in the long canoes — are not my primary interest. My primary interest is stuff that was here from the time the islands came out of the ocean.

HKA: And how about *mo'okū'auhau*, your genealogy? Who were your grandparents?

KPR: Aubrey Robinson and his wife, Alice Gay Robinson. Those are my grandparents on my father's side.

HKA: Is that the same family as the Gay and Robinson map? I've seen that map before.

KPR: Aubrey Robinson, together with his cousin Francis Gay, founded Gay and Robinson. There was later a peaceful split, and Francis Gay ultimately returned to England and ultimately died on the Channel Island of Jersey, if I recall correctly, which is a few miles off the French coast.

HKA: And your *'ohana* (family) has been here, living here, for a long time? Generations?

KPR: Going on about 160 years.

HKA: So, you're familiar with Mānā and PMRF?

KPR: Sure.

HKA: Were you around in those areas as a child growing up?

KPR: Once in a great while we would go to Polihale or Nohili Sand Dunes, but it was very rare —if dad had some time for an evening picnic or something, which he almost never did, he was a hard worker. So, I know a little bit about the place. And later in life, as I grew up and became aware of the endangered species situation, I traipsed over a lot of those sand dunes myself and checked them out. On at least one occasion the Navy called me in to do a quiet survey of the place when they were worried about a situation — some other private landowners here and there in Hawai'i have called me in occasionally because when they want somebody who will look over their property and not go blabbing to the eco-Nazis and causing all kinds of problems, somebody who will keep quiet, so that's basically how it is. I've been called in once or twice, yeah.

HKA: And when you've been called in, did you notice any plants there?

KPR: Well, that's why I was called in. In fact, I anticipated having to talk about some of it. PMRF is host to an awful lot of Hawaiian endangered species — a lot of the so-called strand plants that are found out on sand dunes and shoreline areas. They're host to a lot of these species that are not found elsewhere on Kaua'i, but there's a very, very good reason for that which we can get into

later in this interview. The people running PMRF worry a little bit about eco-Nazis coming in and screaming, yelling you've got an endangered species here. You can't do this, you can't do that, or you can't do the other. So, I get called in quietly to look things over occasionally and give them my opinion. And as I've said, PMRF has a lot of stuff not found elsewhere, but there is a very, very good reason for that.

HKA: And what is it? Besides *mālama 'āina* (caring for the land), because you do *mālama 'āina*, are there any cultural practices that you have witnessed or participated in at PMRF or Kōke'e?

KPR: Not really. Cultural practices don't interest me. I'm interested in stuff that was around long before there were any Polynesians, long before there were any Robinsons, long before there were any cultural practices of any kind. That's the stuff I am interested in. Way back in distant pre-human times.

HKA: Then I'm going to ask you this question. Do you feel that the renewal of the leases will impact cultural practices or cultural resources?

KPR: I'm not particularly worried about cultural practices or cultural resources. Human cultures are like the shadows of clouds on the face of the earth — they shift and change all the time. The Babylonians are gone, the Egyptian empire is gone, the Romans are gone, the British empire is pretty well faded out of the picture. Pretty soon, sometime in the not very distant future, the United States is going to collapse economically like ancient Rome, and then history will continue on. I'm not terribly interested in human history or cultural practices. I'm interested in human history primarily because of taking warnings, try not to repeat the mistakes of the past. Other than that, it does not interest me that much.

HKA: Are you familiar with the history of the Mānā Plains?

KPR: Very vaguely, yeah.

HKA: Can you tell me what you know about that?

KPR: Well, when the first missionaries arrived here, if they wanted to go from Waimea to Mānā — which is a tiny hamlet way out in the middle of nowhere toward Polihale — they didn't go trudging around for hours on hot loose sand dunes. They took a canoe along the inland waterway. This whole place was a beautiful swamp. And Hawaiian swamps, a lot of people think of swamps as dismal places where people and cows get sucked in and never get seen again. Hawaiian swamps are different they had all kinds of rare plants and trees and birds and stuff like that. The last of this swamp was not drained until about the 1890s, there was still a remnant. The missionaries and the ancient Hawaiians often found it easier to take a canoe from here to Mānā than it was to trudge around on that long hot loose sand and coastal sand dunes. But when the swamp was drained, an awful lot of things went wrong.

HKA: So that was a main transportation route, that waterway?

KPR: I wouldn't say it was the main transportation, but it was a very commonly used one, yes. From about over here to somewhere around where the housing is now or the entrance to KVMH (Kaua'i Veterans Memorial Hospital), all the way out to Mānā and Polihale, there was an inland waterway that ran through the swamp.

HKA: With lots of birds.

KPR: Probably, almost certainly. Native birds, native plants and trees. I've seen the remnants of some of those things — I'm old enough to have seen the remnants of some.

HKA: Do you remember any of the plants that were there?

KPR: *Sesbania tomentosa* [or *'ohai*] —there was a yellow or orange flower variety of *Sesbania tomentosa* that used to grow in the area. There was a small pond out near the north gate of PMRF, and the *sesbania* persisted in that pond in semi-swampy conditions for quite a few years, around the 1960s or 1970s. Then it gradually died out. The state government came and decided to improve the pond with bulldozers. If my memory serves me correctly, there was a man named Tom Telfer, with whom I had a number of professional disagreements. He wanted to improve the pond to make it slightly larger for waterfowl. I thought that since the edges of the pond were the

last habitat of some of the swamp species, it should be left alone. But he got the bulldozers and improved the pond, and that was the end of the *sesbania* and a couple of other species. Ironically, the waterfowl weren't much interested in using the pond after that anyway. More recently there have been indications that some *sesbania* are still around that pond or in the waterway that runs alongside the highway — I haven't had the time to do a comprehensive check, but they might still be there. There's also a non-native species of *sesbania* that has become naturalized in there it's about the same height, and the flowers are about the same size, instead of being yellowish-orange to red-orange, those flowers are yellow and purple, the non-native *Sesbania, Sesbania sesbans*, if I recall correctly.

HKA: Can that plant be used medicinally or for adornments? Do you know the use of that plant?

KPR: Every time I talk to Hawaiian activist types or people who are interested, they say, can you use it, can you eat it? And I say no, but it is very scientifically interesting and fascinating. And their eyes glaze over, and their mind wanders somewhere else. As I said, I'm not interested in cultures. I'm interested in Christian theology — and in the King James Bible, the first commandment God ever gave to man was: I've created a planet and given it to you to enjoy. Use it, replenish it, keep it up. That was the first commandment. Everybody heard the "use it and have fun with it" part, but nobody was listening when it said, "Keep it up and replenish it, and keep it going."

I've had my own friction with some of the Hawaiian cultural types. A few years back — a quarter century now — some of them, a *hula hālau* (Hawaiian dance group), wanted to go out to the Polihale sand dunes and visit some of the *sesbania* out there. I said, "Look, this is not a good idea. It's not a bright idea. Those plants are extremely fragile. If you walk close to them, there is some kind of a pathogen on people's feet that gets tracked in, and if you get close to those *sesbania* on that sand dune, if you get within about six or eight feet, that pathogen gets to the *sesbania*, and it kills them. Do not bring the *hula hālau* out there, they have no idea of this kind of thing. It's a bad idea." They disregarded my advice and went out there. "Oh wow, how lovely." They walked all around and handled all the plants. Within about six or eight months, all the plants in that place were dead. I went out there and checked the tracks afterward, but there was one place where the tracks showed, one small colony of *sesbania* the *hula hālau* had not gone to. That colony survived and continued on. I got seeds from that colony and tried to start replanting them elsewhere. Some of the replantings I did on the Polihale sand dunes stretching down toward

Nohili have taken, and the species is slowly spreading on those sand dunes, very slowly spreading. But the place where it's safest is inside the military installation — and there's a very good reason for that, I won't go into it right now, later maybe we can get into it. So, I know something about that area.

HKA: Yeah, because there's a lot of people — before, there was a lot more access, people would walk all over the beach and such.

KPR: And they mess it up. You tell some stupid hippie like I did one time. He had a dune buggy, and I said, "Don't drive your dune buggy over *such and such* a place because you'll wreck the native plants there." "Oh no, we're flower children, we're concerned with the earth, we don't do anything to damage the earth." [KPR makes the sound of a dune buggy engine] RRRR!!! Off he went, all over the plants. So — the people who talk loudest about conservation are usually the ones who are the most damaging. The ones who are quiet and do their work quietly in the shadows where no one can see them, those are the guys that make the difference.

HKA: Yeah. Have you gone fishing out there?

KPR: I had a kind of a spooky experience one time, yes. I had a boat — I was one of the three men in the factory that built the boat, I was a fiberglass man in those days. I was one of the three men that built it. I knew that there was shallow water off of Polihale and off of the start of the cliff country, and I decided to go out and try for *uku* (type of fish, snapper [*Aprion virescens*]) out there early one morning, just after sunrise. I had spent the night drifting around offshore catching practically nothing. I sent down a line, unfortunately the line had a stainless-steel leader on it — a big mistake. Something big seized the line. I was kind of careless about the line, and which any veteran fisherman will tell you to always be careful about your lines, especially the strong lines, be very careful or you will tangle up in them and get dragged overboard. There was a groundswell running, about a six- or eight-foot groundswell coming in from the north. I was in a ten-ton boat, and the line wrapped itself around my hand as it ran overboard, while I was hanging on to the superstructure on the roof of the boat. It must have been a shark — it was a steady, very powerful pull. Sharks have a very powerful and steady pull, tuna has a powerful pull, but it's a pulsing pull. So, this had to be a big shark. And between that shark and myself, we got that boat turned right around. Luckily, I clung to the boat and never got pulled overboard. After a while the

stainless-steel leader, which was a 150-pound test leader, broke. I was very relieved —and so was the shark, I'm sure. Not too long after that I decided there wasn't much to be had there, cranked up the boat, and came home.

HKA: And that's the only fishing adventure you've had over there?

KPR: In that place, yes, that was the only fishing adventure. There were other places and other adventures elsewhere. The old timers used to tell me that it's extremely dangerous to go out solo fishing in a boat, and in my time several solo fishermen did vanish at sea —in one case the boat was found several days later, still in gear, and it had run out of fuel. These things happen.

HKA: Do you know other than *uku* what kinds of fish are out there?

KPR: I've fished for *akule* (type of fish, big-eyed or goggle-eyed scad [*Trachurops crumenophthalmus*]) and *ʻōpelu* (type of fish, mackerel scad [*Decapterus pinnulatus* and *D. maruadsi*]), and everybody does that. I've also fished for squid and for tuna.

HKA: Do you surround the *akule* and *ʻōpelu*?

KPR: No. I do a hand line —I tied my own hand lines and made my own fishhooks and handlines, and my own little flies for the *akule* or the *ʻōpelu*. The *akule* or the *ʻōpelu* thinks it's some little crustacean, shrimp, or something.

HKA: You dive, catch *heʻe* or octopus?

KPR: No. Those are waiting around on the reef; I was at sea. Most of my fishing was done in waters between 25 fathoms and 1,000 fathoms —6,000 feet of water. At night the critters come up from the depths —after the sun goes down, a lot of wildlife comes up out of the depths and decides to have an orgy until the sun rises or until the sky gets light in the east, and then they go back down to 2,500 feet or beyond. In the meantime, if you're up there, you can see all kinds of interesting things.

HKA: And how about Kōke'e —back to Kōke'e. Have you seen the Kōke'e Park Geophysical Observatory?

KPR: I've been around it. I haven't been in it, but I've been around it, sure.

HKA: Do you know how far it is up there?

KPR: I guess it's somewhere around the 18- or 19-mile mark on the highway, I'm not sure, after leaving here.

HKA: So, there are still a lot of endangered plants up in Kōke'e, yeah?

KPR: If you know where to look, yes. But a lot of these species now are up there are, but they are up there in very thin numbers and little colonies — one colony here, another colony half a mile over, another colony two miles beyond. You've got to know where to look.

HKA: Many people I've been talking to have been up there for the *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) and the *mokihana* (special native tree found only on Kaua'i [*Pelea anisata*]), yeah?

KPR: Yes. I don't like that. I worry about the *maile* and the *mokihana* — they're being picked into extinction by people with no sense of conservation at all. They just go out, and around graduation time or somebody's big wedding, they go out and devastate the forest. It's not a good situation. I get really upset about it. I've almost never worn a *maile* lei, just on general principles. It is a lot worse than it was then. In the ancient times, if the Hawaiians wanted to decorate themselves with *maile* or *mokihana*, they had to send a huge expedition miles into the mountains. People would collect it and then run back down before the stuff wilted. They would have to get back down here. There was a natural limit to what each person could carry. But now they go up in pickup trucks and bring back far too much. One of the people involved in that practice once told me they're not happy until they get at least a gallon of *mokihana* seeds. That is an H blank of a lot. This is why *mokihana* is going extinct.

HKA: And it's only here too —it only grows here.

KPR: Yup. I'll never forget one time when I was in the U.S. military, up in the East Range over in the Ko'olau Mountains behind Schofield Barracks. We got into a part of the forest that was primeval and had never been invaded before by anybody, as far as I could tell. There were huge clumps of *maile* vines hanging off the *lehua* trees up there, it was just fantastic — everything was native forest, native forest. And we had some local guys, activated National Guard, "Oh goody." They went around ripping down all the *maile* off the trees and making huge wreaths, fifty pounds of it for each soldier, and then they taught the mainlanders to do the same. By the time we left that forest, it was a ruin. This was local people. No sense of conservation. And they taught the mainlanders and the mainlanders had just come in as replacements, and it was a nightmare watching what happened. They tore the heck out of it. And a lot of that happens. We have constant problems with people ah — well, PMRF here is off-limits to most of the public; and PMRF has much better fishing than the rest of the Kaua'i shoreline does. Ni'ihau is off-limits, most of the public cannot go there, so the reefs there have a lot more fish and *'ōpihi* (limpets) than here. If you go down by Burns Field, by Port Allen, by the airport, and you can search the rocks there, you may occasionally find one *'ōpihi*, the size of a dime, but that's about it. They just strip it. There's no sense of conservation — they talk endlessly about conservation, but they don't do it. Everybody is, "Oh we love the *'āina*, we *mālama*." Tears and all that, bullshit.

HKA: I did conservation up in Kahana. I live in Punalu'u by Kahana. The *lehua* was getting diseased ....

KPR: Well, there's a lot of disease around. There's all kinds of new diseases constantly coming in. When I started my work back in the '70s and '80s, it was estimated that about 15 new species of insects per month were landing in Hawai'i from elsewhere in the world. Well, we had jet planes even back then — the stewardess went around with her little spray can, "Goody everything is sterile now." Yeah, right, sure. Luckily, most of those species would not take too well to the Hawaiian climate for one reason or another, or there would already be hostile species that would eat them, or something like that. A lot of those species would die, but a significant number did survive, and they're still coming from all over the world. We're still getting all kinds of pests coming in and getting on the native plants and trees.

HKA: Right. In Punalu'u we have the rhinoceros beetle and it's decimated so many of the coconut trees already.

KPR: The coconut rhinoceros beetle is not one of my major concerns right now. There's a new fungus getting in that attacks the base of the fronds of palms — anything that's a palm, especially the native *loulu* (native fan palm [Pritchardia]). It gets in there and it munches away, right where the stem of the frond joins the trunk of the palm and munches away on the base of the frond, right where it joins the trunk of the palm. Eventually the whole frond falls down, it fails because the whole tissue there had been rotted out by this fungus or whatever. Gradually the fungus moves on to another leaf and another leaf and soon the whole tree will be dead. The eco-Nazis, the scientists, and the news media don't know anything about this yet. It's just appearing in my reserve. But we're getting kind of far off the subject of PMRF, aren't we?

HKA: No, well, yeah, but no —because it's talking about preservation, so it's okay. So, are you familiar with what's going on at PMRF?

KPR: Well, my family has been involved in a good deal of that. We started working with the U.S. military almost exactly 100 years ago, maybe just over 100 years, and we've had fairly close relations. We knew about Pearl Harbor eight years before it happened. There were skilled men then in the military — patriots, people in intelligence service, people who were just ordinary officers, but they were smart enough to listen and find out what was going on. Billy Mitchell predicted back in 1926 that Pearl Harbor would be attacked. He missed the time by about 30 minutes — he said it would occur at 7:30 on a Sunday morning, and the first bomb didn't fall on Ford Island until 7:55, so he was about 25 minutes off. In the meantime, the Mitchell faction of the U.S. military had gotten in touch with Ni'ihau and advised us that an attack was coming and a war with Japan was coming, and we should get ready for it. One of the things they wanted us to do was to plow up the whole island so it could not be used in the event that the Japanese occupied it — it could not be used as an improvised airstrip. So, we spent the next eight years plowing up two-thirds of the island, and you can occasionally see some of that plowing. Some of those furrows were cross hatched at about, the squares were about 100 feet on the side. I think the men were cutting corners a little bit because some of those squares were like 103 or 105 feet.

HKA: Is there anything you want to share?

KPR: You're doing the asking; I'm just yammering on like a silly old man.

HKA: Because I cannot ask you too much questions about cultural practices, because that's what this thing is really about — the impact ....

KPR: I don't pay attention to cultural practices, I know about a lot of the cultural practices, and I know what was done. But I don't do it myself. If there's something in Hawaiian practices that made sense and was common sense, I'll use that practice myself. If I go to Western science and I see something good there, I'll use that. I'll synthesize them together. Because I know a good deal about Hawaiian cultural practices and about how the natives lived in those days, I can sometimes predict where native endangered species will be found or figure out where and why a species became extinct or how. The Hawaiians picked it up too much or overused it.

Like for instance, *kokia* (Kaua'i tree cotton [*Kokia kauaiensis*]). They occupied the same environmental niche that is now occupied by *kukui* (candlenut tree [*Aleurites moluccana*]) trees. In the dryland country, on the dryland sides of the island, that environmental niche was occupied by *kokia* trees. [KPR is speaking to his nephew who is in the room on his computer] James, bring up a picture of any Kokia tree, *drynarioides*, *kauaiensis*. [KPR and HKA look at the photo of the kokia] Now, that flower is the size of my hand. It's kind of small on that screen, but it is the size of my hand. When the Polynesians came to Hawai'i, they very quickly discovered — well, they brought *kukui* with them, because *kukui* is a very useful plant in Polynesian culture all across the Pacific. Wherever the Polynesians had gone, the *kukui*, *Aleurites moluccana* had gone with them. When the Hawaiians had come to Hawai'i — I can see the point, making a fishnet is big work — you got to find the *olonā* (a native tree shrub used for cordage [*Touchardia latifolia*]) fiber, you've got to sort it out, weave the fishnet — it's a lot of work. You don't want to lose your fishnet. But when the Hawaiians found they could make a preservative dye for the fishnets by stripping all the *kokia* trees of their bark, soaking the bark in water, and making a preservative dye that they could stain the fishnets. This would extend the life of the *olonā* fishnets for a couple of years or something like that. But if you rip the bark off a tree, the tree dies. So, by the time Westerners saw the place, the *kokia* were virtually extinct already. That is where a big problem began because nobody knew what was going on. The only place where *kokia* were now found, were dry distant places that were far from Hawaiian civilization. And the Hawaiians, a simple primitive people, high stone age, but still stone age, they lived near the

drinking water, and man still does. Where we put our cities, we try to have a good water supply. So, everything in the good water supply or in the fertile valleys — the *kokia* got all wiped out. When the last few *kokia* trees were first seen by Westerners, everyone assumed they grew only in hot, dry, remote locations. Then I came along, had all kinds of problems, started growing the things, and not too many people had grown them before — and these things were not doing that well — eventually, I started growing them in nice, deep, rich, bottom-soil valleys. And then they thrived. People asked, "How come he can grow them and nobody else, including the government who tried for fifty years?" For fifty years they made the same kinds of mistakes, over and over and over again and expected a different result. This is the definition of insanity. And that is why I do not work with the eco-Nazis, and I keep most of my work strictly secret, so they won't find out. Environmental activists love to bully people with their doctrine and any time they — knowledge is power and anytime they get their hands on more knowledge and more power, they use it to bully innocent citizens. They're too lazy and incompetent to do the endangered species work themselves but they'll go around and try to bully anyone who's doing the work they're not doing. Just keep it under the radar, and almost nobody knows anything about it. I'm very secretive about my work. Now, there are one or two people who have occasionally gone with me on condition that they will never reveal what they have seen with me. There is a woman named Natalia Tangalin and she's studying to be a nurse. She goes with me. She has seen some of my stuff. And she has been kind enough to say that some of the methods she has seen me using are stuff she hasn't seen anyone use in her whole life. But again, knowledge is power, and a lot of that knowledge is going to the grave with me because I don't want the environmentalists to get ahold of it, because every time they do something wacky, it damages people. They talk about conservation, but they come up with these Soviet-style schemes that wreck the place. Heck with it. Anyway, we are getting way off the subject, I'm ranting as usual, so what?

In the later years of the Hawaiian Kingdom, a regulation was passed forbidding the stripping of bark off of *kokia*. You got to know the history of this stuff also. You can find that kind of history in the books written by old-time botanists like Joseph Rock. Joseph Rock was really good about going around with Hawaiian guides and he would ask them what was this used for, what was that used for. And then in the vast majority of cases, the thing was not used for anything, but if there was some sort of use for it, Rock would record it. And he would say what it was and things like that. Nobody reads Joseph Rock anymore — his books sit unused on shelves.

HKA: So, are there other plants you can talk about? Maybe plants that might be in Kōke'e?

KPR: Well, there's a million kind of plants in Kōke'e. Kōke'e has a kind of native sunflower, *Bidens cosmoides* — very pretty thing. It grows up about five or six feet tall, but usually about half that size, but can grow five or six feet tall, [KPR gestures] around this big around. Very pretty little thing, but very rare now. You've got to know exactly where to go. It's almost gone — eaten readily by grazing animals. The State, in its infinite wisdom, introduced deer back in 1960. Bruce and I had a hand in that. We weren't involved with the deer; we were at a party.

We were at the party, Ralph Daehler, who was the district forester. I screwed up the party that night, I put a billy goat in the bridal getaway car, but anyway. Ralph was ah. Someday I'm going to write my memoirs. One chapter is going to be entitled, *The Bride Wore Goat Snot.* Ralph Daehler came to my father, he was at that big social event, he said, "Oh by the way Lester, we're thinking of bringing deer into Kaua'i and turning them loose so the hunters will have something else to shoot at besides goats." Dad thought it was a very bad idea, and Bruce and I thought it was a very bad idea. Ralph said, "You guys have a very good reputation for not allowing poaching and destruction on your property, on Gay and Robinson land. Could we turn the deer loose on Gay and Robinson land?" Dad was standing right there, and Bruce and I were standing behind just behind him, echelon behind him, like a couple of maliciously grinning idiots. It was well known every summer when we came home from high school or college, we would go out in the mountains, and we would spend that summer with our gray-old daddy; and spend our summer killing goats. In an average summer we would kill about 125 goats, and this was just on our spare time on the weekend, when we weren't breaking in horses or doing work. So, Ralph asked, "Can we turn the deer loose on G and R lands?" Dad looked at him, and he smiled gently and said he, "No, I don't think the deer would really appreciate the climate there." And Bruce and I were standing behind him, you know, [KPR letting out a cynical laugh] nyuk, nyuk, nyuk. Ralph got a sickly smile on his face and said, "Oh, I see, we'll find some other place." So, they found some other place and they turned the deer loose right in the middle of the headwaters of Mahanaloa and Pa'aiki Valley, which has some of the rarest and most highly endangered species on Kaua'i right there. The deer of course, went around doing what deer do, and very soon the whole place was a wreck.

HKA: That's a good story because I'm sure the deer are in Kōke'e as well.

KPR: Ten years ago. About 15 now, I had a reliable report of a deer being seen behind Wailua. That's quite a way from here. Deer travel a lot, especially when the bucks are in rut and hunting for does, they'll range all over the whole country, they will go ten or fifteen miles in a day just hunting. So, what can you do? I've had deer strip native plants in my wildlife reserve. I'm not happy about it. The way deer strip plants is similar to goats, but it's just a little bit different from how the goats eat. You can sometimes tell when a deer has been around. I'd tell the local hunters: open season, fifty dollars for anybody who can show me a deer he shot within half a mile of here.

HKA: I thank you. I'm going to end our interview right now. This is good information.

KPR: Well, you haven't even gotten around to PMRF or Kōke'e. What's the deal?

HKA: I did — I talked about PMRF and Kōke'e. I asked you questions about that because this is a Cultural Impact Assessment.

KPR: Look, you're missing the point completely. I'll tell you a story and it's a true story.

[KPR talking to his nephew James who is doing research for KPR] James, I gave you a note there, did you pull it up on your computer? If my memory serves me correctly, I was in my late teens or early '20s, no, late teens. Fort Belvoir in Virginia was, at that time, an artillery range as I recall, an army artillery range — the guns were shooting out into what were called the piney barrens, which were a wilderness of pine trees and not much else.

*****KPR and HKA interview on pause awaiting research information*****

KPR: I served in the army a little bit, Vietnam time. I never actually went to Vietnam, but I had a lot of training for sniper stuff like that. Boy, what a mess that was. That was a totally mismanaged war.

This fort [Fort Belvoir] was used for artillery training. It was a famous place for artillery training. There are such things as liability laws and if you ever hit a civilian, there is going to be a lawsuit. So, the U.S. Army and it's artillery ranges .... [KPR asking for a piece of paper from James and draws on the paper and draws on the paper] Okay, I'm going to make a hypothetical artillery range over here, okay Your cannon is shooting down range, this is the impact area, okay. Now, all

the rest of this is wilderness. Where the shells fall, it's going to be complete devastation for about 100 or 200 yards around because it's constant explosions and the trees are full of shrapnel, and it kills the trees and everything else. This is the impact zone here, but you have to have a safety area where there's maybe less than a one-in-a-million chance that shrapnel will fall. So, you have to designate a huge safety area where nobody can go because a chunk of shrapnel may come down on him or something. [KPR referring to his drawn schematic]. So, they shoot from here and they impact here. Over here, it's totally untouched. Once in a great while, like in about 10 years, if you're walking through the place, you may see a piece of artillery shrapnel that fell down on the ground without hurting anything, it will just plunk on the ground, okay. But in the meantime, you've got this giant untouched safety zone, in that safety zone all of the native wildlife will flourish mightily. And I do mean mightily.

HKA: Why?

KPR: Again, I'm talking about when I was a kid. [KPR referring to his nephew James' two siblings who are in the room] I was less than half their age, what they are now. So, this is a military reservation, just like out here, the public can't go on the military reservation. The deer are gigantic — the bucks have huge racks on their heads because nobody's ever shot them, right? They're just wandering around in there. These animals are smart enough not to come out, because they realize they will get shot at anywhere else they go. Anytime they hear a [sound made by KPR] knweee, they get away from this place. And they are all just fine. They get away from the impact zone and they are just fine. There are a lot of good deer in there. But the public can't go.

The Senate and the House in those days, and it still does have a lot of fat cat politicians who could just barely walk from the dining room to the toilet. They're too fat, they're too overweight, but they want to give the impression they are mighty hunters, and they want to give the impression they are still hunters, they still walk 10 miles across the Rocky Mountains to secure their trophy buck and all that yada, yada, yada, okay. The military authorities have to go in front of these fat cats every year or two to get fiscal appropriations to fund their activities. The fat cats would like to get in and walk 400 yards to shoot a trophy-sized buck. It was common knowledge. I'm not going to preach any kind of thing about morality. The fat cats got their antlers to put on the wall of their office, and the military got its military appropriations from the head of the Senate and House Armed Services or whoever it was, okay. That is how the system worked. Everybody

knew about it, but nobody talked much about it. You ever heard of the four words RHIP [rank has its privileges]?

HKA: No.

KPR: You're too young to have heard that? I thought everybody still knows it. RHIP — rank has its privileges.

HKA: Okay.

KPR: That principle has been in operation since the time the pyramids were being built. So, the big cheeses in Washington, in the Senate and the House would get to come go in on a weekend when nobody could go in, and they would come out with a nice trophy. Some of their assistants would come and carry the buck out or whatever. They would get their horns, and they and the military would get their appropriations. The taxpayers would get ignorantly screwed as usual, but we won't get into that. So, that continues still to this very day. If you want a place where the wildlife is left undisturbed, go to a military reservation. The public cannot go into a military reservation. Some of the best endangered species' areas I know out in Polihale are inside the military reservation. The public cannot go there. The cultural practitioners cannot go and fool around with the *sesbania*, walk up close to them, and leave their pathogens on the ground to attack the *sesbania*. Some of the best stuff. The finest.

I shouldn't be telling this story, I really shouldn't, but it illustrates a point. A Terrier rocket — Terrier rockets are obsolete now; they went out with the stone age or with the 1960 and 1970s. They were a huge complex anti-aircraft missile that could be fired. They were pretty reliable, but they were huge, they were not like the little transistorized things we got nowadays. Anyhow, they hung on, there was a pole, arms on them, arms pointing out, there was a Terrier affixed to the arms, and when somebody pushed a button, the Terrier would go [KPR making a sound] ... rrrgh. Take off was a two-stage rocket. And it would go ripping miles high in the atmosphere or whatever. So, at the north, they still have — it's discarded now, the rocket launcher for the Terrier rocket at the north end of PMRF. Way back in the day, about 20 years ago or so, the things were becoming extinct, but they were still occasionally firing them, [KPR recollecting the event and laughing] they pressed the button, and the rocket went right off of the launcher. In

about 30 or 40 feet something went very wrong in the rocket — the rocket exploded, the rocket split open like a giant tin can and spewed its rocket fuel everywhere. There was fire all over the place, it burnt up the whole joint. The military eventually put the fire out. Now they had a whole area of all burnt up bushes, it was horrible. There was a huge patch, maybe 150 feet on the side. The whole thing had been scorched. But people don't stop to think, the eco-Nazis never think, nobody stops to think anymore. Analytical thinking is important if you want to save an endangered species. Rocket fuels, this is why we are having a fertilizer shortage right now — a lot of the fertilizer is being diverted into making rocket fuel for the Middle East. Rocket fuels are nitrogenous compounds. Nitrogen is in four-fifths of what we are breathing in the atmosphere — elemental nitrogen — it's an inert gas. It doesn't like to be put into compounds by man. When it gets into those compounds, it very often disassociates back into gases very violently, very suddenly and violently. It's not only good for plants to eat as a fertilizer but it's good rocket fuel, good gun powder, good dynamite, it's an essential ingredient in something called, nitroglycerin. Anyhow, this rocket split wide open and spewed its flaming fuel everywhere, the stuff soaked down into the ground, and it burned all the bushes and everything else. But the fuel soaked into the ground, nitrogenous compounds. The military called in a bulldozer; they wanted to conceal the evidence of the foul deed and put out the fire. They called in a bulldozer, and it went grubbing all around. This mixed the compound even further into the sand. Then the military, how do we, we better try to find out how much trouble we got ourselves into. "Oh, brilliant idea, let's call Keith Robinson, he doesn't talk too much. Let's call him out. Let's get him out here, let him look around, and give us a private assessment of the situation to see how much damage there is; and how much awful publicity we're going to get; and how horrible this whole thing is going to be." The XO (Executive Officer) at the base called me, and said, "Keith, will you come out and walk the area. We've had an accident here. Would you walk the area of the accident, inspect it, and give us your opinion?" And you know, everybody's worried about all the environmental — "They're going to sue us, we're going to —" [KPR making a sound] Oh worry, worry, wurra, wurra, wurra. "There is going to be bad publicity nationwide. Horrible. Maybe the officers will get caught in the hot seat and it will affect their careers, who knows? And it will affect the appropriations because the activists will all be screaming." They called me out. I went to the north edge with the XO of the base and walked around. And went, "Wow!" You heard of something called, *hunakai* (type of rare beach morning glory plant with white flowers [*Ipomea stolonifera*; synonym, *I. acetosaefolia*])?

HKA: Yes.

KPR: You know what *hunakai* is?

HKA: No, but I heard a song with *hunakai* inside. [HKA chuckles].

KPR: You heard a song, but you have not worked with the thing. You haven't even seen it?

HKA: No.

KPR: And you are into Hawaiian cultural stuff. Well, never mind, okay. *Hunakai* (type of beach morning glory plant with white flowers [*Ipomea stolonifera*; synonym, *I. acetosaefolia*]), *Ipomea stolonifera* is in the sweet potato family and morning glory family. It is a sand morning glory.

HKA: *Ipomea.*

KPR: *Ipomea*, yeah, whatever. The old Hawaiians called it *hunakai* — *huna* is to hide, and *kai* is saltwater, the ocean — the thing that hides by the saltwater. It is found on sand dunes. The species' name is *stolonifera* because it probably propagates by stolons — stems (vines) that grow underground — especially in loose sand. Pretty soon the leaf sprouts out. Along with the leaves a flower bud comes up, or if a flower bud sets seeds, you get a seedpod; and 90% of the plant is underground. You only see the flowers, the seed pods, and the leaves, that is all that you see — *hunakai*, the thing that hides by the ocean. There had been some of this right there by the Terrier site. And it got massively fertilized by the rocket fuel. It was the finest stand of *hunakai* I've ever seen in my entire life — the place was wall-to-wall *hunakai.* It's a little morning glory, it's white with a yellow center. I looked around and wow, I've never seen something like this. And it was just wall to wall *hunakai* everywhere that had come out of the sand dunes. And there were another couple of species of native plants too. But anyway, we walked over by where the Terrier had taken off, and two feet away from the rocket blast site, where the Terrier had been, there was healthy *'akoko* (an endemic tree shrub [*Euphorbia* spp.]), *Euphorbia celastroides*, nice big bushes. The stuff that hadn't been actually trimmed, physically trimmed, or scorched off by the rocket blast, two feet away was all perfectly healthy. There was a lot of native stuff in that place, a lot of native stuff.

The XO was following me around — what's going on now. He asked, "Keith what do you recommend that we do?" My mommy always used to say that I had a very unhelpful sense of humor. She said it was warped, twisted, morbid, perverted, and misplaced. I think she once predicted that it might one day get me thrown in jail. Up until now that hasn't happened. Still working on it. The XO, "Whoa what do we do now, whoa? Will this become a nationwide thing? Will our careers be affected? Whoa. Will we lose our defense appropriations?" He said, "What is your recommendation?" I said, "I recommend that you crash a rocket on this place once every two years." [KPR laughing]. The horrified look on that man's face was something to see. Oh, gee, it was comical. He said, "You mean it's not that bad?" I said, "No, this is great — it's all coming up native stuff. The rocket blast burned up all the non-native stuff, and the native stuff is all coming up." He said, "Oh really, yeah." I said, "Yeah, really." So, I went my way, and he went his way. Nothing was said or done or anything after that. I have been back there once or twice, and the story doesn't have a very happy ending. Nobody ever took care of the place, nobody ever crashed a rocket or anything, and the last time I went back there, the *hunakai* was almost extinct there. The non-native stuff had again taken over — wiped out, and it over shadowed … it was almost gone. I looked real hard, and I could find a couple of *hunakai* plants but … other than that, it was all now non-native plants.

Okay, my point remains, if you want to find good, native stuff, go looking inside places like military ranges where the public is not allowed to go, in places like that. On top of that, I learned when I was in the military, you have company areas, which are usually presided over by the head sergeant of the whole company; and if Sgt. Jones has a little planting, maybe right outside of his headquarter office or whatever, there would be a little patch about the size of this room; Sgt. Jones had gone and planted it up with various kinds — some will be ornamental plants, some will be plants native to the areas, and anybody who messes with anything inside of that place is going to face the wrath of Sgt. Jones. If you are a PFC (Private First-Class) or an E-4 or something, you don't want to get in trouble with Sgt. Jones, you'll wind up on KP (kitchen police) for a month. So, if he says, "No messing around with the plants." There will be no messing around with the plants. This is how it is in the military. The civilians never stop to think. They say, "Oh how terrible, everything is going to be blown up and burnt." Bullshit. So as far as I'm concerned, PMRF can continue forever.

I like to pick up seeds whenever I can, endangered species seeds. If I can, I try to sneak into the

sand dunes at PMRF, without PMRF knowing about it, and I poke it into the sand dunes. And the stuff is slowly spreading. I have been back a couple of times over the years, and *sesbania* is slowly spreading. So, I guess, that pretty well finishes it for you?

HKA: Do you have any more information you can share?

KPR: Well, I've been working with Hawaiian endangered species for 40 or 50 years now, but I'm not about to blabber it out where the environmentalists can get a hold of it. I keep that very, very secret. It's just in my endangered species reserve. [KPR referring to his nephews two children in the room]. Someday, one or all of these kids may know about it, but they'll be instructed to keep it quiet too, because anytime the environmentalist find … most people know just enough information to be dangerous.

HKA: I'll end our interview right here. Thank you so much for your time. *Mahalo nui.*

KPR: Sure. No problem.

For Signature:

Keith P. Robinson Date: May 7, 2016
Keith P. Robinson

***** Please see the following pages, which were authored by KPR. *****

Kauai Wildlife Reserve
P.O. Box 117
Makaweli, Kauai, HI 96769

March 31, 2026

Ms. Hannah K. Anae, M.A.
C/O International Archaeology, LLC
2081 Young Street
Honolulu, Hawaii 96826

Dear Kaumaka,

Your March 24, 2026 interview with me seemed to be a good one, as far as it went.

But (in my opinion) it got bogged down in discussions about Hawaiian cultural matters, and Hawaiian endangered species problems.

Thus it never went near a subject that I believe is far more important: i.e., the military threat to Hawaii (and thus, to Australia and New Zealand also) that is now presented by the China-Russia-North Korea alliance of communist naval powers.

So – here is a partial discussion of some of those facts.

To begin....

There was a time when the Korean Peninsula was heavily populated by Christians – so much so, in fact, that the City of Pyongyang (now the capital of North Korea) was once known as "the Jerusalem of the Far East".

In Korea, the family name "Kim" is about as common as "Smith" or "Jones" in the U.S.A.

Around 1913, a boy named "Peter" was born into one of those Korean "Kim" families.

Korea had already been conquered by the Japanese in the 1894-1895 Sino-Japanese war: and it remained under Japanese occupation until the end of World War II in 1945.

To escape the Japanese occupation, the Kim family fled to the city of Shanghai in China.

But that was no solution to the problem – the Japanese eventually attacked and conquered China's eastern seaboard (including the famous port city of Shanghai) and kept that also, until the end of World War II.

During World War II, young Peter may have been briefly jailed by the Japanese, for pro-American activities. If that story is true, he was extremely lucky to have escaped torture and execution – Japan's notorious Kempeitai secret police force, had an even worse reputation than Adolf Hitler's Gestapo.

Peter apparently also served the American-South Korean side in the 1948-1953 Korean War: and he evidently performed so extraordinarily well, that at some point the American government took the highly unusual step of making him an American citizen, by a Special Act of Congress.

Thereafter he served in the intelligence service of the U.S. Army, eventually rising to the rank of Major, before he retired and died.

The man was a brilliant and far-seeing military affairs analyst: but, like most other such men, he spent most of his life working in the background shadows, unseen and unnoticed by the general public.

The one momentary exception to that anonymity, occurred on or around May 13 of 1958, when he rescued then-vice-president Richard Nixon from a hostile mob in Caracas, Venezuela.

This event apparently brought him to the attention of the Eisenhower administration: within two years he got his promotion from "captain" to "major".

But throughout that entire period, both before and after, he remained stationed at the famous military Post-Graduate schools in Monterey California, one of America's earliest and most famous "think tanks".

And he lived in a house in nearby Carmel, in California.

His particular military intelligence specialty was focused on Latin America and the Far East, especially China and the two Koreas (Well, naturally! He had spent years in both places.)

But meanwhile, back at the ranch ....

Niihau Island and Niihau Ranch were both owned by two brilliant, quiet, close-mouthed, and intensely private brothers, Aylmer and Lester Robinson.

Aylmer, the older brother, had been the secret POC (Point of Contact) in 1933, when the "Billy Mitchell" faction of the U.S. Army secretly warned the Robinson family about Japan's plan, to start a future war against the U.S., with a surprise attack on Pearl Harbor, at 7:30 AM on a Sunday morning. (The Japanese got the idea for that attack, from certain Anglo-American military activities in the 1920-1940 period.)

(Aylmer and Lester heeded that secret U.S. Army warning, and prepared accordingly: but the Roosevelt administration ignored it, and was caught flat-footed, with its pants down, on December 7, 1941.)

And thousands of people died.

During World War II, and the "Cold War" that followed, Aylmer and Lester and Niihau Ranch continued their private cooperation with the U.S. military.

By then Bruce and I were teenagers. We knew that the U.S. government had ignored a secret advance warning from the U.S. Army Air Force, that Japan would attack Pearl Harbor.

But we only knew the broad outline of the affair; the U.S. government had done a thorough job of hiding the Roosevelt administration's mistakes; and some 30-40 years would pass, before I finally unraveled the details of that cover-up.

Nevertheless, what Bruce and I did know about the matter, was enough to keep us alert and worried about possible Soviet nuclear surprise attacks, throughout the years of the Cold War.

In 1957 Dad (my father, Lester Robinson) sent Bruce and myself off to a private high school in the Monterey area, near where Peter Kim was stationed.

And just to make sure that we behaved ourselves (some of the other young Robinson kids had gotten into heavy drinking and partying) he sent our mother along also, to ensure that we "stayed in line".

Mother had the most wonderful personality of any woman I have ever seen – she made friends wherever she went.

Two of the friends she made, were Peter Kim and his wife.

To the end of my life, I will always believe, that that meeting was purely accidental and social.

But it may possibly have been otherwise. At that time Peter Kim was deeply involved in American military intelligence: and Niihau Ranch was secretly helping the U.S. military to prepare for some hydrogen bomb tests at Johnston Atoll.

But, however the meeting happened, or why, the ultimate result was the same.

One night, shortly after his rescue of Vice President Nixon in Caracas, the Kims invited Mother and Bruce and myself to dinner at their home.

Now, Bruce and I had spent most of our quiet young lives around adults; so, we were both "old" for our years. At a time when most American teenagers were getting drunk, and chasing girls, and drag-racing their hot-rods, we were quietly helping out with U.S. military preparations for hydrogen bomb tests.

These kinds of things can give you a more serious and worried outlook on life.

So – while the women that night were chatting elsewhere in the house, Captain Kim sat down in the living room to discuss international affairs with Bruce and myself.

And the warning he gave us was so specific and insistent, that both Bruce and I clearly remember it today, almost seventy years later.

Now here is a highly condensed summary of the briefing that Captain (he had not yet been promoted to "Major") Kim gave to Bruce and myself, back in 1958-1959.

He said that the communists had so severely disrupted China's society and economy, that China would be too weak and disorganized, to be a serious military threat to anybody – at least, not for several years (or maybe even a few decades) to come.

But he insisted, that eventually China would get organized again: and then it would eventually become one of the world's greatest powers.

He also stated, that as China's economic and military power increased, China's communist leaders would begin to build a great national empire. First, they would dominate and absorb the countries closest to them: but as their power and influence increased, they would gradually take over countries, and places that were more and more distant.

And finally, he very clearly and bluntly stated, that at some point in its relentless expansion, communist China would want to take over the Hawaiian Islands and incorporate them into a Pacific Ocean empire.

Basically, he told us that communist China would follow in Japan's footsteps; and do what Japan had tried and failed to do, in the 1930s and 1940s.

But he said that China would not try to conquer Hawaii until its military forces were far stronger (IN COMPARISON with America's forces) than Japan's army and navy had ever been.

(When Japan attacked the United States in December of 1941, Japan's national economy, and its population, and its military forces, were only about two-thirds of the size of America's strength.)

Captain Kim assured Bruce and myself, that China's communist leaders absolutely would not repeat Japan's mistakes.

Instead, they would carefully and patiently wait, biding their time, until they were absolutely certain that they finally had a clear national superiority over America.

If any confirmation of Captain Kim's prediction was needed, it came from Reverend Carter Morgan, a few years later.

When I was a youngster, Carter Morgan served for years as the minister of the Baptist Church in Waimea on Kauai.

His religious views were closely similar to those of Aylmer and Lester Robinson; so he and his wife Agnes became good friends with Uncle Aylmer, and Dad, and Mother, and Bruce and myself.

Eventually America's Baptist Church sent him off to serve as a Baptist church missionary, in Hong Kong, about two blocks away from Hong Kong's border with communist China.

He served there for years, and became thoroughly familiar with the Chinese people, and Chinese history and customs.

But during his occasional vacations, he and his wife Agnes would sometimes return to Kauai to visit old friends.

So – I sometimes had chances to talk with him, about China and its communists.

Dr. Morgan was extremely clear in his description of the Chinese and their customs: his exact words were, that the Chinese are "an imperial people", with a natural instinct to build great empires.

So – here we have two highly intelligent people, from totally different professions and backgrounds (a Baptist church pastor and a U.S. Army intelligence major), who never met or knew each other, both saying the same things about the Chinese.

I believe that it would be insanely stupid for America to ignore the statements of these two highly experienced professionals. The Roosevelt administration ignored its own intelligence sources in the 1930s: and look at the resulting disaster at Pearl Harbor…

The next time, the U.S. may lose dozens of cities, and two hundred million people, instead of only eight battleships.

Almost seventy years have now passed, since Captain Kim warned Bruce and myself, about communist China's intentions and ambitions.

Today communist China is one of the world's greatest powers.

It has conquered Tibet; it has brutally suppressed the Uyghurs: North Korea, Mongolia, and Vietnam are its satellite nations; it is taking over the Solomon Islands without firing a shot (Japan's military forces fought for five months before conquering the Solomons); Hong Kong is gone; Taiwan could fall at any moment; and the Philippines, Singapore, Borneo (lots of oil), Indonesia (even more oil), and Thailand, Cambodia, Burma (more oil, again), and Micronesia all lie within easy range of Chinese conquest.

Moreover, America's manufacturing capacity is now in serious decline; so, more and more American tools, clothing, and medicines now carry the "Made in China" label. The Chinese now have our technology….

Also, the Red Chinese navy has more ships than the American Navy; China has the world's largest active-duty army; and China is armed with nuclear weapons, and long-range missiles.

In short, Major Peter Kim's predictions, made more than sixty years ago, have thus far proved to be amazingly accurate. (Well, the man did spend most of his life working for the U .S. Army's intelligence service.)

And if his past predictions have been so consistently accurate, maybe the rest will be, also.

It's something to think about.

But other, then-unknown factors, are now also involved.

The U.S. government's ballooning debt, and America's disgusting drug culture, are deadly threats to the United States. Our national enemies (Russia, China, North Korea, etc.) are watching us closely: and they all know that America is decaying internally, like ancient Rome.

At some point our national enemies will make their move, when they finally think they are certain to defeat us.

That time may not come for another twenty years.

But the Chinese have always been a nation of patient, long-term planners – if they have to wait for another twenty years in order to defeat America, they'll wait for twenty more years.

And, besides – by then their national population (and their economy, and their military forces) will be even bigger and stronger.

However, the whole world is now such a crazy place, that some other loon may set off a war, before the Chinese think they are finally ready.

Some Islamic fanatic, or a North Korean nutjob, or even a drug cartel kingpin, or an arrogant American President, could start an international chain reaction of falling dominoes, that could explode into World War III, before China's leaders are ready for it.

And (as usual) the Middle East is a box full of dynamite sticks, with a smoldering, slow-burning fuse stuck into it ....

OK – that finishes any relevant comments I have for your present ethnographic survey.

To sum up, Hawaii needs the United States, far more than the United States needs radical-left Hawaii.

Up to now, Bruce and I have never spoken to anyone else, about Major Peter Kim's private discussion with us, on that long-ago-night in 1958-1959.

Major Kim is now long dead; Bruce and I (then just teenagers) are now in our eighties; sometime both of us will join him; and his warning may be lost.

So – since his predictions about China may now be more relevant than ever, you may possibly want to quote from this letter, in your ethnographic survey: and you have my permission to do that.

In closing, may I repeat that we live in increasingly dangerous times.

The United States has lost its original morality and is decaying like ancient Rome; America's government, at all levels, is increasingly dominated by radical-left morons; and at some point their corrupt incompetence will result in a huge national collapse.

Furthermore, our national enemies are far more aware of world history, than most of America's politicians, and drug addicts, and fat, complacent, overweight citizens.

So – America's enemies are waiting patiently, knowing that they will eventually have an excellent opportunity to make their move.

Signed,

Keith Robinson

Keith Robinson, Manager
Kauai Wildlife Reserve

P.S. The radical-left, anti-military morons now running the state of Hawaii, have absolutely no idea of the frightful terror and oppression that will follow, if the Chinese communists ever take over the Hawaiian Islands.

China's communists have absolutely no regard for human life. People are all totally expendable, in their social engineering schemes. With China's vast population, its rulers have always been able to get plenty of human guinea pigs for their governmental experiments.

The Chinese also have no love for the Japanese – China has fought and lost two wars with Japan.

They still remember that…

And they don't like the Americans and South Koreans, either – not after the Korean War, and the Cold War, and China's constant anti-American propaganda.

So – if China ever takes over the Hawaiian Islands, the Chinese will quickly notice, that Hawaii is extensively populated by ethnic Japanese, and also Caucasian Americans (blue-eyed foreign devils).

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The commies butchered thirty-four million of their own people, in China's Communist Revolution. And they are xenophobic; they won't go any easier on conquered foreigners (ask the Tibetans and the Uyghurs).

So – history could easily repeat itself: I have long believed, that people who arrogantly ignore history, are often doomed to repeat its worst mistakes.

The U.S. military was driven out of the Southwest Pacific, and the Philippines, with massive casualties, at the start of World War II.

And many thousands of innocent people died, during the Japanese Occupation that followed.

If the U.S. military is likewise forced to abandon Hawaii at some point in World War III, the resulting Chinese police state terror and mass murder will be horrendous.

Maybe – just possibly – Hawaii's people have a right to know and consider these possibilities, before anything happens.

So – I hereby give you the right to quote verbatim from this letter, in an Appendix to your report.

But – PLEASE – be VERY careful not to twist my statements around, or take them out of context.

K.R.

ORAL HISTORY INTERVIEW

With

Elaine Kuʻulei Momi O Kai Kawaiola Gampong Keamoai [EKK]

March 23, 2026

Waimea Tech Center, Waimea, Kauaʻi

By

Hannah Kaumakamanōkalanipō Anae [HKA]

Recording file name: IA2026025_Interview_Kuulei Keamoai.mp3

HKA: *Welina mai kākou* (Greetings everyone).[1] Today is Monday, March 23rd, 2026. I am Kaumaka Anae, representing International Archaeology, LLC, and I am conducting interviews in support of two cultural impact assessments, one for the PMRF (Pacific Missile Range Facility) and KPGO (Kauaʻi Pacific Geophysical Observatory) succeeding lease and easement area; and the other for the Department of Airforce lease renewals at the Kōkeʻe Air Force Station. We are at the Waimea Tech Center in the *ahupuaʻa* (land division) of Waimea, Kona *moku* (district), on the *mokupuni* (island) of Kauaʻi. I am here with Kuʻulei. Kuʻulei, can you please state your full name?

EKK: My full name is Elaine Kuʻulei Momi O Kai Kawaiola Gampong Keamoai.

HKA: *Mahalo* (thanks). And do I have your permission to record this interview?

EKK: Yes, you do.

HKA: *Mahalo.* The interview encompasses a series of questions, and I'd just like to say, *e kala mai* (excuse me) in advance if I seem *mahaʻoi* (brazen) — it's not my intention, this is for the purpose of the interview. *Mahalo.* So, the first thing I'd like to start off with is your *pilina* (connection) and

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

your connection to, not just to PMRF, but to the broader Kauaʻi, Waimea area, whether it be work, whether it be *moʻokūʻauhau* (genealogy), or whether it be just your lifeways.

EKK: Okay. My *pilina* specifically to the western part of Kauaʻi — I currently live in Kekaha. I reside in Kekaha and raise my children on *ʻāina hoʻopulopula* (Hawaiian Homestead land). So that in and of itself has so many layers and depth. To be on what is considered Hawaiian homelands, and all of the things that you need to go through in order to qualify for said Hawaiian homelands.

I'm currently raising my children there, but my *ʻohana* (family) is from the island of Niʻihau. My parents, after we were born, moved to Kauaʻi when I was probably about the age of three, and I was raised in Kaumakani, not in Kekaha. I was raised in Kaumakani, and then my parents had qualified for Hawaiian homelands, so we relocated from Kaumakani to Kekaha when I was about 12 years old, and have resided in Kekaha since then, except for when I went to high school and was married and did all of that — but I've since returned. I've lived in Kekaha for now going on almost 20 years.

Our *pilina* to Kekaha is deep. Kekaha is considered to be a Hawaiian community. If you could really call any community a Hawaiian community, right? Because we live in Hawaiʻi, so really all communities should be Hawaiian. But primarily there's a lot of Hawaiian presence in Kekaha, and specifically a Niʻihau presence and a Niʻihau representation, especially in the subdivision that I live in. A lot of my *ʻohana* are my neighbors, and so just raising my children in that environment is special.

When I was younger, truthfully, I didn't quite understand my identity. Growing up in the '90s, having mixed messages — and going away to Kamehameha really opened my eyes. Because up until then, it wasn't cool to be Hawaiian. And not only to be Hawaiian, but to also be considered full Hawaiian, to come from a family that speaks Hawaiian on a daily basis, and then go to public school where they don't speak Hawaiian and they speak English, and then to be relegated to classes where you need a separate teacher because you don't speak the language of the place — and Hawaiian not being recognized. I mean, it was recognized by the time I was growing up, but there were a lot of layers to that, a lot of traumatic experiences. And all of this matters because it shifted my thinking when I went away to Kamehameha and realized, wow, this is kind of a big deal, what I've accepted as normalcy in my home is not so normal across Hawaiʻi.

Then I started the journey, but I was a really angry teenager, so I had to work my way through that. Having my children, they had a totally different experience because the ’90s is not what the 2000s was, right? So, by the time we roll into the 2000s, Hawaiian immersion schools had already been created. They were created in the ’80s, and I’m very proud to say that the very first Hawaiian immersion preschool ever created was created in Kekaha, Kauaʻi, where we live. It was established by the Pūnana Leo board — Larry Kimura and all of them — my auntie being one of them. And one of the first teachers at Pūnana Leo was my mother. What they did was they took a bunch of native speakers — my mother being one of them, Auntie Lolena being one of them, and just a lot of my aunties — and created a school. And during that time, I can imagine how much backlash they got. I can imagine, “Why are you going to teach Hawaiian language? You’re not gonna be successful if you speak Hawaiian. There is no success.” And this all ties into the military presence — you’re not going to be successful if you’re going to live and breathe as a *kanaka* (Hawaiian person, native person). And that was rammed down our throats for a lot of years.

The people that started Pūnana Leo said, “No, we’re gonna try a different route.” And I’m very, very proud to say that my mom was one of those people. It’s just to have that legacy — and it’s also, I don’t want to say traumatizing, but it’s also very deep for her, because I don’t even have conversations with her about that time. I’ve tried to, and there’s a lot of, “I don’t want to talk about it,” so I give her that space, because I can imagine if that was the message I got as a child, I can imagine the messages our adults were getting.

My mother and my dad, they knew nothing else but being Hawaiian. That’s it. My dad was a *paniolo* (cowboy, ranch hand) on Niʻihau, came to Kauaʻi, worked in the plantation, but he also was a *paniolo* until he passed away when I was young. And so that whole lifestyle of being, just went away. Our years of spending Christmases and summers on Niʻihau went away when my dad passed away, so that is always one part that I’m sad I wasn’t able to share with my children. I have never taken them to Niʻihau. I would like to one day, but I don’t know if that’s ever going to happen in my lifetime. I’m hoping in my children’s lifetime the requirements are going to change.

But to have seen all of that, and then to raise my children in Hawaiian homes, right, on *ʻāina hoʻopulopula* and to explain to them, this is where your *pilina* is to this place. Mine is different, but this is yours, and this is going to be yours in perpetuity. I cannot even begin to explain what that is

like. And then raising them to learn protocols, to know what chants to do, what dances we should do when we go into certain spaces.

We've been invited — our *hālau* (hula school/group) is small, and I kept it that way because I was busy raising kids — but we've been invited to spaces where friends of mine that delve into the more spiritual realm have asked, can you please come and do protocol in this space? We need to balance the energy because certain construction is happening, that is stirring up this, that, and the other — and if you know, you know, right? And we've done so.

And so, for me to tell my children, okay, at 11 o'clock I need you guys to get your *lole* (clothes, garments), start getting dressed at 11, we're gonna go dance *hula* at this certain place at midnight, these are the things we are going to do. And to have them not even flinch and just say, "Okay." Nobody seen us, we're not doing it for an audience, we're doing it because that's our *kuleana* (right, responsibility, privilege). And as crazy as it may sound for people outside of our *ʻohana*, our *hula ʻohana*, or people that practice as we do, who cares? Who cares if they don't understand. My job is not to educate you; my job is to educate them. And then for them to know that if any of their *kūpuna* (ancestors, elders) calls them up and says, I need you to come, this is what I need to happen — and they know what *oli* (chant) to do, they know what *hula* to do, they know what is appropriate for that area and what the stories of that *wahi* (place) are — that's really all that matters to me. And so, to raise them in this way is dramatically different than how I was raised. The reality is my children have such a deep *pili* (close relationship) — I guess I've done my job so well that they don't ever want to leave, specifically Kekaha, they don't want to leave Kauaʻi, but they absolutely don't want to leave West Kauaʻi and Kekaha specifically.

HKA: How many children do you have?

CSM: I have four children. I have a daughter that's going to be 23. She is a Kamehameha Schools graduate, class of 2021. She graduated during COVID. She came home and went back, half of her senior year because remember the campus was shut down, just the senior class living there, and then graduated. She came home, went to KCC (Kauaʻi Community College), started her Hawaiian Studies degree and Hawaiian Botany, and now she's wrapping up her Hawaiian Studies degree through UH (University of Hawaiʻi) West Oʻahu. But she never left Kauaʻi. She was working part-

time as a substitute at Kē Kula O Niʻihau, which is right down the road from our house — the principal is my cousin — and was asked if she wanted to work there full-time.

So, she's currently working there, teaching middle school, teaching English and Science, working on her bachelor's degree in Hawaiian Studies, and then is going to roll into her teaching certification, and then her master's program after that.

I have a son that's a senior at Waimea High School. He was at Kamehameha, but when my mom got ill, he opted to move back to Kauaʻi. He's here as well, graduating this year, class of 2026. His plan is to go to KCC for the associates in civil engineering program and then go to UH Mānoa and get his bachelor's in civil engineering. But his plan is not to leave Kauaʻi either. As soon as he graduates — I was like, are you going to travel the continent? Like there is all these opportunities, he was like, "No, I am coming right back at home."

I have a daughter that's a sophomore at Kamehameha, going to be class of '28, and she plans to be a medical doctor, which is exciting for me, because she's going to be our first doctor in our family. She should also be speaking fluent Hawaiian by then, so she'll have her medical degree and be able to speak fluent Hawaiian, which is going to benefit our Hawaiian community immensely, but specifically our Niʻihau community immensely. That's her plan. I keep asking her, are you sure you are still on that plan? And she keeps saying, yes. So, she is in her honors program at Kamehameha. She will graduate with her associate's degree upon graduation.

And then I have a little one, she's eight. I adopted her — I raised her from when she was five months. She's technically my older brother's granddaughter, so of course she has *pilina* to me and to our *ʻohana.* She is the only one of my children raised in Hawaiian immersion school — she's a student at Kē Kula O Niʻihau. My three older children went to English-speaking school, so they didn't get the Hawaiian Immersion experience. I had to supplement with *hula* and other things, but my youngest daughter is at Kē Kula O Niʻihau.

As I became a single mom about 13 years ago and raised them independently. I'm kind of hoping that as they saw me work really hard to try and raise them, that instilled in them: here's what you've got to do, you've got to work hard, it's Hawaiʻi. We see value in being a *kanaka* in Hawaiʻi, but you also have to make certain life choices to be able to sustain a life here.

We are, as a *ʻohana,* very pro-Hawaiʻi versus pro-America. I'm not saying that they can't be pro-America if they don't want to — I'm just saying that's the environment they've grown up in. And my biggest thing to them — because I'm also a *kumu* (teacher) of Hawaiian studies at Kekaha Elementary School — one of the things they asked me, as a *kumu hula* (hula teacher) to teach their program — I said, first of all, May Day is not Hawaiian, I'm going to tell you guys that right off the bat. But as a *kumu* I have a responsibility to make it as Hawaiian as possible. So that means, there might be things you find questionable, but it's either I have free reign or I'm not taking this job. There are no ifs, ands, or buts, I do not compromise when it comes to Hawaiian knowledge and Hawaiian practices, I don't compromise. You cannot tell me we cannot do this because the school — then I'm not the *kumu* for you. Go find somebody else who's okay with downgrading their *ʻike* (knowledge, wisdom) to fit in the box of the education system requires this of us. I'm not that person.

We've covered everything from the Overthrow; I taught the students things you will not learn in a DOE (Department of Education) school normally. We covered the Overthrow, we covered the *aliʻi* (chiefs), hard topics, we covered military presence — we covered all of these things — but it's always done in a very talk story kind of way. We talk about stories, we explain, I explain the history, but in a very not watered down version, because I donʻt water it down, in a way that children can digest. I'm not going to lie though; I've had some third graders whose parents work at PMRF who have literally sat after my class, and they are just stunned. And I'm like, "What's the matter?" "Oh — my dad is in the military." And I'm like, "I get it. I'm not saying that you should be sad for your dad. I'm not saying any of that, I'm just saying this is what happened in 1893, this is history, this is real. Your dad wasn't there in 1893, chances are his *kūpuna* was not there either. But I cannot, not teach you history. The reality is, is you live here. This is a part of your history. The time that your dad is here in Hawaiʻi, you have a *kuleana* as being here on our *ʻāina* (land). I cannot water that down for you. I'm sorry, I won't. But you can say, we didn't like this part of history, we want to be different, and we want to make it better. That's all I'm saying. If it hurts your heart babe, I'm sorry, *kumu* did not mean to make you feel that way. But the reality is, this is real. If you want to go home and talk to your parents, and your parents have questions; if they want to talk to me, and if they have concerns, you can tell them to come to the school, and you can tell them to call the school, because I will have those hard conversations. But I just need to teach you this, so when you get older, you're going to be more aware. And then when somebody says, whatever about Hawaiʻi, you can say, my *kumu* taught me this, my *kumu* said this. The reality is, it's true. I'm not even telling you, my opinion. I'm telling you what is in the history books."

Going back to the original question — what is my *pilina* to this place? It's not just to *ʻāina,* my *pilina* is to build the future. The future of Hawaiʻi always is the people. We must equip them to make good decisions. I've brought my older children to help every year in the May Day programs I create. They dislike it, I'm not going to lie. At Kekaha School and we have done last year's May Day. We honor *wai* (water). I'm not the one that picked. I was not in the classroom last year, it was another *kumu*. I just took care of May Day, so they gave me the topic. We had a *wai* ceremony. We gathered all the *wai* from the different *ahupuaʻa* of Kauaʻi, even all the way down to Kalalau. I had a friend of ours that lives in Hanalei, and he went on his boat to gather freshwater. We had given all the *wai* out to the different grades. Every class offered *lei,* and every class had offered *wai* in bamboo. I had my children there receiving. My oldest daughter had done an *oli*, *Aia I Hea Ka Wai A Kane*. She had gone through that entire thing.

HKA: That chant has like seven *paukū* (stanza, verse, paragraph).

EKK: She had learned it at Kamehameha Schools, and I was in the process of teaching it. She said, "That's okay mom, I can do it." My son in high school, was like, "Whoa, I gotta go." And I say this to them repeatedly, "We must normalize what being a *kanaka* in Hawaiʻi looks like. You got to understand your upbringing is not the same as other people's upbringing. What is normal for us, doing ceremonies, gathering *wai*, making *lei*, doing all those things, is not normal for majority of Hawaiian families. So how are we going to help *mālama* our *kaiāulu* (community), if we don't set the example." I don't mean set the example like, "Look at us, oh by the way look at what I'm doing." That's not what I'm saying. What I'm saying is, we show up, we do the things, and then other people going say, "Oh, I can do that. I can go play football and still dance hula. I can do this and still go paddle canoe. I can go college, and very much come home and work in the *loʻi* (taro pondfield)." Like you can do these things. It's not like one family is better than another family, because this family has knowledge and this family doesn't. Your *kuleana*, if you are the keeper of knowledge, you better be sharing that stuff, you better, or else what, what you going do with all of that? Have knowledge for what? Keep it to yourself? If not to instill? If not to create a sense of strength building? Because we have to do foundational building.

Our identity has literally been stolen from under our feet. We been beat down way too long. We've been told bad things about ourselves, our people. And I am really tired of it. I grew up and I got really angry when I was at Kamehameha. I was angry for a long time — didn't want to touch

history, didn't want to learn about it, didn't want to talk about it because I was mad. And then, I softened when I became a parent. I realized then because the same year I became a mom, is the same year that my sister died. I never like do nothing about *hula*. I never cared and just wanted to dance *hula* because I looked pretty. I didn't want to stand in the front; I was all about the back row because I was kind of tall. My sister was like, "You gotta come *luhi* (tend to with care) *wai*, you got come gather, you got to *oli*." I was like, "I no like do that. You the *kumu*, and I'll be the dancer. You be the *kumu*." "Who's going to teach your kids." "You going. I'm going to give birth to them, and I'm going to bring them to you." And a month before I had my first daughter, she died, she had passed away. My whole world had flipped. Everything I had thought — ah, I don't have *kuleana*, I'm the baby of the family; the baby just gets to play around; no need to do anything serious. My whole world turned upside down. Who's going to teach me kids, right? Not me, then who? So, that started my journey of like, what are the things I want my children to learn? How am I to conduct myself in a way that my children will respect me, will love me, and see the sacrifices I am willing to make? I stay very much in my lane. I try to support as much people as I possibly can. I don't say anything negative in public. If I don't support you, because I don't like the way you do things, I just don't go. My presence or lack of presence is a message. Other than that, I don't bother anybody for the most part; far as within our cultural *kuleana*. There are some people, mmm, the vibes are off; I'm not really cool with that, so I don't — it's not that I don't support, I just don't bring myself there. Your presence will show, more than your words, who you support and why. There is that *kuleana* that we also have to carry as *kanaka*. Not all the things that are put out there need to be amplified by us. If you are going to amplify something, you must take ownership of that. So, one of the things I definitely live, eat, sleep, and breathe — what future am I going to live behind for my *keiki* (child); and not just my physical children, my personal children, I mean the children that I teach, and the children that live in my community. How am I or what am I going to make better for them?

HKA: What is the name of your *hālau*?

EKK: Our *hālau* is Hālau Hula O Hāliʻi Leo.

HKA: Hālau Hula O Hāliʻi Leo. Leo like the voice?

EKK: Yeah, is like the foundation. The word *hāliʻi,* not in slang but in like, for us, Niʻihau — the *hāliʻi* is like the mat you put on the ground, but in other translation it's like a foundation, or a covering. So, my brother-in-law always had this deep, boombastic type of *leo* (voice), and his voice has always been like his trademark. The foundation of our *hālau* has always been his voice, his calling. The interesting thing is, my brother-in-law was not Hawaiian, my sister was. Their *pilina*, their relationship with each other, is kind of what created — like I said, we started out as an entertainment company that became a *hālau,* and they started that journey together until my sister passed away.

HKA: And how many students do you have?

EKK: We don't have many — maybe like 25 students right now. Some of them are my kids. And we're going to have open registration soon. Right before COVID — because during COVID we were still operating, but operating out of my house. So, we would do practices at our house and whatever cultural things we were invited to participate in, whether it's a *ʻūniki* (graduation ceremony within Hawaiian arts) or whatever. Like I said, there's a lot of construction that happens, so sometimes we've been called to just go out and kind of balance the energy. Unless you're a cultural practitioner and you've seen this stuff happen with your own eyes, you'd never believe it, because the things that we've been to — nuts.

HKA: Is there anything you can share?

EKK: Yeah — so there is some construction that's happening in Poʻipū. They're building some condominiums, and it had gotten pretty narly a couple of years back, maybe 2022. There were some marches happening in Poʻipū, and one of my really good girlfriends was kind of involved — people having confrontations with real estate developers, and the police were there as well, acting as private security. And there was all this *hakakā* (conflict) happening. But what was important was that the energy of the *kūpuna* of that space was very heightened.

When my girlfriend asked me, can you bring the *hālau?* I said, yeah, I can. It was on a Saturday, nobody's there, like we never tell nobody — which is always the purpose. So, I had my children and some of my younger *hula* students — they're like college age. I explained to them: okay, this is what we're gonna do. We're gonna do trilogy (three specific *hula* dances). We're going to open with this *oli*, and we're gonna end with this *oli.*

We got there. Super simply, I'm not one of those *kumu* who like this fancy fluff kind, totally not. Super basic, we go out with our *pahu* (hula drum). And just so happened, where the construction was happening, it is a private road. There is a sidewalk, and public access is on this side. We drive up on the private road, pull over on the grass, which is still private. Right across the road where the actual construction was happening, they were clearing grass and stuff. Just so happened the gate was opened. I said, "Oh okay." Everyone was in the car, putting on their *lole*, putting on their *lei*. I said, "Oh, I'm going to check it out." I walked inside where the gate was open and there was maybe this size right here of buffalo grass, but was smashed down flat. just this section. I was like, "Oh, well, somebody came open the gate for us then. Perfect." So, we were gathering our things, right? As we're preparing, getting our *lole* on, putting on our *lei* — one of the residents stops. His daughter used to dance *hula* with our *hālau* before. He was like, "Hey, Kuʻulei, what you guys doing here?" I said, "Oh, we're just going to do some *hula* in there, do some protocol to balance the energy." He goes, "Okay, if anybody come and stop you, you give them my address" — and on a paper he wrote down his name, phone number, and address and said, "I'm a resident here and you're a guest of mine. If anybody tells you you're not supposed to be here, give them my name, my address, my phone number, and tell them call me, and I'll come."

I said, "Oh, hey, thanks." And I was like, one, I didn't even know he lived there. But also, when we are asked to do things, usually our *kūpuna* will make a way for certain things to happen. Sometimes they don't — sometimes you're meant to be confronted because you're meant to push through that thing, whatever it is. So, anyway, I said, "Thanks." Nobody came.

We grabbed all of our *pahu* and my girlfriend shows up. She's like, "Sis, you're not gonna go on that side, because that's public access over there, nobody can stop us." And I looked at her and I said, "Oh, the gate was open. We're only gonna be dancing *hula,* we're gonna be here maybe 15 minutes. Pretty sure we're gonna be okay. But even if not, a hula student dad of ours, he came by, he gave me his information, and if anybody gives us hard time, he told me to call him. We technically have permission, but 15 minutes in and out." She said, "Okay." I asked her, "You brought a lei, yeah." She said, "No." I said, "That's okay we made lei for you or for whoever is going to be there, we made extra." So, I explained this is what we are going to do.

We put all of the *pahu* down, put our mat down. When we started, it was overcast — super overcast day. And then they did their *oli* and came in. Once we had gotten to the first part — we basically

did trilogy [*hula* trilogy, three specific chants]; trilogy is very grounding. You probably know, yeah? So, we started out with that *hula*. When we started dancing, the wind started whipping. And when I literally mean whipping, I don't mean mild — I mean my hair was like in a tornado almost.

And the kids kind of paused, and I said, just keep going, don't stop. So, the way that we do the trilogy is that on the last part, we do *'Aua Ia* [*a hula chant*]. My children will kneel down and they become the *ho'opa'a/ho'opā* (one who steadies, one who keeps the rhythm) for me. So, I have to stand up and dance. The reason is because *'Aua Ia* is a prophetic chant — you're talking about the children — for our specific *hula* lineage, the adults and the *kumu* are the ones that dance. The *haumana* (student) sits down and *oli* for you. And the children do the *ho'opa'a/ho'opā.* So, my children have all learned it from when they were little. I'm standing up there by myself. You have to take your *kīhei* (shoulder wrap worn in ceremony) off, because as a *hula* dancer, if you are wearing a *kīhei* and then you have to dance, you are changing roles. So, I took my *kīhei* off and tied it around my waist, which made me a dancer. When that happened, it was like the clouds had opened and there was like a spotlight shining down on just that opening. It was hella bright. You could see through the opening to blue skies. During that time, the sun was shining, but then it also started to rain and the wind got really, really strong. And again, they got kind of stunned. So, I said, just keep going. They kept drumming and I kept dancing. And at the very end, once your knee touches the ground, you're done. And everything just got super still. Then we finished up, *pule* (prayed), did our last *oli,* and left.

But it was one of those things where, if you're not present and you don't realize that our *ho'ailona* (sign, omen, confirmation) is always going to present itself — whether in the wind, in the rain, the clouds, in the sun, the birds — it can get silent, completely silent. So, there's all these things that, unless you're in it, you're not going to know. And so, the kids are like, okay.

On our drive home, we start to debrief and we talk about that, and they tell me about different things that they saw, and we kind of share those things. But again, if they were not exposed to it, they would never know. We have that *kuleana* to expose our children, right? Bring them into those spaces. It doesn't have to be big, it doesn't have to be loud, it doesn't have to be crowded. It can just be you and your *'ohana.* But I know that once we start instilling those things in families and they do it independently — not just when they go paddle and not just when they dance *hula,* but what is specific to your *'ohana,* which is important to understand *pilina* to that place — so, what is

in that area, whether you honor the *wai* (water) or whatever you like to do, you don't gotta wait for the big *Makahiki* (annual festival season) to happen. You can just pick a day, when you think it is important to honor your *kūpuna.* Go outside and dance *hula*. *Oli* in the front of your property or wherever. You like go to the beach, *oli* to the ocean. Those things, you know, and we were made when we were younger, we were made to be like, "Oh shame, what if my friends see me?" I've taught all of my kids friends, because I taught at the elementary school. So, they know that this is not unusual. But if they never seen us doing it, they would think it was weird. And we cannot perpetuate that already. Going back, what does that have to do with military lease expansion? Call me crazy, but I am one of those *kanaka* that is not okay with any kind of military presence. I believe in us going back to sovereignty. What is that going to look like? I don't know. I had this question, and had this conversation with my mom one time; because she was just like, "Well you know, where is your father going to go because he is not from Hawai'i?" Because my *hānai* dad is from the Philippines. She also speaks Hawaiian and she was like tida 'eh (strong Hawaiian woman who speaks their mind). And I said, "What do you mean, mom?" "What do you think sovereignty is?" I go, "I'm gonna guess you're thinking sovereignty is only Hawaiians live in Hawai'i.But how are you gonna do that when the majority of Hawaiians are mixed?" What it is — and what I had to learn — it's the idea of saying, why are we relying on other ethnicities to tell us how to live and govern ourselves in Hawai'i when we are more than smart enough, we are more than capable, and we have enough intelligence to build our own? Why are we allowing other ethnicities? "Oh, I came from California and this is how we do it over there." "Oh, perfect for you, but by the way did you ask the native people of that place because you know all the fires that are happening it is because you probably shouldn't have built your homes where it is natural to have fires; but you wouldn't know that if you do not have indigenous wisdom. Love that for you, but don't come to Hawai'i and tell Hawaiians how to live; because our ancestral wisdom is already there." I said, "That's what I'm saying, mom. If you literally think we don't have someone that's a *kanaka* smart enough to govern ourselves — the whole *ahupua'a* system started here. Here. Not any other country. Who by the way other countries want to copy the way that we lived, that we've lived for generations." They like copy our knowledge.

So, when I take children out and I say, let's talk about Hawaiian engineering, let's talk about the *loko i'a* (fishponds) — I go, have you guys ever heard of fish farming? They tell me about fish farming that they say is relatively new. Guys, not new. Do you know where 'Alekoko is? Do you know where Kalapaki and Niumalu are? Keep driving. Go to the lookout. When you look down, you're going to see 'Alekoko. Guess what? This is how it works. We've been doing this for how

many years. It's not new. There's a lot of our engineering concepts that is not new, that we had for a long time, that other countries and other people, I don't want to say what color they are — but will say, "Oh, we have this new technology" — whitewash the hell out of it, and they'll say, this is something new. Own it peeps, it's not, actually. We've been doing that. But we've also been used to having our *ʻāina* taken, our *ʻike* stolen, our wisdom dismissed, being told we're not smart, that we're lazy, that the way we do things is *kāpulu* (unclean, sloppy). I don't believe that anymore. I refused; I hit my '20s and I said, "Hell no." And I've raised my children and anybody else's children that I've taught with the mindset of: I refuse to accept the lies that's been told to us. When people in our community, specifically people in our Kekaha community, like to talk about the wonderful history of Kekaha Plantation, I stop them right away because we were in existence before the plantation.

*****The interview was interrupted by a lost tourist. *****

And that's only one question. I'm sorry.

HKA: No, no — that's how the interview should be. It should be like *kūkākūkā* (talk story). That's good. That's how it should be.

EKK: Because I can literally talk about these kinds of topics forever.

HKA: This building right here is where you teach your *hula?*

EKK: Yeah.

HKA: Wow. No, no. That's good. That's how it should be. I want to ask you something. It doesn't even have to be from Aunty Mary Kawena Pukui, but what is your own *ʻōlelo noʻeau*?

EKK: I don't actually have an *ʻōlelo noʻeau*.

HKA: The things you live by you know. Like your practices and stuff.

EKK: Hmm. That's a good question. There's a lot to that.

HKA: I would imagine you do, because you have a lot of set values.

EKK: For sure. I mean, I guess probably one of the ones that I absolutely absorb is — like I said earlier — normalize what being a *kanaka* in Hawai'i looks like. Whatever that looks like for anybody. I'm not telling anybody what that looks like for anybody else. But I know what it looks like for us and for me and my *'ohana.*

HKA: Explain that.

EKK: Just being an example, right? So again, doing ceremony in public. There's certain ceremonies that can be done in public and there's certain ceremonies that shouldn't be done in public, that should be done under the veil of night for a very specific reason. But there's some ceremonies that need to be done under the light of day so that people can see.

A lot of what I encounter with *'ohana,* especially children's families that I meet at Kekaha School specifically, they don't know what that looks like. To them, living a local lifestyle — driving lifted trucks and getting all the things — that local type of lifestyle is what being Hawaiian means to them. And so, kind of nudging them in the direction of, actually we have cultural practices. And if opening your children's minds to that will be helpful, then great.

I also must understand that not all people think like me. I'm probably on the far end of the spectrum that is super pro-Hawai'i. And then I have people in my family that are leaning more towards America. They've gotten accustomed to living that way and they have no desire to change. I just like to live our lives in a way to say this is also an alternative, you know? And where you land in between is fine too. But just be open-minded enough to know that you can still live this way.

I mean, I still have a US passport, right? And you're gonna get the argument, well, if you like sovereignty, then why do you use the internet? Then why do you have a phone? Do you not understand what international commerce is? Are you that close-minded that you don't understand

that international commerce is a thing? Do you own a Samsung? Because if that's the case, don't use that because Samsung is from Korea. So, that is so 'the kind', I don't even waste my time.

But a lot of it is opening people's minds to say it's doable. You can be a 21st century *kanaka,* right? You can be super grounded and rooted in our history and our own wisdom, and yet still have a job, still be a doctor, still be whatever, and pay your bills on time. And like have good credit, take vacations to Disney or whatever. It's not one thing or the other.

And you know, there was a season in my daughter's life where I thought she was going to become an attorney. She was thinking about political science. I asked her, "You sure you want to study political science?" She said, "I think so, mom." I said okay, "Why? Like, how did we go from Hawaiian law to political science — do you want to become a politician?" And she told me, "Well, I was thinking about it. I could go to law school, but that just means I'm probably going to get involved after the law is broken." I said, "Yeah, okay, we need Hawaiians out there." She said, "But if I go political science and become a politician, it would be better for us if I was a part of making better laws for Hawaiians so that we don't have to be breaking laws." And I was like, "Hey, you on to something, eh you?" Well, she ended up becoming an educator and she's super passionate about it. So, I was very shocked, because for few years there, her sophomore, junior year, this is where she is going to decide what she's going to study — those years were filled with law school and poli-sci. That was kind of where she was leaning. She knew that she wanted Hawaiian to be her foundation. And then she said, "Nope, I decided I'm going to become a *kumu*." "Really sis, great choice for her." It's that, empowering of our younger generations to know that you can still be very rooted in *ʻāina,* you can very much be on *aloha ʻāina* (love of the land), you can go as deep as you want to be, and yet still graduate college, and very much pursue those things — as long as your knowledge and your actions are beneficial to our *kaiaulu* and eventually to our *lāhui* (nation, people). So, that is a very long-winded answer to your question.

HKA: That's awesome. So, do you practice any gathering? I know you guys probably gather for *lāʻau* and stuff like that. Have you guys gone to Kōkeʻe to gather?

EKK: We do. And actually, I was just in Kōkeʻe the other weekend — the weekend that never had the storm. We stopped at different places. I've had to tell my children — like, there's different *oli* that we do. I was taught by an aunty about this — if you're ever going to *oli,* either do it super quietly

or just do it internally. And they're like, huh? And I said, because our forest is filled with a lot of energy and a lot of *akua* (deities, divine forces) and a lot of things that you cannot see. As you're going to pay respect, not everything in culture has to be loud. It has to be a big show. Some things can just be quiet and still. Sometimes you don't even have to say a word. You can just go and hold space in silence for however long — five minutes, thirty seconds, twenty minutes. But if you are going to offer *oli,* you should do it quietly. Because if you wake up certain things in the forest, which happen a lot, they don't know enough to know not to follow you. And you may not be equipped enough to tell them not to. So, I suggest you just do it in your *poʻo* (head), do it in your spirit, allow your spirit to be in the element, then go do what you gotta do, make your *hoʻokupu* (offering), and leave it there. We've had times when we have *ʻūniki*. So Kōkeʻe is incredibly important to us, our *hālau* and Kalalau specifically. So, when I went through *ūniki,*I went through a few *ūniki.* We had done our ceremonies up at Kalalau. I had taken my oldest daughter who was only 14 to my very first *ūniki.* I trained her in advance and said: okay, this is what's gonna happen. At this time, we're gonna start getting dressed. At this time, we're gonna sit with our *kumu,* which is my brother-in-law. He asked if she could be a *kōkua* (helper, assistant), and she said, "Okay." I said, "I already packed all your *lole*." She had made all of her leis. when you get up there, once ceremony physically starts, we are going to have our talk story time, Papa's gonna talk to you — you don't talk. When he talks to you, you just do what he tells you to do, but you don't talk." Up to that point, her and my niece, my niece was 16. "You guys have *kuleana*; when we get up there; once we put on our lole; once ceremony actually starts …." I told her, "I know that spiritual things are going to happen. And as much as I want to help you, I cannot break ceremony. I'm going to be there, but I'm not going to be there as your mom. I'm going to be there as a *haumana* who's going through *ūniki.* You understand that, right?" And she was like, "Yeah." I go, "You're going as a *kōkua,* so you cannot talk. If something scary happens — if you feel a presence — you have to be so grounded in your *kūpuna* to know that you have to literally pray them away. But you have to know that. Be confident in yourself. I've taught you these things. I've taught you these prayers. I've taught you these *oli* that you can do. You have to *pale* (deflect, protect) yourself. And she's like, okay. I go, you think you're gonna be, okay? Because no matter what, I cannot break ceremony — I can't stop what I'm doing and tend to you until ceremony's done, which won't be till the next morning when we break fast." And she was like, "I think I can, mom."

I said okay. Because I've had families ask me, "How do you take your children into places like that?" I say, "Well, first of all, you gotta prepare them. You cannot take them into a lion's den and not teach them the things they need to know. You cannot just take a child that you've kept sheltered

their whole life and take them to ceremony at midnight in Kalalau, you don't do that. That's your *kuleana* as a parent, as a *makua* (parent, elder). You have to have that wisdom. But if you know you're going to bring them for whatever purpose, you have to prepare them. Build their confidence. Tell them honestly what can possibly happen. What bad vibes feel like, what whispers in the darkness sound like. These are things you cannot hide from your kids. And then you teach them what is the *oli* they can do. What is prayer? I go, you know what, pray to whoever. I'm not saying you only have to pray to Hawaiian gods. Pray to Jesus. I don't care. Just prepare your children." Because the reality is, once you hit ceremony, the veil becomes so thin. And that's always one of the things — when the veil becomes thin, you're gonna have a hard time differentiating between what is real and what is not real. And not all *kupuna* that you see are good *kūpuna.* So, you have to use your discernment. You have to know what your *'ano* (sense of being, moral quality) naturally feels like. And what does your *'ano* feel like when you're around people that are just not good? We gotta teach our kids that. How many times were you ever taught that when you were little? Right? Were you ever taught that? Were you ever taught that now?

So, these are conversations that are kind of normal in my family. And it can sound not so spiritual — like, what's the vibes? Where are you gonna go? Who are you gonna be with? Oh, what's the vibes with them? Are they cool or not cool? Okay, so that's that same conversation but more in tune to them. Well, who's your friends? Who are you surrounding yourself with? Troublemaker kind people, that means their *'ano* is not good because they're making not-good choices? We're having these spiritual conversations, but within their context, within their world. Whoa mom, so and so, this and this. Also, who's their parents? What kind of home they come from? Sound *maha'oi* right? Sound like kind of *nīele*. Why you asking that kinds of questions? I gotta know the children they're around, what is their *'ano.* What kind of family do they come from? Meaning, do that particular family practice dark arts? That is the reality of being a *kanaka* as well. Not all *kanaka* operate in the light, some operate in the dark. And I'm also not judging anybody because I just don't know — I know enough about dark arts to stay away, and I don't know enough to practice it. So, those conversations, right? What it looks like is, oh, who's their family? Oh, where they from? Oh, okay, I know their *'ohana.* Oh, they're known for this. Oh, their *kupuna* is known for this. So, what looks like just asking general questions, my mind is going: oh, that *'ohana*, they are from Waimea Valley; oh, they're from this and this place; oh, they are known for this and this." So, you gotta have *pilina* to that space, right? You gotta know where these families are from, and every family gonna have their own reputation usually. And I'll usually say: "Oh, I don't know, sis, maybe,

no cruise with them; or maybe, don't cruise with them past a certain time; just not so much, or only once in a while is fine."

HKA: Or just at certain places.

EKK: Correct, right? And that's another conversation. "Where you guys gonna go?" "Oh, mom, we gonna go this and this place. I can go Kōkeʻe." Where in Kōkeʻe? What you guys gonna be doing in Kōkeʻe? You guys going be burning out? Who going be driving? What you going be disturbing up there? What you guys going go for? You guys gonna go gather? You guys gonna go fish? What are we doing?"

HKA: Kōkeʻe, is there fishing?

EKK: They get like bass at the reservoir. They also go swim by Sugi Grove? I gotta know. And they just think I gotta know because I gotta be *nīele*. One yes, I'm their mom and I gotta be *nīele*. But the second thing is, there's certain things — spirits, *deities* — they live in certain parts of the mountain. You should not be there if you don't belong there, if you have no *kuleana* there. So those are all things. I cannot remember what my question is, but —

HKA: Yeah, I was asking about you guys gathering and stuff like that over there and cultural practices.

EKK: Up in Kōkeʻe?

HKA: Yeah.

EKK: We go up there, we gather, but we know the protocols, knowing when to go. And then we've had ceremony up there too. I don't ever go into Kōkeʻe without going to Kalalau — up at the lookout anyway — and just spending time there. That's really important, specifically to my *ʻohana* and to our *halau.*

HKA: And have you guys gone to, like, Nohili or PMRF?

EKK: Or just any type of *hula?*

HKA: The last time I went to PMRF was a couple of years back, I think 2022. Wasn't only us though, was us and a whole bunch of *hālau*. We had gone to PMRF because they were honoring *kūpuna* bones — right, in the tomb. I went with Auntie Puna. So, our *hula* lineage is through Lokalia Montgomery. My *kumu* are Doric and Momi Yaris — Keamoai Yaris. And their *kumu* is Auntie Puna Kalama Dawson. And her mom, Auntie Nana Kalama, was a *haumana* of Auntie Lokalia. So, Auntie Lokalia Montgomery — she's one of the known *kumu* lines. She's originally from Anahola, Kauaʻi. And a lot of our *hula* schools come from that lineage, like the Cazimero — who is teaching *hula* right now? Kaʻilihiwa Vaughn [Darval]. Our markings — oh, and I think Auntie Puna was saying that your *kumu* was part of her mom's ceremonies when she passed away. Because they're cousins.

*****Conversation Omitted, not pertaining to the content of the interview*****

EKK: No, we were there in 2022. I'm going to look it up because I have a picture of it. [EKK searches for a photo].

*****Conversation Omitted, not pertaining to the content of the interview*****

HKA: Kōkeʻe Park is really big yeah?

EKK: Yeah.

HKA: I noticed that because includes a portion by Kalalau, which is where the Air Force is, and then you get the other side, you get the geophysical observatory — KPGO.

EKK: See, I don't even really know. I know the one near Kalalau. It looks like a really big golf ball.

HKA: Yeah, that one is the Air Force.

EKK: Oh, that's the Air Force one? Yeah. Because that is where — it's usually up there where we like to go, we go gather, yeah.

Yeah, in Kōkeʻe. [EKK finds photo]. I knew I had it. So, this is at PMRF. It just so happen the Navy had posted it. This is my nephew — my sister and my brother-in-law's son. Technically, the *hālau* belongs to him. And then this is my oldest daughter and me. My *kuleana* was —

HKA: Can I use the picture?

EKK: Yeah, for sure. I mean, yeah, you can. That photo actually belongs to the Navy, because they were taking pictures. So anyway, while they were doing stuff at PMRF, they had found bones. They had gathered the bones and interned them in one location. We were there for the ceremonies. We were one of the *hālau*, there were maybe like five or six *hālau* from Kauaʻi and Oʻahu that had participated. We were just honoring the internment of all of the bones into that tomb.

HKA: Yeah, yeah. When was that?

EKK: 2022. See, I knew that was 2022.

HKA: And do you know any of the *Hiʻiaka* (younger sister of Pele; a deity figure in Hawaiian tradition) stories of Mānā?

EKK: Specifically of Mānā?

HKA: Yeah.

EKK: I don't think so.

HKA: Or any *moʻolelo* (story, history, record) of Mānā?

EKK: I'm a little rusty when it comes to that. I mean, I know I've learned a few over the past 40-ish years.

HKA: Is there anything you'd like to share?

EKK: I think I talked plenty. Yeah. I guess this all kind of leads up to the fact that I am not for the renewal of the leases. I will clearly state that. I am not supporting and I'm not supportive of the lease renewals. There's no shortage of information that shows that the American government is not the greatest government when it comes to doing the right thing by native peoples. And our current administration — the current head of America's government is also a little cuckoo, and you can just say it like that. And again, my opinion and my thought; I'm not very confident that the commander-in-chief of the United States of America is the greatest option the American citizens have, as far as being the person who makes decisions.

I would like to say — I don't like to say that I'm not American, but if you were to ask me how I identify, I identify as a Hawaiian Kingdom Nationalist. I'm very open to the idea of Hawai'i being governed by ourselves. Not just for ourselves, but who else would have greater wisdom than our own people? I do not ever align with the idea of foreigners would have a better way of governing Hawai'i than *Po'e Hawai'i* (people of Hawai'i). I'm not very shy at all about making those kinds of statements.

I understand that there is *kanaka* out there and not just *kanaka,* there are *Po'e Hawai'i*— which by definition are two very different things. You can be a person of Hawai'i and not be a *kanaka. Kanaka* is specific to those of us with the ethnicity and specifically the *mo'okū'auhau* that ties us to our lineage. But as *Po'e Hawai'i,* you have *kuleana* to our *'āina,* you have *kuleana* to our elements, you have *kuleana* to our *mo'omeheu* (culture, cultural practices), you have *kuleana* to everything that is Hawai'i. And if you don't want to live your life like that, then this isn't the place for you.

I'm very pro-Hawaiian in all aspects. I'm not for the extension of military leases. There've been numerous examples of how the military does not govern themselves well enough. They don't even have fiscal responsibility. Like, we're gonna extend leases? You guys are like wasting money, I know this. I don't know personally, I don't work at the base, but you can see all the reports. I'm like, you guys can't even manage your own resources, and you want to continue to manage ours and bomb our *'āina* on other islands? No, I'm sorry, I have such a hard time, as a *kanaka,* when I look at other people — how are you okay with the military bombing *Papa* (Earth Mother)? How

are you okay with that, how? We are the representation of *Papa* and *Wākea* (Sky Father). That's who we are. We are the descendants of *Hāloa* (the first Hawaiian, born of *Papa* and *Wākea*). And you're okay with bombing of your own mother? I cannot.

We should stop them completely. And the other islands, right — Kaʻula — what's happening there? But I mean, I get it. But here's the thing — why do we have to prove to anybody that you shouldn't be bombing our island? Why? We shouldn't have to prove nothing.

This isn't your island to do it, I mean, literally, I walked into one of the public meetings, signed the paperwork that I was there, and I lasted for like 10 minutes. Because I know that if I stand in front with a microphone, I'm not gonna be the most calm. I'm not gonna say things in the best way, other than just: Get out. I don't know how else to say it. And because I know I have to work on that, that's why I don't stand in front and give verbal testimony, because I cannot promise that I am going to keep it together. So, I usually sign the paper, get the papers, listen a little bit, and I bail. Because my heart is so sore, and it's so *ʻeha* (painful, hurt), that we literally, as *kanaka,* constantly have to stand in front of people that are usually foreigners, and we have to explain our existence. And I don't want to do it.

I mean, am I going to do it if I have to go and march and do the things? Yes. But I shouldn't have to, because your existence does not outweigh mine. Your voice does not outweigh mine. I don't care if you're the military, you're the American government, I don't care. Your existence does not trump my *moʻokūʻauhau* and my *kūpuna.* Not in Hawaiʻi. I get super passionate. And then of course I say these things, and my children are like, mom, you've got to calm down. I'm like, okay. I'm glad that this is a private conversation.

HKA: You know I'm going to send you the transcriptions.

EKK: Oh God, I promise.

HKA: I'm going to send you the transcriptions. And you're going to review it — it's your transcription. And then your transcription is going to be in a report. You can redact it — take out or put in whatever you'd like. And then we take that information and we put it in. You have to approve it.

EKK: That's really good to know.

HKA: I'm going to end this interview right now.

EKK: Okay. *Mahalo nui.* Yeah, I feel like I said a lot of — yeah, you know.

ORAL HISTORY INTERVIEW

With

Ronald Dan Kouchi [RDK]

March 31, 2026

State Capitol, Honolulu, Oʻahu

By

Hannah Kaumakamanōkalanipō Anae [HKA]

Recording file name: IA2026025_Interview_Sen Ronald Kouchi.mp3

The State Legislature was in session.

HKA: *Welina Mai Kākou* (Greetings everyone) [1]. Today is Tuesday, March 31st, 2026. I am Kaumaka Anae, representing International Archaeology, LLC. I am conducting interviews in support of the Cultural Impact Assessment for the PMRF [Pacific Missile Range Facility] and KPGO [Kōkeʻe Park Geophysical Observatory] succeeding lease and easement areas. We are at the State Capitol in Honolulu on the *mokupuni* (island) of Oʻahu, and I am here with Senator Kouchi.

RDK: Kouchi.

HKA: Kouchi, sorry. Senator Kouchi, can you please state your full name?

RDK: Ronald Dan Kouchi.

HKA: *Mahalo nui* (Thank you very much). And do I have your permission to record this interview?

RDK: Yes.

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

HKA: *Mahalo* (thanks). The interview encompasses a series of questions. I'd like to say *kala mai* (excuse me) if I seem nosy, or *nīele* (inquisitive, curious), or *maha'oi* (brazen).

RDK: Oh, anything I don't feel like answering, I won't.

HKA: *Mahalo* . So, I'll start off with your *pilina* (connection) or your connection to Kaua'i, and then more centralized to PMRF or Kōke'e, whether it be *mo'okū'auhau* (genealogy), *hana* (work), or your lifeways. Can you please state your connections?

RDK: In 1962, we moved to Waimea. And in 1972, we moved to Kekaha. So, I have resided for both elementary and high school in either Waimea or Kekaha. I'm a graduate of Waimea High School.

HKA: And where does your family come from? Another island?

RDK: My dad is from Kaua'i, and my mom is from Honoka'a. And my dad was born in Makaweli, West Kaua'i.

HKA: Right there, right by Waimea.

RDK: Yes.

HKA: And so, it was from 1962 you guys moved there.

RDK: And I moved to Līhu'e in 1985.

HKA: Wow. So, you're of course familiar with Mānā and PMRF (Pacific Missile Range Facility). Are you familiar with the cultural aspects or any cultural sites there?

RDK: Yes.

HKA: Can you tell me about some of them that you're familiar with?

RDK: Well, the Pacific Missile Range has highlighted the dune preservation, the *iwi* (bones) that is there, because they have won International Navy Environmental Stewardship Awards. And part of the stewardship is preservation of the dunes and the practices involved in dealing with any *iwi* that has been discovered. Kaulana Mossman is the current information officer. Her mother was in that same role for 30 or more years before her. And it is their ancestors' bones that are buried in the dunes. So, the other members of Kaulana's family have worked at PMRF, and the current preservation group that works out in Mānā Kekaha is led by members of her family. And so, it's an interesting relationship to have direct descendants who are employed and, in a position, to oversee that the Navy is using best practices in dealing with the ancestors who are buried in the dunes at the Pacific Missile Range.

HKA: So, we're talking about Nohili, the Nohili dunes, and then the Aipoalani and Kilauano families?

RDK: Yes, and they're all related. Kaulana is Kilauano [family]. And Kunane went from Kekaha Sugar, when they closed, to the Pacific Missile Range. So, you have the Aipoalani family as well who are or have been employed there.

HKA: Thank you. What is your favorite *'olelo no'eau* (Hawaiian proverb)? I know this sounds off the cuff.

RDK: I don't have one.

HKA: This is a question Kaulana wanted me to ask at one time. Some people have English ones, or they have —

RDK: I haven't learned that way, although Roth is a practitioner and finds what's appropriate, but I don't use any of those. So, I don't have a memorized one that I would claim as my favorite. When I hear it, walk away, and I may think, "that was nice," but I've not retained it well enough to quote it back to you now.

HKA: Do you know any Hawaiian traditions that your family practiced while you guys were living there?

RDK: No, my dad was not a religious person. So, while he has other family members who are Buddhist, we were not Buddhist. My sister, who was younger, when she was born, had to undergo a pretty major surgery. They weren't sure she'd survive. She was baptized Catholic — my mom's parents were Catholic — but we were never baptized.

HKA: So, any practices like *lawai'a* (fishing) or *mahia'ai* (farming)? *Hula* (Hawaiian dance)?

RDK: No.

HKA: Are you familiar with Mānā having a waterway that went from Waimea down to Polihale?

RDK: We even had the Mānā pool that we used to go swimming at. They had a high diving board. It was fresh water and all of that. So, everything is interconnected. The other thing is, if you don't open the ditches in Kekaha, the whole town of Kekaha floods. In Waimea, if they don't open the river mouth, then it floods all the way back to the valley, just given the recent flooding. Long-time residents opened up all of the ditches and had the equipment. That's why we did not make the news like Waialua here [on O'ahu]. We were very fortunate that we had some unidentified heroes who went out and did the work because they have long-standing knowledge of the different ditches and waterways and what needed to be opened up so we would not be flooded.

HKA: Are you familiar with the Kinikini Ditch?

RDK: No. I mean, I may not know it by that name. But growing up in Waimea, we would go up into Waimea Valley a lot. By the time I moved to Kekaha, I was going to be a junior in high school, busy playing sports. And in our time, as you're exiting Kekaha heading to Mānā, it was "first ditch" and then the next one was "second ditch." That's what we grew up knowing. And you can imagine — I'm a 1975 graduate of Waimea High School. So that would have been year one of the [Hawaiian] Renaissance, which had not yet taken effect. And Russian Fort, or Fort Elizabeth, was the name in Waimea until about four years ago. Now it's Pā'ula'ula and we are reclaiming the place name. So, I did not grow up with the traditional place names. Donkey Beach is now referred to as Kuna Bay. There's a lot that has happened and changed. But on the names of the ditches, I don't have that awareness. Like I say, we knew them as "first ditch" and "second

ditch."

HKA: And what about Kōkeʻe? Did you guys ever go up there and gather anything?

RDK: I cleaned trails two years in the summer for the State of Hawaiʻi DLNR (Department of Land and Natural Resources) as a student. And when we would have gatherings, we would go up to Camp Sloggett [in Kōkeʻe], as it was called at the time. And we had friends who had cabins, so we'd go pick plums. I was also aware that one of the DLNR employees built a disabled ramp. So, I went with Governor Waiheʻe, and had a dedication of that disabled ramp, which allowed people with walkers or wheelchairs to go trout fishing, because Kōkeʻe has a trout fishing season. I think Awaʻawapuhi [Trail] was the only trail that I would go with my friends a couple of times. You get to the end, and you can see Niʻihau. Some of those guys' hobby was photography, so we'd go hiking, bring our picnic lunch, get to the end, and see Niʻihau. It was beautiful up there.

HKA: Do you know any *moʻolelo* (stories, history) of Kōkeʻe, Kekaha, or the Mānā Plains?

RDK: From what context?

HKA: Like Ola the chief, the *Menehune* (small statured race of people) or *moʻolelo* about the area.

RDK: For us growing up in Waimea, it was the Menehune Ditch and the legend connected to that. And of course, the high school nickname was the Menehunes [referring to Waimea High School]. But as far as any of the legends in Kekaha, I didn't grow up there when a lot of that was being shared. And again, just given the time that I grew up, it was not something that was celebrated or taught in the schools at that time.

HKA: That's true. You were probably around during the sugarcane industry. Can you talk about that?

RDK: Well, it employed a lot of people. And we grew up to find out that a lot of what was the way of doing business would not be considered environmentally best practices — whether washing down machinery or equipment, the use of pesticides. And even in the plantation camps, to keep the dust down because the roads weren't paved, they would take the used oil from servicing vehicles and

throw it on the ground to keep the dust down. So, while the employment was critical to the development of the state at the end of the day, environmentally we didn't know enough to implement what would be better practices. It was not unusual for me in 1982, when I was running for the council, the neighborhood centers were vibrant and the senior programs were active, but they were predominantly women who did not speak English as a first language — either Japanese or Filipino. Because of the way the plantations operated back then, many of the husbands had already passed away and the wives lived a lot longer than the husbands did. And it was hard work working on the plantations as well.

HKA: And do you remember the military coming into the area?

RDK: They were already there by the time I got there. They were there because of the war and everything.

HKA: Is there anything you want to talk about?

RDK: No. I think PMRF is unique in that they have, I think, now fourth-generation family members who are working there. They've been there long enough and have been a good employer that family members worked hard to get their children to go, and then their children's children, and now their children's children's children. Kaulana is an example of that. And so, it's very different in that you have about 100 to 150 active Navy personnel and almost 800 to 900 civilian personnel. So, it is much more familiar as an employer of local residents than what you would traditionally think of with a military installation.

HKA: I think there's more local people there than active military. *Mahalo nui* and thank you very much.

RDK: You're very welcome.

ORAL HISTORY INTERVIEW

With

Val Kane Turalde [VCT]

March 23, 2026

Waimea Plantation Cottages, Waimea, Kauaʻi

By

Hannah Kaumakamanōkalanipō Anae [HKA]

Recording file name: IA2026025_Interview_Val Kane Turalde.mp3

HKA: *Welina Mai Kākou* (Greetings everyone). [1] Today is Monday, March 23rd, 2026. I am Kaumaka Anae, representing International Archaeology, LLC, and I'm conducting interviews in support of two cultural impact assessments for the PMRF (Pacific Missile Range Facility) and KPGO (Kōkeʻe Park Geophysical Observatory) succeeding lease and easement area and the Department of Air Force lease renewals at the Kōkeʻe Air Force Station. We are at the Waimea Plantation Cottages in the *ahupuaʻa* (land division) of Waimea, Kona *moku* (district) on the *mokupuni* (island) of Kauaʻi. And I am here with Uncle Kane. Uncle Kane, can you please state your full name?

VCT: Val Kane Turalde.

HKA: *Mahalo* (thanks). And do I have your permission to record this interview?

VCT: Yes.

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

HKA: *Mahalo.* The interview encompasses a series of questions. I like to say *kala mai* (excuse me), if I seem *maha'oi* (brazen), but it's just for this interview, that's the only reason.

VCT: Oh, you mean *nīele* (ask a lot of questions, nosy, curious)?

HKA: Yes. Let us begin this interview. Okay, so we're going to start off with *mo'okū'auhau* (genealogy) or your *pilina* (connection) to not just the project areas, but to this side of Kaua'i, your *mo'okū'auhau*, maybe your *hana* (work, practices), or your pathways in life. What connects you to this *'āina* (land)? *Mo'okū'auhau* you can talk about that as well.

VCT: Yeah. What connects me is my family who's from here, the Ho'okano and Aweau family from Waimea Valley. And I grew up in the *lo'i* (taro pondfield) with my parents and grandparents here in Waimea as I grew up, and also Ka'alaea, O'ahu. And Ka'alaea is where my family is also from, where my great-grandmother, Kukahiko, that last name. She was also, you know, the *mo'okū'auhau* there. And we have all the documents and history of our family in Ka'alaea.

HKA: Your grandfather over here?

VCT: My grandpa was Ho'okano. Aweau, John Aweau.

HKA: And he lived here?

VCT: Yeah, and then they went to O'ahu because of the land from my grandma.

HKA: Right, where did you live here?

VCT: In Waimea Valley. I'm not sure how long, but I know that the Ho'okano family have different properties up in Waimea Valley. And I do have the documents. So, from being taken, I was *hānai* (adopted, fostered) at birth by my grandpa's sister, who took me at birth. And at five years old, I went back with my family on O'ahu to He'eia Kea. And the families were evicted from He'eia Kea because of the military installation that they once had there. And because of our family burials in He'eia Kea, they could not take the land. These were ancient burials that are still there today. The

Kaluhiwa family are the ones who live there today and got the land because of the burials, proving to the state, the county, and the government that the family burials were there from ancient times. So, you know, I went to Oʻahu, being born, taken, brought to Kauaʻi. And I grew up on Oʻahu. I went to Waiāhole Elementary School, King Intermediate, and Castle High School, where I graduated. And when I graduated, I came back to Kauaʻi.

HKA: And so, what is your connection to Kekaha, like PMRF? Have you been down that side?

VCT: Yeah, because our family burials are all over there in tombs, the burial tombs.

HKA: Where?

VCT: Waiawa and it's all up on the west side. The burial tombs are still there today. On the mountains. And also on the base, there's our family tombs over there too, on the military base, the Aipoalani family and Kīlauano family. And so, we're all connected. And then we also go back to the kings and queens of all the islands. And I have the documents and everything. I was given the will to all the lands by Uncle Wairamu Terangi Carroll, Prince Kūhio's great-grandson. As I was told when I was 12 years old, one day there's going to be a man with an accent and a mark on his face, and he's going to give you the paper for the land. And back then, I was 12 years old, they told me it could be 10, 20, 30, 40, even 50 years from now. From that time, 30 years later, that's when I got a call from my brother Keoni on the Big Island in Hilo. "Brother, there's a man looking for you, he coming to Kauaʻi, he gonna come, he said he must see you." I got a call the next morning: "Can you meet me at Kekaha Park?" So I went, and this is where I met Uncle Wairamu Terangi Carroll. When I went, "*Aloha* (love, greetings)," and he started speaking with an accent. And when he turned his face, he had the *moko* (Maori facial tattoo) on his face. That's when I told him, Uncle Sam Lono and Auntie Emma Defries said you were going to come home and give me the paper for the land. He said, "Wait." And then he went to the car and brought a booklet and took out the papers. He sealed it with the royal seals: Nation of Hawaiʻi, Hawaiian Kingdom, head of state. And then he gave it to me and told me I had to sign my name on that paper. So that paper is pretty much recognized by the State of Hawaiʻi because, you know, as I was going to the Aha Moku meetings and the state meetings, I showed them the documents.

HKA: And do these lands also include PMRF?

VCT: Oh all, all the way to Polihale.

HKA: It includes the Kōkeʻe Park Geophysical Observatory?

VCT: All the lands. Because I do have the documents, I was told that this is for you to have forever and ever, to help our family, our people, and our children get what is correctly theirs back. This is why, through the years, I've gone and I got arrested five times in the '70s blocking bulldozers on the island from them building. In Hanapēpē and ʻEleʻele, when they were going to build, I told them they wanted to build for the open market. I said, "No, you have to build for the 10 generations that were here before the outsiders came to take over the lands. So that's why a lot of the families in ʻEleʻele and Hanapēpē, as of today as we speak, they are still building for the people of Hawaiʻi. And it was told to me that I'm the protector of the lands. So as things go, I was looking at one of my grandsons and my son, because they're interested in farming. One of my sons farms his own.

HKA: And you farm as well, you farm *kalo* (taro), right?

VCT: Yeah, but I passed it on to my grandsons. They're growing *kalo* right now, in Waimea and Makaweli Valley. My grandson took over the property where I was growing taro in Makaweli Valley. This is where my cousin's son, Kaina Makua, who is doing the *kalo* and carrying on the culture. And he also took over Kilohana Canoe Club that I started in 1990. I paddled and coached for 50 years, and I passed the club on to Kaina Makua. He runs Kilohana Canoe Club today.

HKA: Nice. And so, Uncle, you're a cultural practitioner. Different types of cultural arts. Can you tell me what your practices were?

VCT: I did stone art. If you go to the Kōkeʻe Museum and Kauaʻi Museum, most of the stone artwork was done by me. I also gave stonework to Queen Liliʻuokalani Trust in Līhuʻe. They have some of this stonework. If you go into the office, there's two types of *poi* (Hawaiian food staple made from taro) pounders, the ring and the regular *poi* pounder. And I also made *poi* mashers. These are in Liliʻuokalani Trust. They have a big window display. And on the outside, there's all the different *ʻulumaika* (Hawaiian game stones). I've done all that. And I've taught classes to certain students who learned how to pound not only *poi* but make the implements. I was given a *poi* board by Daniel

Anthony, and he's also a *poi* farmer. He's on Oʻahu, but he was one of my students. And his dad, we're all related. And so that's why they came to Kauaʻi. And fortunately, everything was passed on to them also. And today they're in Kahana on Oʻahu. They do the taro in Kahana. I grew up going to my uncle's taro farm in Kahana also.

HKA: What uncle is that? Uncle Nana Gorai?

VCT: Yeah, Uncle Nana. His wife is my grandma's sister. Uncle Nana, as you enter Kahana Bay, the bridge, all to the right and the left, that was all his taro patches. And I helped rebuild the fishpond walls a long time ago with Uncle Nana. And then some waves knocked the walls down, and a lot of the family members went and rebuilt the stone walls for the fishpond. I also grew up in Heʻeʻia Kea. We kind of maintained the fishpond there. And I was the cultural consultant for Kakoʻo ʻŌʻiwi. If you go into Kakoʻo ʻŌʻiwi, all the *ulu* (breadfruit) trees that are planted on the left side when you enter, I planted all those *ulu* trees and the bananas back there. I was there for 14 months as a cultural consultant. I advised people and also opened up two and a half acres of *loʻi* there at Kakoʻo ʻŌʻiwi. I have a lot of pictures. It was Jerry and Rocky Kaluhiwa who recommended me to become the cultural consultant there. So that's when I lived there for 14 months and then I came back home to Kauaʻi, going back and forth. So that was part of my past, and I came home and passed everything on to my sons and grandsons. My cousin's son, Kaina Makua, who opened his own Aloha ʻĀina Poi Company. He made *kūlolo* (taro pudding dessert), but he stopped making *kūlolo*, that is what I was told, only going have Aloha Aina Poi now.

HKA: I tasted the *kūlolo,* it was good. Even the *poi*, I had some.

VCT: When I was making *kūlolo*, I was sending them to Oʻahu to the fish market going to Sand Island, 10 pans a week. I was also dealing with Tamashiro Market for a while, and then it was easier for me to go to Sand Island.

HKA: So, Uncle, you also were a healer at one time?

VCT: Well, I grew up with my family healers. I was told that I do have the gift, but I never really cared to go that route because my auntie told me, "Kane, you really have to be careful because there's a

lot of jealousy out there. Because a lot of jealousy is going to reflect back on your family, your children, and your grandchildren." So that's why I kind of stepped back. Because of jealousy, I stayed away from doing that type of work.

HKA: What kind of cultural practices did you practice here on Kauaʻi? You did *kalo* farming, and then you also taught, right? You were a cultural educator, right?

VCT: Ke Kula Niʻihau O Kekaha. I took the students to Niʻihau to educate them, because the Robinsons and Sinclairs, they only own two-thirds of the island. I went to them, to the Robinsons, and I proved to them because I have the maps and I have the original names of all the original families who own one-third of the island. They say they bought the whole island, but they did not. I have the documents proving that they don't own the whole island, they only own two-thirds of the island. And because I proved to them and we settled and everything was good. I told them, just keep it within the family, you guys cannot extend or build or do anything more, because the families that's there, all of the grandchildren, most of them with Ke Kula O Niʻihau, I've educated them. For the 10 years I was there as a consultant, I did the after-school programs. I do have videos with the students of Ke Kula Niʻihau O Kekaha. It's salt making that I educated them in. *Hana Paʻakai* (salt making) Salt Making 02 was a video that we made with the students.

HKA: And so, yeah, you're a salt cultivator. And so where is this practiced at Hanapēpē?

VCT: Yeah, the *ʻili* (land section) is called ʻUkulā, ʻUkulā Kauaʻi. That's the *ʻili* where the salt is made.

HKA: And going back to like Kōkeʻe, are you familiar with any gathering up there or any type of cultural practices that have been done up at Kōkeʻe, or Kalalau, all of that area?

VCT: Well, up at Kōkeʻe, we actually I grew up picking *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) Yeah, *maile*. And we picked the *māmaki* (native Hawaiian plant [*Pipturus* spp.] used for tea), the tea, that was grown by my auntie them long time ago back there. I kind of know where all the *māmaki* stay and the *maile*, *maile liʻi liʻi* (small-leafed maile variety).

HKA: Oh, wow. That was the small leaves. Wow. And so, is there any *mokihana* (special native tree found only on Kauaʻi [*Pelea anisate*]) over there?

VCT: Yeah, there's a lot of *mokihana*. And one certain area where the *mokihana* trees are still there. And when it's *mokihana* season, we go up and make the leis. I had my students, we went up when I was at Ke Kula, and we gathered and they were taught. I told them that this *ʻāina* is our *ʻāina* that was stolen. Because when the U.S. came, on my grandmother's side, I'm a direct descendant to Queen Liliʻuokalani and King Kalākaua, because my great-great-grandmother is sister to them. They went under the name Kalākau and Kukahiko, and they took the A away to protect themselves because the U.S. was killing the families, stealing the lands, and taking their money. That's the same thing that was happening over here on Kauaʻi with the big Robinson family, all those big families, and the Parker Ranch. They do have true stories, history, and films of the Parker Ranch doing the same thing. When I was on Niʻihau, seven, eight years old, I spent the summers there with Uncle Nui Keale.

HKA: And he was a *kahuna* (priest, expert practitioner), right?

VCT: Yeah, and he was a healer. And also, I witnessed Sinclair and Robinson putting a gun to my auntie's head for her to sign paperwork. Because when they came, all us children had to go in the room and they closed the door. But for me, I was wondering what was going on, so I went and opened the door and peeked, and I seen them put the gun to my auntie's head and told her, "Sign, sign, sign." And then she signed whatever papers were signed. I witnessed that. This is why today I can speak about it. And families who know that I was there, and I have cousins around my age who also witnessed that and speak for it today. My cousins from Niʻihau, you know, people don't believe, but it's the truth. They like to hide the truth of what they did wrong. But that cannot be hidden because we've seen it with our own eyes. The families, like on the Big Island, Parker Ranch, did the same things. They also have a documentary on video now something about Parker Ranch. I haven't seen it yet, but by mentioning it, I know it's all true they did the same thing, how they stole the land. They took the *aliʻi* (chief) and the ones that could write, they made them sign. That's what they did. You know, it's nothing against the families, it's just that we need to correct things, and put things all in place the correct way.

HKA: So, Uncle, when you were young, there was more access to PMRF before, right? People could go there.

VCT: Yeah, we used to go pick watercress. Had watercress growing wild back there. Because they get five springs back there, they capped the springs with pipes and then they leak out, but the spring water goes all the way to the ocean. I haven't been there in a while. We used to go, as I was growing up, to get watercress all the time.

HKA: And besides watercress and stuff, did you guys go fishing over there?

VCT: Yeah, over there had *ʻoʻopu* (fish from the *Eleotridae*, *Gobiidae*, and *Blennidae* families), prawns. Till today, oh, loaded with prawns, loaded with prawns. And the ocean side, they call it Second Ditch. Over there, you get prawns and some Samoan crabs (mud crabs). I haven't gone for a while but when going out there I throw the bait, I put on a floater, tie the bait, and throw it in the water. I used to get the thrownet, I throw over and bring in all prawns and Samoan crabs in the net. Till today, I know people say that they go catch some Samoan crab over there. I've gone a lot of times, and just if I was hungry to eat Samoan crab, I used to go there. Because I was going to Waimea Pier to catch some, then something told me, hey, go to Second Ditch. And I went and I got big kind crabs from there.

HKA: So where is Second Ditch from Kinikini Ditch?

VCT: I think it's right there before. Yeah, when you go by MacArthur Park, it's right there, Second Ditch.

HKA: And then how about the ocean? The ocean all up by PMRF? You guys used to gather *limu* (seaweed)?

VCT: We used to dive out there. Plenty of lobsters. We used to grab lobsters. Because I grew up as a fisherman, you know, my dad was a fisherman, my grandfather was a fisherman. We used to go throw net, lay net, surround, *paʻi paʻi* (a surrounding net fishing method), all that out there. Every kind of fish. All the reef fish. Had *moi* (threadfish [*Polydactylus sexfilis*]) mullet. That's what we mainly went for, the *moi* and the mullet. And then had the invasive fish they brought, the yellow

one, *ta‘ape* (bluestripe snapper, an invasive species). *Roi* (peacock grouper, an invasive species), and *to‘au* (blacktail snapper, an invasive species). We caught a lot of those and shared it with families. The *kupuna* (ancestors, elders) were always happy because, you know, it was all part of the past, but as I got older, I just passed it on. Nice to see other families going and gathering too.

HKA: What kind of *limu* did you guys get?

VCT: Had *limu manauea* (red seaweed [*Gracilaria coronopifolia*]). Yeah, mostly it was *limu manauea*. And we used to go on the north side, gather *limu manauea*, and had the *kūpe‘e* (marine snail [*Nerita polita*]), had *‘ōpihi* (limpet), all that out there. And then I used to always go Polihale for *‘ōpihi*. At Nu‘alolo Kai, all out there, big time *‘ōpihi*. And as a commercial fisherman, we went to Ni‘ihau also. We used to go black coral diving. I was with Bobby Wilson.

HKA: Bobby Wilson from O‘ahu?

VCT: Yeah, because Bobby Wilson’s wife is my cousin, Arlene. And the family is from Kaua‘i. She’s a Ho‘okano also, and a Awā. Growing up, he always used to come and pick me up, “Let’s go.” When I was living on Kaua‘i, I used to fish with Bobby Peltier also. They knew my dad, and we had connections. I lived with Bobby Peltier when I used to go fishing all the time. And he lived right down in Kapaia.

HKA: Where is Kapaia at?

VCT: You’re going down that hill in Hānamā‘ulu, all that area before Hānamā‘ulu is Kapaia. But back in those days, not too many families were around. Fortunately, I was taken and educated in that sense. Really lucky, fisherman and farmer.

HKA: And then, so over there at PMRF, were there any plants that you noticed when you were growing up?

VCT: Yeah, out there had plenty *ʻilima* (native shrub, all species of Sida). Yeah, till today still get the wild *ʻilima* growing. We used to pick and make leis. I used to go with my auntie them and they used to make leis.

HKA: How about the *ʻuhaloa* (small downy plant, Waltheria indica) out there?

VCT: Yeah, *ʻuhaloa* too. All out there too. We used to pick them. They used to make tea, and you can make [tincture], with the *ʻuhaloa*, yeah. All that. But it was just during certain times of my life, and as I got older, I started working.

HKA: Yeah, you were getting on with family.

VCT: Yeah, and then I met my wife, who was a *hula* (Hawaiian dance) girl. She was dancing *hula* for Henry Taeza. He's a *kumu* (teacher) here, Henry Taeza. And I played music for Carol Akau. She was like the champion Tahitian dancer, Carol Akau.

HKA: You guys used to have the Tahiti Fete, yeah? Do guys still have that?

VCT: I don't know, but the first one, I think, was in 1982 in Princeville. And from that time, I started playing music for her. I played music in most of the hotels on the island. We did the *hula* show at Princeville Lanai. I played for Hanalei Plantation. I played music at most of the hotels on the island, Kauaʻi Resorts, Kauaʻi Surf, Coco Palms. I played with Uncle Charlie Fu and Uncle Manu Contrades. I played with them at Coco Palms. We did the Leilani Hula Show. They were the dancers and we played music. Yeah, back at Coco Palms.

HKA: So, Uncle, you mentioned there were burials?

VCT: Yeah, there's burials back there, that's why they cannot build, because of our family burials. And I know that there's burials. I gotta think, I cannot even remember my uncle's name, but they have burials on the family property there in Kōkeʻe. But you know, as a child, I used to go with my Auntie them. They actually, all the cemeteries or the burials, my Auntie them with Queen

Lili‘uokalani Trust, the whole island of Kaua‘i, all the different ancient burials on the whole island of Kaua‘i. We went to clean the burials.

HKA: When you were young? How old were you when you guys used to do that?

VCT: Seven, eight years old. Because when I went to Ni‘ihau, I spent the whole summer, seven, eight years old, but during the other time of the year, when I had Easter, all the vacations, that’s when I was sent. My auntie sent me to stay with her, my Auntie Mabel Navarro. She was the one that raised me from baby. And from that time growing up, I was going back and forth. A lot of the people I grew up with; when I am not around, I am on Kaua‘i.

HKA: So, Uncle, do you remember any religious practices that happened in the Mānā area, or are still happening?

VCT: Oh, I know. when we used to go Mānā, Kunane can speak for that, Kunane Aipoalani, yeah. We’re all the same family and we all used to camp in the same area, right there at Mānā, right at the base. At PMRF, at the base. And Kunane also has documents about all that. And he has pictures of where we used to camp. And I was like, wow, cuz’ (slang for cousin), this is amazing. Because when I grew up, he was one of the older cousins that I’ve looked up to because I knew that things had been passed on to him also. And this is why when we had the *aha moku* (meeting) they asked me, oh, who? Then I mentioned his name first. Because I know that when we grew up with my grandma and his mom, we all were together doing the cultural things.

HKA: And so, do you have like an *‘ōlelo no‘eau* (Hawaiian proverb) or something? It doesn’t have to be from Aunty Mary Kawena Pukui, but it can be something in English too. You know how they have, like, *i ka hana ka ‘ike* (in doing one gains knowledge), or *he ali‘i ka ‘āina, he kawa ke kanaka* (the land is chief, man is a servant). You have any of those sayings, the *‘ōlelo no‘eau*?

VCT: *A‘ole pilikia* (no problem).

HKA: No problem, that is a good one. That is no problem, but it doesn't cause any problem. Have you ever heard the term *wai kahi o Mānā* (the single water of Mānā)? With a single pour of water for the mixing of *poi*? That has to do with Mānā.

VCT: No, because I know growing up we pound *poi* mostly.

HKA: Do you remember growing up, seeing the stream that flowed from Waimea to Mānā, past Kekaha? Swamp lands?

VCT: That is actually the ditch. Still get them today, the ditches. Still get water inside.

HKA: But people used to ride their canoe from Waimea to Mānā.

VCT: Actually, from Mānā to Waimea, I know my auntie has a picture where they paddled the canoes from Mānā to Waimea River. At one time, it was like a big river that went from Mānā to Waimea. My auntie had a picture of it, they lived up on the Mānā side, and from her house there was a picture of that big river going to Waimea. And they used to travel on the canoes going down from Mānā to Waimea. I have to find out who has that picture today. I remember going to her house and the picture was on the wall.

HKA: Wow, that must have been beautiful. How old was that picture? When did you see that picture?

VCT: I was young, probably seven, eight years old or growing up. And then I knew I was kind of there before they kicked everybody out, and I remember going and seeing the picture on the wall. I've got to go try to find out where that picture is today.

HKA: Wow, that is unbelievable. So, you know, Kōkeʻe, did you guys ever go hunting up there?

VCT: Yeah, we go make trap. For the pig. Pig trap. Up there you get plenty of pigs. Goats too. Get wild *pipi* (cattle) too. I went up with Uncle Joe Manini. I went up and helped him make the barbed wire fence on the bottom of their property [at Puʻu ʻŌpae]. All the way, I don't know how, but we did the barbed wire fence,

HKA: Uncle, they were getting the *kiawe* (Algaroba tree or mesquite [*Prosopis pallida*]) from PMRF to make the fence, yeah? Because that is what Evan was telling me.

VCT: Yeah. Evan knows I was the one who helped Uncle first to do all that on the bottom. The property that they have, at a certain area, you can see the fence line all the way that we put up. And I know Evan, the one that took over, he did the top part, the top fence. I did the bottom with his dad. He used to pick me up all the time: "Hey, let's go." And we also grew taro next to each other in Makaweli Valley. All the same family properties. When I was young, Uncle Joe really *pili* (have a close relationship with) me. Growing up all same families yeah? He always would come, "Kane."

My cousin, the Hoʻokano, I used to go hunt. That is how I used to hunt goats

HKA: Where would you hunt goats?

VCT: Makaweli Valley. He used to come with the horse, "Kane let's go." He had a horse for me, so we jumped on the horse. So, we go Makaweli Valley, and the goats they are up on the hillside. They jump, amazing the way they jump. We used to go up there and hunt goat all the time.

HKA: And so, do you have any *moʻolelo* (stories, history), any stories about the Mānā Plains?

VCT: Well, not really.

HKA: Maybe Limaloa, the mirage? Stories of Hiʻiaka passing through?

VCT: I know there's a profile of Captain Cook, and a profile of Hiʻiaka, up in Makaweli Valley. [Note: there is a photo of profile of Captain Cook in VCT folder]. I never took a picture of the Hiʻiaka one, but I have a picture of Captain Cook because when I used to go ride horse with my auntie, up Makaweli Valley, because she used to farm taro back there. My cousin Diane Navarro used to take me on horseback, and she would say, "Look up here. What, you see the man's face?" I look. Oh, wow, that's a petroglyph of Captain Cook. And then when we were in Makaweli Valley, she pointed and said, "Look, that's Hiʻiaka." I never got a picture of Hiʻiaka, but I got one of Captain

Cook. It's amazing the Hi'iaka one. I've got to go take a look and see if it's still there. I have the Captain Cook one on my phone.

HKA: So let me ask you one question here. Do you feel that there's a difference between cultural and natural resources?

VCT: It's all pretty much the same, yeah. Because it's part of our culture.

HKA: Natural resources, right?

VCT: Passed down to us.

HKA: Yeah, right. And in your opinion, does the renewal of military leases impact cultural resources?

VCT: Well, like I told them, I don't care what they do, but stay away from the cultural sites, the burial sites, any cultural sites. Because my nephew stopped them from bombing Pōhakuloa, because of our great-grandfather's grave that was there. Big Island. Big bomb holes, 10 feet away from our great-grandfather's grave. But they never knew there were graves over there. When he went to prove that that's how they stopped. They cannot go to Pōhakuloa bombing anymore. Yeah, Leomana Turalde. He came on TV, whatever it was, they interviewed him. So, I remember going there with my grandma to the graveyard. And my brother John, Keoni, was living in Niumalu. In 1975, they got evicted out of Niumalu. So, my auntie told him, go on our grandfather's land in Onekahakaha. King ʻŌpūnui had, I don't know how many acres, I think it was 15 acres or something. My brother had got the land because we have the genealogies and all the history. My brother Keoni got ʻŌpūnui land, 15 acres, at Onekahakaha Beach Park on the left in Hilo. But because I do have the documents for all the lands.

HKA: And do you know anything about the Menehune and Chief Ola? There's a *moʻolelo* about them?

VCT: No, I don't know that one. I still forget a lot at this age.

HKA: Do you know any of the history of the military when they started, for instance, when they started Kōkeʻe Park Geophysical Observatory? How about PMRF?

VCT: No, really. All I know is that that was all our family's land. Even all over there. That's why we have our family burials over there, the Aipoalanis. And that is tombs from ancient times.

HKA: Is there anything you want to share?

VCT: Yeah. All I know is that I told them when I met with the officers, the Admiral, Captain, all those guys, I told them, I don't care what they do, just stay away from the cultural sites, the cultural area. Because they have a gun range, they have places where they get missiles. I said, no, you guys cannot. Even like on Niʻihau, they got missiles on Niʻihau. But because it's for our protection here on Kauaʻi, if other countries want to bomb us, they get the missiles to intercept. And that's why I told them it's okay for them to have it there because it's for our protection. They get about four missiles at the base and two miles out in the ocean, underwater, they get about four missiles out there too to protect us. That's why when I met with all the military heads and I showed them documents, they were just like, these are documents and this is the proof of who we are. So, you know, stay away from the sites.

HKA: I know you wanted to talk about *mālama ʻāina* (caring for the land) and enriching the lives of our future generations, our *pua* (children, offspring). You want to talk about that?

VCT: As long as they keep things correct, then things will be good because we have the proof of who we are and the generational proof that things should be passed on correctly. Because we come from the direct king and queen lines. My grandpa's side goes direct to Kamehameha the Great, and my grandma's side goes direct to Liliʻuokalani and Kalākaua, the last rulers. But today, as things go, we are the rulers, you know, we the ones that can tell. Because of my wife, I got to lay low. But I passed it on, yeah, the *kalo* farming. And I passed it on to my grandsons.

HKA: *Mahalo*, Uncle. I'm going to end the interview right now, and I thank you. It was an awesome interview. *Mahalo nui*.

ORAL HISTORY INTERVIEW

With

Pualokelani Harada [PH] and Kielepuaalaokalani Harada [KH]

March 24, 2026

Waimea Plantation Cottages, Waimea, Kauaʻi

By

Hannah Kaumakamanōkalanipō Anae [HKA]

Tara del Fierro [TD], PMRF Archaeologist/Cultural Resource Manager

Recording file name: IA2026025_Interview_Pualoke and Kiele Harada_Combined.mp3

HKA: *Welina Mai Kākou* (Greetings everyone). [1] Today is Tuesday, March 24, 2026. I am Kaumaka Anae, representing International Archaeology, LLC. Also present beside me is Tara del Fierro, the archaeologist at PMRF (Pacific Missile Range Facility). We are conducting interviews in support of a cultural impact assessment for PMRF and KPGO (Kōkeʻe Park Geophysical Observatory) succeeding lease and easement areas. We are at the Waimea Plantation Cottages in the *ahupuaʻa* (land division) of Waimea, Kona *moku* (district), on the *mokupuni* (island) of Kauaʻi. We are here with Pualoke and Kiele. Pualoke and Kiele can you each please state your full names?

KH: *Aloha, ʻo wau ʻo* (Greetings, I am) Aloha, I am Kielepuaalaokalani Harada. I am the elder twin.

PH: *Aloha, ʻo wau ʻo* Pualokelani Harada. I am the younger

HKA: And do I have your permission to record these interviews?

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

KH/PH: Of course!

HKA: *Mahalo* (Thank you). The interview encompasses a series of questions, and if I seem *maha'oi* (brazen) or ask too many questions, please excuse me, I say that in advance.

TD: And I just wanted to say, I agree to be recorded

HKA: [HKA referring to TD] Oh yeah, *Mahalo*. So, let's begin. The first thing I want to start off with is your *pilina* (connection, relationship) to not just PMRF or Kōke'e, but the greater Kaua'i — whether it's your *mo'okū'auhau* (genealogy), your lifeways, or your *hana* (work, practice). If it's all of it, can you please speak [to that]?

KH: *Hiki nō* (all right, it can be done). So, for me and my *māhoe* (twin), we've been born and raised here on the *mokupuni* of Kaua'i. We don't have direct relationships with any of the military sites, but we do know of *kānaka* (Hawaiian people) who do work there. [KH referring to Thomas Nizo, the PMRF Deputy Public Works and Stewardship Officer]. Milimili, we call him "Coach" because he used to be our *'anakē's* (auntie's) soccer coach. When we were introduced, they introduced him as "Coach" or "Milimili." How we came to know him is that he has a side job of being a DJ and sounds man, and a lot of the events we would go to they would hire him out, and that's how I knew him as a familiar face — that's how I met her [referring to TD].

KH/PH: Outside of that, we have really strong ties to the North Shore of Kaua'i, because that's where our *'ohana* (family) hails from. My *'ohana* — my *tūtū* (grandmother) is a Chandler, and she married Harada. So, both sides of my *'ohana* are *kanaka mahi'ai* [Hawaiian farmers], they're *kalo* (taro) farmers, rice farmers, fishermen, community volunteers, community members, they're activists *nōho'i* (intensifier for the word 'activists'), *haipule* (pious people), *kahuna* (priests, professionals in their craft). All of the above. We have everything in between and all of the above in *'ohana.*

So, I guess our *mo'olelo* (story, history) really starts, why we're on this path, is with our *tūtū wahine kualua* (four generations removed, of a great-great grandmother or great-great grandchild), Tūtū Rachel [Nāhale'elua Ilalo'ole] Mahuiki. She was a *mānaleo* (native Hawaiian

speaker) for our *ʻohana*. She spoke *ʻōlelo Hawaiʻi* (Hawaiian language). When UH Mānoa was starting up their immersion program and wanted to provide *ʻōlelo Hawaiʻi* within the *kula* (school), they would consult all the *kūpuna* (ancestors, elders) around the *Pae ʻĀina* (the Hawaiian island chain). [PH confirming with KH] She lived on Oʻahu, yeah? Yes, she lived on Oʻahu but she's from here. When they came to Kauaʻi, they would come and visit her on Kauaʻi, on the North Shore.

KH: They have a video of her *mākaʻikaʻi* (visiting, observing) in Hāʻena. She is the reason our roots in the culture are very strong. We *mahalo* (have gratitude) that we are lucky to have one. She was alive when I was born — she got to hold both of us — and then she passed. So, I was fortunate to live with my great-great-grandmother *tūtū*. My great-grandparents are Tūtū Elizabeth Kapeka Mahuiki, who married Francis Elias Chandler. They were the ones who taught all of us how to *hānai* (adopt, nurture) and be *ʻohana*, what it means to be part of a community, and what it takes to feed a community and provide resources to help our youth. They helped to found the Hanalei Canoe Club. And we are a part of the [Hawaiian] Civic Club. She's an Honorary Treasure of Kauaʻi. And it's because of that lineage that we were able and fostered in the way that we were, to be raised with all of our *tūtū uncles* and *tūtū aunties*, who taught us from a very young age how to be *kanaka*. So, I have to give thanks to that.

But in regard to what you're talking about in this arena of *mālama ʻāina* (caring for the land) or to be *kiaʻi* (guardian, protector) — we both, *tita* (sister), we both naturally have the instinct to, you know, *kūʻē* (resist, oppose). Ever since we were young, we've had a mind of our own.

KH/PH: Even in our educational background, I want to touch on a little about that. We're fortunate to come from *Kaiapuni* (Learning environment grounded in Hawaiian education), from *Pūnana Leo* (Hawaiian language immersion preschool). Our ties to the west side started from there, with Tūtū Kahala and ʻAnakē Kuʻulei, as I mentioned before, who were our TAs — or just *kumu* (teacher), we'll call them *kumu*. They were *kumu hānai* (nurturing teachers) to everybody. At the time, *Kumu* Pūnohu, who is a foundational person not just for us but for our whole *Pae ʻĀina*. He has taught so many generations of *kumu*, of *haumana* (students), who *paepae* (support) and continues to speak *ʻŌlelo Hawaiʻi*. Their journey started strong with him. So that was the *hoʻokāhua* (foundation) of our *kānakaness* in the education realm — it started in our preschool years.

Our grandmother, who was raised around my great-great-grandmother, Tūtū Rachel Nāhaleʻelua Ilaloʻole [Mahuiki]. She was her favorite, so she was fortunate to learn a lot from my great-great-*tūtū* — but they were not fortunate enough to learn the language. And if I draw upon what my great-*tūtū* would share — because she's a Kamehameha Schools graduate, Valedictorian of her class — not that she regretted it, but she always had this yearning and this *aloha* (love) for language. She was a musician, a beautiful singer. In her siblings, they all played music, they all did *paniolo* (cowboy/ranching). They were *kānaka paniolo* (Hawaiian cowboys). They were *kānaka lawaiʻa* (Hawaiian fishermen). And beyond that, they were great in *mālama ʻāina* and every aspect of that.

So, for us growing up, the yearning to know who we are, where we come from — rooting ourselves in our language and learning it — was one of my mother's dreams and passions for us to learn it, and also of my grandmother and great-grandmother. So, three generations in from when we first had a *mānaleo* to now, there are more than nine of us — children, cousins, and their own children — who have a level of *ʻōlelo* (language) in their life or in their family. We were the first of a handful of us who actually started from *Pūnana Leo* and who went on to continue learning *ʻōlelo Hawaiʻi* in the Hawaiʻi Language Immersion Program at Kapaʻa. But in the sense of *ʻōlelo* that's where it all started.

Our two *kumu* that we talked about — Tūtū Kahala and Kumu Kuʻulei — they were *kanaka Niʻihau* (Hawaiian of Niʻihau). I remember them very fondly. They always took such good care of us as babies. We would cry our eyes out when we came to school. *Wuhu wha wha* [crying sounds], mom abandoning us, locking us at the gate, leaving us — baby years. Traumatic. Trauma. But they were such key figures in one *hānai*, in this *manaʻo* (idea, belief) about truly investing their time, their *aloha*, and their love — not just for us as *keiki* (children) or *kamaliʻi* (young children) but their knowledge to share with their love for sharing their knowledge and love for their language.

So now, 27-plus years since we were in that space, in that time of our life, we've graduated, gotten our licensure and degrees to teach, and are in this *papahana* (body of work) teaching *ʻōlelo Hawaiʻi*. In *Kanaka* now. In *Kanaka* now. So, the transition from then to now — understanding how everything aligns, *ke Akua* (God) plays a huge part in that.

We currently teach at Kula O Kanaka, Kula Aupuni Niihau A Kahelelani Aloha, which is a school that occupies the old sugar cane plantation building — used to be a bank, now became a school

building — in Kekaha. In Pōkiikauna, that is the old name for that *ahupua'a,* Pōkiikauna. And we are now giving back in a big way by being there as *kumu*, to pay forward and pay back to our two *kumu* who started our whole journey with *'ōlelo Hawai'i.*

KH: This idea — we're here talking about cultural impact — one bigger piece that not enough people talk about is the education of our *kanaka*. I'm not just talking about *Kanaka Ni'ihau*, I'm talking about our *kanaka* as a whole across the *Pae 'Āina*, even those who live on the continental U.S. There is something like 48 percent of them who live away from home. If we are looking at the statistics, there are so many of us don't even get to touch our *'āina* (land), so many of us who want to have a sense of identity, to know our home, to know where we come from and who we are.

Yet we talk about this idea of *ho'i* (return) to our *piko* (point of origin, navel, center). I think that's the theme of what we're trying to enact now, at present — *e ho'i ka piko* (returning to the center/origin or ancestral land). Knowing that without our language, we would not be nothing. Without our language, we wouldn't have stories, we wouldn't have traditions, we wouldn't have customs, we wouldn't have any type of sense that tells us where we're rooted — which is here in Hawai'i. We wouldn't know that we are one of three *pikos* (vertices points that create the Polynesian Triangle) that mark the *Pākīpika* (the Pacific) or the Pacific Ocean.

So, a lot of these things tie back, again, to the education and perpetuation of language — not in what is a book-learned or AI-learned integration of language to *'āina* or to traditions or customs or culture, but what it actually manifests as in our everyday lifestyle. What it is that our *kānaka*, our children, our *kamali'i*, our *makua* (parents), our *kūpuna* are integrating as a lifestyle today.

KH/PK: I speak on this outside of myself, but connecting it back to my journey: if we, as a community, think about *mālama 'āina* — how can you know what to *mālama* and what *'āina* is yours if you don't even know the story? If you don't even know the *'ohana*, if it was your *'ohana* that lived there? How can you connect yourself? How can you protect it? To most of us, right, we walk on ground, the *kanaka — malihini* (newcomer, tourist) or *Haole* (foreigner), thinks it's just dirt, just sand. But beneath it, all the *mana* (spiritual power) that lays there, and all the *mana* that gets disturbed every day — not just here on Kaua'i, not just at PMRF, not just at Polihale, not just in Kōke'e.

PH: Everything that is physically manifesting — and I'll say that — everything that is physically manifesting to us in the lack of rainfall, the lack of water access, the lack of hydration in our forests, the lack of native birds, the lack of native plants, the lack of endemic plants that grow only here on Kauaʻi — *lehua makanoe* [a shrub that is part of the primrose family [*Lysimachia daphnoides*]) that grows in Limahuli, the *kiele* (gardenia [*Gardenia augusta*]) flower that is known to grow in Hāʻena and Wainiha. Her name, *kiele* is significantly known to grow in Lāʻauhāʻelemai in Wainiha — these things, *loulu* (native fan palm [*Pritchardia*]), *mokihana* (special native tree found only on Kauaʻi [*Pelea anisate*]), *maile* (treasured native twining shrub [*Alyxia olivaeformis*]) — are all being neglected by our community and only kept and preserved in place by a handful of our *kanaka*. And that is only because the access to funding, or the access to resources to sustain an *ʻohana*, is very limited to only a handful positions. That is the reality that we face today. Not enough of us even give to care. We go to all these other *ʻāina* and try to put our two cents in those places, yet the community that lives right there, that has been there for generations, has no say or have no participation in what it that they themselves know best that *ʻāina* needs — whether that's *makai* (toward the ocean), whether that's *mauka* (toward the mountain), whether that is in the *kula* (open land, field) where we are right now.

So, I come into this space with a lot of respect, a lot of humility, and a lot of honesty. Because like we talked about earlier, the education that we are feeding to our communities is avoiding or not touching enough on this idea of *hoʻokanaka* (to be/become A Kanaka Maoli- to embody Hawaiian values), and how we do that. There are so many avenues to do that. The first thing is you have to know yourself. You have to know what your gift is, what are your talents. You have to know who you are, who is your *ʻohana*, what lineage of greatness do you come from.

As I shared earlier, my *ʻohana*— master fishermen, master weavers, master *hula* practitioners, masters in *kahuna*, *kahuna lāʻau lapaʻau* (herbal medicine practitioners), *kahuna haipule* (priests/priestess of prayer). All of these things. And even the bad exists in all of our families. But to know that these gifts and talents were passed down to our *ʻohana*, to us — and yet, if we are brutally honest, most of us do not perpetuate that as a consistent part of our lifestyle. Why? Because we're constantly being aggravated by the Western metrics: to provide for a family you need this, to provide for our families you need to have accolades, you need to have a title, you need to earn the credentials to be a *kanaka*. That is not the way of our *kupuna.*

And the saddest thing is that those of us who make the time to fight for the things we truly desire to see, protect, conserve, and perpetuate — again, a handful. Why? Because it's extending ourselves beyond our capacities of our *mana* and of our *ola* (life, health), because we choose — beyond our 9-to-5, 8-to-2, 8-to-3-hour jobs — to make *ʻāina* important in our life, to make it something worth fighting for. Not everybody can commit to that. Some of us have *ʻohana* and children. Some have more than one child in the home. For some, there are no *makua* in the house.

There are so many youths right now — we're talking about the cultural impact — so many young teenagers, we're even talking about the influence of media and phones and electronics — do not have *makua* in their home when they come home from school. Where *tūtū grandma, tūtū auntie, tūtū uncle*, who physically are not well, physically have ailments, physically are in pain, have *maʻi* (illness), are trying to perpetuate and then take on this *kuleana* (right, responsibility, privilege) to *hānai* the next generation. And we're seeing the impact: is that a lot of young people, young *kanaka*, don't have respect for *ʻāina*, don't even care enough. There's no reason to care. Why? Because they are not taught their *moʻolelo*. They're not taught what is their tie to that *ʻāina*.

Yes, they love it. We never question the love that is there for *ʻāina*. We never question the love that is there for our culture. But how can they identify with something if they don't interact with it? How can you say, that is mine; that *pōhaku* (stone) right there — that is my *tūtū* or my uncle, that they could go to that *pōhaku* and give a *hoʻokupu* (offering) to that *kai* (sea). Why? Because their *ʻaumakua* (ancestral guardian spirit) would come and visit them and at certain times of the year they would go somewhere else. How do you make those *pilina* (connections)? And it's not just *pilina* — it's the *pili pu ana*, the act of combing and weaving together, combining all these *kumu ʻike* (source of knowledge, teaching knowledge), sources of knowledge, all these stories to a place. Things that are ours, not something we hear from somebody else, something that is truly us, but from our *ʻohana*, and act upon that.

And then, what does it take to get to that point and act? Because you're standing in front of opposition. Who is the opposition? The first one is us — us toward each other. *Kanaka* is horrible to one another. Why? Because there's this envy, and it's part of colonization, I believe so — but it is also a choice to be that way.

KH/PK: We're all trying to fight, talk about position, we fight to be at the top. Most *'ohana kanaka* — their *makua* or their *kupuna* didn't graduate from high school. Some didn't even pursue higher education in college. And if they did, they couldn't finish because they had *keiki*, they had to go work. So, the bigger thing is — we know in our economy that the military is the highest, and it's a fact, is the highest employer to all of Hawai'i. After that comes tourism — tourism is number three. Then it's first responders — firefighters, police, nurses, doctors, hospital personnel, then it's tourism.

KH: If they [military] bring in the most money, where is all that money going to? And again, talking about initiatives, why are they not spending money to clean up their mess? And that goes back to the cultural impact, because they've already impacted us — not beyond repair, but they have. The soil is polluted because of the easements they have. They're allowing all these high industrial corporations to use the land and do what they please — pesticides, herbicides — and killing our *'āina* and that gets into the air and water. That's why we had that whole bill [referencing Kaua'i County Bill 2491, passed in November 2013, by the Kaua'i County Council to regulate use of pesticides and genetically modified organisms (GMO) in agriculture]. That bill was asking for the county or state to tell the community when they would be spraying the chemicals in the fields, because it was poisoning the schools that are located not too far from where those companies and their farms are. And that is why the cultural impact — they've already impacted us. The damage has been done.

KH/PH: So, all we're really looking for and asking, not even asking, we're telling them; "You guys have the funds, you guys have the personnel, you guys have the money so use it for good." Because in the end, it's only benefiting all of you — including them, because they live here too. You're literally telling the world; I like poison myself; I want to kill myself; you're inadvertently saying you want to kill yourself, thats what your doing, because you know what is happening, and to ask deaf, blind, and stupid. I ask the scientist, I forgot what his name is, the *Haole* guy that just had retired. What's his name? He's short. *Haole*. Old man. He worked there for 37 years. He's a scientist. Oceanographer. Milimili knows who I am talking about, you ask him, he'll know. He told me about the clean up because I looked at the data, and you're telling me 100 feet from land. Seventy thousand feet below sea level. No, no, 100 feet from land is their missile range of how far they are supposed to be. And this is no BS. So, you telling me if something is happening in international waters, then you are not going to shoot further than 100 feet? So, that's BS, you know

what I mean. They just have to be transparent, and they don't want to be because should the truth come out, there is real data be publicized that they are the bad guys. And it's not about being right or wrong. You made the mistake; you chose to be ignorant. You chose to continue to do all your missile testing and launching. All that metal and debris, all kinds of chemicals you have in there, definitely terrible, and you don't want to go clean it up? Why? Is it harmful to you if you go over there and clean it up and touch it? Is it like a Chernobyl thing? Commonsense. So, you rather just leave it there, because you think the saltwater is going to take it all away? Or the channels, are they going to channel elsewhere? Or the currents will take it to Japan? Or the waters are going to redirect it because you're *Moana* (character for the Disney Movie, Moana), I don't know. And so, they could not answer our questions. I am asking simple questions. "So, when have you ever cleaned up? Oh, you have not cleaned since day one, okay. Are there any initiatives to go clean it up?" "No." "And then, you are telling us all these great ideas about *kuleana*, it's your *kuleana*, if you make the mess, you got to go clean it. Whose *kuleana* is that? mine? I pay you tax dollars. We pay you for security. CIA, all your essential offices up there. Don't we pay you tax dollars to serve and protect, so serve and protect."

KH: And so, solutions look like this: collaboration with community; having access to all the *wahi pana* (culturally significant places) that they are occupying illegally, and restricting us from; they should allow community to go onto PMRF — there should be a special admissions process; waive the fee because we deserve to pay nothing; limit the personnel to how many you can bring in a group, that can be all waived because our *keiki* need to know that these are the people, and this is the *hui*, that are doing all these things, this is where they work at, this is what they do here. You want them to fight, you have to show them what they are fighting up against. Because we don't deserve to pay anything. Limit on group size, of course — that can be worked out. Because our *keiki* need to know these people and this *hui* (group, organization) that are doing all these things. This is where they work. This is what they do here. You want them to fight? You've got to show them what they're up against.

PH: Because honestly, half the battle is people say they understand what we're up against, but they really don't know. You don't truly know until you get into the *hana* (work). But why wait till somebody's about to get arrested? Why wait until cops are called? Why wait until DLNR (Department of Land and Natural Resources) come down.

KH: Or harassment or retaliation?

PH: Why wait for it to become an ugly thing between two parties?

KH: Get ahead of it.

KH/PH: No, work together so that the solution is — instead of constantly being we have to show acts of protest to get our point across — that you act on the part you already know. Because they're not stupid. And that's the other thing — they're not stupid.

PH: If we truly believe we are as smart as we say, it's the modern 21st century, 2026 — then let's truly be conversing at that same caliber and level. If you're a professional, then let's speak professionally. This is not going to work for the perpetual future of an island community. Maybe in a continental state like the United States of America, it can work, because you have a lot of ground you can avoid. You can zone off area so many feet in a circumference from a place that has high toxic chemicals. What I am saying here is like the whole thing with the pipeline, the *kanaka ʻIlikini* (Native American); that is going directly into their waterway which is the main river that runs through all the states on that side of the continent. Yes, it's a problem. You may not drink from that water every day, but it does affects all the *ʻāina* that it touches from up to down, because water flows, *kahe ia i lalo* (water flows downward). If we're thinking: is this a new idea? It's not. It's not a new concept; it's not a new problem. But we are getting more problems — problems we didn't foresee coming as soon as they are. The ocean is rising. That is a natural phenomenon, it happens year-round for us, we are in this tropical area of this *mokupuni*, in this *honua* (earth); we know this as *kanaka*. But are things escalating to a point where we're having a high percentage of degradation in our native environment? Yes.

KH: We don't want to end up like Maui and go into drought.

HKA: I just came from Oʻahu and I have pictures of my yard.

KH/PH: Right. It's terrible what is happening because they do not have any running rivers, or water coming from the mountain to *kahe* (to flow) into the *kai*. And it's still there — there's so much

reconstruction that can happen. Diversion of water and fracking of water because they wanted to make the H1 and H3 [freeways on Oʻahu]. For whom? The military, come on. I mean, we're talking about the same history, we're talking about the same place. All we're saying is let's not avoid the issue. Let's get ahead of it. You already stayed behind because you chose to avoid all these generations. Because why, you think we're stupid? Because you think we don't know? Of course, we know this. Every fisherman on the North Shore notices what's happening. Our *limu* (seaweed) in Keʻe — it's not growing. It's not as plentiful.

HKA: *Limu kohu* (soft edible seaweed [*Asparagopsis taxiformis*])?

KH/PH: We are known for our *limu*. All of Koʻolau, *moku o Koʻolau* (district of Koʻolau), all of the North Shore — we are known for our *limu*. It is abundant. It used to be. But now it's not. Why? Because they're throwing all the *kemikala* (chemicals) chemicals in the water. Doing all these kinds of testing and diverting our *iʻa* (fish) from returning home and living within our *kāheka* (pools) and our *kai*. And the *ʻauwai* (irrigation ditch). And then you have commercial fishermen that you guys allow. And then you're allowing all these private investors and developers to go and *ʻoka* (purchase) and purchase acreage of land that should be used for propagation.

KH: We are known for our *limu*. All of Koʻolau, *moku o Koʻolau* (district of Koʻolau), all of the North Shore — we are known for our *limu*. It is abundant. It used to be. But now it's not. Why? Because they're throwing chemicals in the water. Doing all these kinds of testing and diverting our *iʻa* (fish) from returning home and living within our *kāheka* (pools) and our *kai*. And the *ʻauwai* (irrigation ditch). And then you have commercial fishermen that you guys allow. And then you're allowing all these private investors and developers to go and *ʻoka* and purchase acreage of land that should be used for propagation. And then youre allowing the kalo farmer to go farm kalo that is all GMO because why, because there are not enough *momona* (healthy and fertile land) in the aina. And they did all of this on purpose to take us to make us reliant on them. To provide us the food we eat, the work that we need to *ʻoka* (pay) for our living and every means of transportation. So, the power is with them. We get power too. But if they so choose, they could. And that is the facts is that every time a kanaka, a lahui chooses to address the issue and try to get ahead of it, there is retaliation. Theres ʻino (bad), because no man wants to be proven wrong. And a prideful man like them, like that entity of the military they instill pride and fear. Their practice is not from *aloha*. They initiate they from the get go, pride and fear, pride for USA, fear of who, USA.

How are they going to work in harmony with us? That's not going to work in harmony. That takes you to recognize that your way is not the way. And what we're showing you, is that you have *kanaka* who thrive in our *Pae 'Āina* because they choose the right people to work with them, they make *'ohana, lāhui*, and their community a priority, they choose to educate. We're lucky to have them — but that's a small percentage of the whole *pae* (everyone, all KANAKA).

PH: That's not even including the ones that cannot live here anymore.

PH/KH: All we're asking — it's not even an ask, it's a telling — '*auamo kuleana* (burden the responsibility). What does that look like? It looks like: shut up, pay attention. Like our *kupuna* tell us: Shut up, *pa'a kou waha* (shut your mouth). *Ho'olohe me kou pepeiao* (listen with your ears). *Hana me kou lima* (work with your hands.) *Huli kou lima ilalo* (Turn your hands downward, meaning do not ask for something with your hands facing upward). Provide us. Don't ask us. Initiate. Anticipate. Military tactics: initiate and anticipate. What is the next move?

So, you did all these meetings because you thought — what? You already know where we're going to come from. You guys know our *kuana'ike* (perspective, position). You get expertise, not just one person, the anthropologist. You have years of history to look at how we operate. You know. That's why you're successful, because you thought you could overthrow everything. But we're not dumb. And they need to stop.

You can show us on the news. You can make us into antics, whatever — optics — you can do all that, fine. But if you know me, you know that's the same me on there. Same me that goes home. Same me that shows up to work. Same me today, tomorrow, yesterday, forever. Hopefully, I will get a little bit better, you know what I mean. I look a little cuter and stuff. It's a game to them. But it's not a game to us. Because this is our *ola.*

When you look at your family and you already know that the statistics show that — one, two, three — grandma, *tūtū uncle, tūtū auntie*, all going *hala* (pass) before I will be a *kupuna*, before I get white hair. When you look at that, that's a problem. And to treat that as normal, and they accept that — that is even more *kaumaha* (grief, sorrow, heavy). And for us not to pay homage to *kanaka Ni'ihau* and all that they've done for our people, for *'ōlelo* — we don't talk enough about them. It is because of them that we are thriving in our *kula* (schools). Why we have *makua*, grandparents,

and *keiki* all being able to converse in *ʻōlelo Hawaiʻi* in the same household — that was never even the goal to begin with, I mean it was, but it wasn't like real until now. We wanted that and dreamt about it. Of course, we fantasized about it. That is our reality because of them. So, why would you not treat them like the people they are meant to be — for us, they're our *piko* (center origin for our ʻōlelo Hawaiʻi)? And that is not how they are treated. They're not given all of the opportunity, and they are not given all the accolades. They should be.

PH: You look at all the podcasts — kudos to them because of modernity, right? They are learning how to navigate the economics of today. But honestly, talk to the ones who wake up every morning and take their kids to school. Talk to the ones who wake up, go to work, come back home, and still *pule* (pray) with their *ʻohana* every day, every night; go to church — that's the ones you talk to. And I think it's like — for us, because we grew up choosing and knowing at a very young age who we were and who we wanted to become and who we were meant to be — and it all goes back to *Ke Akua, mahalo Iesu* (Heavenly Father and thanks be to Jesus Christ). Her and I were brought up in the Church of Jesus Christ of Latter-day Saints. My great-*tūtū*, she converted to that before she passed. And for my family — and there's a lot of complexity in that history too. I went to BYU Provo, Utah, and everything, okay. I know the history — but for me, it doesn't conflict. My faith doesn't conflict with who I am, because it is simultaneously one and the same.

If we believe in how we think of our *kanaka*, in the whole traditions that we have — if we believe in *piko*, we believe in *ʻuhane* (spirit), we believe in *moeʻuhane* (a vision usually in a dream). Our spirit knows each other. I don't even need to know your name, I don't even need to know who your mother or father is — but just our coming together in one space, seeing eye-to-eye, our *ʻuhane* knows one another. Why? In Tahitian, *wairua* is spirit. Why is it that our *wairua* connects us so? Because we chose this. We chose to come into this world as *kanaka*. We chose to be of this lineage. This *ʻāina* is us. It's not separate from us. No matter wherever else we go, we take that *ʻike* (knowledge) with us. But at the end of the day, we have a people. We have a *one hānau* (sands of birth, birth land). It is our *kuleana*. And it's not just to the place where the place you were born. Yeah, I was born on the east northshore side, grew up my whole life there — only to come to find out that my *kūpuna* are buried in those sand dunes right there in Polihale.

HKA: Polihale.

PH: They showed me, they said, come, this is your *kūpuna*. I walk down to the burial ground and I'm flabbergasted. I'm *pū'iwa* (in awe, startled). Just like all my hair sticks up on my neck. Just amazed. Because why? This is your *'āina* too. Then to find out back in the day, how did they come to this *'āina* — before Kekaha was as it is in Kapa'a, it was covered in *wai* (water) for the rainy season [referring to the historic swampland]. How did they come across from the other side of the mountain? The people who lived in Hā'ena would come across the mountain, bring down with rope their *wa'a* (canoe), and *wa'a* (paddle) across that *'āina* to get from one place to the next. Do you see that *wai* today? No. Did you even know that? If you grew up in this current generation, would you have known that that place was filled with *wai?*

KH: *'Ōpae* (shrimp), *i'a*, it was a swamp.

PH: Known for that. That *'āina* was *kaulana* (famous) for that. You wouldn't even dream of it. Why? Because you cannot see it.

HKA: I know. It's Kekaha. There's a lot of water now. I was like, oh, it's coming back.

KH: But they don't know what to do with it because the natural pathways flood easily. Everything is all flat. So, when we had the rain, when it was pounding last week, it just trapped right there on the *'āina* and made big puddles.

HKA: It still looks like a lake over there.

KH: Yeah, yeah.

HKA: I was going towards Polihale this morning before the interview, and I was like, oh, there it is again.

PH: It's *nani* (beautiful). Yeah, it's *nani.*

KH: With all this rain, it's probably the greenest those mountains have been in a long time. But I think, you know, when we're talking about all these things, all the opposition we face — honestly, the solution is with us. And it starts within our home. But the education we teach to these children is

so vital for them to figure out what are their gifts and what are their talents — makes it that much harder for them. And if you're already absent as a parent in the home, that is one more nurtured factor that brings the difficulty level of them understanding and finding what are their gifts, and what are their talents. It makes it that much harder for them. And you see all the troublesome things that come out of it.

PH/KH: We just need more access, really. Access to the *ʻāina*. We need access. We need initiatives, people to be there to *kōkua* (help, assist). — every time they do educational groups to come out, and to work the *ʻāina*, there are projects that the do — whether it's cleaning a *loʻi kālo* (taro pondfield), planting *kō* (sugarcane), or just cleaning the *nāhelehele* (weeds, undergrowth) on the side of the walkway — that's what needs to happen so they can see the value in going back to the *wahi pana* that are filled with *moʻolelo*. And then they understand the concept: we're going here because we're going to *mālama* these *iwi kūpuna* (ancestral bones); or we're going over here because we're going to clean this little patch it used to belong to so and so *tūtū kane*; or we're going here because this is a *wahi kaulana* (famous place) where they used to grow *lehua* (ʻōhiʻa tree flower [*Metrosideros macropus*, *M. collina* subsp. *polymorpha*]), grow *maile,* or grow *makaloa* (perennial sedge plant [*Cyperus laevigatus*]). We're going to these places, and that is the access we need so that we can show the *keiki* that these are resources.

KH: It's not like we're looking to treat everybody like you're the enemy. But if you stay as you are, you are the enemy. If you choose to change and buy into this idea of *laulima* (cooperation, working together), of *kākou* (all of us together), of *lāhui* (community) — and you truly go above and beyond — because you should. Above and beyond, you're not just providing access, you're providing resources. Resources look like tools. Resources look like, maybe transportation. Resources look like *kānaka* to help facilitate what *mālama ʻāina* is. It requires all those pieces so that we can start to show that there is momentum. Because right now, there's none.

Every school should have access to the *wai*, to create *loʻi kalo*, to farm, to be self-sustained. That is what we need. If our kids can't do that at home because mom and dad don't have time — then they need to come to school and learn. And then it helps reinvigorate this idea of being independent. *Niʻihau I Ke Kiku Ola Mau, Aloha La, Aloha E, Niʻihau is known for its independence, to be self-sustaining, to provide*. Their *ʻāina* is *momona* because they stay in the parameters of our customary practices. And what we're realizing is — there are no parameters. They chose not to follow that.

Not because they never know. Don't come here and tell me, you never know. That is BS. That is bull lie. You know, and you chose not to follow. And the question should have been: why do they have parameters like that? Why can't we just keep the *wai* (water) all for ourselves? Why does it have to flow from one *ʻauwai* from the *poʻo wai* (headwaters) or the *mānowai* (source of water and life), to the ʻ*auwai* to the *loʻi kālo*, and back out to the *kahawai* (stream)? Why? So that everybody can have access. It doesn't stay *paʻa* (permanently) to one family, to one group, to one *hui*. It's for *kākou*. It's for *lāhui.*

HKA: That's pretty much what I felt about our *ahupuaʻa* (land division running from the sea to the mountain summits so native Hawaiians might share in the different resources it provided) system was set up to do.

KH: Yeah. And you know, maybe it requires us to be a little more *hana* (industrious, working) too. So that's a change in our lifestyle as well. But it starts from somewhere. And you, as the military, need to start cleaning up your mess. Stop being lazy. Stop relying on all your devices, and all the statistics, and all the data collected — for your own gain — whatever process you been following, is it really benefiting you? It may be just you. But just you are not going to make sure you get beautiful beaches. Just you are not going to make sure that the Hawaiʻi you live in today will stay beautiful. The people you look at would be the same *kanaka*. Unless you want to live in a paradise that doesn't look like Hawaiʻi, then you go create your own fake island. They did that in Dubai. They can create their own palm beaches and everything, you guys get money.

No come here and think it's okay for desecrate and keep on disturbing our *kupuna*, who is us. Just remember, you're going to die too one day. You're going to *hoʻi i ka ʻāina* (return to the land). You going become *ʻāina*. And who's going to take care of you? You're like somebody come and dig up your father and mother's *iwi* (bones) to build their mansion — you would be okay with that? I don't think so. That's the reality. They did that already though. So, what are you going to do now? You're going to bring all that *ʻohana* that you desecrated all their *iwi kupuna*, and you are going to get resources for them. What does that look like? That is a conversation between you and the *ʻohana* — *hoʻoponopono* (the process of conflict resolution- to correct; to put in order). What about the *iwi*? Don't leave it like that to be desecrated. Give them back their *iwi*. Go through the proper protocols. You don't know what the protocol is? Anthropologist, direct them to the person who knows how to do the protocol. Go to the *ʻohana*. Because that's theirs. That is the solution. That's

step one. And there are a lot of steps after that. But step one, you know who they belong to. You know whose *ʻāina* you're on. You need to go and reach out to the *ʻohana* and start figuring out how to fix the mess that you just made. And don't tell the *ʻohana* to fix it. That's not their *kuleana* (responsibility/obligation). That's your *kuleana*. And in there, I'm sure there are things they need, there's some way to make that a collaborative effort that is beneficial for both parties. And then you know what the *ʻohana* going do? They'll go back to their community, their *lāhui*, and be like: this is what we did; it was super *maikaʻi* (good); I was a little skeptical; but through the process and continued support, this is the outcome.

KH/PH: Cultural collaboration. And then they start to see the value of what we do.

HKA: [HKA referring to TD] It's like what you guys did over there with the reinterment — the *iwi kūpuna*, the crypt.

TD: Yes. The *Lua Kupapaʻu ʻO Nohili* (the burial vault of Nohili) — that was erected before I came. But I understand that the *ʻohana* wanted — we have shoreline. As we talked about earlier, the beaches, the waters continue to rise. Our beaches erode. And we have *iwi kūpuna* (ancestral bones) on our shoreline that during high tides and king tides they reveal themselves. I physically go out and monitor those beaches. The Navy has an agreement on what treatment — in 2011, that was signed. And so, there's treatment and preservation in place, that's always the priority — always. That's number one, preservation in place. Second, if it cannot be preserved in place, you have to call the *ʻohana* and talk through what treatment looks like.

From that time in 2011, they had voices at the — I was not there — but at the Navy they had voices that continued to say need a location to reinter these *iwi kūpuna* when the natural coastal erosion occurs — we want them to go to their *moena* (resting place). That was why they created in 2019 the Lua Kupapaʻu ʻO Nohili. Since that time, they wanted to honor that *ahu* at summer solstice. So, from summer solstice they would honor the *iwi kūpuna* there, and if there was anything that resulted, replace that. Some of their *ʻohana* members took classes from other — because we're always learning, right? Sometimes we don't know everything. And so, we go to classes, we go to other *kumu* and we seek to educate ourselves. *ʻOhana* members went to *kumu* for *Iwi Kuamoʻo* (genealogical bones program), that program. They had classes about that and connected with that group and learned some things and said, "We need to fix the *lua*." Because at that time, it was just

like a shoebox with a bottom. One thing they had to do was remove the bottom. And then removing the cap every year was interrupting, and they didn't want to do that any longer.

So, in the time that I've been here, that information — that was new *ʻike* that they took in. And they took it upon themselves, and the Navy got support from the command to get a local stonemason to help. It took a lot of collaboration is what I am getting at. We didn't just go — this next phase that we had to do — we had to fix the issue and then collaborate. It wasn't the first time, or the second time or third, there were different renditions of how it was supposed to look. But they did the rededication to Waiapuaʻa Bay, formerly Majors Bay. And there were lots of *leo* (voices), voices saying: why do we call it Majors Bay? Who is that major? Why is that significant? So we went into the research, and the command — and the Navy was okay with this — to establish and give back the name to Waiapuaʻa. And we put Waiapuaʻa there. At that naming ceremony there was Peleke Flores — and Kalani Flores flew in from Hilo, I believe, he was present. Uncle Kunane Aipoalani was there. They all went to go visit the crypt — continued to talk about what they see for its future. They decided on a [new shape for the crypt], a circle because it's a *piko* — the area. They wanted it not to be a square [its former shape], which was the first rendition, but a circle. So, the collaboration in that area produced what we have now, that people come to.

And I'm one of the reasons I'm here today — 100% to hear and listen, but also to add input when I can. As the archaeologist for the installation, people come to me for requests to come to the base as well as all the other administrative things I may be doing, or other projects I may be working on. I would love to work with you on a future visit with the *Kanaka* schools, and we can talk more about that. We also have Kaulana Mossman, who is the community planning liaison officer [at PMRF], her engagement. She specifically furthers external community engagements beyond our borders — she's another touch point. And then our public affairs officer, Jonell Kaʻohelauliʻi. So, we've been working on things. Recent activities we've had include working with Ke Kula Niʻihau — we worked on a visit, but the rains shifted some of the plans, and we did end up going out to Kekaha Neighborhood Center for Kuʻi Ka Lono.

I am here to listen and to engage. *Mahalo nui* (Thank you very much) for your *leo*, your voices, because that is where I don't know everything and everyone's voices matter. But I do want to share — because I've been listening — one of the things that has been coming up is the request for the Navy, for the military to clean up their messes wherever they be. There were comments about it,

and we heard this from multiple public meetings about ranges or anything that is put into the environment for cleanup, that has been a strong community concern that has been raised in different areas within the different military installations. And as I am learning, I'm taking this back to the team as I understand. I have had to engage — there is so many divisions in the Navy — there are a lot of experts in the Navy. You have talked with some. I have talked to some. Clean up is a big [concern], everybody asks us about cleanup. My understanding of military munitions and cleanup so far — I am not an expert on it — my understanding is in certain ranges the Navy does have a program for cleanup. The Navy also has a program for when an installation is no longer needed or to be in use, and that's called BRAC (Base Realignment and Closure). There is a Range Safety Council as well. My understanding is in some of the other areas, but this may not apply to all places, but in some places, there is a Range Sustainability Section, and when I spoke to them about cleanup and what is the feasibility about cleanup — range cleanup does not happen until a range has been closed. That means that certain activities are no longer needed. This is me trying to educate but also listen and provide a little bit more context — one, I hear you, and the community's desire us to cleanup and be more proactive with cleaning up their spaces that are being used. I wanted to just educate that there are programs out there. I'm trying to do my best to contact them and to understand more of what that looks like. But I am hearing that for certain ranges, if a range is active, they do not move forward with clean up until that range is closed.

KH: Which in this case — shut it down, right? Is that what I'm hearing? They have to shut it down so that it's inactive, clean it up. And that's why they haven't cleaned it up — because they don't plan to shut it down. Right, that's what I heard.

PH: Well, that range is never going to not exist because of where we are and where PMRF is logistically located.

KH: That's an excuse. Okay, I'm just going to say that. It's an excuse, because you guys know, you guys plan, right? You plan when you're going to do your tests, your missile testing. There's a gap of time from when you actually do it and when you don't — to clean. So, you go tell the people who told you that bull shit, sorry, I'm just going to say that. And for feasibility ….

PH: If they can find the Titanic, they can clean up the missile range rubbish.

KH: I would probably — I don't know how you're going to work your magic — but as long as that is their response to you, then you, you're the liaison to message to the rest of us, it's not going to be a cute picture. And that's just from *ao ao* (side of) *kanaka*. We've been tolerant. And you're *kanaka* too, so you understand that part.

Let's keep it real, she's young, she's just coming into this way after these years of desecration. I understand you are walking into a situation because it is your job. I can look at it from the viewpoint of this is not all you, but because you are in this job title with the military. Yes, it might feel like the whole world is on your shoulders to make it right. But that is why, the more you advocate for support from the people who are here, who have the best interest and not their own ill-interest because people can say stuff like, "Clean your shit up." It can get really ugly, really fast, and that is not helping nobody — because we are living two extremes — it's either yes or no, or you're going to do it or not do it. It's a military tactic too, you're either the enemy or you and me are on the same team — so you're ally or enemy — in this predicament that's been the normal, that's been the constant.

Based on what they say, that's been the normal. So, I don't know — you've been in this game, you've been doing your *kuleana*, collecting data, interviews for how long, *'anakē* (aunty)?

HKA: About seven years.

KH: So, everything we're talking about is not all new information.

HKA: No.

KH: It's the same information.

HKA: Right.

KH: From every site you've been to, right so that probably a starting point, so every site youve been at, every report you've collected — why are you not referring to all of that? Because it's the same issue. Why aren't you using the data that already exists to support that? It's not maybe, it's we have

to. Or, how soon? Because that response right there — if it gets me riled up, it will get everybody riled up. And we want to stop operating from a deficit mindset because we've been operating from deficit for so long, we have, and it's tiring. I'm young and I'm tired. Because I see I'm sad — first I'm sad — because I see all my *tūtū aunties, tūtū uncles*, all the *makua*, all the families who are struggling because they no more what they need.

And honestly, it's better to be the black sheep, to stand alone, than to stand in with the crowd — that's my go to. And all I say is, you've got to stop making excuses and challenge them. Like, whatever meeting you're in, girl, wear red, get your hair in a boom-boom, put that *lei* on you girl, and challenge them. Because they need to be challenged. We're challenged every single day to be *kanaka* — why not them? They don't care because they don't see the same — we don't share the same value system, we don't. They don't value what we value. You could talk to one man in perfect English, perfect, and still, he doesn't understand what you are saying, because what you value, what he values and what she values, are two different things. So, the question first is, what do they value? And if they can't answer that question, I don't know what to tell you. We are looking and operating from a deficit mindset. We are trying to get out of the fog and to stand on solid ground. And if that means we're all hunched over, flat on the ground— at least we're there together. It would be worth it. That's something worth dying for. So that you know the next generation coming after you doesn't need to worry about polluted water, doesn't need to worry about where they're going to get their maile lei, doesn't need to worry about where they're going to live or who's going to take care of them — because they have everything they need to be self-sustainable, to provide and thrive.

PH: And our *ahupua'a* is not going to look the same —

KH: The *ahupua'a* is going to change — so stop looking at boundary lines, because that's going to change. We learned that from the big floods in Hanalei, Wainiha, and Hā'ena — the whole landscape changed because of landslides, floods going happen. You're *hale* (house) not going to look the same. The boundary line is going to change. But what's not going to change? Our culture. Who we are as *kanaka*. The values don't change. We are who we are today because the value system that we all want to protect and want to perpetuate is the same: which is *aloha*. That's the only thing that separates all of us as *kanaka* from everybody else. It's not just the word. It's not just the I love you, hi and goodbye — no. *Aloha* is perseverance. *Aloha* means, to your last breath, the

last gift of breath of life you're willing to give it without a second thought because you know it's being done for good.

There are people who are willing to do that so that we can perpetuate and thrive as *kanaka*. They would. And the first people would be our *kūpuna*— just like Mauna Kea. They would be the first to say, ill clean it, send me. You're young, you got plenty of years to go. I'm you're strong, I can walk, I can, I can bend over, I can dive, I can swim — send me. But why would we do that when we have technology? There are machines that can do it for us, come on. All it takes is push the button like you are on a plane —playing call of duty, make the robot move, pick up the *ʻōpala* (trash), throw it in one of your Navy ships, pile her up, and do something with it. You guys know recycling —

PH: You guys stay in 137 countries.

KH: If guys have to build a Chernobyl dome to put all the chemicals inside; go do that. We are past the point of conversation; we just want action. You know what I'm saying? Walk into the room, what is your plan of action? You have a plan of action, what is step one? Okay, where am I included in the step? Do I have to participate? Okay, I'm coming with step two, *hiki nō* (can do). Plan of action.

PH: It's not hard in the sense that we've all lived here, we are all living life. We come from families that have lived a lot of life. We know our family members, and their parents, and their parents' parents. The journey that they've had to go through so that we could be here today. So, it's not a matter of the source of ʻ*ike* (knowledge, insight, wisdom) — it's right here, it's right within us. Why are we scared? Okay, ask the bigger question: why are our *kanaka* scared?

KH: Because they feel like they don't really know enough.

PH: They don't have the higher education.

KH: Inadequacy.

KH: They feel like they're not going to understand. They're going to walk into a room — da, da, da, da, da … the finality da, da, da, da, da … the data shows that there is a regression da, da, da, da, da … the expectancy da, da, da, da, da … oh, there are outliers. They are not going to understand none of that, they rather just not — deficit mindset. It's not their fault — because they're scared. And why are they scared? Because of scare tactics. Military scare tactics. That is generational trauma. And we're trying to get the *lāʻau lapaʻau* (healing medicine) to *hoʻokuʻu* (to clear up, to release) it.

KH: *He maʻi, he lāʻau, he lāʻau, he maʻi* (Sickness come, there is medicine, there is medicine for the sickness).

PH: That is what we're trying to do.

KH: Fix your *koe* (congestion, phlegm) — whatever [KH making a sound] E! E! you've got, there's a *lāʻau* for that.

PH: Our *kūpuna* shouldn't have to lay down their life for us — those days are done. We have already learned from that. They need to *hoʻokuʻu*, whatever it is that's stopping you — and *aloha no return*. My Uncle Kula Shumacher taught me that — he said, "*Hele maau* (many travels) and *aloha* no return." That is all I'm saying. If that is the response from the Navy, if that is the number of meetings and people you have to talk to just to get to *hanohano* (honor) and *mālama iwi kūpuna*, girl, something's wrong with the system. And if they value you because of who you are and what you bring to their organization — same with you *ʻanakē.*

KH: Don't let them treat you — girl.

PH: What you bring to their organization, how they treat you and what you share and what *hana* you do — it is sufficient, and you have *mana* to bring to that.

KH: Believe it the first time. If they're being *puni* (deceitful) then they're *puni* — it's not that you cannot work with *puni*. There is a way to that you just have to address it from that perspective, right? If somebody is being *puni*, you just have to —

KH/PH: Okay, you're *puni ala* (deceitful), thats okay, but can you please go cut the *huli* (top of taro used for planting)? You can *mahalo*, there you go. Re-advert them from their *puni ala* state and make them go *hana* (work, be effective). That's a *kumu* mindset — Come, come pull weeds. This is your cross-fit workout. The end, girl, get real down to the ground and *ʻoki* (cut) her, *ʻoki* her. We're *kumu*, so it's our *kumu* mindset too. Haumāna first, always. This *kumu* action is like, how do children learn? If you got to take it down to children, you have to show them. "You see that rubbish over there — go pick up the rubbish." "Why *kumu*, it's not mine." "Go pick up the rubbish, go, go, go, doesn't it look more beautiful now that there is no rubbish on the ground?" And that's what we call *mālama ʻāina* — and what is *mālama ʻāina kākou* (what is caring for the land everyone) — that means we must pick up our rubbish. That's one definition to *pai papa maalaʻo* (encourage kindergarten class). And if they [kindergarteners] can learn the *haʻawina* (lesson), why can't captain, why can't commander, why can't a sergeant, whatever the titles are — expertise this, expertise that?

***** KH/PH *māmā* (mother) enters the room to use the restroom*****

KH: So amazing — you see this line of teachings? *ʻAnakē* did we answer all your questions, I'm so sorry.

HKA: You answered all the questions, I mean, you went through all of the practices through your *ʻohana* — *mahiʻai* (farming, cultivation), *kahuna pule*, *lawaiʻa*, and you went through your concerns. [Not to mention your kanaka perspective and immersion into the culture in your practices, especially in the Hawaiian language].

KH: Lots of them. Don't worry — if you want me to repeat I will. I am not scared of no man; I don't care what title you've earned. The only *kanaka* or person I'm scared of is *Ke Akua* — because the one who gave life can take it away, and we must use our *ola* here on earth for good.

KH/PH: And the other thing too Miss Tara, another thing which might be helpful: you know how they have a team? Girl, get your team.

TD: Working on it.

KH: Demand the budget so you have a team. And you know why — it's one setting you up to fail for you to *ʻauamo* (carry the burden) all of that. Honestly, if I had to look at it from a business standpoint, one person to oversee that whole highly congested, highly trafficked area, inclusive of military occupation and daily usage — that's a lot.

***** KH/PH *māmā* (mother) leaves the room *****

TD: Are there any recommendations —

KH: Girl, you are the one in the office — You see how they roll up — okay, let's take that meeting for instance, I don't know how it's done at other meetings — but when I walked into the room, there were a lot of people.

PH: Girl, you had committees of committees.

KH: So, they have their teams, right? You're one part of that many, many, many — not use. If they have their team, what you need to say to them is that you need a cultural collaborative team to *mālama* all that *kuleana* and to help support them — and that's a key word, help support them to do the right thing so that this can be a collaborative effort. Collaboration is you talk I listen; I talk, you listen; we're talking about is going to the same goal. The first step is, we need to include more *ʻelele* (representatives, messengers) from the community that live in this *ʻāina*, who are willing and able to come to our *hālāwai* (meetings) and participate in cultural collaboration meetings — boom — that's us speaking the same language. What is this goal going to mean? This is us truly reaching out to community, enacting community outreach, having community liaisons come in with us at our home base, which is the PMRF office, to discuss the matters on the viability of each area of that lease, from Kōkeʻe all the way to Mānā; which actually goes around Mānā to the other *puʻu* (peak), Nuʻalolo — all of that area. That's a lot of *ʻāina* to cover. Yeah, to Mākaha, that's a lot of *ʻāina* to cover.

And what needs to happen — if they showed up with their whole team and it's just you — how does that make sense? You're already in a losing battle. You get all of this blah, blah, blah, and I'm not trying to dumb you down sis, it seems like it just doesn't make sense — one through 13 — one

through 35, no. Tell them, demand it, you need a collaborative team of community to *mālama* this *kuleana*. Why? Look at how much *ʻāina*. So that we can do right by the people. Why should you take that on by yourself? That's not yours, that's not only your *kuleana*. It's not fair to you at all. Because who's going to take the downfall of that from them, whatever they say and do publicly — it will come down on you. That's not fair. It's better to say it like this, there is this *kanaka,* this *wahine* (women), this *ʻohana,* and this *ʻohana* that I work with. This is our *hui* (group). We all *mālama* this *kuleana* of *ʻāina*. We all work together, to work in collaboration with the military to make it right. That visually, to me, looks like collaboration. Looks like *holomua* (progress, moving forward). Looks like *kākoʻo* (support, solidarity)

PH: And what needs to happen — if they showed up with their whole team and it's just you — how does that make sense? You're already in a losing battle. You get all of this blah, blah, blah, and I'm not trying to dumb you down sis, it seems like it just doesn't make sense — one through 13 — one through 35, no. Tell them, demand it, you need a collaborative team of community to *mālama* this *kuleana*. Why? Look at how much *ʻāina*. So that we can do right by the people. Why should you take that on by yourself? That's not yours, that's not only your *kuleana*. It's not fair to you at all. Because who's going to take the downfall of that from them, whatever they say and do publicly — it will come down on you. That's not fair. It's better to say it like this, there is this *kanaka,* this *wahine* (women), this *ʻohana,* and this *ʻohana* that I work with. This is our *hui* (group). We all *mālama* this *kuleana* of *ʻāina*. We all work together, to work in collaboration with the military to make it right. That visually, to me, looks like collaboration. Looks like *holomua* (progress, moving forward). Looks like *kākoʻo* (support, solidarity).

KH: And that is from the *Bibala* (Bible), their *Bibala*; there will be rumors of wars, wars of wars on this planet, before *Iesu* (Jesus) comes back. Girl, it's about to get more terrible than now. It's better to get ahead of it, than to wait for the stuff to go, poof.

PH: You get *ʻāina* too at home, where you stay, Oʻahu?

HKA: Mmhmm.

PH/KH: There is a lot of *ʻāina* over there. There is a lot going on, on Oʻahu. There are a lot of titans over there. They're in the mountains over there. They got all their stuff in the mountains — in the

kuahiwi (mountains). Okay, let me come through the tunnel safely. We know, we're not stupid. Pearl Harbor, Schofield, Kāneʻohe base.

HKA: I been on all of them.

PH: I believe.

KH: It's not about being nice — it's not about feasibility. The best option is the *pono* (correct, right, moral) option. The *pono* option is never going to be the easy one. It's going to be the costliest for them — dollar, dollar, dollar, ching, ching. It's going to require you to step out of your comfort zone. Let's not be a master of our faith, let's leave the mastering and all that to *Ke Akua*. Let's be about our business, and our business is *hoʻōla* (give life, live) and *e hoʻi ka piko*. If not us, then who? Everybody, you guys want to help? No, okay, that is what I thought. Then there decades of this, we did all the *kūʻē* from the '90s and the '70s — Kahoʻolawe all these things happened. And then there was this degradation of momentum — then Maunakea happened, that was another resurgence of *mana*. Not just to us but from outside looking to us. Japan — Janet Jackson, yeah.

KH: If we all *mālama* to be one family, because we are one human family, then if our desires are right, and if it is a righteous desire of ours as a people, people will support that. Why? Because they want the same thing. We all want to live a healthy, loving, not *puni*, real life. You know, we want to be able to struggle and still get back up again. Not struggling, and we lose a leg, we lose an arm, and we get amnesia, whatever, all this *maʻi* that be coming up with our *kanaka*. No, like other things such as GMO. All these colonial issues, factors. We want to be able to, when we weak we have *alu* (room, space). Because our *kanaka* doesn't have *alu*. Everyday we try to perpetuate a version of *paʻa* (security, steadfastness, solid). We *paʻa*, we are good with ourselves and our families. How solid is it for the perpetual future of our families? If we *make* (die) tomorrow, will our *ʻohana* be okay; will they be able to drive; are they going to have the skills and knowledge to live; or is it going to feel like hell? That is the thing that drives her and I. It is a blessing if you believe it to be a blessing to know things. Why do we know things? Why do we have *ʻike*? We live it, we breathe it, and we teach it so that it lives forever. It will not live forever if people don't teach it. Nobody is going to understand the power of *kūʻē* when the OG (old gang) crew goes — Uncle John with Hōkūleʻa from Kauaʻi, *Anakala* (Uncle) Nainoa with *waʻa* (canoe) — all the Protect Kahoʻolawe ʻOhana (PKO), all of them because they are on their exit — what are we going to perpetuate? Are

we going to be able to do it, taking it to the next? Because taking it to where they have taken it is not the goal, we have got to go forward. Forward is going to look a heck of a lot different with the trajectory and the speed of how things are evolving. We didn't have to worry about warfare with computers, digital currency, fake ID — people stealing your identity. We didn't have to worry about that 30 years ago. But at the speed at which things are escalating and evolving, we as *kanaka* have to take back our *mana* in that power of evolution.

PH: The innovation part is where the collaborative [effort] should happen.

KH: Military, they have access to all the high-tech technology from every part of the world. I don't have to see it to believe it, I know it. Skills — computer science, engineering, all of that has a part to play. It can be a very positive thing. If we present it that way. Because if all we are saying is get the hell out of here, and then what? Who gets all the education? Where is all the technology? Not us. We can ask for it, we can do partnerships, but that takes time. Use what you have, make it work, and make them do their part. Not — pay you $10,000 on the side, you are going to be quiet, eh? No worry, six months from now, I'll pay you another $10,000. Okay. Check you in later. Alright, all good? All good. *Maikaʻi* (good), their fabulous. Money is a huge conversation for us *kanaka* too. People are working two to three jobs — that's the norm now. That used to be abnormal when I was ten years old, that was abnormal. Now it's to survive.

HKA: We're going to end this right now. I'm going to stop the recording. *Mahalo.*

*****Interview ended with PH saying a beautiful prayer in the Hawaiian language*****

ORAL HISTORY INTERVIEW

With

Dennis Eguchi [DE]

April 21, 2026

Kekaha Neighborhood Center, Kekaha, Kauaʻi

By

Hannah Kaumakamanōkalanipō Anae [HKA]

Lahela Kaulukukui [LK]

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HKA: *Welina Mai Kākou* (Greetings everyone).[1] Today is Tuesday, April 21st, 2026. I am Kaumaka Anae, and beside me is Lahela Kaulukukui, and we represent International Archaeology, LLC. We are conducting interviews in support of a cultural impact assessment for the PMRF (Pacific Missile Range Facility) and KPGO (Kōkeʻe Park Geophysical Observatory) succeeding lease and easement areas. We are at the Kekaha Neighborhood Center on the *mokupuni* (island) of Kauaʻi, and I am here with Uncle Dennis. Uncle Dennis, can you state your full name?

DE: Dennis Eguchi.

HKA: And do I have your permission to record this interview?

DE: Yes, you do.

HKA: *Mahalo* (Thank you). This interview encompasses a series of questions, and I would like to say *e kala mai* (excuse me) in advance if I seem *nīele* (ask too many questions, inquisitive, curious) or *mahaʻoi* (brazen). It is not my intention. It's just for the purpose of this interview. Okay, so let's

[1] Most Hawaiian definitions were sourced from Ulukau: Hawaiian Dictionaries online (https://wehewehe.org/gsdl2.85/cgi-bin/hdict?l=en). In some instances, the subjects supplied definitions and in others, the interviewer provided a translation.

begin. Uncle, what is your *pilina* (connection) to Kekaha, maybe even PMRF, or maybe even the broader *Kōkeʻe* area or even the broader Kauaʻi?

DE: So, I belong to an organization in Kekaha, and it's called E Ola Mau, E-O-L-A-M-A-U. It's a non-profit, and we do anything that needs to be done in Kekaha. So, we make it a point whenever there's a new captain at the base, we go as E Ola Mau to introduce ourselves and ask the captain, whoever is there, that whatever we're going to have, we'd love them to participate. For example, for Easter, we did an Easter egg hunt. We put out 2,000 eggs and we invited from the whole island, but we only put out the posters from Waimea to Kekaha. But we also do it at PMRF. We love the participation from PMRF. But we do all this kind of stuff to try to keep in touch with whoever is in charge, only because the people on the west side also like to go to the base for subsistence fishing. Certain base captains close the base down. We try to make it so that the base understands how important it is to be able to get to the resources. We participate with whatever they want to do, and we invite them to whatever we do. So that's part of the interaction. This island is so small that everybody knows who the major players are on this island. Because I fish, I have a lot of fishing friends right across the island. I have friends down Hanalei, Kīlauea, Hāʻena, and the go-to person would be Hanalei Hamasua. So, if you want anything down there, you call him and he'll set it up for you. Or if you need anything, like for example, Thomas needed some fish for his crypt [reinterment structure]. I think it was seven species, and they couldn't get some fish. Thomas couldn't get one *ʻāweoweo* (red fish with large eyes [*Priacanthus*]). So, I passed the word out, and I got fish from every community all the way down as far as Hāʻena. Yeah, everybody sent me *ʻāweoweo* I gave them to Thomas. This island is so small, and if you're in the fishing community, it gets even smaller. Like how you guys [Hawaiians] have put things in like *ahupuaʻa* (land division). I'm actually not in favor of that kind of stuff, and the reason being is that today, nobody stays in their own *ahupuaʻa*. Because, you know, old days, maybe yes, you're restricted. Today, if you like *limu kohu* (a prized edible seaweed [*Asparagopsis taxiformis*]), *limu kohu* is the best from the North Shore. So where go? You jump in your car, and you pick up *limu kohu* over there. So today, like I said, it's hard that they set it up that way, and some Hawaiians like the idea of that. I'm not in favor, only because nobody fishes within their own area anymore. Everybody goes wherever the resources are today.

HKA: And uncle, when Thomas needed the fish for PMRF [unclear acronym — possibly PMRF or a cultural organization], it was for the crypt, yeah? Were they rededicating the crypt? To reinter more *iwi* (human skeletal remains)?

DE: No, they were opening the crypt. Something about the Hawaiians believed in having, I think, seven different types of fish or something.

HKA: Fish for ceremony, yeah?

DE: Yeah, and just so happened, they couldn't get one particular one.

HKA: Yeah, right, the *ʻāweoweo.* The good fish. But uncle, your *moʻokūʻauhau* (genealogy) — your parents, were they from over here?

DE: Well, my parents were born and raised on Kauaʻi. My grandparents came from Japan.

HKA: Right, and so your parents were living in Kekaha?

DE: Yeah, my parents lived in Kekaha. My grandparents lived in Kekaha. My grandfather and grandmother ran a piggery. One ran a piggery, one ran a charcoal business, the other one made tofu.

HKA: And all in Kekaha?

DE: No, they were all kind of closer to the mill, because they all worked for the mill, and then that was a side job.

HKA: So, they worked for the mill, and then they made tofu, charcoal, and had the piggery. I've heard so many people talk about the piggery in Kekaha, and there were mangoes by the piggery.

DE: Well, the piggery actually was outside of Kekaha. It was between here and the base. They had everything — mangoes, watercress, papaya, bananas. Yeah, that's why, unfortunately and fortunately, myself and my cousins, when we were growing up, male or female, we never, ever could participate in sports, especially in high school, because the family came first and we had to work on the farm. We're not just working on a farm; we're helping make and sell tofu. We're doing charcoal, going to cut wood, you know. But in a way, when we were young, we used to kind of complain among each other, and now at our age, we think back and we go, what a blessing, because all of our family came so close

HKA: And then you still were making tofu up until the 2000s, right?

DE: No, I still make tofu.

HKA: You still make it?

DE: Yeah, but the price of the beans became so expensive that I just stopped. So, I watch now.

HKA: And this is soybeans, and where do you get the beans from?

DE: A wholesaler.

HKA: Here on Kauaʻi.

DE: Yeah, yeah. I buy it by the 50-pound bag. But my thing was that I'd make the tofu only when we had funerals. So, you know, local Japanese, they'd get together, and I'd make one tofu block [DE hand gesture] about this big, and I'd put all the *tsukemono* (Japanese pickled vegetables), the different types of cabbage, *koko* (vegetable used in tsukemono) and different things all around it. But then I did it for one family because they were close, and then I got asked and asked and asked, and it was endless. So, at one point, I said, you know what, because it takes plenty of time. I've got to soak the beans, pressure cook the beans, grind the beans, strain the beans, and yeah.

LK: And then, that's like the *haupia* (coconut pudding) in the Hawaiian side. Whoever makes the *haupia*, must make it all the time. Once you get good at something, then everybody wants it.

DE: Yeah, and the Japanese don't waste anything, so you strain the beans, and then the rubbish, they call it *kasu*, it's called *okara* (soybean pulp), and that's what they use to mix with vegetables and fry up. You don't see that anymore, already. And then, every so often, if I made enough tofu, I'd make *inari sushi* (cone sushi with fried tofu pockets), because that's tofu, just deep fried. I was taught, right, but then I asked all my cousins one day, do you guys know how to make tofu? Yeah. Have you guys ever tried making it? Let's go, let's make it. I brought all my stuff to one of my cousins' house, and we started making it. They said, "This is the last time we make tofu." Too many hours. It's not hard work; it just takes time.

HKA: Yeah, yeah. So, do you do it with the old style, like you get the grinder and everything with the basalt grinder, I seen a show of it when they were making it in Japan?

DE: I had a friend make redwood boxes for me, and then you put the cheesecloth inside, then you put the curdling inside, then you put them on and press the water out. I never invested in any special equipment; it was just basic. Yeah. But I also started making *natto* (Japanese fermented soybeans). You pressure cook the beans, you add this bacteria to them, and it becomes fermented. The Japanese used to ferment the beans and store them, like how the Koreans used to store *kimchi*. When they need food — but it smells something terrible. But you can go to O'ahu, Gyotaku (Japanese Restaurant) and they sell it on chips, and they put they put the curd beans, and they put *poke* (seasoned raw fish) on top. Some big thing over there. But believe it or not, I eat more *poi* (pounded taro made into a pasty consistence; staple for Hawaiian diet) than anything else. I do not eat rice. I eat potatoes once in a while, but I like Okinawan sweet potatoes. But *poi*, I eat *poi* almost every day. One of my friends goes to the *poi* factory, and the *poi* mill, they get.

HKA: Where Uncle?

DE: Waimea.

HKA: At Kaina's?

DE: You can get the *poi*, the one with no water inside.

HKA: The *pa'i 'ai* (undiluted taro)?

DE: Yeah. The hunters use that when they go to the mountains, right? My friend, I give him fish and he gives me *poi*. He tells me, "This thing is *'ono* brah. Hey, this thing is stuck on a spoon." He tells me, "The hunters used to take it to the mountain because the thing lasts." For some years I have been getting it from different people, I get plenty from the local taro guys over here. But depending on the variety, some *poi* is terrible. I know the difference between the varieties now.

*****DE phone rings he ends the call*****

Anyway, this whole island, like I said, interaction with the base — everybody is close, tight. We get guys that go to the base specifically to spin-fish close to Major's Bay, and they do for *moi* (the threadfish [*Polydactylus sexfilis*]). We get guys from all over the island coming over here because we've got one of the better places. And that's the reason why we need to keep close ties with the people at the base. We now have some planning people at the base in good positions that can advise the captain about the boaters when they're fishing, about the people going to the shore. You've got to have that, otherwise it's going to be like O'ahu. Okay, next question.

HKA: What is the name of your parents?

DE: Yoshitaka and Shigeko Eguchi.

HKA: Yeah, and so you guys were living here for a long time in Kekaha. How many years have they lived here?

DE: My parents lived, well, my dad lived in Waimea Valley, way up at the top, but my mom lived in Kekaha most of her life, and I've been here all my life.

HKA: You live over here in one of the old lands in Kekaha, like, one of the Kilauano lands?

DE: Well, my grandparents bought it from them, and then we ended up buying from my grandparents. All this area over here is all considered Hawaiian homes. But then all the lands around me, my neighbors and everything, there are no more Hawaiians over there. They all sold. I've got *Haole* (Caucasians), Japanese, Filipino, all different nationalities already.

HKA: And uncle, you're a fisherman. You want to talk about your fishing in the area?

DE: Okay, so at one point I used to fish wherever there was a lee, in other words, calm water. I'd fish from Līhuʻe Airport all the way down to Nāpali Coast. But I was young then. My fishing days would be like, I'd get up at four o'clock in the morning and take the boat down to Nāwiliwili and go fish, then come home, process the fish, and so on. But as I got older, I realized that my passion for fishing was taking up too much time. So now I only fish in the areas from, for example, Port Allen down to Nāpali Coast.

HKA: All this area too yeah, and what do you fish for, Uncle?

DE: Basically, I fish for ʻ*ōpelu* (mackerel scad [*Decapterus pinnulatus* and *D. maruadsi*), but a certain time of the year I'll go and catch *onaga* (Japanese name for Hawaiian red snapper) and ʻ*ehu* (ruby snapper [*Etelis carbunculus*]), the deep-sea fish, and that's because I give them to people. Other than that, I chase *ʻahi* (yellowfin tuna [*Thunnus albacares])* once in a great while, but I prefer to just concentrate on ʻ*ōpelu*. About 60% of my catches are sold, but 40% of my catches are donated — to weddings, funerals, birthdays. Almost every part of here, my fish is there.

HKA: Uncle, did you work for somebody? Were you employed?

DE: Yeah, I worked for the telephone company for 34 years.

HKA: What was it called over here?

DE: It started off with Hawaiian Telephone, and then it went to GT&E (General Telephone and Electronics), and then when I retired, it was Verizon. I worked for 34 years. I spent plenty of time on Oʻahu for training, because out of one year, the phone company would invest like four months

of training. And once that was done, if they put in new equipment somewhere, they'd relocate you. I spent plenty of time on Molokaʻi and Lānaʻi, because they put the equipment there and I'd go over there. I made plenty of good friends in all those places. I realized what kind of resources every island gets. If you like deer, Maui, Molokaʻi, Lānaʻi, that's the place. If you like *kole* (dark surgeon fish [*Ctenochaetus strigosus*]), you cannot catch more *kole* than Molokaʻi. Kaunakakai, right out there on that flat reef, gets so much *kole*. I went there, I stayed with this guy named Clayton Ching, he worked for the phone company too. I borrowed his skiff for *kole*. I think I caught about 150-quart cooler, filled it up, and donated it to the community, because I'm not going to take them home, right? I'm not going to waste. So unbelievable. And *tako* (Japanese name for octopus), man.

HKA: Uncle, so your family did do planting, right? Did they have home gardens?

DE: I think everybody in the plantation community, at one point, everybody had one garden.

HKA: What did your family plant?

DE: Eggplant, string beans, Filipino beans, okra, some had *kabatiti* (luffa or ridge gourd used in Filipino cuisine [*Luffa acutangular*]) and squash. All the traditional vegetables, everybody planted. Not so many cucumbers, because those days they had fruit flies, so the eggplant would fare well. And then *ampalaya* (Filipino bitter melon), everybody had one garden. In fact, even I had gardens for quite a while. I was planting eggplants, because the eggplant can turn into a tree and still bear them. And I love squash, and I love *kabatiti*. Filipinos like that, but I love that, so I was raising that too. Over here, lettuce and that kind of stuff don't fare too well, because summertime comes too hot.

HKA: And so, when you guys had piggery, how many pigs did you have?

DE: They had upwards of 500 pigs.

HKA: 500 pigs? You guys were the major contributors for pork in this area.

DE: Us over here and the Kanashiros down in ʻŌmao. Between the two of them, they supplied the island. I worked on the piggery from when I was born until I was about 20 years old, maybe. They had the piggery for 50 years plus. I don't know when it began, but it ended about 1962.

HKA: They had the piggery before you were born. And Uncle, how many siblings do you have?

DE: I have two brothers and one sister. One brother passed away in a hunting accident. So now I have just one sister and one brother left. One of them is an invalid, so he comes back and forth from Washington to Kauaʻi, and my sister just resides in Washington.

HKA: And you got kids too, yeah?

DE: Yeah, I have one boy and three girls. Two girls live on the island. One lives in Maryland. The other one lives in Las Vegas. I have one grandkid from each one of them, just only one. Four grandkids, but only one each.

HKA: Hey, that's good. At least you get grandkids, Uncle. So, do you recall the days of the plantation era?

DE: Very much. When I was younger and we were being raised — these are the things that I remember — anybody that had a fruit tree, it was open to anybody in the community. If somebody had a certain type of mango tree bearing, everybody would just say, "Hey, so-and-so has mangoes," and you just go ride up. "Uncle, yeah, okay." Or lychee, or everything else, right? I lived in a plantation camp right in the back of the mill. Kekaha was divided: it was the Haole camp, the Haole camp was more of the supervisors; the workers for the mill — the Puerto Rican camp across the mill, and the Filipino camp. But as I got older, everybody just kind of integrated. Along with my friends, we'd go surfing. On the way home, whoever's home was closest and had food already prepared, we'd all go there and eat. I'd get home and my mother would say, "You're not going to eat? I cooked already." But that's how it was. And one of the biggest things I remember too was that anytime anybody had a party, the entire block would be invited, no matter what nationality. I grew up learning how to eat all the Filipino foods because we had Filipino neighbors and they'd kill pig, and of course I'd go there and help. I would never eat some parts because I had so much of that

when I was growing up. I got tired of pig feet, milk gut, and pig head. They sell everything and we get all that, right? That was all I ate, so nah. I grew up eating boiled green banana with cod fish, *pastele de hoja* (Puerto Rican tamales wrapped in banana leaves), all the Puerto Rican food, all the Filipino food, and all the Japanese food.

HKA: And everybody shared food.

DE: Everybody knew how to make it because they'd ask, you know, and everybody was willing to teach. The biggest thing to me was whatever fruits were available — lychee, longan, mango, whatever. A plantation community is very, very tight, in a sense where when I was younger, I went through two strikes. Okay. And we had to go to the soup kitchen. So, you go over there with your pot. It was very interesting because all the workers there would provide all the resources to make everything right. The hunters would go get *kālua* (underground oven cooked), the guys with fishery, of course, with all the shoreline fish — fried fish or fish soup or whatever. But it was always shared. All the kids I grew up with, everybody was friends. It's not like that today. You cannot find this today.

HKA: So different. So awesome. Are there any stories, any fishing stories that you've experienced out at PMRF?

DE: Well, at one time, the area outside of PMRF, the resources were just in abundance. When we get trade winds, the lee is from here all the way to the back of PMRF. The fishermen, if they're looking for calm water, they'll target that area. The resources back there, especially the pelagics — the *aku* (skipjack tuna *Katsuwonus pelamis*]) and *mahimahi* (dolphinfish [*Coryphaena hippurus*]) and *ono* (wahoo [*Acanthocybium solandri*]) — they're not as abundant as they used to be, because there's too much fisherman interaction and too many tour boats. Way too many tour boats.

HKA: All trying to go to Nāpali.

DE: They're all trying to make money too.

HKA: Do you know any fishing stories?

DE: When I was young, I used to be the bag boy for about four fishermen over here, because my dad owned a boat. He had four good friends. They were supposedly two of the best net fishermen on the island because they had really good eyes for the fish. I actually went with them a couple of times where they kept the fish in what I call chocolate water — murky water. I never learned too much from them in that way because they would catch so many fish, come up, and I'd come in the back with a bag. I can see reasonably well but not like them. I never got to actually spend much time figuring out how to look for the fish. They'd walk up along the beach, and maybe 30 yards away out on a reef, they'd stop and start fixing the net. I'm trying to look, right, but they're looking way out there. And dirty water, literally dirty water, chocolate, and they're fixing the net, and they're going down because they spotted a school, and then throw, throw, throw. And then I see the net jump up. I go, holy smokes. I got to experience fishing in the old style. One of them was actually from Niʻihau and came to Kauaʻi, and he knew Niʻihau very well. Once in a while we'd go across with him to Niʻihau and, oh my God, that's where the fish stay.

HKA: And what kind of fish were they catching in the net?

DE: Well, number one, they target *moi* Yeah. So, they go to *moi* first. Then after the *moi* they go for mullet and *uouoa* (false mullet [*Neomyxus chaptalii*]). After that they go for *āholehole* (young stage āhole, an endemic fish [*Kuhlia sandvicensis*]). Then they go for *manini* (common surgeonfish or convict tang [*Acanthurus triostegus*]). And then they go for *nenue* (chub fish, pilot fish, or rudder [*Kyphosus bigibbus, K. vaigiensis*]). But rarely ever *nenue*, because they target *moi* first.

LK: Did you ever have to count it, like in the Hawaiian way — like four, four, four — did they teach you a special way to count it, or about ceremony, like do you have to sacrifice the first fish for giving thanks?

DE: Never ever. Never ever. And two of them were Hawaiians. One of them was a Takahashi, and he came from Niʻihau.

HKA: Yeah. Wasn't there a Takahashi that was a *kahu* (priest, spiritual practitioner), bishop, or priest?

DE: Oh, that was Tom Takahashi. And that's who I used to fish with.

HKA: Yeah, because you used to have that kind of *kāhuna*, that used to do blessings for houses around here that had spirits inside.

DE: Yeah, he'd go do blessings, whatever. But what he was actually known for was that him and his wife — the wife would sing and he'd play the *plangana* (galvanized tub or pākini in Hawaiian, used as a musical instrument — washtub bass). And those two did almost every wedding ceremony in Kekaha. Literally. They both sang the Hawaiian wedding song, and that's what I know them for.

HKA: Oh, nice. Thanks for that, because I had some stories about him going and blessing some houses.

DE: Well, I ran across this lady — I helped with the food bank. Just this past Tuesday we had the food bank over here, and this coming Thursday we do them at my church. This lady came by — one Haole lady — and she said she was visiting, and she saw the food bank, so she thought she'd stop and get some stuff. She said, "Do you know where Tom Takahashi used to live?" I said, yeah, right down the road, right here, second street down on the corner, blue house. She said she knew the family very well. She spent so much time with him and said he was so spiritual. He helped anybody who needed help. He was very giving. He has two daughters left. One is married to a contractor. The other one is Latvina and she works for the county and she's still working. I'm 76, she must be 74. She's in her seventies and she's still working. She's healthy.

HKA: Good. And then uncle, do you have any concerns about these leases or anything?

DE: I know we have a homeless problem and every community has that. Unfortunately, we try to feed everybody if we can. Our church actually goes and looks for them. It's called Westside Christian Church, and Westside Christian Church works with E Ola Mau. We take food to the senior housing, the low-income housing, and a lot of the meals for the homeless — we go from Kekaha to Waimea.

HKA: Uncle, anything else you want to add?

DE: No, I talk too much again. You make me talk too much.

HKA: No, no, no. I love it. I love it. Oh wait, uncle — I want to talk to you about the *ʻōpelu*. What is your best bait?

DE: Well, it's going to be one fish product, and I cannot tell you which one. No, no, no. Because I get fish off the auction block, right? And so, whatever is the cheapest is what I buy.

HKA: So, this would have been a good day. You guys don't experience calm waters often. What is your normal fishing schedule?

DE: Well, my fishing trips now, because I try to fish not too far away — I leave my house at six o'clock and by nine o'clock I'm back in my yard. I *pau* (finish) fish.

HKA: Three hours? Nice. All out here?

DE: Yeah. Anywhere from Port Allen down to outside of the base.

LK: Any problem when you're fishing in front of the base? You have a relationship with the Captain so it's, okay? Do they know who you are?

DE: No. The base tower will let you know if you're infringing on an area where they have ops on. Rather than become a problem, if I see a military boat out there, I know from experience that area back, they're going to close it. So, I go someplace else. Why [not avoid it], you know what I mean? I just make sure I watch. And then, ever so often, I'll call the guys in the control tower and say, "Hey, you guys got ops coming up?" Like right now they're doing RIMPAC (Rim of the Pacific Exercise), right? But RIMPAC is way outside. If you are aware, then you're not going to have a problem. That's what I try to do.

LK: Do you know if they have a rule, like how many miles out is considered military?

DE: Well, there's no such thing as "considered military." It's either whether you're in state waters or federal waters. State waters go to three miles, and federal waters go to 25 miles.

HKA: So, since you go outside fishing, you are not worried about the inside fishing, yeah?

DE: Sometimes I fish right next to the shore, maybe from here to the house away. Because I've got to go where the fish are, right? Sometimes you get too many porpoises, and the porpoises will actually corral the fish and move them to shore. They can feed on them there. Then I've got to go where the fish stay.

HKA: How long have you been fishing, Uncle? How many years?

DE: Let's see. I started fishing at 25. When I was younger, I used to just be a bag man, and that was only on weekends. Otherwise, I used to only surf. At 25, I started figuring, you know what, I'm getting nothing out of surfing. So, I started going fishing. In those days we used to go catch *aku* and chase *ʻahi*, all the pelagics, the trolling fish. I did that for about 10 years. Then I joined Westpac (Western Pacific Regional Fishery Management Council [WPRFMC]). Westpac took some advisors to Saipan. We all went, and I got to meet guys from the Big Island that do only *ika-shibi* (squid tuna fishing at night with lights), guys that do only *palu ʻahi* (*ʻahi* line fishing using a stone and chum bag). I met guys from Maui that only do *onaga* or *ʻōpakapaka* (snapper [*Pristipomoides sieboldii, P. microlepis, Aphareus furcatus, A. rutilans*]). I became good friends with all of them. They were kind of old; I was the youngest of them every time, but we became good friends. They'd invite me to come out, and I'd go. Because I used to sell electronics for ocean trollers, I knew well about all the electronics. I'd go out on a boat, and ask them, "You know how to find the fish with this." "Oh, no, but I can see the bottom." "No, your recorder can see fish." They tell me, "What?" I said, "Yeah." So, I readjust it for them. And they go, "Oh wow." Then that guy calls his friend from another island and asks if they can bring me along. I used to go all over the place. I enjoyed it because I would be involved with fishing. I used to love to hunt too. That is how I got to the Leslies. If you do it and you, do it honestly, from the inside, trying not to get anything but meeting somebody new and becoming friends, it turns right around. They'd tell me, come out to Hilo, and we'll take you. Watch us go catch *ika-shibi.* [Uncle saying to his friends] "What, what is that?" You go out there, you put out these lights, you get this long pole with a gaff. As the squid swims by, you gaff them. Then you bait them, set them down, and the *ʻahi* comes to feed on them.

HKA: That's why you say *ika*, because *ika* is a squid, and *shibi* is the *ʻahi*.

DE: Yeah. And then *palu ʻahi* is where you get a stone, you put your *palu* (chum) on, you wrap it up, and you chase ahead of the porpoises. You go in front of the porpoises, you send a line down, you bust a rock, and hopefully the *ʻahi* will pick them up. They do that in Kona. Hilo side cannot because the wind's too strong. In my fishing career, when I started off, the boat at that time to buy was called a Radon. The Radons come out of Santa Barbara, and they're known to carry heavy loads at high speeds. Perfect for diving and fishing. So, that is how I used to go Niʻihau to dive. My first fishery was *ika-shibi*. I'd go nighttime, do all that. But we do not have plenty of *ika* like they have. But I realized that *ika-shibi* wasn't a good thing to do because when you catch, if you are the first to catch, you get chance at the market. When the fish is actually biting, everybody gets fish. I decided I'd stop the tunas and try only *ono* for a little while. I went up to the Big Island and learned from this guy named Robert Cabos. He was the best guy for catching *ono*. He used to go South Point, working the current line back and forth, but he had a trick. His trick was that he used live ʻ*ōpelu* — no lures, only live ʻ*ōpelu*. And then he'd throw *palu* (chum). I tried over here. Our *ono* over here run the drop off, over there they school, and it was different.

So, I went from *ʻahi* to *ono*, and then eventually to *uku* (deep-sea snapper [*Aprion virescens*]), and then eventually to *ʻōpakapaka*, and then eventually to only *onaga*. Each one took me about five years. I stayed in each fishery for five years each, because you cannot just jump around. If you jump around, you cannot market the fish. You have to be in a business when they call, yes, I have it.

HKA: Right. You have to be reliable. They expect you to have that certain fish.

DE: To sustain the market. Yeah, yeah. That's why everytime I jump to a fishery; I stay in that fishery for five years minimum. Then when the light went on about *ʻōpelu*, I went — forget all that. I want to go catch *ʻōpelu*. So, I'm the only one who has *ʻōpelu* in volume on the island. Other people go and hook, but I go with volume. And that's why I modified everything. I figured out what I had to do. That's why I'm productive.

Kai [Kahele] came over here a couple of times. When we get together, I bring *ʻōpelu*. And then of course he loves *gindai* (Japanese name for banded snapper or the Hawaiian name, ʻukikiki [*Pristipomoides zonatus*])— that's his favorite fish. I cook some *gindai*, anyway. We talk, and then he tells me, "How'd you get this ʻ*ōpelu*?" I said, "You know I net them." He tells me, "Miloliʻi

[Hawai‘i Island], we don’t catch ‘*ōpelu*, we catch, ‘*ōpelu*. I told him, ‘*ōpelu* this size over here, no more market. The smaller the ‘*ōpelu*, the tastier the *‘ōpelu*. I brought him this small size. Soak them in vinegar for about five minutes so the stomach bones start to melt. Then put salt, let them *miko* (seasoned in salt only marinate), and then deep fry them so you can eat from the head to the tail. He says, “Hey, this is *‘ono* (delicious)!” I say, “Of course.” He tells me, “We don’t catch this kind over there; we catch them big.” Because a lot of what they do is dry them.

HKA: They dry them.

DE: Right. I did dried ‘*ōpelu* for only about six months and I said, “No, this is too labor intensive.” And if you dry fish perfectly, yeah, the day you finish, you eat them — oh, so *‘ono*. But if you put them in an ice box or a freezer, the thing starts to dry out. When you eat them, the texture is not the same. I called up the guys in over there [Hawai‘i Island]. How much is one *ka‘au* (a basket full; *ka‘au* used to refer to a count of 40) for dried ‘*ōpelu* now? At the time it was $85. Now must be $200 I think. How many pieces? Depending on how big the *lauhala* (pandanus leaf [*Pandanus odoratissimus*]) basket. I said, $85 for how many? They told me the amount — 18 pieces. So, I go target the big kind, I go make and then dry them. The best way is sun dry. But it takes too long. I’ve got to sun dry them on this side, turn them over the next day, and I’ve got to watch the weather. So anyway, I started dehydrating them. Dehydrating is terrible. So instead, I put plexiglass on top of my dry box and put them out in the sun. If it rains, I just let them go. But I remember 18 pieces of ‘*ōpelu* for one small *ka‘au*, $85. I called up some guys, hey, you like dry ‘*ōpelu*? I like them hard-dried and to be able to peel it. I hard-dried them, but one fourth of the weight disappeared. I had to put more inside. And I was like, you know what? I’m over this. For myself, once in a while, I’ll make some. And I like the taste. *‘Ōpelu* has good taste.

HKA: Cause it’s a bloody fish.

DE: Yeah. But I learned how to make *‘ōpelu lomi* (a preparation of fresh salted fish). And *‘ōpelu poke* (salted fish mixed with other ingredients). Never mind the dried already. If I like good taste, I make *‘ōpelu lomi*. Oh, that thing is something *‘ono*, oh no man. *‘Ō‘io* (ladyfish or bonefish [*Albula vulpes*]) is good. But if you like the taste of *‘ōpelu* — put the salt, let them *miko*, open them, scrape them off with a spoon, put them in a bowl, mix it up, add my *limu kohu* inside. Perfect.

HKA: In fact, I just got *limu kohu* yesterday. I should have brought you some.

DE: No, I don't need, I get from this guy. I get it from Pila. I give them *ʻōpelu* and they give me *limu kohu*. But even then, they think they do me a favor and give it to me in a Ziploc. I normally take them apart, throw them in a jar, put a little bit of Hawaiian salt and stack them. The rest I end up freezing. But once you freeze *limu*, it's not *limu kohu* anymore. When you defrost it, it doesn't look like *limu kohu*. Yeah, I like putting them in jars with a bit of salt. Then it becomes like an appetizer. When I'm eating something, I've got to put some on the side and pick at it. Oh, I don't need stew nowadays, I can eat it in anything. I thought to myself, too much iodine. But yeah, it's good for us.

HKA: Uncle, is there anything else you want to share?

DE: Well, I think one of our biggest problems today is — and I don't know how you can resolve this because you guys are archaeologists — the newer generation for some reason just don't understand the value of hard work. I say that because St. Theresa [Parish], the Catholic school, we just had one carnival done only for one night. I went there to help. I go there, I look around — didn't go there for about three years already, but one of the guys called me to come and help — everybody there was involved with the church or the school for over 20 years, no more the younger generation. I asked, "How come no younger generation?" They said, "The school tells the kids they have to put in so many hours of community service at the carnival." The parents come up and say, "What is my child's shift?" "Oh, four hours." "How much are you going to credit my kid for that?" They write them a check, and the kids don't show up. So, they could only run it for one day, from 10 o'clock in the morning to five in the evening. A lot of them go from four o'clock in the morning to *huli huli* (rotisserie style) the chicken and so on. The people there were putting in 13-hour days, but no more relief because there aren't enough workers. I don't know how we're going to turn it around. It's not only the mentality about working, but the values. That's the problem. And even with all the Hawaiian kids, I can see where they're going already. Don't get me wrong, but I am going to tell you, okay. I good friends — because I go to the Hawaiian school right here, and I go to the one down there. Unfortunately, Hattie [the principal] passed away, so the husband runs the school now but he's *Haole* (Caucasian). He doesn't know how to speak Hawaiian like Hattie did, and it's not the same. I can see eventually it's going to get trouble. Over here they've got all Hawaiians, people that can speak all Hawaiian. The problem is that I go there and they come up to me and talk to me in Hawaiian. But I cannot speak Hawaiian. I can understand something, but I cannot speak. One

day Tia Koerte, the principal — I told Tia, don't get me wrong and don't get mad at me, but I'm going to be honest with you. My grandson went to Kamehameha School. Kamehameha School paid for University of Hawai'i and so on. We were fortunate. He knew how to speak some Hawaiian, because the *Tūtū* Māmā and *Tūtū* Kāne (grandparents, male and female), they speak Hawaiian — they came from Honolulu. But I tell her, now that he's in the real world, there's no more room for Hawaiian. The rest of the culture, the business culture, doesn't speak Hawaiian. So, these kids are at a deficit. They can speak fluent Hawaiian, but when they get into the real world, unless they can adapt and have the personality to function there, the Hawaiian [language] is not going to help them.

HKA: Hopefully they'll be bilingual. But I know kids nowadays, they're bilingual.

DE: Yeah. But plenty over here, they don't speak too much English because when they go home, the parents all speak to them only in Hawaiian. Because I go over there every time to different people's homes. Always in Hawaiian. I think to myself, oh man. Unfortunately, even the real business world. And they should be sending the kids and teaching them how to speak Chinese too; part of the Hawaiian culture, but Chinese too, because in the future, Chinese is going to be a dominant language.

HKA: Right. Yeah. There are places right now where Chinese is. And it's a hard language.

DE: They have different dialects, like Hawaiian. I think Mandarin is what you'd want to actually learn. I got relatives in the mainland, they actually live in Canada, and they sent the kids to Chinese schools. I asked them, "Why?" And they said, "Just look at the writing on the wall. The Chinese are going to own everything eventually. They already do already." But so, I like what our school represents. It's just that I can't see, because some of them speak such good Hawaiian, I don't know how to get them into Kamehameha School even. Our community under E Ola Mau, we give scholarships. All you've got to do is be born in Kekaha and graduate, and we'll give you two years' worth of money to go to any trade school. If you use it for college, well that's fine, but we would like somebody to get an associate's degree. We want a plumber, a carpenter, and an electrician. Get a trade. But the kids over there — 12 kids are going to graduate, only one goes to school. They did not elect to go to school.

HKA: Maybe things are going to change.

DE: Well, in the last couple of years, there's been a big movement — you guys are part of it, because you guys are Hawaiian — to go back to the old traditional. Okay. But you cannot survive in this world old tradition today. The Leslies do old traditional fishing. He calls me all the time only because I do not do traditional. At one time he was using nylon for the net. I never did use nylon. Everything is *suji* (Japanese word for monofilament) because the net is too heavy for me to handle alone. I'm by myself, right? So, from way back when, I started making net. He tells me, "Oh, how big the net?" I thought, oh, it's not how big the net is, it's how much fish can go inside. [I say,] "I am getting trouble right now because I don't use nylon, I use only *suji*." "No can, no can," he tells me. [I say,] "Can we just got to figure out how." He believes in cotton twine rope for everything, for tying. I don't use that kind of stuff because the thing absorbs water and tangles too quickly. I use plenty Japanese technology. When I tell him, he says, "Oh no, the thing hot on the hand." I said, "Yeah, but no tangle." Unless you actually keep up with technology, yeah.

HKA: You know, back in the days, if the Hawaiians had what is available now, and if it made it easier — they would use it. They worked smarter, not harder. They would be using what we have now. Hawaiians would ride a car instead of walk.

DE: That's why when Kai tells me, "What size boat you get?" I say, "I don't fish from a canoe." Because in Miloli'i [Hawai'i Island], they think that is the only way to fish, because get the outrigger and that is where they put the net — no. You know what I mean? So, Kai tells me, "Hey, I've got to come with you one day." You're not invited. No, no, no. But when I get close to actually figuring that I can walk away from it —

HKA: Are you going to have anyone take over for you, Uncle?

DE: I have one grandson that lives here now. He comes off and on. He's been with me for two years. Unfortunately, he's a pilot. Once he starts working in commercial aviation, he's not going to come anymore. He's not going to be able to. I taught my other grandson, the one that went to Kamehameha Schools — the problem is he loves music more than fishing. Both of my grandsons told me, write down the procedure, what you do. I said, "I cannot." Because every time I go fishing, the conditions change and I've got to improvise every time.

HKA: You got to take a video of you when you go out in different conditions. You know me, I can kick myself because I never did that for my father. And look at what I'm doing now. You know what I mean?

DE: Well, the problem is that not everybody can be a fisherman. You either got to love it or you don't. You've got to love it.

HKA: You got to be raised with it.

DE: Not only raised with it, but it has to mean something to you. For me, I love to eat fish — that's number one. Number two, it's a challenge. Because all fishing — *ʻōpelu* fishing is a Chinese fire drill. Everything has to go boom, boom, boom, boom, boom, and if you make one mistake, there went the fish. I like that because it's multitasking and I doubt if I'll ever get Alzheimer's. I've got to use my brain all the time. So, the next time you come to Kauaʻi, I was planning on trying to start fishing tomorrow. My therapist told me, "So what do you think?" I said, "Well, I wanted to go last week already, but I couldn't go. Something came up." He said, "Well, I never liked you go." I said, "I'm not going to ask you. When I come back, I'm going to say, eh, I went fishing." She tells me, "When's the date? I said, "Well, I've got to come back on Thursday to see you. So, I'm going to try tomorrow." But I'm going to be very smart about this. I'm going to go out there, enjoy the weather, enjoy the ocean. Normally I fish according to how many orders I have, because I donate a lot to my church and we give them away at the food bank. Some people come by and I've got a bag of *ʻōpelu*. They go, "Oh my God."

HKA: That's gold, Uncle.

DE: And my church, we give away Hawaiian salt.

HKA: Both of them is gold.

DE: Yeah. In fact, anybody offered you Hawaiian salt.

HKA: Yeah, Uncle I get.

DE: But I bet you don't have the kind of salt I get.

I got two Japanese friends that married Hawaiians. They got one salt patch. When they make salt, the salt comes out white. They wash them and wash them because they say, "No need to get the *lepo* (dirt) inside. Not unless you're going to add the *'alae* (red volcanic clay). But other than that, why should the salt be brown? Just because they made them in a clay bed. The clay is not brown — it's the red dirt from the wind that makes it brown." I give you one bag, just so happen I get.

HKA: Right. Okay, uncle, I'm going to end this right now. *Māhalo nui* (Thank you very much).

DE: [jokingly] Yeah, it's going to cost me more otherwise.

APPENDIX C: CONSULTANT BIOGRAPHICAL DATA SHEET

Biographical Data Sheet

Interviewer Name:
Date of Interview:

Participant‘s first name:
Participant‘s last name:
Participant‘s middle name (if applicable):
Participant‘s maiden name (if applicable):

Contact information:
Mailing address:
Town:
Island:
State:
Zip Code:
Email:
Phone:

Birthdate (year):
Place born:
Gender:
Citizenship:
Ethnicity:
Language(s) can speak:

Places Lived & When:
Currently living in:

Father’s name:
Mother’s name:
How many siblings? What is the participant‘s place in family (order of siblings)?

Participant‘s spouse?
Name of spouse:
Birthdate of spouse:

HAWAI‘I: 2081 Young Street, Honolulu, Hawai‘i 96826-2231 - Tel: (808) 946-2548 - Fax: (808) 943-0716 - E-mail: HonoluluOffice@internationalarchaeologyllc.com
GUAM: P.O. Box 22621, GMF, Guam 96921 - Tel/Fax: (671) 646-7552 - E-mail: GuamOffice@internationalarchaeologyllc.com

Birthplace of spouse:
Children (how many and how old):

Ancestors:
Names of maternal ancestors:
Location of where maternal ancestor(s) lived/moved?
Years maternal ancestor(s) lived:

Name of paternal ancestors:
Location of where paternal ancestor(s) lived/moved?
Years paternal ancestor(s) lived:

Education:
Elementary:
Intermediate:
High School:
Other (trade school/college):

Employment:
Previous jobs (title, dates, location):
Current job (title, dates):

Interests/skills/hobbies:
Religion:
Community/professional organization involvement (past & present):

What public emergencies or natural disasters have you experienced during your lifetime?

Is there anything specific you would like me to ask you during the interview?

HAWAIʻI: 2081 Young Street, Honolulu, Hawaiʻi 96826-2231 - Tel: (808) 946-2548 - Fax: (808) 943-0716 - E-mail: HonoluluOffice@internationalarchaeologyllc.com
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KPGO Archaeological Inventory Survey

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FINAL

ARCHAEOLOGICAL INVENTORY SURVEY OF THE NATIONAL AERONAUTICS AND SPACE AGENCY (NASA) KŌKE'E PARK GEOPHYSICAL OBSERVATORY (KPGO) LEASE AND EASEMENT AREAS, WAIMEA AHUPUA'A, KONA MOKU, ISLAND OF KAUA'I

[TMK: (4) 1-4-001:013 (POR.)]



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FINAL

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[TMK: (4) 1-4-001:013 (POR.)]

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Note: *In this report, the spellings and the use of diacritical marks (glottal stops and macrons) follow conventions issued by Pukui and Elbert (1986) and Pukui et al. (1974) with limited exceptions – spellings and diacritical marks are used as the original sources used them in quotations, titles, and proprietary names.*

Cover Image: *SIHP 50-30-06-YYYYY (TS-002) terrace (view to south).*

MANAGEMENT SUMMARY

Reference	Archaeological Inventory Survey of the National Aeronautics and Space Agency (NASA) Kōkeʻe Park Geophysical Observatory (KPGO) Lease and Easement Areas, Waimea Ahupuaʻa, Kona Moku, Island of Kauaʻi [TMK: (4) 1-4-001:013 (por.)] (Irvine and Mulrooney 2025)
Date	May 2025
Project Number	Pacific Legacy, Inc. Job Code 4209.01
Project Location	The National Aeronautics and Space Agency (NASA) Kōkeʻe Park Geophysical Observatory (KPGO) project area is located within a portion of TMK: (4) 1-4-001:013, Waimea Ahupuaʻa, Kona District, Kauaʻi Island.
Project Description and Related Ground Disturbance	NASA is proposing to maintain long-term use of the 23 acres of leased lands and easements for continued operation of KPGO after existing real estate agreements for these State lands are set to expire in 2030. No change in any use or maintenance of existing infrastructure is planned at KPGO, and no construction, renovation, or demolition of facilities is planned.
Project Area Land Jurisdiction	State of Hawaiʻi
Project Proponent	NASA and Pacific Missile Range Facility (PMRF) Department of the Navy
Investigation Permit Number	Fieldwork for this project will be performed under Pacific Legacy's Hawaiʻi State Historic Preservation Division (SHPD) annual archaeological permit, issued per Hawaiʻi Administrative Rules (HAR) §13-282. Pacific Legacy's current permit for the year 2025 is 25-11.
Agency	NASA and Department of the Navy
Project Area Acreage	23 acres
Document Purpose and Historic Preservation Regulatory Context	This archaeological inventory survey (AIS) is being completed as part of an Environmental Impact Statement (EIS) being prepared by the Navy and NASA to evaluate potential environmental impacts of proposed real estate agreements with the State of Hawaiʻi for PMRF and KPGO. This document conforms with NASA and the Navy's consultation with the State Historic Preservation Division (SHPD), including Hawaii Administrative Rules (HAR) 13-281 and Hawaii Revised Statutes (HRS) Chapter 6E. It also conforms with the Antiquities Act of 1906, the Archaeological Resources Protection Act (ARPA) of 1979, ARPA implementing regulation (32 CFR Part 229), National Historic Preservation Act (NHPA) of 1966 (as amended), NRHP implementing regulations (36 CFR 800), Native American Graves Protection and Repatriation Act (NAGPRA), Department of Defense Instruction (DoDI) 4715.16, and Marine Corps Order (MCO) P5090.2A.
Fieldwork Effort	Fieldwork was conducted from January 6 through 10, 2025 by Pacific Legacy archaeologists Emmaline Irvine, M.A., James McIntosh, B.A., and Mara Mulrooney, Ph.D. Fieldwork required ten person-days to complete. All fieldwork was conducted under the general supervision of Mara Mulrooney, Ph.D. (principal investigator).
AIS Results	The AIS resulted in the identification of two newly identified historic properties (SIHP 50-30-06-XXXXX, TS-001 and SIHP 50-30-06-YYYYY, TS-002). SIHP -XXXXX (TS-001), consisted of 17 features associated with NASA KPGO infrastructure. SIHP -YYYYY (TS-002) consisted of a post-Contact terrace, interpreted as a temporary habitation feature. SIHP -XXXXX and -YYYYY are assessed as not significant. No mitigation is recommended at this time for SIHP -XXXXX (TS-001). SIHP -YYYYY (TS-002) has been adequately documented and is recommended for no further work.

1.0 INTRODUCTION

Pacific Legacy, Inc., under contract to Dawson, conducted an archaeological inventory survey (AIS) of the National Aeronautics and Space Administration (NASA) Kōkeʻe Park Geophysical Observatory (KPGO) lease and easement areas located within Kōkeʻe State Park, in the *ahupuaʻa* of Waimea, Kona District, Kauaʻi Island [TMK: (4) 1-4-001:013 (por.)] (Figure 1, Figure 2).

The AIS covered a 23-acre project area/area of potential effect (APE) that is owned by the State of Hawaiʻi. The AIS was completed as a part of an Environmental Impact Statement (EIS) being prepared by the US Navy (Navy) and NASA to evaluate potential environmental impacts of proposed real estate agreements with the State of Hawaiʻi for PMRF and KPGO.

This AIS report conforms with NASA and the Navy's consultation with the State Historic Preservation Division (SHPD), including Hawaii Administrative Rules (HAR) 13-281 and Hawaii Revised Statutes (HRS) Chapter 6E. It also conforms with the Antiquities Act of 1906, the Archaeological Resources Protection Act (ARPA) of 1979, ARPA implementing regulation (32 CFR Part 229), National Historic Preservation Act (NHPA) of 1966 (as amended), NRHP implementing regulations (36 CFR 800), Native American Graves Protection and Repatriation Act (NAGPRA), Department of Defense Instruction (DoDI) 4715.16, and Marine Corps Order (MCO) P5090.2A.

1.1 PROJECT AREA

NASA's KPGO is located on a ridge within Kōkeʻe State Park. KPGO is one of the core sites for NASA's Space Geodesy Project (SGP), which maintains a global network of space geodetic observing instruments that utilize various observation techniques to collect geodetic data. NASA and the scientific community use data collected at KPGO to study ecosystems, geological hazards, sea-level change, water cycles, crustal-dynamics, and many other Earth science topics. Many of these applications rely on the long history and continuity of the geodetic data collected from the current KPGO location, which is within Kōkeʻe State Park near Waimea Canyon at an elevation of 3,600 feet. This location is isolated from radio broadcasts that would interfere with the sensitive measurements made by the Very Long Baseline Interferometry (VLBI) system. The location on the island of Kauaʻi is also critical for tying the Hawaiian Islands into the International Terrestrial Reference Frame (ITRF), which contributes toward improving positioning and navigation accuracy around the Hawaiian Islands.

Since 1961, NASA has operated KPGO to collect geodetic data. KPGO includes five site areas (Sites A through E), which are described in more detail below.

Site A – Former MK-74 Radio Detecting and Ranging (RADAR) Site
Site A is 5.3 acres in area and consists of four buildings and structures. Those currently enumerated are NASA Building 5539, NASA Building 5535, NASA Building 5534 and NASA Building 5536, which include technological library and flammable storage buildings. Navy assets include a former MK-74 RADAR that is currently used for storage as well as utilities and communication conduits that serve Mākaha Ridge.

Site B – Kōkeʻe Power Plant
Site B is 2.3 acres in area and consists of three buildings and structures, among them NASA Building 5540, NASA Building 1076/51/37 and NASA Building 1076/51/32. Navy assets include a diesel generator that provides backup power to Sites A, C, D, and E as well as hazardous material storage (paint, mechanical lubricating, and cleaning fluids), storage for power plant supplies and water, two 25,000-gallon diesel tanks, a fire suppression system, and an electrical transformer yard.

Site C – Kōkeʻe Communications and State of Hawaiʻi Facilities
Site C is 6.1 acres in area and consists of eight buildings and structures. They are NASA Building 5542, NASA Building 769, NASA Building 1076/51/39, NASA Building 1076/51/38, NASA Building 5541, one NASA Building to be determined, NASA Building 1076/51/33, and NASA Building 5544. Navy assets include communication systems, including a 200-foot free standing communication antenna tower and a 150-foot guyed antenna tower, a communication building that houses a transmitter, receiver, and network equipment that support various Navy, federal, and state/county systems, a NOAA weather radio broadcast transmitter, used for public weather information, as well as DLNR-managed facilities that support Kōkeʻe State Park, including a helicopter launch/landing area, maintenance building/storage building, pole barn, open storage yards/drums and vehicle storage areas, and small cinder-block shack.

Site D – Kōkeʻe Telemetry and RADAR
Site D is 6.5 acres in area and consists of eight buildings and structures. They include NASA Building 5545, NASA Building 5546, two NASA Buildings to be determined, NASA Building 1076/51/26, NASA Building 783, NASA Building 5548, NASA Building 1076/51/41, as well as instruments for KPGO, including a transmitter building and multiple antennas.

Site E – Kōkeʻe Park Geophysical Laboratory
Site E is 5.7 acres in area and consists of six buildings and structures. They include NASA Building 5549, NASA Building 1076/51/40, NASA Building 1076/51/29, NASA Building 1076/51/42, NASA Building 5550, and NASA Building 1076/51/30, including two main buildings housing equipment and administrative offices, two antennas mounted on tracking gears and footed in concrete, and several additional outbuildings/shelters and equipment storage areas. As with Site D, Navy does not have assets at Site E.

1.2 PROJECT DESCRIPTION

Navy and NASA are jointly preparing an Environmental Impact Statement (EIS) to evaluate potential environmental impacts of proposed real estate agreements with the State of Hawaiʻi for PMRF and KPGO. NASA currently leases or holds easements for 23 acres of land owned by the State of Hawaiʻi that is used for operations of KPGO. NASA has issued a Use Permit to the Navy for the use of portions of KPGO for radar, telemetry, and communications services for PMRF mission support.

The data collected at KPGO supports modern navigation technology such as Global Positioning System (GPS) that is widely used by the public, and is also used in scientific studies, spacecraft navigation, and the geolocation of Earth observations.

NASA is proposing to maintain long-term use of the 23 acres of State lands (totaling 16 acres of leased lands and 7 acres of easements) for continued operation of KPGO after existing real estate agreements for these State lands are set to expire in 2030. No change in any use or maintenance of

existing infrastructure is planned at KPGO, and no construction, renovation, or demolition of facilities is planned.

1.3 ENVIRONMENTAL SETTING

Soils in the vicinity of KPGO include Kokee silty clay loam (Figure 3), which is described as follows by Foote et al. (1972):

> This series consists of well-drained soils on uplands on the island of Kauai. These soils developed in material weathered from basic igneous rock, probably mixed with volcanic ash. They are gently sloping to very steep. Elevations range from 3,400 to 4,200 feet. The annual rainfall amounts to 60 to 70 inches. The mean annual soil temperature is 59° F. Kokee soils are geographically associated with Paaiki and Kunuweia soils.
>
> These soils are used for water supply, wildlife habitat, and woodland. The natural vegetation consists of ohia lehua, puakeawe, blackberry, yellow foxtail, koa, plantain, uki uki, redwood, and associated plants.
>
> **Kokee silty clay loam, 0 to 35 percent slopes** (KSKE) – This soil is undulating to steep and occurs on uplands. Included in mapping were some small, narrow areas of alluvial soils.
>
> In a representative profile the surface layer, about 8 inches thick, is dark-brown silty clay loam and silt loam that has subangular blocky structure. The subsoil, about 34 inches thick, is strong-brown and dark-brown silty clay loam and silty clay that has subangular blocky structure. The substratum is soft, weathered rock. The soil is very strongly acid throughout the profile.
>
> Permeability is moderately rapid. Runoff is medium, and the erosion hazard is slight to moderate. Roots penetrate to a depth of 20 inches or more, depending on the depth to weathered rock.
>
> **Kokee silty clay loam, 35 to 70 percent slopes** (KSKF). – On this soil, runoff is rapid and the erosion hazard is severe.
>
> This soil is used for water supply, wildlife habitat, and woodland. (Capability classification VIIe, nonirrigated; pasture group 12; woodland group 10). (Foote et al. 1972:71-72)

Conservation areas in the vicinity of the project area include forested lands with a wide range of tree species, including *ʻōhiʻa lehua* (*Metrosideros polymorpha*), *koa* (*Acacia koa*), *ohe kikoʻola* (*Polyscias waimeae*), *hala pepe* (*Pleomele hawaiiensis*), *hōʻawa* (*Pittosporum napaliense*), *kalia* (*Elaeocarpus bifidus*), *māmaki* (*Pipturus kauaiensis*), *loulu* (*Pritchardia spp.*), *ʻiliahi* (sandalwood; *Santalum paniculatum*), and the Kauaʻi *kauila* (*Alphitonia ponderosa).* Economically important plants that have been noted in the general area include *kokiʻo keʻokeʻo* (*Hibiscus arnottianus*), *maile* (*Alyxia stellata*), *hoi kuahiwi* (*Similax melastomifolia*), *mokihana* (*Melicope anisate*), *pōpolo* (*Solanum americanum*), and *pūkiawe* (*Leptecophylla tameieameiae*) (Handy and Handy 1972).

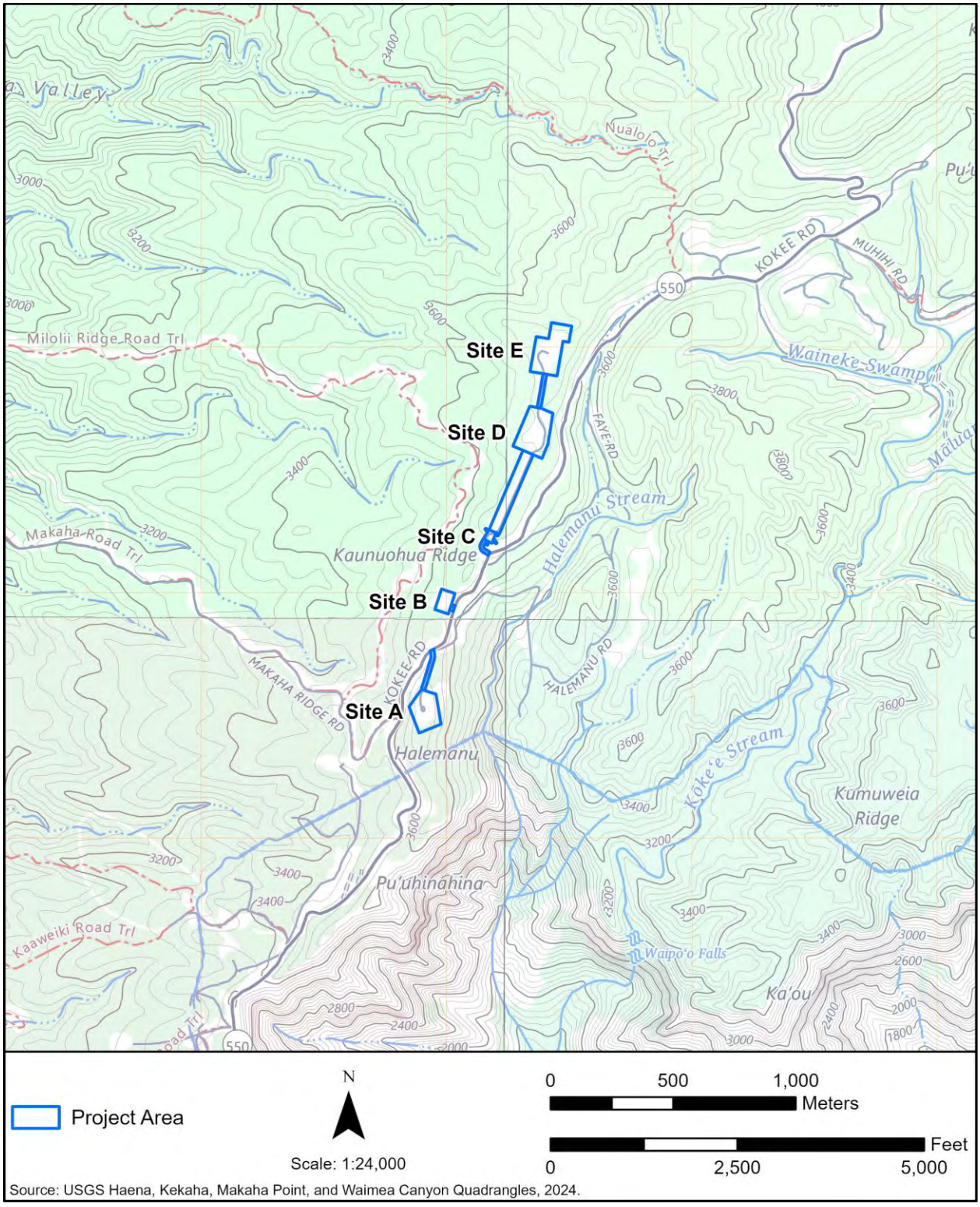


Figure 1. Location of the NASA KPGO Project Area.

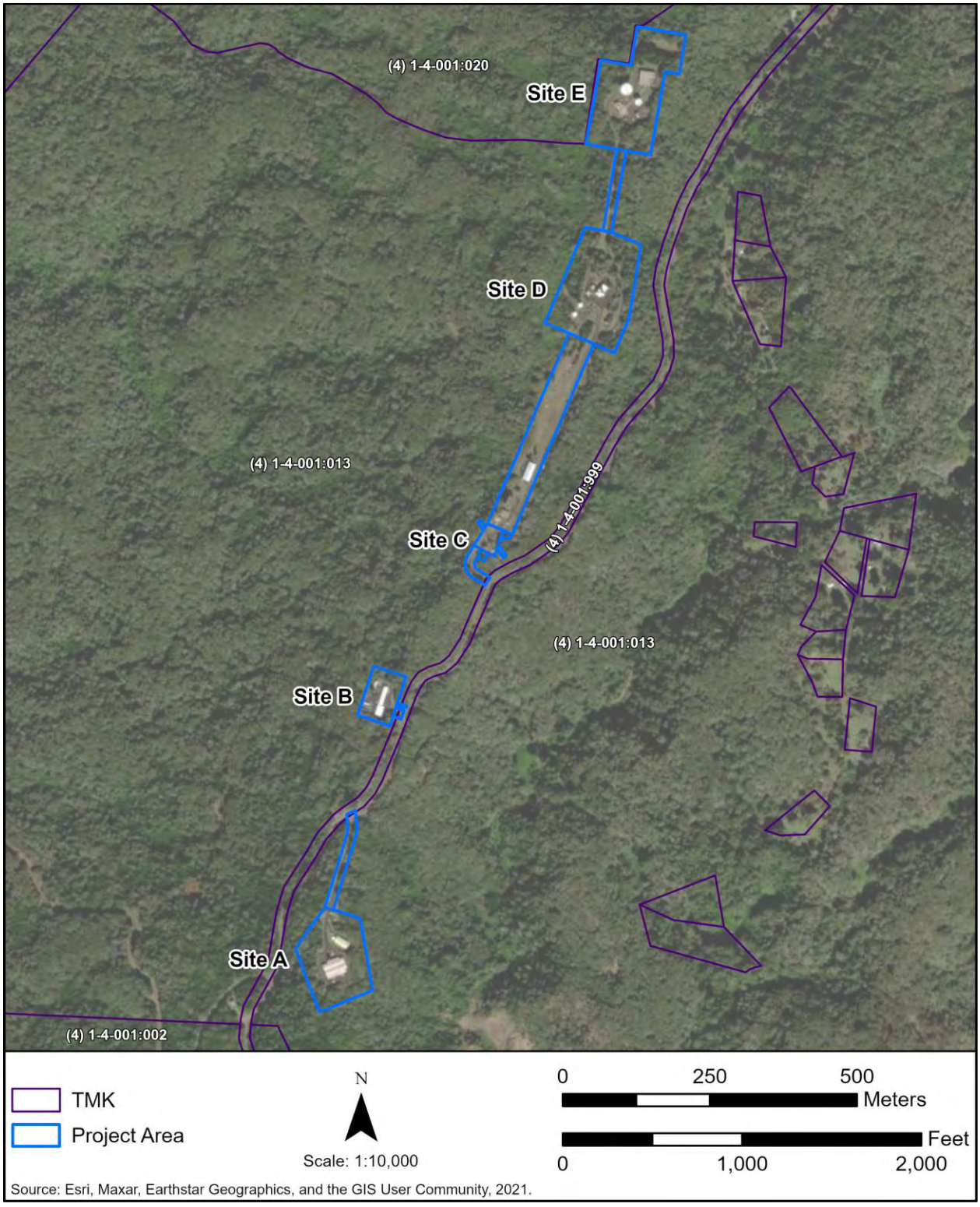


Figure 2. Location of the NASA KPGO Project Area with TMK boundaries.

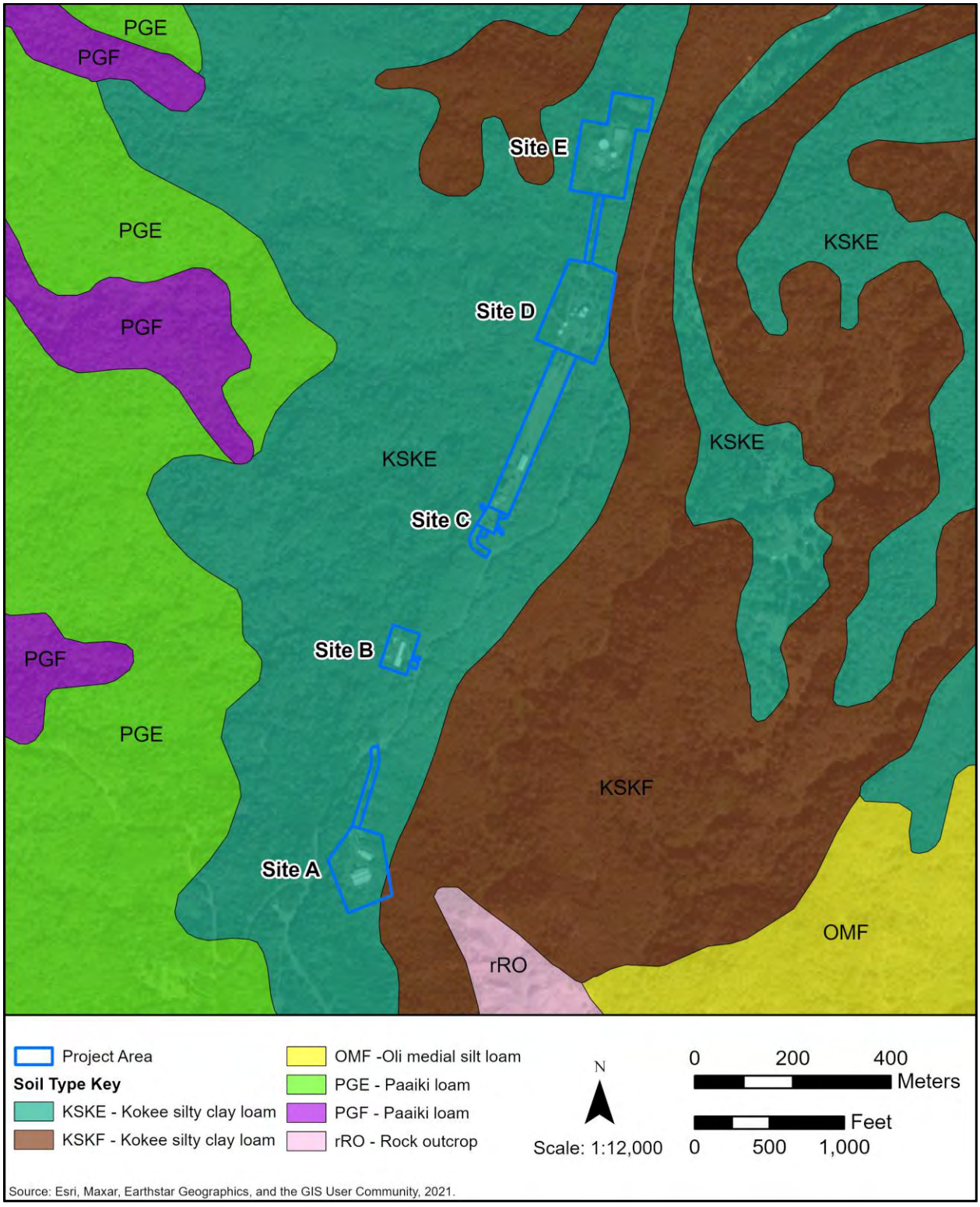


Figure 3. Soil types within and near the NASA KPGO Project Area (USDA Web Soil Survey, 2024).

2.0 METHODS

2.1 ARCHIVAL AND BACKGROUND RESEARCH

Pacific Legacy, Inc. conducted a thorough document review for the production of this AIS report. Research for this project involved a review of historical documents, historical maps and aerial photographs, and reference materials. Relevant archaeological reports were obtained from the SHPD Library and Pacific Legacy's internal database. Historical maps were obtained from the Hawai'i State Department of Accounting and General Services (DAGS) and Pacific Legacy's internal database, relevant historical and ethnographic sources housed in the Pacific Legacy library and found through online databases including the Office of Hawaiian Affairs (OHA) Papakilo (https://www.papakilodatabase.com/) and Kīpuka (https://kipukadatabase.com/) Databases, the Hawaiian Electronic Library, Ulukau (https://ulukau.org/index.php?l=en), the Digital Archives of Hawai'i (https://digitalarchives.hawaii.gov/), and the Hawaiian Legends Index housed at the University of Hawai'i at Mānoa (https://manoa.hawaii.edu/hawaiiancollection/legends/). Information on Land Commission Awards (LCAs) was obtained from Waihona 'Āina (https://waihona.com/) and accessed through the Ulukau Māhele Database (https://ulukau.org/cgi-bin/vicki?a=p&p=intro). These resources, as well as GIS mapping, were used to identify the locations of previous archaeological surveys and synthesize the background sections of this report.

2.2 FIELD METHODS

Fieldwork was conducted during five consecutive days between January 6 and January 10, 2025 by Pacific Legacy archaeologists Emmaline Irvine, M.A., James McIntosh, B.A., and Mara Mulrooney, Ph.D. Fieldwork required ten person days to complete. All fieldwork was conducted under the general supervision of Mara A. Mulrooney, Ph.D. (principal investigator).

The project area was subjected to a pedestrian survey with nearly 100% coverage. Approximately 0.89 acres, or 3.9% of the project area was not accessible due to steep slopes. In these areas, field personnel conducted a visual survey from a safe vantage point. Visibility ranged from excellent to moderate, the latter due to areas of native and non-native trees and shrubs. The field crew surveyed the project area in 5-m transects. Site documentation included detailed recording with written descriptions, photography, GPS recording, plan-view mapping of all newly identified features, and development of a site database in ESRI ArcGIS Pro. Recordation also included terrestrial LiDAR scanning of selected features. An individual point location was taken for each feature (feature datum) using a sub-meter Trimble R1 GPS unit. Site boundaries were created in ArcGIS Pro as a polygon by geo-referencing the site's plan view map with feature datums and additional GPS positions. Coordinates were recorded in World Geodetic System (WGS) 1984 Universal Transverse Mercator (UTM), Zone 4 North projection.

When an archaeological feature was encountered, it was examined to determine whether it constituted an isolated element or whether it formed part of a larger complex of features. Each recognized archaeological feature or group of spatially clustered features was then assigned a temporary field number to facilitate identification.

2.3 GEOSPATIAL METHODS

Historical maps were georeferenced in ArcGIS Pro using the Haena, Kekaha, Makaha Point, and Waimea Canyon 7.5-minute USGS topographic quadrangles (2024). Known points were used to correlate the location of historical maps relative to these base layers; however, the location of the project area on historical maps should be considered approximate. Geospatial data was recorded in the field using a handheld Trimble R1 receiver to submeter precision, differentially corrected in real time and subsequently uploaded to ArcGIS Online. GNSS positions were collected in the field as Esri shapefiles with a WGS 1984 UTM Zone 4 projection.

3.0 ARCHIVAL AND BACKGROUND RESEARCH

The project area lies in the traditional *moku* (district) of Kona, which is now part of the modern tax district of Waimea on the island of Kauaʻi. The NASA KPGO Project Area is within the *ahupuaʻa* (traditional land division) of Waimea, which follows the traditional *mauka* to *makai* (from the mountains to the sea) pattern that extends from the upland region, including Kōkeʻe, to the coastal waters of Waimea.

3.1 TRADITIONAL HISTORY

3.1.1 Traditional Boundaries

The current boundaries of Waimea Ahupuaʻa border Makaweli and Wainiha Ahupuaʻa on the northeast and east sides, Hanakāpīʻai, Hanakoa, and Kalalau Ahupuaʻa on the north side, and Honopū Ahupuaʻa on the northwest side (Figure 4).

3.1.2 Significant Place Names

The traditional Hawaiian place names given to significant places carry meaning and can convey much about the history of a place, its physical characteristics, the qualities of the people who resided there, and other culturally significant information. In the preface to *Place Names of Hawaii* (Pukui et al. 1976), Samuel Elbert writes:

> Hawaiians named taro patches, rocks and trees that represented deities and ancestors, sites of houses and *heiau* (places of worship), canoe landings, fishing stations in the sea, resting places in the forests, and the tiniest spots where miraculous or interesting events are believed to have taken place. (Pukui et al. 1976:x)

A selection of place names associated with Waimea Ahupuaʻa are listed in Table 1 and depicted in Figure 5, and have been identified through Boundary Commission Testimonies, historic maps, and information received from cultural descendants. Translations and meanings of significant place names have been added to Table 1 when they could be found in existing literature (e.g., Pukui et al. 1976).

Table 1. Place Names Associated with the Area Surrounding the NASA KPGO Project Area

Place Name	Description/Significance	Source
Ahuloulu Heiau Complex (Puʻu-Kapele)	"The volcano hill"; Heiau Complex; Puʻu; ʻili kū	USGS 1965; Office Of Hawaiian Affairs Kīpuka Database
ʻĀwini Falls	Wailele	USGS 1965
ʻĀwini Stream	Stream	USGS 1965
Elekeniki Stream	Stream	USGS 1965
Elekeninui Stream	Stream	USGS 1965
Haʻeleʻele Ridge	"Blackish"; Ridge	USGS 1965
Haʻeleʻele Valley	"Blackish"; Valley	USGS 1965
Halemanu	"Bird house"; Puʻu, triangulation station	USGS 1965
Halemanu Stream	"Bird house"; Stream	USGS 1965

Place Name	Description/Significance	Source
Hikimoe Ridge	“Resting place”; Ridge	USGS 1965
Hikimoe Valley	“Resting place”; Valley	USGS 1965
Hipalau Valley	Valley	USGS 1965
Kāʻana	“Division”; Hill	USGS 1965
Kaʻanamahuna Valley	Valley	USGS 1965
Kāʻaweiki Ridge	“Tie a little”; Ridge	USGS 1965
Kāʻaweiki Valley	“Tie a little”; Valley	USGS 1965
Kahelunui Valley	“Big Kahelu”; Valley	USGS 1965
Kāhililoa	“Long feather standard”; Boundary point, puʻu	USGS 1965
Kahoaloha Valley	“The friend”; Valley	USGS 1965
Kaluanamaulu Valley	Valley	USGS 1965
Kaʻou	Boundary point, puʻu	USGS 1965
Kauaikinana Stream	Stream	USGS 1965
Kauhao Ridge	“The scooping”; Ridge	USGS 1965
Kaʻulaʻula Valley	Valley	USGS 1965
Kaumuaiea (Kaumuaie) Heiau	Heiau	Office Of Hawaiian Affairs Kīpuka Database; Bennett 1931:104
Kaunuohua Ridge	“The altar of Hua”; Ridge	USGS 1965
Kawaikōī Stream	“The flowing water”; Stream	USGS 1965
Kawaiʻula Valley	“The red water”; Valley	USGS 1965
Koaiʻe	*ʻili ʻāina* and stream in Waimea. They are “named for the *koaiʻe* (*Acacia koaia*) tree that was uprooted by Nā-maka-o-ka-paoʻo, a Maui hero who made a war club of it.”	Ulukau Hawaiian Place Names Collection; Pukui et al. 1974:114
Koaiʻe Stream	Stream	USGS 1965
Koaiki	ʻili ʻaina	Ulukau Hawaiian Place Names Collection
Kōkeʻe Stream	“To bend *or* to wind”; Stream	USGS 1965
Kopakaka Ridge	Ridge	USGS 1965
Kuʻia Valley	“Obstructed”; Valley	USGS 1965
Kukui	“Candlenut lamp, light of any kind”; ʻili ʻaina	Ulukau Hawaiian Place Names Collection
Kumuwela Ridge	Ridge	USGS 1965
Laumahi	ʻili ʻaina	Ulukau Hawaiian Place Names Collection
Lua Reservoir	“Pit, crater, hole”; Reservoir	USGS 1965
Mahanaloa Valley	“Very warm”; Valley	USGS 1965
Mākaha Ridge	“Fierce”; Ridge	USGS 1965
Maluapopoki Stream	Stream	USGS 1965
Miloliʻi	Land sections, a ridge, and a valley along the Nāpali coast of Kauaʻi. *Miloliʻi* means “fine twist (as sennit cord)” and a place on Hawaiʻi Island of the same name was noted for its excellent sennit and an expert sennit twister who lived there. An alternative interpretation of the name is “’small swirling,’ as a current.”	USGS 1965; Pukui et al. 1974:151-152
Moeloa Falls	Wailele	USGS 1965

Place Name	Description/Significance	Source
Mōhihi	A road, river, falls, and divide in Waimea Canyon, "probably named for a variety of sweet potato."	USGS 1965; Pukui et al. 1974:153
Nāwaimaka Stream	"The tears"; Stream	USGS 1965
Noe Stream	Stream	USGS 1965
Nuʻalolo	A valley, stream, land section, and trail on the Nāpali coast, northwest Kauaʻi, proposed as a State reserve area. The *iliau*, a relative of the silversword, grows here	USGS 1965; Pukui et al. 1974:167
Oneopaewa Valley	Valley	USGS 1965
Paʻaiki Valley	Valley	USGS 1965
Papaʻalai	Boundary Point, *Puʻu*	USGS 1965
Pohakuwaʻawaʻa	"Corrugated rock"; Boundary point, stone	USGS 1965
Polihale	"House bosom"; Ridge; State park, beach, ridge, *heiau*, and land division, in Waimea, famous for its seaweed (*pahapaha*) used in *lei*. The practice is said to have been introduced by Pele's older sister, Nā-maka-o-Kahaʻi. Literally, the name translates to "house bosom."	USGS 1965; Pukui et al. 1974:188
Poʻo Kaeha	*Puʻu*	USGS 1965
Poʻomau Stream	"Constant source *or* constant head"; Stream	USGS 1965
Poʻopoʻoiki Valley	"Small depression"; Valley	USGS 1965
Puʻu Hinahina	Boundary Point, *puʻu*, a hill in Waimea, perhaps named for one of the several *hinahina* plants	USGS 1965; Pukui et al. 1974:196
Puʻukaʻohelo	*Puʻu*	USGS 1965
Puʻukapele	a hill at Waimea Canyon, Kauaʻi, upon which the Ahuloulu Heiau Complex is located. It translates literally to "the volcano hill." Pukui et al. (1974:198) note that it was believed that the voices of the *menehune* here were audible on the island of Oʻahu. "*Wawā ka Menehune i Puʻu-ka-Pele ma Kauaʻi, pūʻoho ka manu o ka loko o Ka-wai-nui ma Koʻolau-loa, Oʻahu,* Menehune speak at Puʻu-ka-Pele, birds at Ka-wai Nui pond at Koʻolau Loa, Oʻahu, are startled"	Pukui et al. 1974:198
Puʻulua	"Double hill"; Puʻu, triangulation station, vent	USGS 1965
ʻUlumaika Court	Recreation area	Office Of Hawaiian Affairs Kīpuka Database; Bennett 1931 (SIHP 50-30-06-00037)
Wahane Valley	"*Loulu* palm nut"; Valley	USGS 1965
Waiahulu	ʻili ʻaina	Ulukau Hawaiian Place Names Collection
Waiahulu Stream	Stream	USGS 1965
Waimea River	"Reddish water (as from erosion of red soil)"; River	USGS 1965
Waineke Swamp	"Bulrush water"; Swamp	USGS 1965
Waipoʻo Falls	Wailele	USGS 1965



Figure 4. Ahupuaʻa boundaries in the vicinity of the NASA KPGO Project Area.

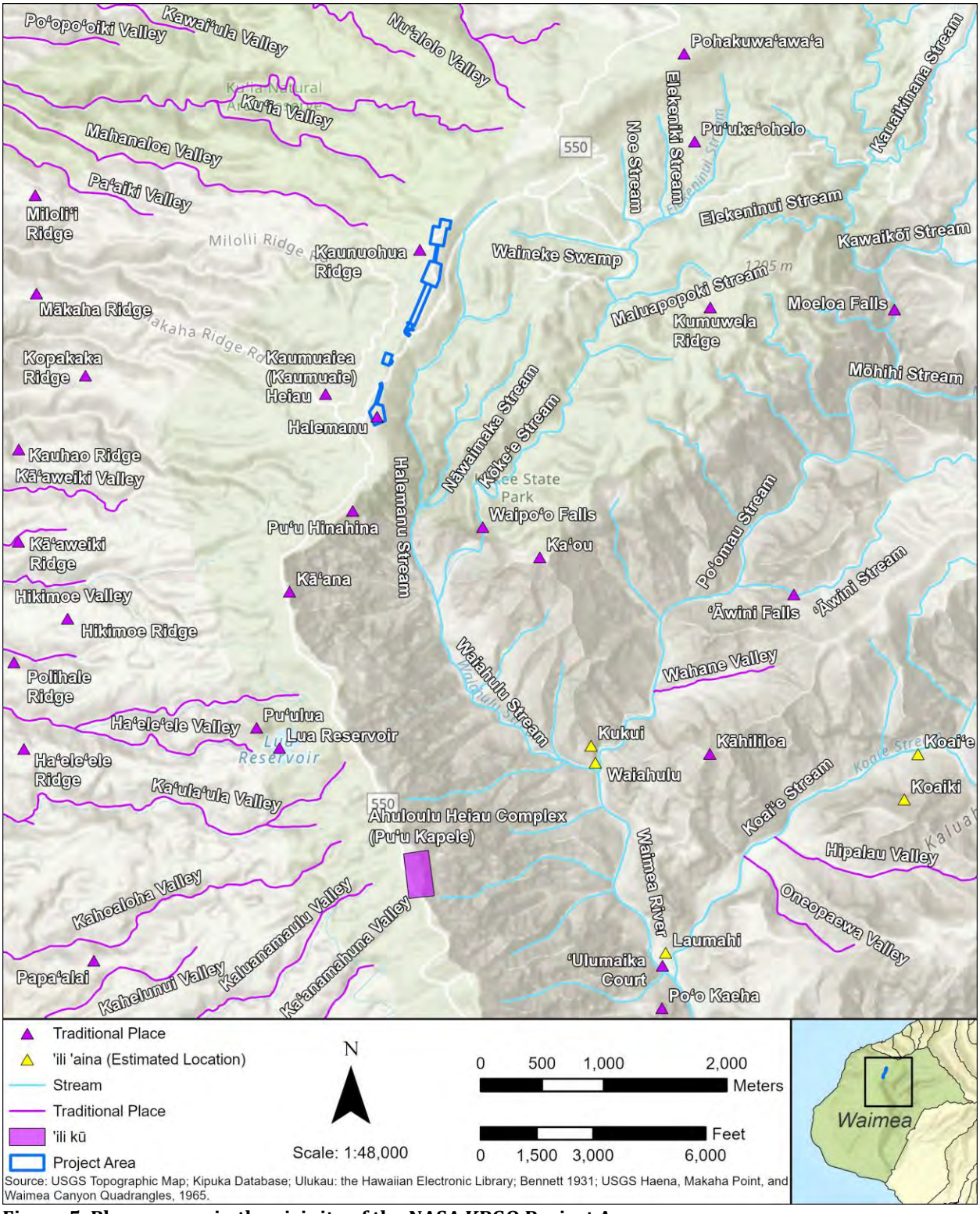


Figure 5. Place names in the vicinity of the NASA KPGO Project Area.

3.1.3 Moʻolelo

Frederick B. Wichman collected *moʻolelo* (oral traditions) associated with Kōkeʻe State Park (Wichman 2001). These *moʻolelo* are summarized and presented in Folk et al. (2021). Several of the locales that Wichman (2001) wrote of are in the vicinity of the current project area. The reader is referred to Wichman (2001) and Folk et al. (2021) for more information on these *moʻolelo* and others. (also see Figure 4 and Figure 5 for locations of significant places in the region). *Moʻolelo* in the vicinity of the current project area are summarized by Folk et al. (2021) and those that reference significant places in the immediate vicinity of the project area are included below.

On Puʻu Hinahina (also written Puʻu-hinahina or Puʻuhinahina), a traditional place located south of the current project area:

> Puʻu-hinahina (*geranium hill*) lookout is named after a native geranium that grows as a shrub or small tree that bears red and white flowers. Puʻu-hinahina is the spot where the trial of ʻElepaio took place. ʻElepaio is a small, alert, brown bird with a pert pointing tail and bright black eyes. This bird is very curious and will fly very close to anyone venturing into his territory. One day a man carrying a water container made from a gourd went to a dark spring to collect healing water for his ailing chief. After the man had filled his gourd, ʻElepaio flew down and pecked a hole into the gourd causing all of the healing water to drain out. The man became angry with ʻElepaio and threw a rock at him, hitting his leg. ʻElepaio flew off to Owl, the king of all birds, and demanded a trial to condemn the man who had hurt him. When confronted with the other birds of the forest, ʻElepaio admitted it was his own doing that had caused the man to throw a rock at him. As punishment, the birds said that from now on ʻElepaio had to show which trees were insect free. Thus if ʻElepaio picks at insects on a tree, it will be riddled with holes and be unsuitable for canoe making. (Folk et al. 2021:16; see also Wichman 2001)

On Kāʻana, a traditional place located south of both the current project area and Puʻu Hinahina:

> This lookout is at the top of Ka-ana (*sadness*) ridge. It is believed that the spirits of the newly dead would come to this place before going down the ridge to the sea. At the cliffs below, the spirit would jump into the ocean and sink into Pō, the land of the dead. However, if the spirit's body had not been properly buried or correct prayers were not recited over it, the spirit could not leave this place and wandered about until the god of the dead came to swallow it. Thus, anyone living near Ka-ana built their houses with gables facing east and west, with doors north and south, so spirits would hit against the gable ends and pass around the house, or if they entered the house by one door, they could exit by the other. (Wichman 2001:12 as cited in Folk et al. 2021:16)

On, Halemanu, a traditional place located within Site A at KPGO:

> Hale-manu (*bird house*) was the summer home of the *kia manu* (*birdcatchers*). Once a year, after the nesting season was over, the *kia manu* came up to the forests. They smeared gum made from the resin of breadfruit trees onto branches of flowering *ʻohiʻa lehua* trees (*Metrosideros macropus*). The birds would land on the branches and get trapped by the gum. *Kia manu* also trapped birds by stretching nets between trees. A highly skilled catcher could hold a nectar-laden flower in his hands and catch the long-beaked bird in his fingers. *Kia manu* only hunted three months of the year, giving the bird population time to rebuild itself. (Folk et al. 2021:16-17; see also Wichman 2001)

On Pohaku-waʻawaʻa, a traditional place located to the northwest of the current project area:

> *Naupaka kuahiwi* (mountain *naupaka*) shrubs mark the landscape at this site. Here Wichman retells the story of Nau and Paka, a story of forbidden love. Nau and Paka were students at a hula school located at the north shore of Kauaʻi. They both fell in love, however, such a relationship was forbidden to students. When the chiefess of the school discovered their relationship they were both killed. Nau was killed in the mountains and was transformed into *naupaka kuahiwi* (mountain *naupaka*). Paka was killed at the beach and transformed into *naupaka kahakai* (beach *naupaka*). Both flowers of these shrubs produce only half of a flower, a reminder that they are forever separated. (Folk et al. 2021:17; see also Wichman 2001)

Other *moʻolelo* associated with the Waimea area focus on the *menehune*, a "legendary race of small people who worked at night, building fish ponds, roads, temples; if the work was not finished in one night, it remained unfinished" (Pukui and Elbert 1986:246). The Kiki-a-Ola (also written as "Kīkīaola") is a cut stone-lined *ʻauwai* (ditch, canal) to bring water down to the Waimea flats. It is sometimes called the "Menehune Ditch." It originates somewhere above Puʻukapele, towards Kōkeʻe. Puʻukapele is located south of the current project area, *mauka* or (inland), of Waimea Town. Beckwith (1970) provided several versions of the *moʻolelo* of the construction of the *ʻauwai*. Ola, a son of the chief Kualu-nui-pauku-moku-moku, succeeded his father in rule over Waimea. He desired to bring water to the Waimea flats and was advised by his *kahuna* (priest, sorcerer…expert in any profession), Pi, to proclaim a *kapu* (taboo, prohibition) and summon the *menehune*. The *menehune* each brought a stone, and in one single night, the entire Kiki-a-Ola watercourse was laid (Beckwith 1970:328-329).

In another version presented by Beckwith (1970), Pi was the chief of Waimea who requested the *menehune* to construct both a dam across the Waimea River and an *ʻauwai* leading from it, to a place above Kiki-a-Ola. At Pi's command, the *menehune* were summoned from the mountains of Puʻukapele (Beckwith 1970:329). According to Beckwith, the sound of the voices of the *menehune* during this construction project is the origin of the *ʻōlelo noʻeau:*

> 2920. *Wawā ka menehune i Puʻukapele ma Kauaʻi, puoho ka manu o ka loko o Kawainui ma Oʻahu..*
> The shouts of the *menehune* on Puʻukapele on Kauaʻi startled the birds of Kawainui Pond on Oʻahu.
>
> The *menehune* were once so numerous on Kauaʻi that their shouting could be heard on Oʻahu. Said of too much boisterous talking. (Pukui 1983:320)

In this version of the *moʻolelo*, it was also Ola who built the three stepped *heiau*, Ahu-loulu, at the foot of Puʻukapele crater cone (Beckwith 1970:329). Ahu-loulu is located south of the current project area, *mauka* of Waimea Town.

In the *moʻolelo* gathered by Wichman (2001), presented in Folk et al. (2021), Puʻukapele was described as a place where *koa* and *koaiʻe* was farmed:

> The villagers of Puʻu-kāpele farmed *koa* (*Acacia koa*) and *koaiʻe* (*Acacia koaia*) trees. *Koaiʻe* was carved into paddles, farming instruments, and food bowls, while *koa* trees were used to produce canoe hulls. Because of the importance of these trees, the Kauaʻi version of the legend of Laka was set here by early storytellers. In brief, the story of Laka is about a young man named Laka who is searching for his father who was lost during a trip to a distant

island. Laka is sent by his mother to Puʻu-kāpele to obtain a *koa* tree suitable for the construction of a large canoe. Once he gets to Puʻu-kāpele Laka is assisted by a group of *menehune* who build him a canoe. With his new canoe built from a *koa* tree from Puʻu-kāpele, Laka finds his lost father (Folk et al. 2021:16; see also Wichman 2001).

Moʻolelo specifically mentioning the area of Kōkeʻe are scarce.

3.1.4 ʻŌlelo Noʻeau

Hawaiian proverbs, or *ʻōlelo noʻeau*, have been passed down through oral traditions. Many *ʻōlelo noʻeau* have been collected and published in Hawaiian-language newspapers and other primary and secondary sources. The *ʻōlelo noʻeau* presented below were compiled by Mary Kawena Pukui in the book entitled *ʻŌlelo Noʻeau Hawaiian Proverbs and Poetical Sayings* (Pukui 1983). These *ʻōlelo noʻeau* often have both a literal and metaphorical meaning (called *kaona*). *ʻŌlelo noʻeau* about geographical features and areas can help us to understand natural phenomenon, land use, and the history of a place. A selection of *ʻōlelo noʻeau* pertinent to the project area and its surroundings are compiled here, along with their translations and interpretations from Pukui (1983).

A number of *ʻōlelo noʻeau* reference Waimea:

> 777. *Hemahema Kahuwā me Waimea.*
> Kahuwā and Waimea are awkward.
>
> These places are in the upland, where people are said to be awkward in handling canoes. (Pukui 1983:86)

> 1028. *Hoʻi ka paʻakai i Waimea.*
> The salt has gone back to Waimea.
>
> Said when someone starts out on a journey and then comes back again. The salt of Waimea, Kauaʻi is known for its reddish brown color. (Pukui 1983:110)

> 1339. *Ka iʻa hoʻopā ʻili kanaka o Waimea.*
> The fish of Waimea that touch the skins of people.
>
> When it was the season for *hinana*, the spawn of *ʻoʻopu*, at Waimea, Kauaʻi, they were so numerous that one couldn't go into the water without rubbing against them. (Pukui 1983:146)

> 1591. *Ka ua nounou ʻili o Waimea.*
> The skin pelting rain of Waimea.
>
> Refers to Waimea, Kauaʻi. (Pukui 1983:172)

> 1662. *Ka wai ʻula iliahi o Waimea.*
> The red sandalwood water of Waimea.

This expression is sometimes used in old chants of Waimea, Kauaʻi. After a storm, Waimea Stream is said to run red. Where it meets Makaweli Stream to form Waimea River, the water is sometimes red on one side and clear on the other. The red side is called *wai ʻula ʻiliahi*. (Pukui 1983:179)

1775. *Ke one kapu o Kahamaluʻihi.*
The sacred sand of Kahamaluʻihi.

A city of refuge for those of Waimea, Mānā, and the Kona side of Kauaʻi. (Pukui 1983:190)

2531. *ʻŌpā na kuku o Waimea.*
Weary are the sticks that hold the nets at Waimea

Weary are the legs after walking far. A line from an old chant. (Pukui 1983:276)

3.1.5 Settlement and Land Use

Within Waimea Ahupuaʻa, settlement was most densely concentrated along the coast and in the foothills of *mauka* (inland/upland) areas, with agricultural areas extending up the gulches (Bennett 1931:103; Sinoto 1978:2-6). The densely populated Mānā Plain contains a coastal dune and back beach area where temporary fishing camps were occupied while people accessed the abundant marine resources. These were linked to permanently occupied communities along the foothills (Anae et al. 2024), who also traveled to the upland portions of Kōkeʻe near the top of Waimea Canyon (Figure 6).

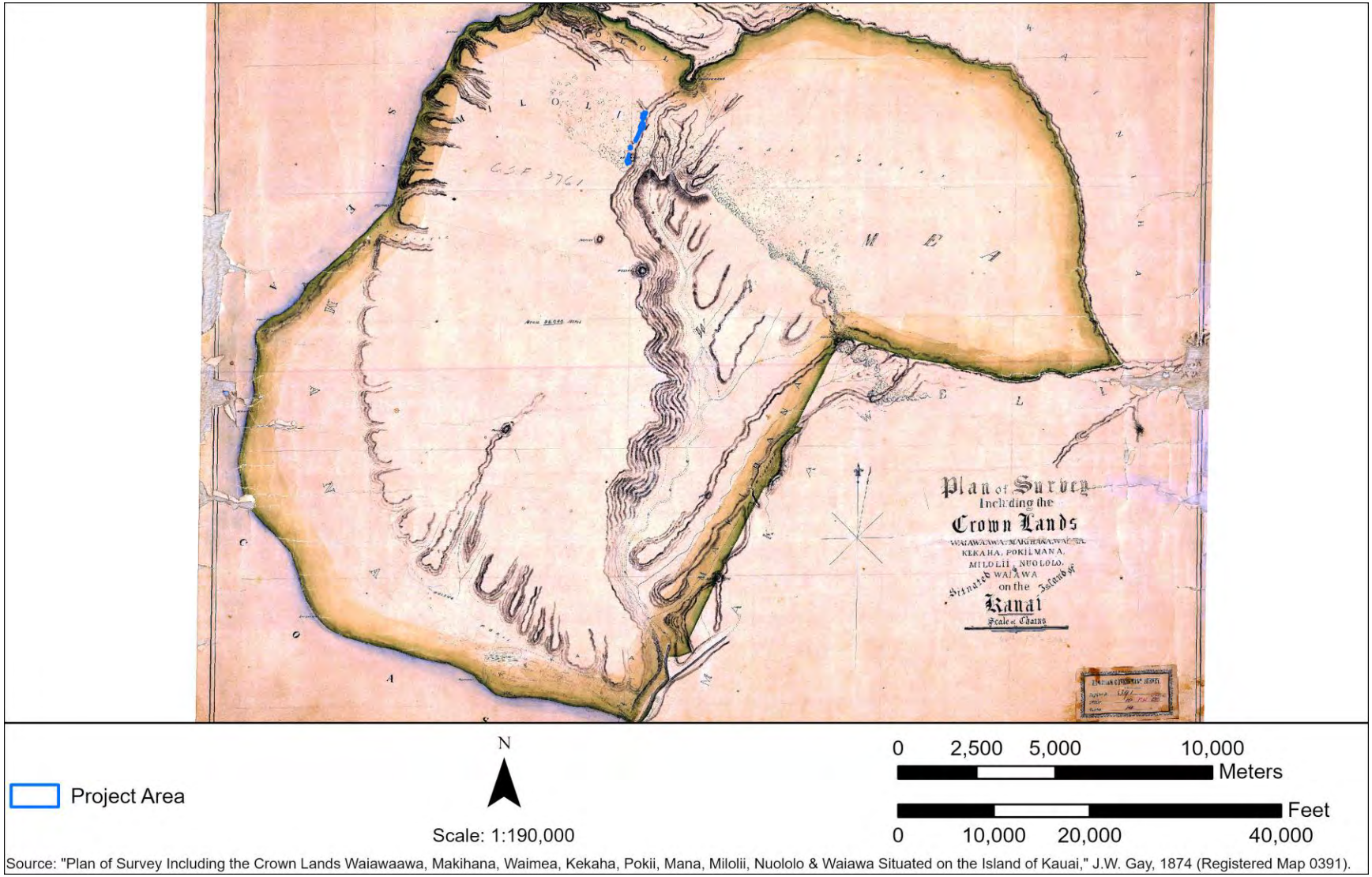
The upland area of Kōkeʻe was likely used as a resource gathering area, as opposed to a locale for permanent habitation or agricultural activities (Yent 1995). Several major trails traverse the area and would have connected communities along the valleys of the Nā Pali Coast (Kalalau and Nuʻalolo) in the north to coastal communities in Waimea to the south. The trail network was described by Handy and Handy (1972) as follows:

> More anciently the old Hawaiians used a number of overland trails. The Kamaile trail descended into Nuʻulolo [Nuʻalolo] Valley inland. There was a trail connecting Nuʻulolo with Honopu. A good trail overland connects Kalalau with Haʻena. There is a trail from Kokeʻe in the mountains above Kekaha down into Kalalau. From Polihale travelers could go on foot, with a little swimming, to Miloliʻi, and a trail connected Miloliʻi with Nuʻulolo flats. Another trail connects Miloliʻi with Kokeʻe. And there was the path *(ala),* said to have been built by King ʻOla, that led from Waimea Delta up the canyon to Kokeʻe, over the Alakaʻi Swamp, where it was said to have been paved with sticks *(kipapa),* and thence down Maunahina ridge into Wainiha by way of Kokeʻe. (Handy and Handy 1972)

In the vicinity of the KPGO area, timber and logs, particularly large *koa* trees, were harvested for canoe building and other uses (Rice 1923). Handy and Handy (1972) described these remote upland forests as an important source of natural resources, such as hardwoods, plants used for *lāʻau lapaau* (medicinal and ritual uses), birds and their feathers, as well as freshwater resources such as ʻ*oʻopu* (Hawaiian freshwater goby; *Awaous guamensis*) and ʻ*ōpae* (freshwater shrimp; *Atyoida bisulcata*). Handy (1940) noted that boggy areas of the uplands (in Alakaʻi Swamp) were

used for the cultivation of *olonā* (*Touchardia latifolia*), which was cultivated for use as the "finest cordage made in the Pacific Basin" (Krauss 1993:27).

Within Kōkeʻe, Thrum documented two large *heiau* during his island-wide survey (Thrum 1907). Ahuloulu Heiau (State Inventory of Historic Places [SIHP] Site No. 50-30-01-00019) was documented by Thrum (1907) at Puʻu Ka Pele, approximately three miles south of the project area and also includes two clusters of habitation features, which were recorded by Bennett (1931). Kaumuaiea (Ka-unu-aiea) Heiau (SIHP Site No. 50-30-01-00022) was documented in the immediate vicinity of the project area at Halemanu (Thrum 1907; Bennett 1931; discussed in Section 3.3).



Source: "Plan of Survey Including the Crown Lands Waiawaawa, Makihana, Waimea, Kekaha, Pokii, Mana, Milolii, Nuololo & Waiawa Situated on the Island of Kauai," J.W. Gay, 1874 (Registered Map 0391).

Figure 6. 1874 map by Gay (Registered Map 0391) with the NASA KPGO Project Area overlaid.

3.2 POST-CONTACT TRANSITIONS

The arrival of western naturalists, explorers, and industrialists to the shores of the Hawaiian archipelago rapidly accelerated after Captain James Cook first arrived at Waimea Harbor in 1778. When Cook arrived in Waimea, he estimated that there were 60 villages similar to Waimea across Kauaʻi, with a total of 30,000 inhabitants on the island. However, it is more likely that the island supported closer to 20,000 inhabitants with fewer than 60 villages the size of Waimea (Fornander 1880:165). The subsequent centuries are often referred to as the 'post-Contact' period, demarcating a period of significant transformation in Hawaiʻi's history that was highly influenced by increased interactions with Europe, the United States, and other regions. The following centuries saw the unification of the archipelago and the formation of an independent, constitutional monarchy under the Kamehameha Dynasty (1810-1874), followed by the Kalākaua Dynasty (1874-1893). It also saw the introduction of a wide range of plant and animal species, foreign diseases, and a rapid influx of foreign settlers and business interests. This latter introduction ultimately brought about the overthrow and annexation of the Hawaiian Kingdom by the U.S. in the late nineteenth century, followed by statehood in the mid-twentieth century. These significant social, political, and biological transformations had diverse and wide-ranging impacts on island ecosystems, land tenure and use, and cultural practices.

3.2.1 Early Post-Contact Period

Beginning in the early nineteenth century, new economic enterprises had profound impacts on the area of Waimea Canyon and Kōkeʻe. The sandalwood trade, in particular, began to radically transform the upland forest beginning in 1810, when *makaʻāinana* (commoners) were forced to abandon their *kalo* (taro; *Colocasia esculenta*) fields to cut sandalwood in the mountains, then transport it to the port of Waimea for export. The sandalwood trade was controlled by King Kaumualiʻi, who exchanged it for exotic goods, including ships. The sandalwood trade lasted until the mid-1830s, when nearly all of the sandalwood that once thrived in the western Kauaʻi forests had been harvested (Joesting 1984; also see Yent 1995).

In 1821, the Reverend Hiram Bingham traveled from Waimea to Hanalei along the established trail that passed through Kōkeʻe. He described the trail as a "narrow, winding, slippery foot-path, sometimes on sharp ridges, here ascending and there descending rugged steeps" (Bingham 1981). He mentioned that he passed several temporary shelters that he attributed to sandalwood cutters, and described the area as being uninhabited aside from those shelters.

Another individual who traversed the area was a tobacco farmer, Archibald Archer. During the early 1850s, he built the first western-style house, constructed in Kōkeʻe at Halemanu. Archer frequently traveled through the area, situated between his tobacco farms in Hanalei and Mānā (Damon 1931:292). Halemanu is in the immediate vicinity of Site A of the project area (Figure 8).

During the mid-nineteenth century, the area of Kōkeʻe was transformed further with the introduction of cattle ranching, which was initiated by Knudsen, who leased much the area that is now Kōkeʻe State Park, to provide beef to provision visiting whaling ships. Large-scale ranching activities in the Kōkeʻe area were short-lived, however, as whaling declined during the late nineteenth century and this, coupled with the overgrazing leading to environmental degradation, had negative impacts on this industry (Monahan and Powell 2005).

While the cattle industry was declining, another industry was burgeoning. The sugar industry began in the late 1800s and involved large-scale water irrigation systems (see Wilcox 1984). The Waimea Canyon-Kekaha Ditch diverted water from upland streams to irrigate sugarcane plantations that were established on the western side of Kauaʻi. The Kōkeʻe Ditch, located directly south of the current project area, was built in 1923 by Kekaha Sugar Co. and connected to the larger network. Plantation camps were established in the uplands to house Japanese and Chinese workers who constructed and maintained the network of ditches (Yent 1995).

3.2.2 The Māhele

In the mid-nineteenth century the Hawaiian Kingdom, under the leadership of King Kamehameha III (Kauikeaouli), undertook a momentous reformation of land tenure that had far-reaching and profound consequences for native Hawaiians. The impetus for this transition arose from compounding pressures from outside entities: foreign traders, merchants, missionaries, and their governments desired control of private lands and contested the prerogative of the king and *aliʻi nui* (high chiefs) to distribute or revoke land rights at will according to traditional custom. The increasing danger of annexation by a European nation loomed large after the Paulet Affair in 1843, and with similar processes occurring throughout southern Polynesia. There were also unprecedented challenges with regard to integrating into a Western economic system, and the desire of the king to safeguard the rights of Hawaiians to their native lands, particularly in light of the mass loss of Hawaiians under the onslaught of introduced diseases (Van Dyke 2007:30-31; Chinen 1958:25).

In response to such pressures, Kamehameha III and his chiefs enacted the Bill of Rights in 1839, as an initial if limited attempt to define property rights. This was followed by the creation of the first constitution of the Hawaiian Kingdom in 1840, which established legislative and judicial bodies suited to addressing land ownership reformation. The Organic Acts of 1845 further organized the executive branch and defined the king's role and power in Western legal concepts. Also in 1845, the Board of Commissioners to Quiet Land Titles, commonly referred to as the Land Commission, was created. The Land Commission oversaw the adjudication of all land claims.

In December of 1847, the king and his Privy Council determined to initiate a division (*māhele*) of the kingdom's lands; this became known as the Māhele. The initial *māhele*, which transpired between January 27 and March 7 of 1848, involved the division of the lands between the king and approximately 250 *aliʻi* and *konohiki*, wherein the king selected lands he would personally retain and quitclaimed all rights to the remaining land, and the *aliʻi* did the same. The 1848 Māhele was recorded in a legal document titled "Buke Kakau Paa no ka mahele aina i Hooholoia i waena o Kamehameha III a me Na Lii a me na Konohiki ana" (which was later known as the *Buke Māhele*, or Māhele Book). These land claims only involved the larger land divisions consisting of *ahupuaʻa* and *ʻili kūpono* (*ʻili* situated within an *ahupuaʻa* but independent from it).

After the 1848 Māhele, the king retained roughly 60 percent (ca. 2.5 million acres) of the Kingdom's land ("Crown Lands"); however, he then apportioned 1.5 million acres of that land to the Government, which became known as "Government Lands." The *aliʻi* ended up with between 56-74% of their original holdings, and these lands became known as "Konohiki Lands" (Kameʻeleihiwa 1992:219). Notably, during the initial *māhele*, land surveys defining the boundaries of the *ahupuaʻa* and *ʻili kūpono* land claims were not required and the claims were rewarded based on their traditional names only. In 1862, in order to address the lack of clearly defined boundaries and

emergent land disputations, the Commissioner of Boundaries was created and all *ahupuaʻa* and *ʻili kūpono* award recipients were required to present land surveys for confirmation.

Soon after the 1848 Māhele, it became apparent that the land rights of the native Hawaiian populace, or native tenants, needed to be ensured (Chinen 1958:29). In the Kuleana Act of 1850, the legislature authorized the *makaʻāinana* to claim lands which they actively cultivated or inhabited. These became known as "Kuleana Lands." Kuleana Lands were often the most fertile of the lands in Hawaiʻi, as claims often centered on arable or cultivable land (Chinen 1958:31). Claimants were required to provide a professional land survey to the Land Commission as well as supporting testimony for their claim. Testimony was collected from neighbors, current or previous residents of the area, and the *konohiki* of that area, in either ʻŌlelo Hawaiʻi (Native Testimony) or English (Foreign Testimony). An awarded claim was termed a Land Commission Award (L.C.Aw., or L.C.A.) and assigned a *helu* (number). A Royal Patent was then issued which confirmed the government's quitclaim of interest to the land (Chinen 1958:14). These land claims were recorded in ten large volumes (LCA Books 1–10) and the associated testimonies are included within an additional 50 volumes. The survey maps and descriptive testimonies provided with the land claims contain invaluable information on land use practices and resources at that time period. Ultimately, however, the majority of the lands to be set aside for the *makaʻāinana* were not awarded or claimed, resulting in only 28,658 acres being distributed to the *makaʻāinana* (Kameʻeleihiwa 1992:295). Thus, much land shown as blanks on nineteenth-century maps was not necessarily unused land, but rather, land without written or illustrated legal records. Notably in this regard, not all *aliʻi nui* and *aliʻi* participated in the Māhele (Hopkins 2022).

The Alien Land Ownership Act, also issued in 1850, granted foreigners the right to own land. Beginning in 1845, foreigners were allowed to take the oath of citizenship, and by 1847, foreigners were allowed to hold lands but could only sell such lands to legal citizens of the Hawaiian Kingdom (Kameʻeleihiwa 1992).

The majority of Waimea Ahupuaʻa was retained and designated as Crown Land. Most Land Commission Awards (LCAs) were awarded in the lowlands of Waimea Ahupuaʻa near the coastline. There are no LCAs within the current project area, nor the immediate vicinity (Figure 7).

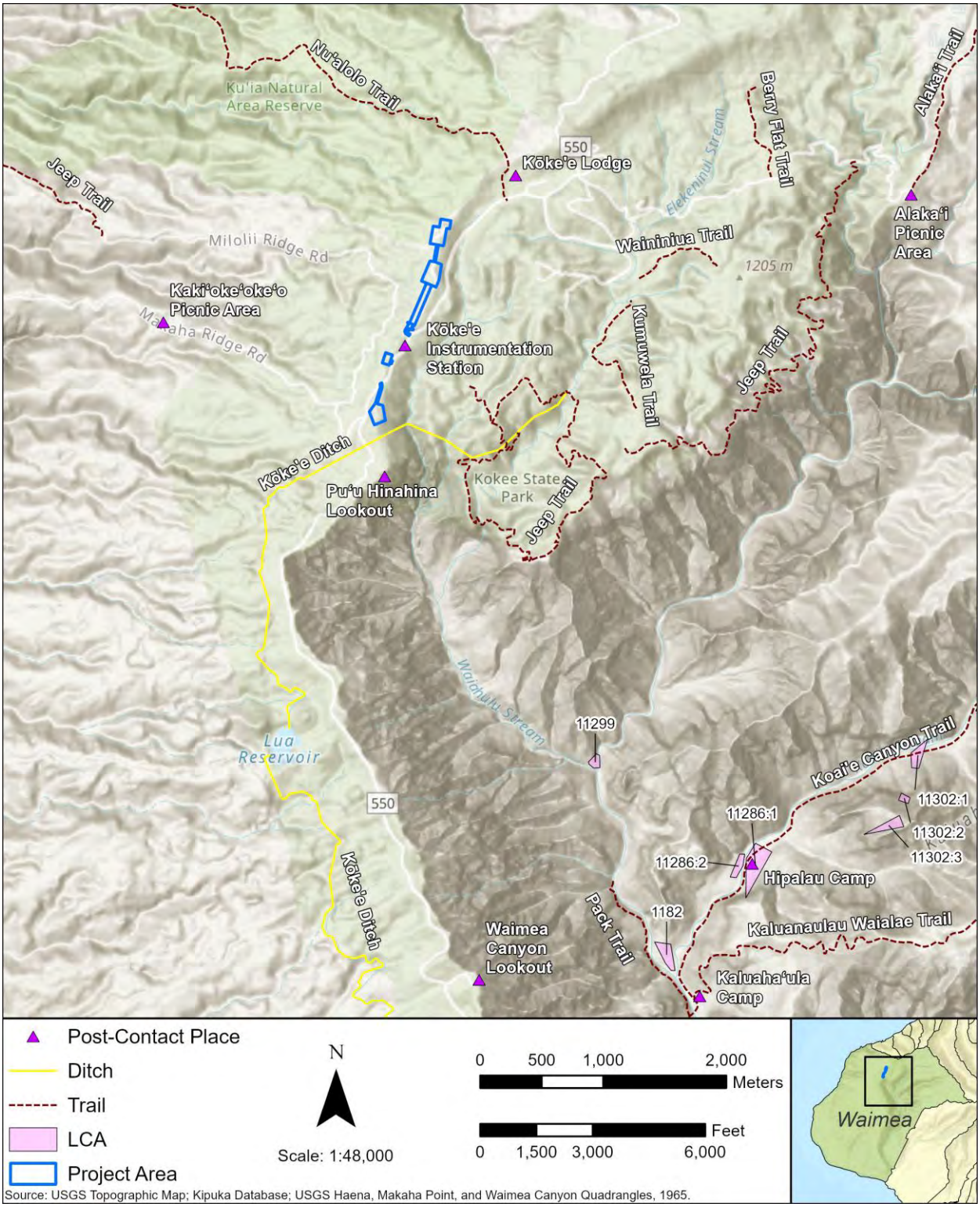


Figure 7. Map of LCAs and other post-Contact features within the vicinity of the NASA KPGO project area, identified through archival research.

3.2.3 Kōkeʻe in the 20th Century

During the early to mid-twentieth century, the area of Kōkeʻe was primarily used for recreational and military activities. Figure 8 depicts the project area and vicinity in 1903. Recreational activities included the construction of vacation cabins by wealthy sugar plantation owners in Kōkeʻe, which they would visit to escape the heat of the lowland plains during the summer months. The area was used by hunters of pigs and goats as well. In 1929, there was a push to establish forest reserves, and in 1930, a total of 755 acres were designated as the Waimea Canyon Territorial Park. Figure 9 shows that as early as 1910, forest reserves were being depicted on USGS maps.

Following the Great Depression, an effort was made to provide unemployed Americans with work, and as part of this national initiative, the Civilian Conservation Corps (CCC) Camp was constructed in 1935. From 1935 until 1943, the CCC Camp was used to house young men who planted trees and built and maintained trails in the park, as part of a massive reforestation initiative. The CCC Camp was used by the Army's Signal Corps during World War II and in 1940, the Army constructed a support camp north of the current project area. At this time, roadways were improved and lookouts at Waimea Canyon and Kalalau were established. The Army camp was dismantled in the early 1950s, and wooden buildings were taken apart or relocated for use as park buildings. One became the Kōkeʻe Museum, which was founded in 1953, and four park cabins and the Kōkeʻe Lodge were built using wood from the dismantled camp (Yent 1995).

In 1952, the Kōkeʻe Territorial Park was designated, with the addition of 4,451 acres from the Na Pali-Kona Forest Reserve (see Figure 9). The Board of Agriculture and Forestry oversaw the management of Waimea Canyon Territorial Park and Kōkeʻe Territorial Park, and additional infrastructural improvements, such as the construction of Hawaii Route 55 in 1955, which was later changed to Route 550 and is shown on Figure 10 through Figure 17 (Belluomini and Hammatt 2022). Waimea Canyon Territorial Park and Kōkeʻe Territorial Park were subsequently designated as Waimea Canyon State Park and Kōkeʻe State Park following statehood in 1959. See Figure 7, which depicts some of the named places in the vicinity of the current project area that are associated with Kōkeʻe State Park.

Post-WWII Military Developments and NASA

During the 1960s, a Hawaii Air National Guard installation and a NASA Tracking Station (labeled as the "Kokee Instrumentation Station" on Figure 11) were constructed in Kōkeʻe as part of the National Space Program. The Hawaii Air National Guard built a radar tracking facility on the former site of the Army radar station near the Kalalau Lookout in 1961. The NASA Tracking Station's lease with the State of Hawaiʻi was established in 1965 and in 1992, the facility subsequently became known as the Kōkeʻe Park Geophysical Observatory (KPGO). NASA established a use permit and memorandum of understanding with the Navy in 2016 to provide mission support to PMRF radar, telemetry, and communications services at KPGO. Figure 10 through Figure 17 include USGS maps and aerial photographs of the project area from 1965 to 2017.

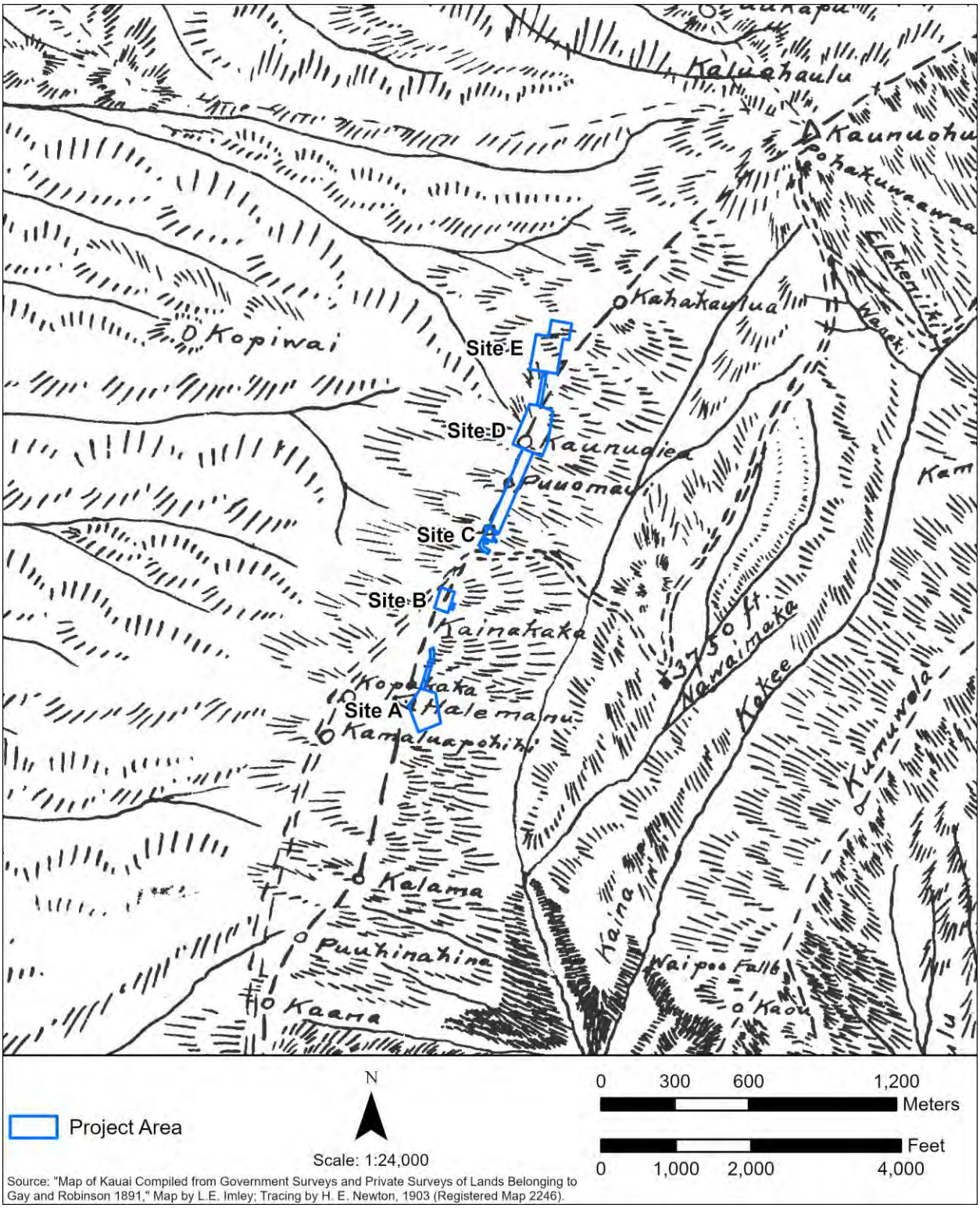


Figure 8. Portion of a 1903 map by L.E. Imley (Registered Map 2246) showing roads and place names in the vicinity of the NASA KPGO Project Area.



Figure 9. 1910 USGS map showing road alignments, Waineke Swamp to the east of the KPGO Project Area, and "Puuhinahina" (Puʻu Hinahina) to the southwest of the NASA KPGO Project Area.

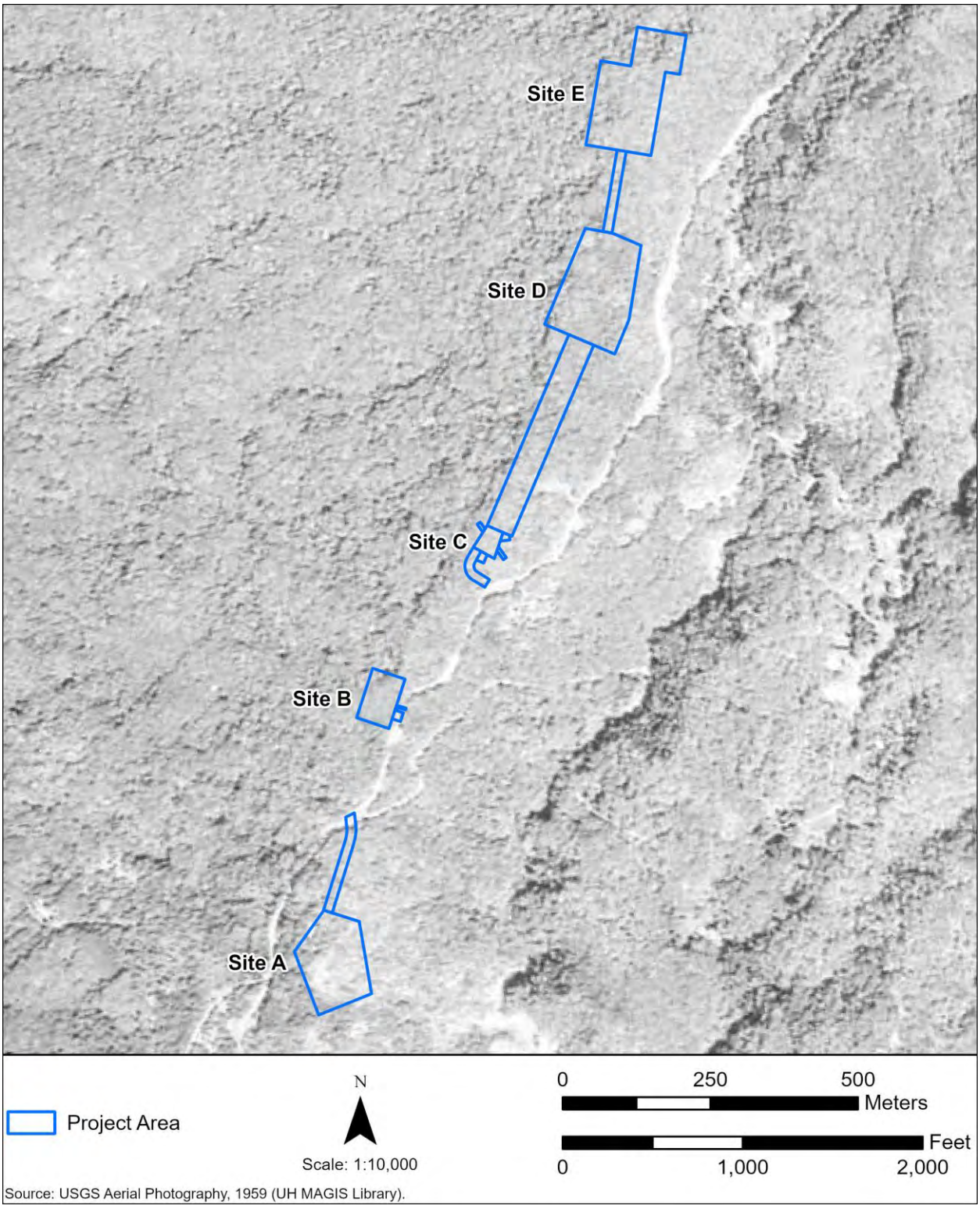


Figure 10. 1959 USGS aerial photograph showing Kōkeʻe Road and other road alignments in the vicinity of the NASA KPGO Project Area.

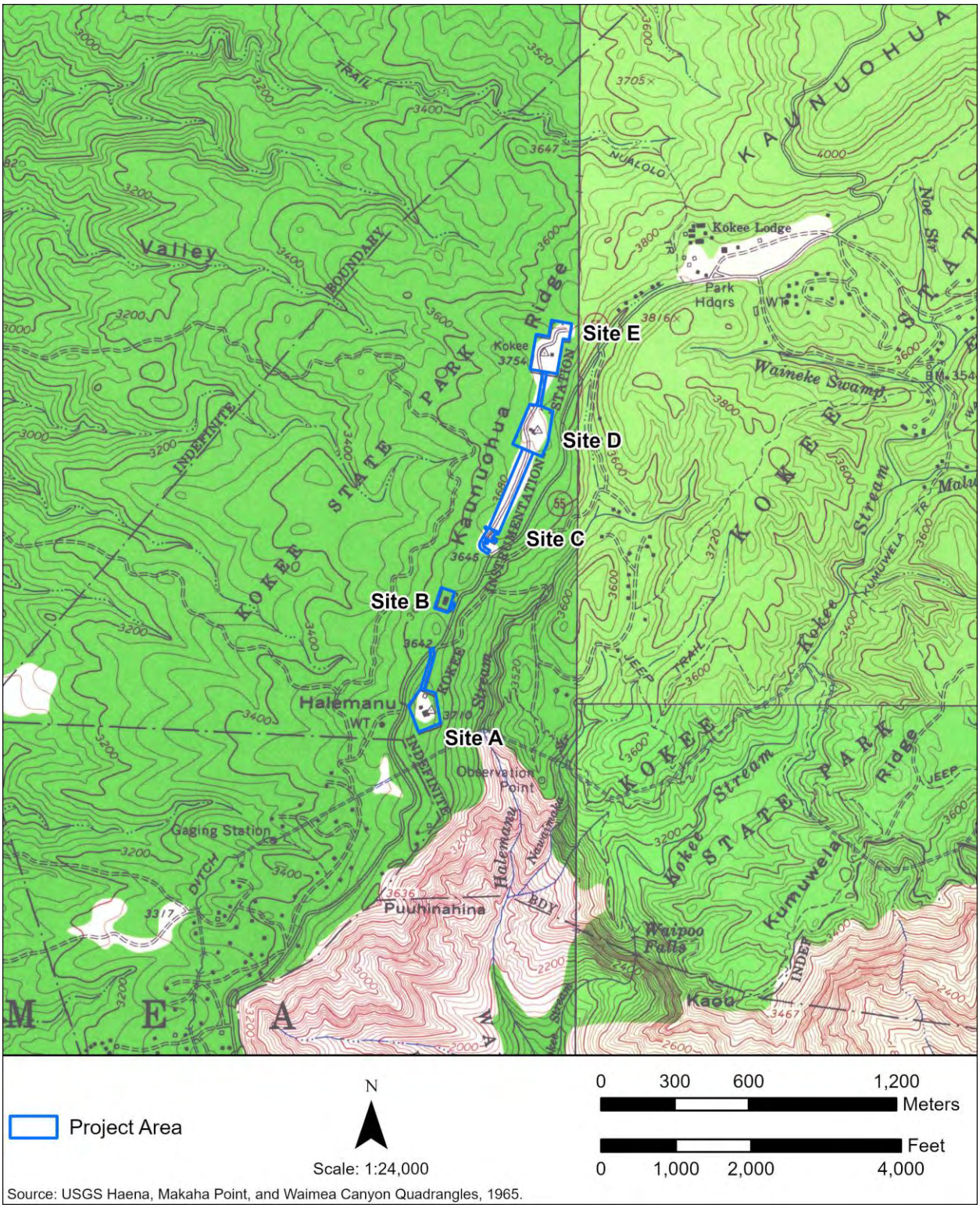


Figure 11. 1965 USGS map showing the NASA KPGO Project Area within the lands of Kōkeʻe State Park, with infrastructural improvements such as the paved road (Kōkeʻe Road/Highway 55), as well as the "Kokee Instrumentation Station" later known as KPGO. Also note the nearby "Kokee Ditch" (south of Site A).

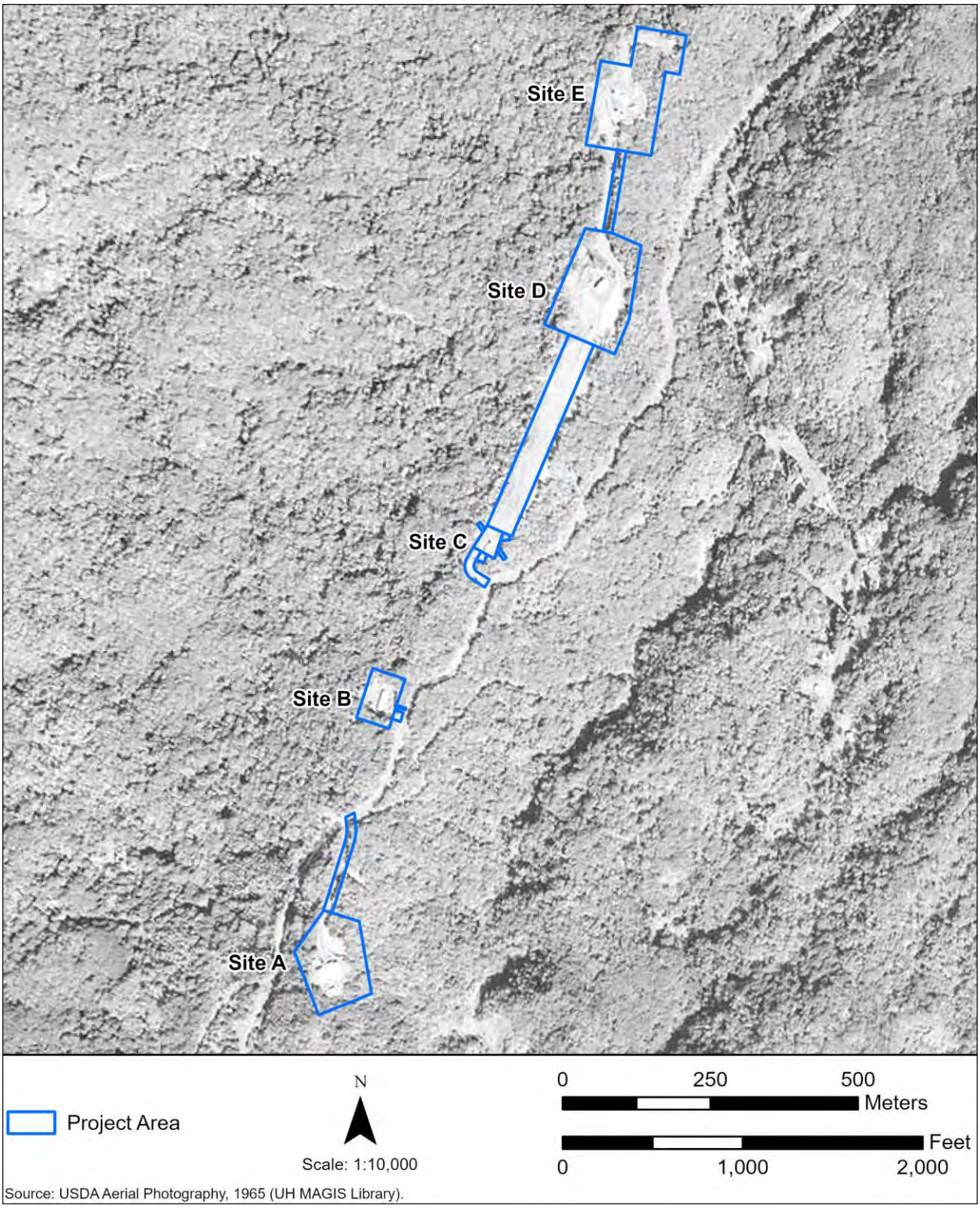


Figure 12. 1965 USGS aerial photograph showing Kōkeʻe Road and other road alignments in the vicinity of the NASA KPGO Project Area, as well as the development of infrastructure within the project area.

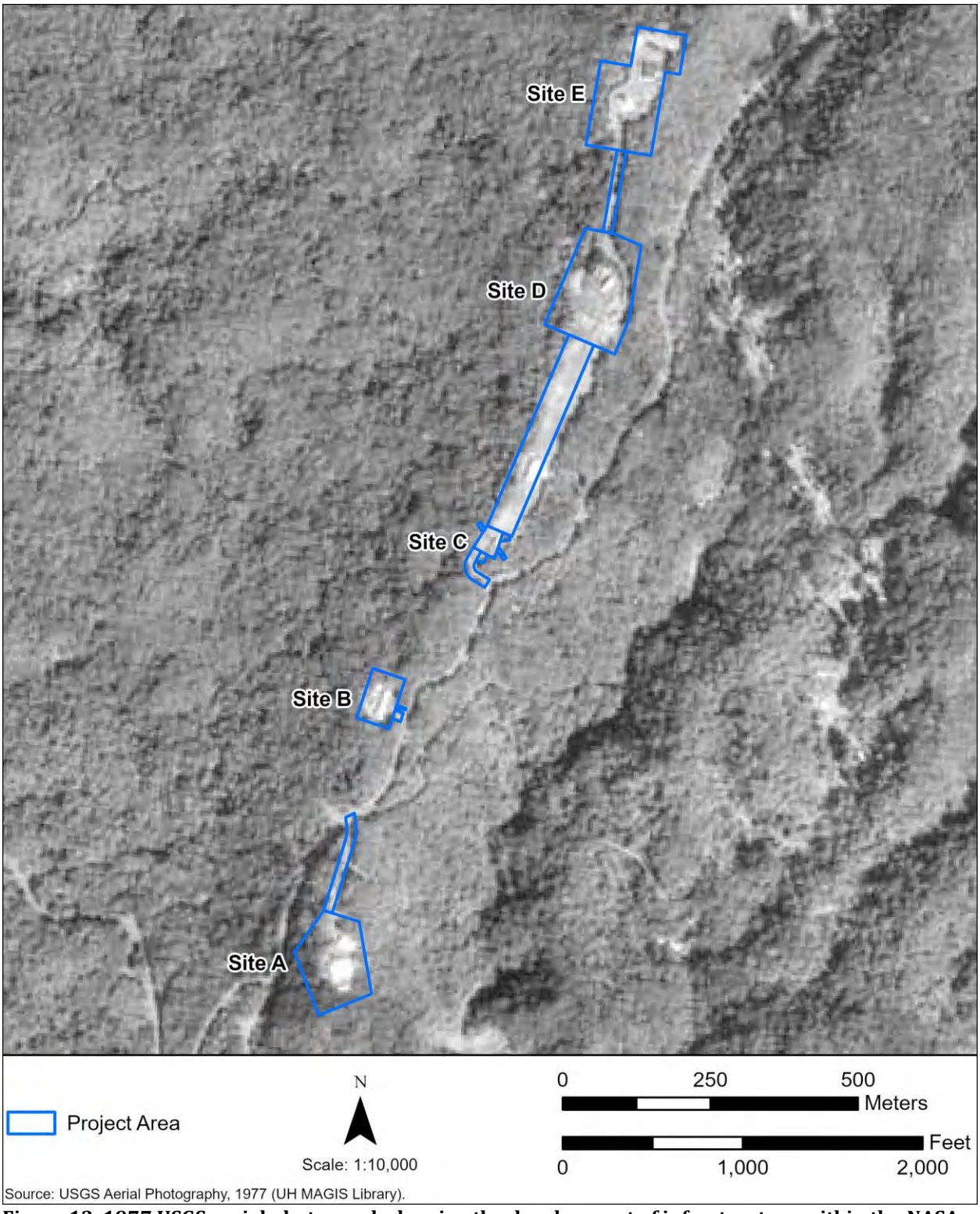


Figure 13. 1977 USGS aerial photograph showing the development of infrastructure within the NASA KPGO Project Area.

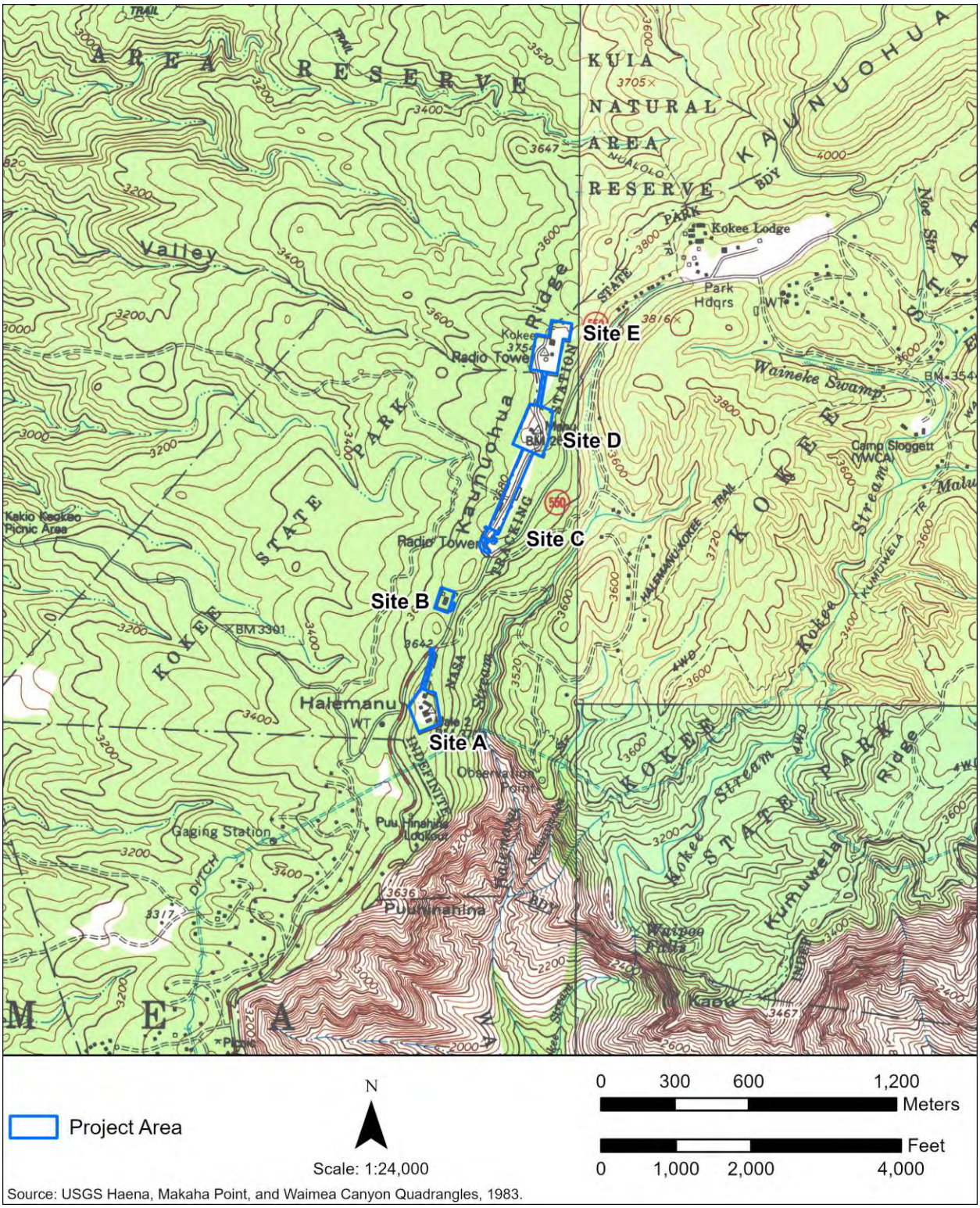


Figure 14. 1983 USGS map showing the NASA KPGO Project Area within the lands of Kōkeʻe State Park, with the paved road (now labeled as Highway 550), as well as the "NASA Tracking Station" later known as KPGO. Also note the nearby "Kokee Ditch" (south of Site A).

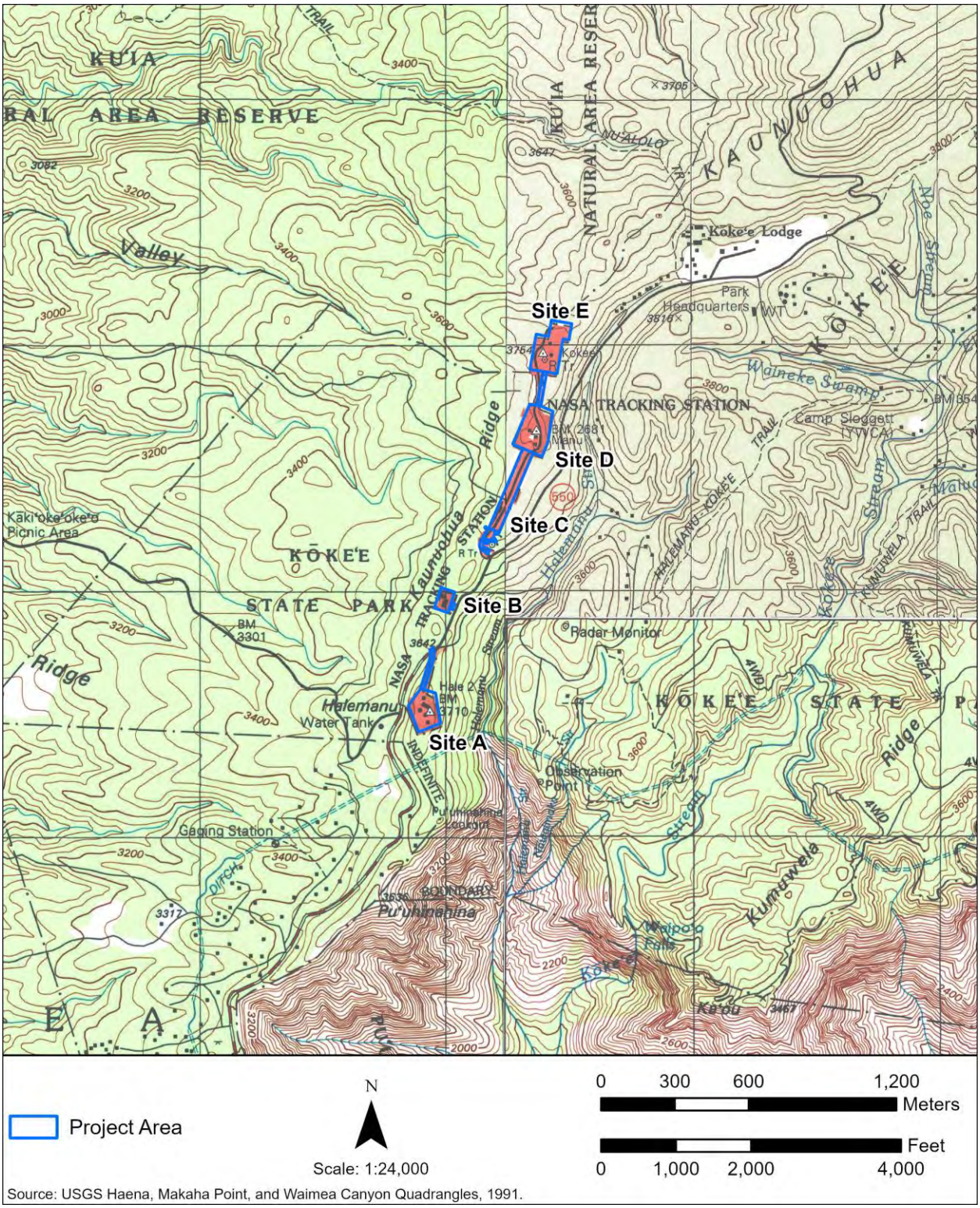


Figure 15. 1991 USGS map showing the NASA KPGO Project Area within the lands of Kōkeʻe State Park, with the same infrastructure that is seen on the 1983 USGS map. At this point, the area is still labeled as "NASA Tracking Station."

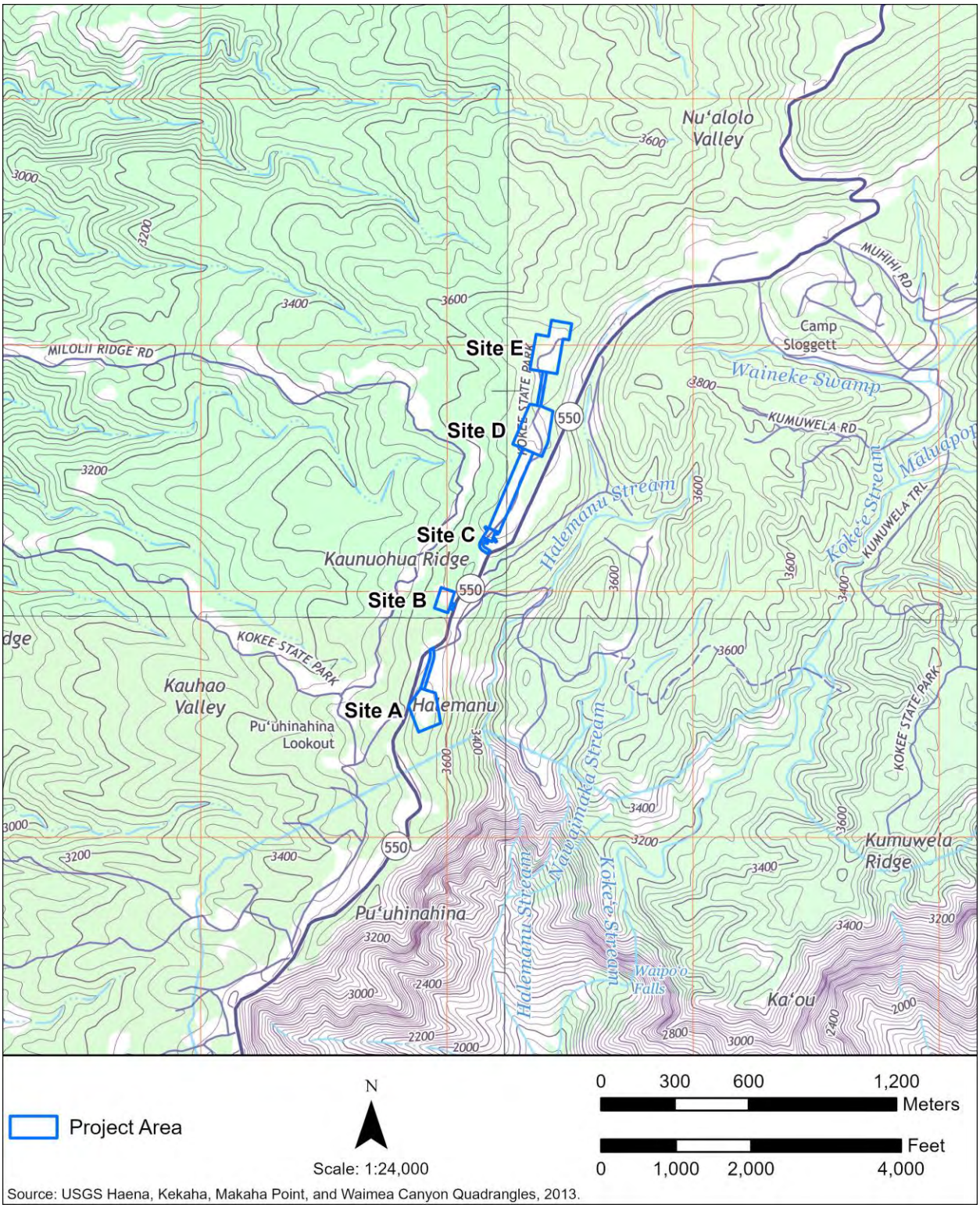


Figure 16. 2013 USGS map showing the NASA KPGO Project Area within the lands of Kōkeʻe State Park.

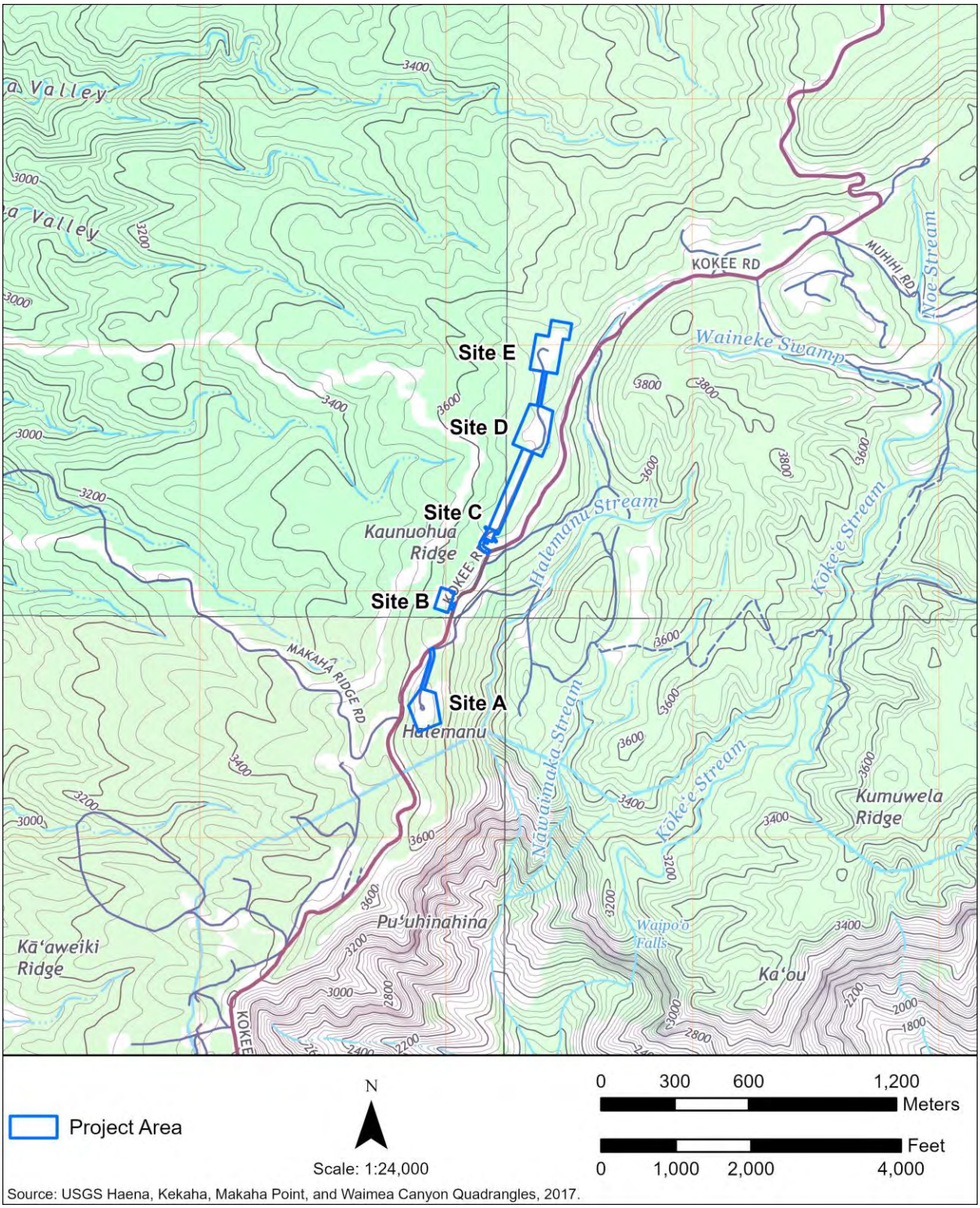


Figure 17. 2017 USGS map showing the NASA KPGO Project Area within the lands of Kōkeʻe State Park. The road within Site A is now visible and the road within Site E terminates in a different place than on the 2013 USGS map.

3.3 PREVIOUS ARCHAEOLOGY

Early documentation of archaeological sites on Kauaʻi include Thrum's (1907) survey of *heiau* for the island of Kauaʻi and Wendell Clark Bennett's (1931) synthetic volume, *Archaeology of Kauai*. Thrum (1907) and Bennett (1931) identified numerous archaeological sites within the *ahupuaʻa* of Waimea, including one *heiau* that may be in the nearby vicinity (within 0.5 miles/0.8 km) of the current project area. Bennett (1931) provided the following description of the *heiau*:

> Site 22. Kaumuaiea (Kaumuaie) heiau, in the forest of Milolii on the ridge of Kaumuohua.
>
> In the forest above Halemanu is a small clearing known as Kaumuaiea. Here there are a few stones in a rough line, but not forming a platform or definite outline. Thrum describes this heiau as a small shrine and says that no platform remains to indicate its location. (Bennett 1931:104)

A total of 10 archaeological studies have been conducted within a 0.5-mile buffer around the KPGO Project Area (Table 2 and Figure 18). Table 2 provides an overview of all 10 archaeological investigations with a summary of their findings. All previously identified historic properties within the 0.5-mile buffer are described in Table 3 and pictured in Figure 19, which also contains significance assessments and mitigation recommendations. Three of the previous archaeological studies (Yent 1982; Walker and Rosendahl 1990; and Dowden and Rosendahl 1993) included a portion of the current project area and are discussed in more detail below.

3.4 OVERVIEW OF PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS WITHIN 0.5 MILES OF THE PROJECT AREA

A total of 4 historic properties have been identified within 0.5 miles of the current project area. Previously identified historic properties include SIHP 50-30-01-00022, Kaumuaiea Heiau (Thrum 1907; Bennett 1931); SIHP 50-30-02-02417, the Kōkeʻe Ditch, which was constructed for sugarcane agriculture in 1923 (Belluomini and Hammatt 2022); SIHP 50-30-02-02549, Kōkeʻe Road, which is a portion of Highway 55, which was originally constructed in 1910 and has since been repaired and altered (On File, SHPD); and SIHP 50-30-06-09392, the Civilian Conservation Corps (CCC) Camp, which was built in 1935 and is listed on the National Register of Historic Places (Yent 1995; Reinard and Erickson 1996; Monahan and Powell 2005).

Three of the previous archaeological studies (Yent 1982; Walker and Rosendahl 1990; and Dowden and Rosendahl 1993) included a portion of the current project area. None of these identified historic properties within the current KPGO project area, but one (Walker and Rosendahl 1990) noted a low retaining wall outside the fenced compound at Site E at KPGO and provided the following description:

> The wall is located at the end of the area graded for the fenced compound of KPGO and appears to be a foundation to retard erosion or to stabilize the soil. The retaining wall appears to be of relatively recent construction and was not designated as an archaeological site. (Walker and Rosendahl 1990:5)

A location for the low retaining wall was not provided and an SIHP number was not assigned.

Table 2. Previous Archaeological Studies Within 0.5 Miles of the NASA KPGO Project Area

Reference	Type of Study	Findings
Thrum 1907	Island-wide Survey	One historic property within 0.5 miles of the project area: Kaumuaiea (Kaumuaie) heiau (SIHP 50-30-01-00022).
Bennett 1931	Island-wide Survey	One historic property within 0.5 miles of the project area: Kaumuaiea (Kaumuaie) heiau (SIHP 50-30-01-00022).
Yent 1982	Archaeological Reconnaissance	No findings.
Walker & Rosendahl 1990	Archaeological Inventory Survey	No historic properties identified. A low retaining wall was noted but not designated as an archaeological site. An Archaeological Assessment Report was submitted to SHPD.
Dowden & Rosendahl 1993	Archaeological Inventory Survey	No historic properties identified. An Archaeological Assessment Report was submitted to SHPD.
McMahon 1993	Archaeological Reconnaissance	One historic property identified, none within 0.5 miles of the project area.
Yent 1995	Archaeological Survey	One historic property identified: Civilian Conservation Corps (CCC) Camp (SIHP 50-30-06-09392).
Shideler et al. 2004	Literature Review and Field Inspection	No newly identified historic properties.
Yent 2004	Archaeological Inventory Survey	No historic properties identified. An Archaeological Assessment Report was submitted to SHPD.
Monahan & Powell 2005	Archaeological Inventory Survey	One previously documented historic property: CCC Camp (SIHP 50-30-06-09392).
Belluomini & Hammatt 2022 (Not Shown on Previous Archaeology Map)	Literature Review and Field Inspection	One historic property inspected: Kōkeʻe Ditch (SIHP 50-30-02-02417). Field inspection took place at six points along Kōkeʻe Ditch, none of which are located within 0.5 miles of the project area. However, the entire Kōkeʻe Ditch was discussed.

Note: Previous studies that include the current project area are highlighted in gray.

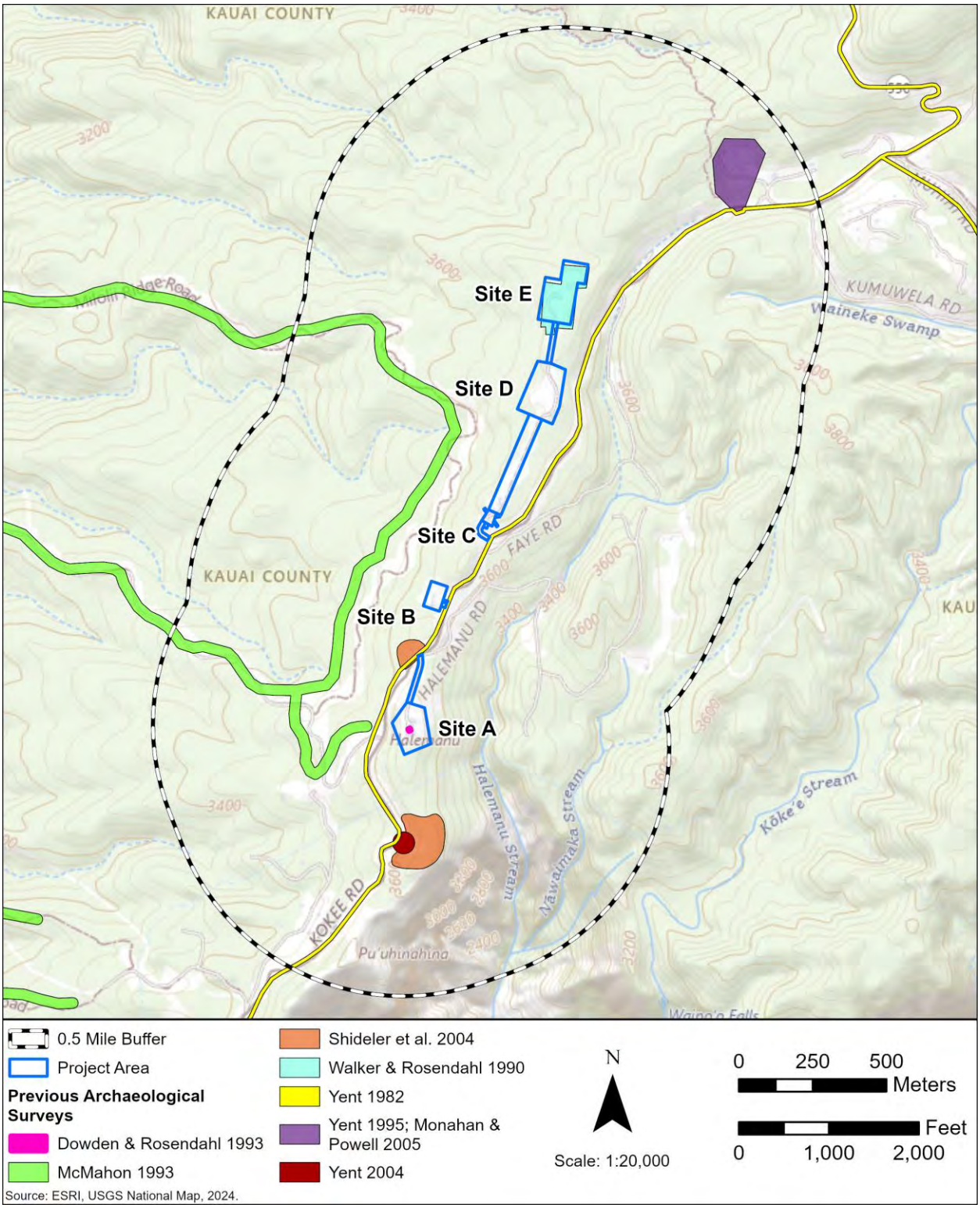


Figure 18. Previous archaeological studies conducted within 0.5 miles of the NASA KPGO Project Area.

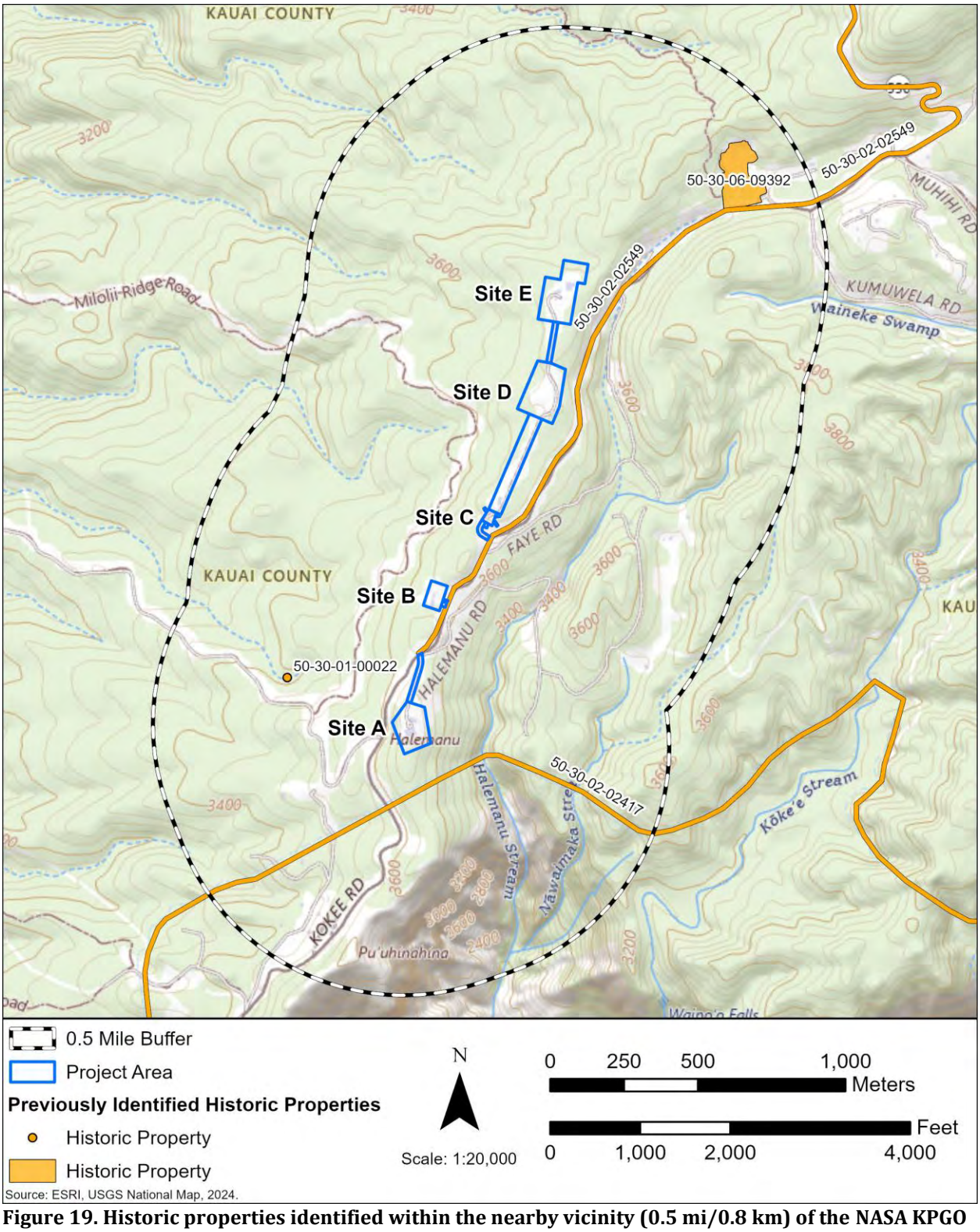


Figure 19. Historic properties identified within the nearby vicinity (0.5 mi/0.8 km) of the NASA KPGO Project Area.

Table 3. Previously Identified Historic Properties within 0.5 Miles (0.8 km) of the NASA KPGO Project Area

Site Number	Type	Function	Age	Significance	Mitigation Recommendation	Reference(s)
50-30-01-00022	Kaumuaiea (Kaumuaie) Heiau	Ceremonial	Pre-Contact	None Provided	None Provided	Thrum 1907; Bennett 1931
50-30-02-02417	Kōkeʻe Ditch	Water diversion	Post-Contact	a, c, d	No Further Work	Belluomini and Hammatt 2022
50-30-02-02549	Kōkeʻe Road	Transportation	1910	A, C	None Provided	On File, SHPD
50-30-06-09392	Civilian Conservation Corps Camp in Kōkeʻe State Park	Camp	Post-Contact	A, C	Preservation (NRHP)	Yent 1995, Reinard & Erickson 1996 (NRHP Nomination Form); Monahan & Powell 2005

3.5 BACKGROUND SUMMARY AND PREDICTIVE MODEL

The NASA KPGO project area is located in Waimea Ahupuaʻa, within Kōkeʻe State Park on a ridge. The project area lies at an elevation of 3,600 feet above sea level, near Waimea Canyon. Much of the project area has been graded and grubbed for the KPGO facility, which has been operational since 1961. Archival research indicates that during the pre-Contact period, the upland area of Kōkeʻe was likely used as a resource gathering area, as opposed to a locale for permanent habitation or agricultural activities (Yent 1995). Several major trails traverse the area would have connected communities along the valleys of the Nā Pali Coast (Kalalau and Nuʻalolo) in the north to coastal communities in Waimea to the south (Handy and Handy 1972).

In the vicinity of the KPGO project area, timber and logs, particularly large *koa* trees, were harvested for canoe building and other uses (Rice 1923). Handy and Handy (1972) described these remote upland forests as an important source of natural resources, such as hardwoods, plants used for *lāʻau lapaau* (medicinal and ritual uses), birds and their feathers, as well as freshwater resources such as *ʻoʻopu* (Hawaiian freshwater goby; *Awaous guamensis*) and *ʻōpae* (freshwater shrimp; *Atyoida bisulcata*). Handy (1940) noted that boggy areas of the uplands (in Alakaʻi Swamp) were used for the cultivation of *olonā* (*Touchardia latifolia*), which was cultivated for use as the "finest cordage made in the Pacific Basin" (Krauss 1993:27).

Thrum documented two large *heiau* within Kōkeʻe during his island-wide survey (Thrum 1907). Ahuloulu Heiau (SIHP 50-30-01-00019) was documented by Thrum (1907) at Puʻu Ka Pele, approximately three miles south of the project area and also includes two clusters of habitation features, which were recorded by Bennett (1931). Kaumuaiea (Ka-unu-aiea) Heiau (SIHP 50-30-01-00022) was documented approximately 400 m west of the project area at Halemanu (Thrum 1907; Bennett 1931).

Other historic properties in the vicinity of the project area include: SIHP 50-30-02-02417, the Kōkeʻe Ditch, which was constructed for sugarcane agriculture in 1923 (Belluomini and Hammatt 2022); SIHP 50-30-02-02549, Kōkeʻe Road, which is a portion of Highway 55, originally constructed in 1910, and passes through a portion of the current project area (On File, SHPD); and SIHP 50-30-06-09392, the Civilian Conservation Corps (CCC) Camp, which was built in 1935 and is listed on the NRHP (Yent 1995; Reinard and Erickson 1996; Monahan and Powell 2005).

Three previous archaeological studies (Yent 1982; Walker and Rosendahl 1990; and Dowden and Rosendahl 1993) included a portion of the current project area. None of these identified historic properties within the current KPGO project area, but one (Walker and Rosendahl 1990) noted a low retaining wall outside the fenced compound at Site E at KPGO. A location for the low retaining wall was not provided and an SIHP number was not assigned.

Based on the results of previous archaeological investigations, no pre-Contact historic properties were anticipated. Post-Contact historic properties including infrastructure relating to use of the area as Kōkeʻe State Park and the development of the area into NASA KPGO during the mid-twentieth century were anticipated. A post-contact/modern low retaining wall that was previously identified within the project area but was not assigned an SIHP number (Walker and Rosendahl 1990) was also anticipated.

4.0 RESULTS OF FIELDWORK

This section presents an overview of the AIS results. Methods utilized during the project task are presented in Section 2 of this report. Individual site descriptions with illustrations and photographs are presented in Section 4.2.4 of this report and are summarized in Table 4. Previous survey results are included in the site descriptions where relevant.

4.1 SURVEY COVERAGE AND DESCRIPTION

The archaeological survey was undertaken to identify any historic properties and to assess whether subsurface testing was warranted. In order to ensure that all surface archaeological features present within the survey area were located and documented, pedestrian transects were undertaken in 100% of accessible portions of the survey area with field crew spaced at 5 m intervals. Visibility throughout the project area was good to fair. Portions of the project area were maintained, and vegetation had been cleared for NASA and Navy infrastructure, including roads, buildings, and equipment. This infrastructure was contained within fenced areas, made of both barbed wire and chain link fencing. Outside of the fenced areas, much of the project area included slopes which ranged from 30 to greater than 60-degree angles, and some of these areas (totaling approximately 0.89 acres, or 3.9% of the project area) were not accessible due to safety concerns (Figure 20). The inaccessible areas were visually inspected when they were not safe to traverse, and the entire project area was adequately inspected. Much of this area was densely forested with both native and non-native tree and shrub species, including *koa* (*Acacia koa*), *ʻŌhiʻa lehua* (*Metrosideros polymorpha*), strawberry guava, *Waiawi* (*Psideium cattleianum*), and Himalayan blackberry (*Rubus ulmifolius*). Within the fenced areas, previous development included grading and grubbing, evidenced by push piles on the edges of sloped areas. The sloped areas also contained green waste debris from landscaping and clearing within the fenced areas. Recently deposited rubbish was also present in the sloped areas, especially near hiking trails associated with Kōkeʻe and Waimea Canyon State Parks. See Figure 21 through Figure 30 for overview photographs of the landscape within the project area.

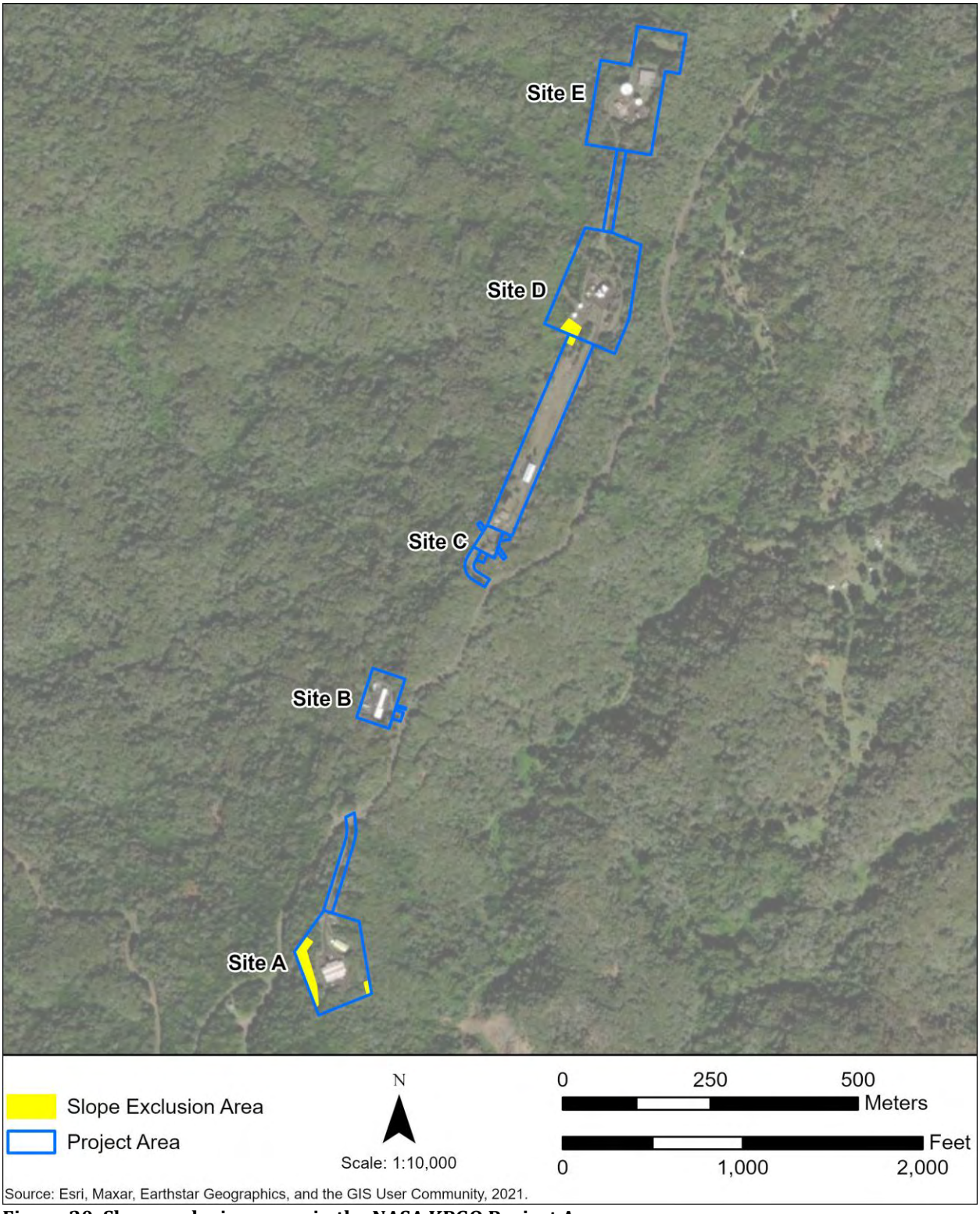


Figure 20. Slope exclusion areas in the NASA KPGO Project Area.



Figure 21. Overview photograph showing the northern portion of Site E, a mowed grass meadow outside of the fenced area with NASA KPGO infrastructure (view to northeast).



Figure 22. Overview photo of the west side of Site E, with slopes greater than 30 degrees (view to south). Pacific Legacy crewmember for perspective.



Figure 23. Overview of paved asphalt road leading to Site E (view to north).



Figure 24. Overview photo of the exterior of the fenced area at Site A, with a steep drop off and slopes of greater than 60 degrees (view to southeast). Pacific Legacy crewmember for perspective.



Figure 25. Dense vegetation conditions on eastern side of roadway at Site A (view to south). Much of the forested area around the fenced areas within the NASA KPGO Project Area were similar or denser than this.



Figure 26. Overview of the sloped, forested land outside of the fenced area at Site B (view to northwest).



Figure 27. Modern trash scattered outside of the fenced area at Site B (view to north).



Figure 28. Overview of the forested section outside of the fenced area on the east side of Site D (view to west). Pacific Legacy crewmember for perspective.



Figure 29. Overview of the forested section on the east side of the road, within Site C (view to east). Pacific Legacy crewmember for perspective.



Figure 30. Gated entrance to Site C, D, and E on the west side of SIHP 50-30-02-02549 (Kōkeʻe Road) (view to northwest from east side of road).

4.2 ARCHAEOLOGICAL SURVEY RESULTS

The AIS resulted in the documentation of two historic properties with a total of 18 features: SIHP 50-30-06-XXXXX (TS-001) and 50-30-06-YYYYY (TS-002) (Table 4; Figure 31). SIHP 50-30-06-YYYYY (TS-002) is the retaining wall that was previously documented as a recent feature by Walker and Rosendahl (1990).

Table 4. Historic Properties Identified in the NASA Kōkeʻe Park Geophysical Observatory Project Area

SIHP No.	Temp. Site	Fe.	Type	Function	Age
50-30-06-XXXXX	TS-001	1	Retaining Wall	Water Control	1961 or after
50-30-06-XXXXX	TS-001	2	Concrete Slab	Building Foundation	1961 or after
50-30-06-XXXXX	TS-001	3	Channel	Water Control	1961 or after
50-30-06-XXXXX	TS-001	4	Channel	Water Control	1961 or after
50-30-06-XXXXX	TS-001	5	Retaining Wall	Water and Erosion Control	1961 or after
50-30-06-XXXXX	TS-001	6	Channel	Water Control	1961 or after
50-30-06-XXXXX	TS-001	7	Retaining Wall	Water and Erosion Control	1961 or after
50-30-06-XXXXX	TS-001	8	Channel	Water Control	1961 or after
50-30-06-XXXXX	TS-001	9	Retaining Wall	Water and Erosion Control	1961 or after
50-30-06-XXXXX	TS-001	10	Retaining Wall	Water and Erosion Control	1961 or after
50-30-06-XXXXX	TS-001	11	Retaining Wall	Water and Erosion Control	1961 or after
50-30-06-XXXXX	TS-001	12	Concrete Slab	Building Foundation	1961 or after
50-30-06-XXXXX	TS-001	13	Concrete Slab	Building Foundation	1961 or after
50-30-06-XXXXX	TS-001	14	Channel	Water Control	1961 or after
50-30-06-XXXXX	TS-001	15	Channel	Water Control	1961 or after
50-30-06-XXXXX	TS-001	16	Asphalt Pad	Equipment Foundation	1961 or after
50-30-06-XXXXX	TS-001	17	Channel	Water Control	1961 or after
50-30-06-YYYYY	TS-002	N/A	Terrace/ Retaining Wall	Temporary Habitation/ Erosion Control	Post-Contact

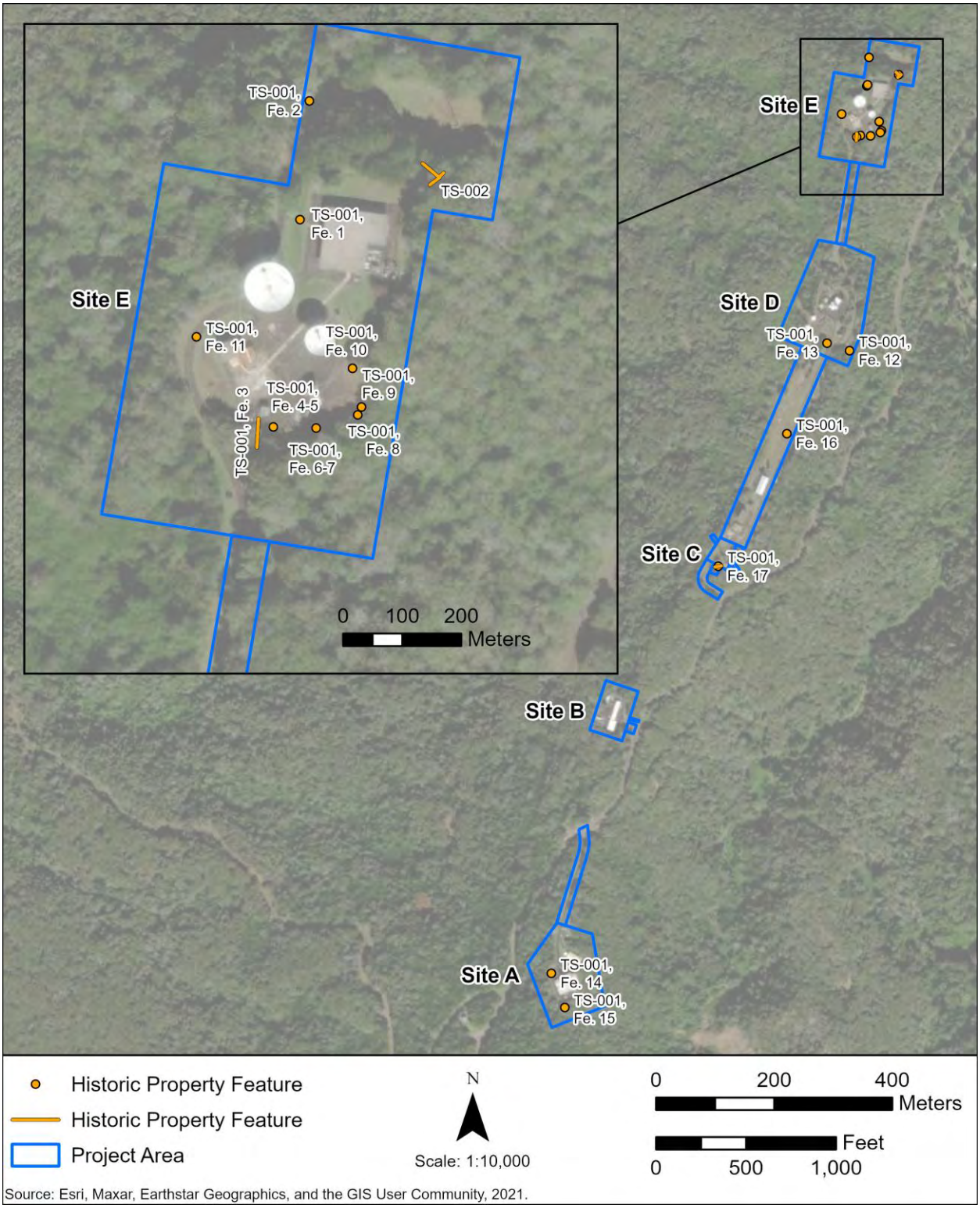


Figure 31. Overall distribution of historic property features identified during the AIS in the NASA KPGO Project Area, including Site A, B, C, D, and E.

4.3 MAJOR TYPES OF ARCHAEOLOGICAL SITES AND FEATURES

A wide range of archaeological features were identified during the present survey. Most of these built structures and modified natural features fall within a number of specific morphological and functional feature types, which can be clearly defined and described. A list of these feature types is provided in Table 5.

Table 5. Archaeological Feature Types within the NASA KPGO Project Area

Feature Type	Number
Asphalt Pad	**1**
Asphalt Road	**1**
Channel	**7**
Concrete	5
Concrete and Basalt	2
Concrete Slab	**3**
Retaining Wall	**6**
Concrete	4
Basalt	1
Concrete and Basalt	1
Basalt & Concrete Terrace	**1**
Grand Total	**18**

The most prominent feature types identified during the AIS include channel and retaining wall features. A map of the spatial distribution of feature types is provided in Figure 32.

4.3.1 Channel and Retaining Wall Features

A total of 13 channel and retaining wall features were identified during the AIS. These include five concrete channels, two concrete and basalt channels, four concrete retaining walls, one basalt retaining wall, and one basalt and concrete retaining wall. The features are clustered on the exterior of the chain link fence surrounding KPGO satellite and radar equipment. The features have erosion and water control functions and date to 1961 or after.

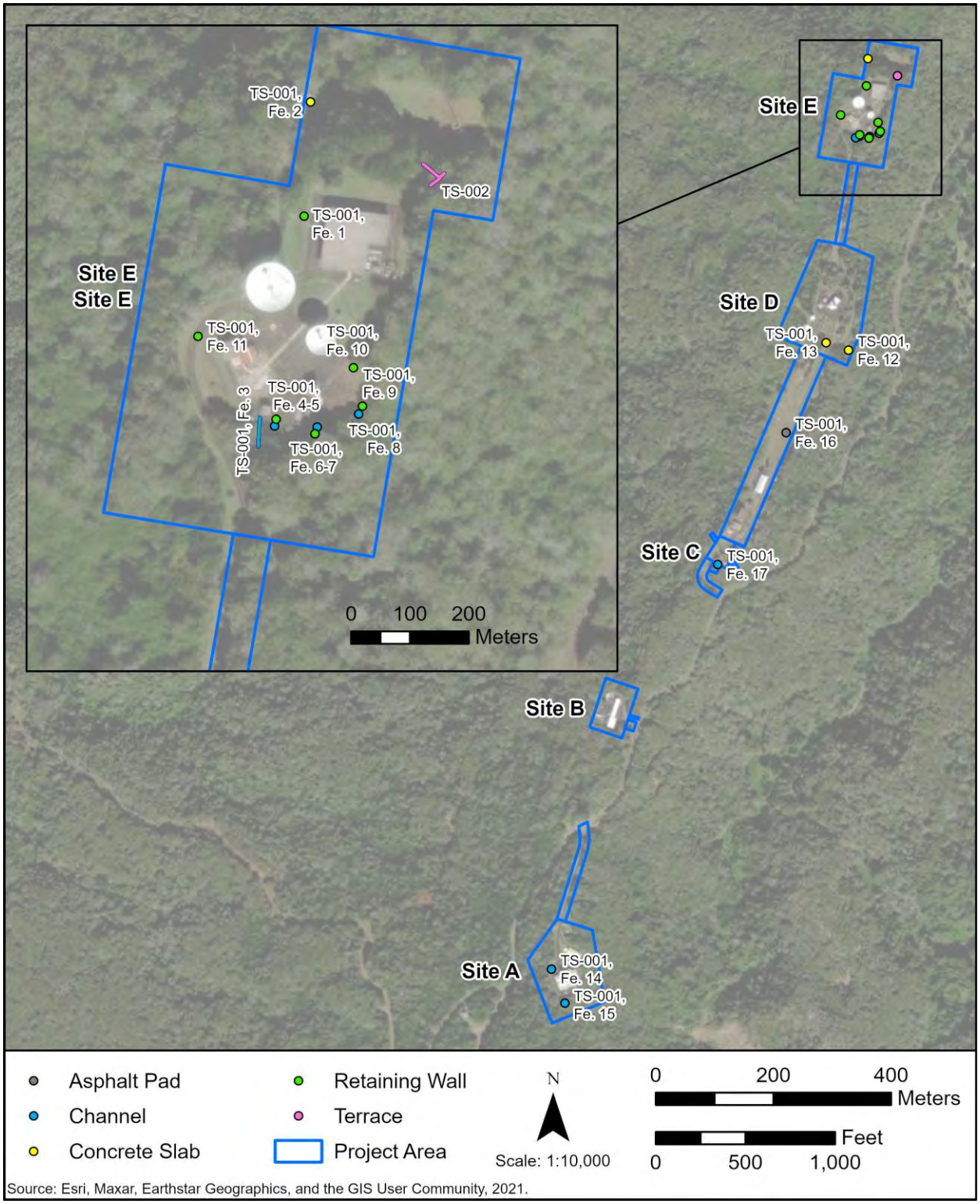


Figure 32. Spatial distribution of major feature types in the NASA KPGO Project Area.

4.4 HISTORIC PROPERTY DESCRIPTIONS

SIHP 50-30-06-XXXXX
TS-001
Site Type: NASA Kōkeʻe Park Geophysical Observatory Infrastructure Features
Number of Features: 17
Dimensions: 1.61 km L x 597 m W
Condition: Good to Fair
Age: 1961 or after
Function: Building and equipment foundations; transportation; and water and erosion control
Significance: not significant
Integrity: Location, design, setting, quality of workmanship, feeling, materials, and association

Site Description

SIHP 50-30-06-XXXXX (TS-001) is a complex of 17 features related to NASA KPGO infrastructure (Figure 33). The site measures 1.61 km long (north-south) by 597 m wide (east-west). All features were constructed in 1961 or after. Two features were located at Site A (Features 14 and 15), two features were located at Site C (Features 16 and 17), two features were located at Site D (Features 12 and 13), and twelve features were located at Site E (Features 1 through 11). Three features were building foundations (Features 2, 12, and 13), one feature was an equipment foundation (Feature 16), five features were related to water and erosion control (Features 5, 7, and 9 through 11), and eight features were related to water control (Features 1, 3, 4, 6, 8, 14, 15, and 17).

No cultural materials were documented at SIHP -XXXXX. SIHP -XXXXX is assessed as not significant. It possesses integrity of location, design, setting, quality of workmanship, feeling, materials, and association**.** No mitigation is recommended at this time.



Figure 33. Historic property feature components associated with SIHP 50-30-02-XXXXX (TS-001) during the AIS in the NASA KPGO Project Area.

Feature 1 (Figure 34 and Figure 35) consists of a basalt retaining wall, located within the fenced area at Site E, near the northwestern project area boundary. The basalt retaining wall is constructed of stacked angular basalt, stacked five courses high at the center, built roughly east-west through a drainage swale running downslope (south to north). A 12-inch PVC drainage pipe is located at the center of the wall. The retaining wall functions to control water within the NASA KPGO project area. Feature 1 is associated with a wooden walkway bridge built directly over the basalt retaining wall (Feature 1). Feature 1 measures 3 m long by 0.8 m wide by 0.6 m high.



Figure 34. Site 50-30-06-XXXXX (TS-001), Feature 1, basalt retaining wall underneath wooden bridge (view to southwest).

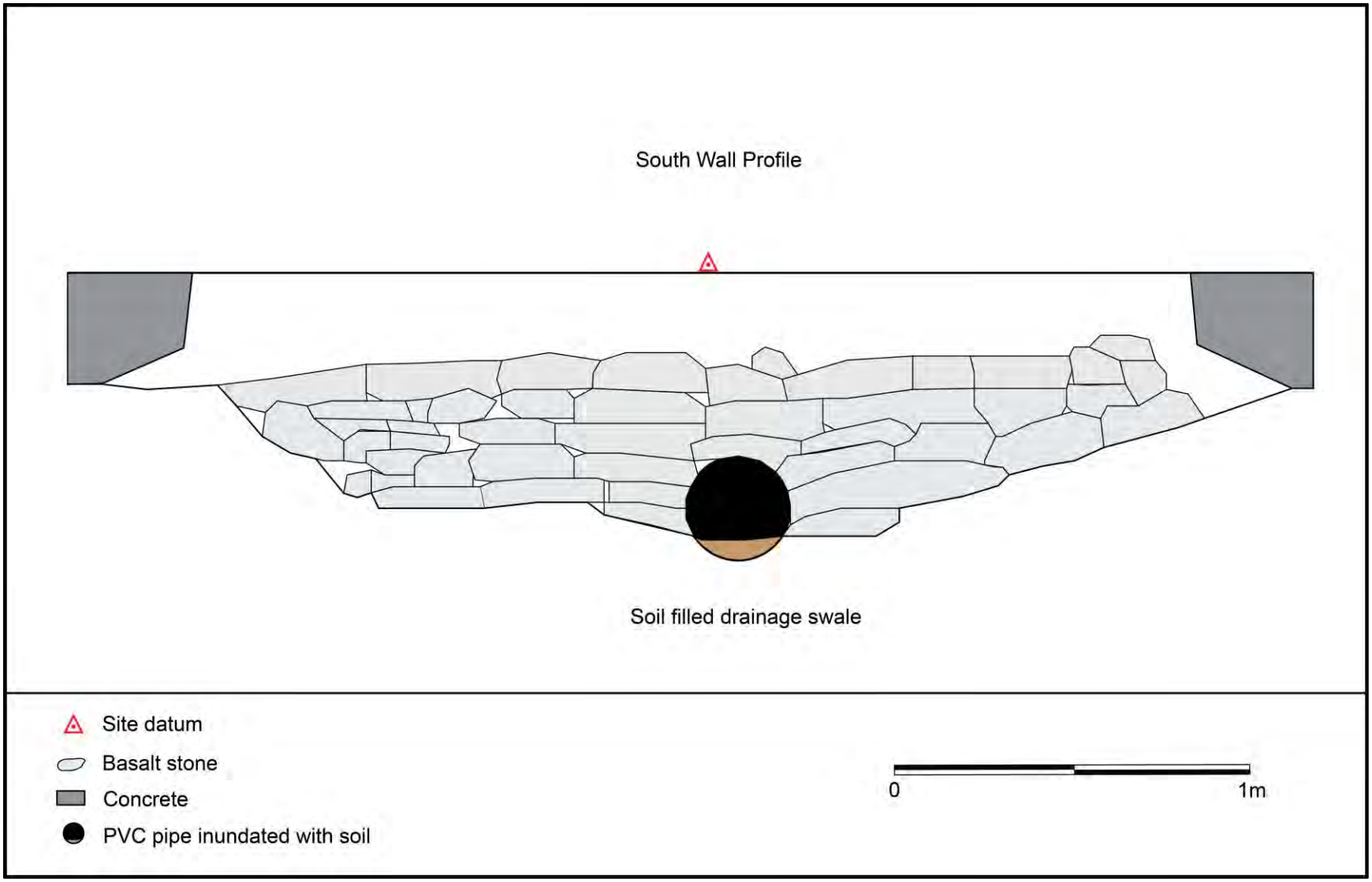


Figure 35. Wall profile of Site 50-30-06-XXXXX (TS-001), Feature 1, basalt retaining wall (view to south).

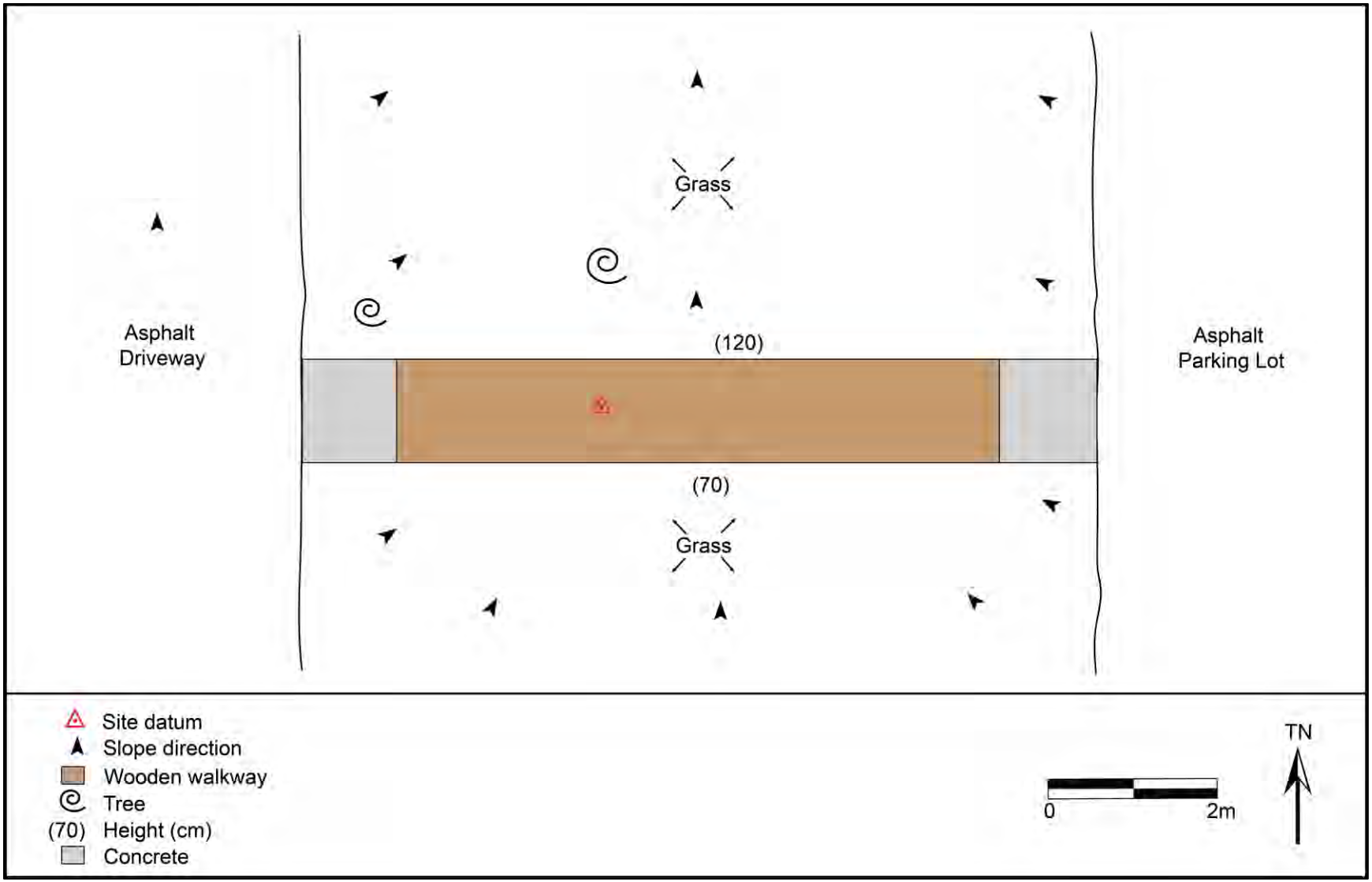


Figure 36. Plan map of SIHP 50-30-06-XXXXX (TS-001), Feature 1, basalt retaining wall, which is located directly below a wooden bridge/walkway, and is not visible on the plan view map.

Feature 2 is a concrete slab (Figure 37 and Figure 38), located along the western edge of the northernmost project area boundary in Site E. It is located north of the lowest elevation of an asphalt driveway which originates within the area fenced by chain link fence, outside of this fenced area. The area has been cleared and is associated with NASA KPGO. Feature 2 rests on the edge of a steep drop off to the north. The concrete slab functions as a building foundation. It is constructed of concrete and has four rectangular concrete supports arranged in a square pattern. A raised rectangular concrete pad with several PVC pipes is built into the center of the slab. Electrical wiring is present on the rectangular concrete supports. It is likely associated with inactive infrastructure, such as antenna, radar, and/or satellite structures. During a conversation while conducting AIS field work, the station manager reported that there was radar and satellite equipment on the structure that was removed in the late 2000s or 2010s. Feature 2 measures 7.3 m long by 7.3 m wide and has a maximum height of 1.45 m.



Figure 37. SIHP 50-30-06-XXXXX (TS-001), Feature 2, concrete building foundation (view to west).

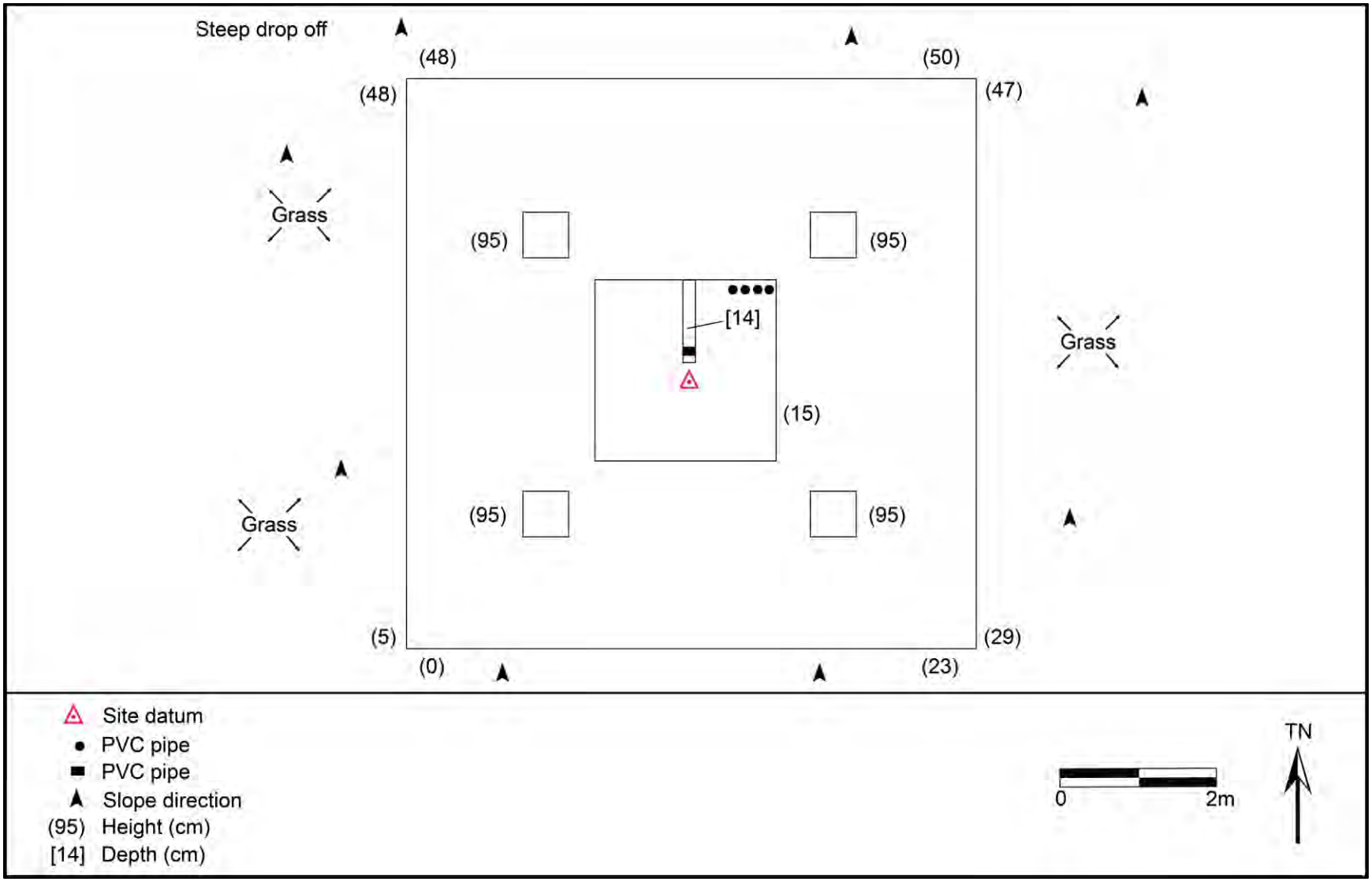


Figure 38. Plan map of SIHP 50-30-06-XXXXX (TS-001), Feature 2, concrete building foundation.

Feature 3 is a concrete and basalt channel (Figure 39 through Figure 44) located in the southern central portion of Site E. It originates on the edge of a chain link fence, which surrounds cleared land with antenna and radar infrastructure associated with NASA KPGO. The channel is constructed of concrete and stacked basalt stone with concrete mortar. The basalt stone is medium to large cobble size and angular to subangular in nature. The wall is stacked one to two courses high and concreted in place. The channel floor is constructed of concrete. The channel is oriented on a downslope, and terminates at the base of the slope, on the eastern side of the asphalt road which runs through the center of the project area. The channel is located on a slope greater than 60 degrees. The channel functions as a water drainage feature. Feature 3 measures 12 m long by 0.8 m wide by 0.3 m high.



Figure 39. Site 50-30-06-XXXXX (TS-001), Feature 3, concrete and stone channel (view to north).



Figure 40. Site 50-30-06-XXXXX (TS-001), Feature 3, concrete and stone channel (view to south).



Figure 41. Site 50-30-06-XXXXX (TS-001), Feature 3, concrete and stone channel (view to northwest, at base).



Figure 42. Site 50-30-06-XXXXX (TS-001), Feature 3, concrete and stone channel (view to west, at top).



Figure 43. Site 50-30-06-XXXXX (TS-001), Feature 3, concrete and stone channel (view to east, at top).

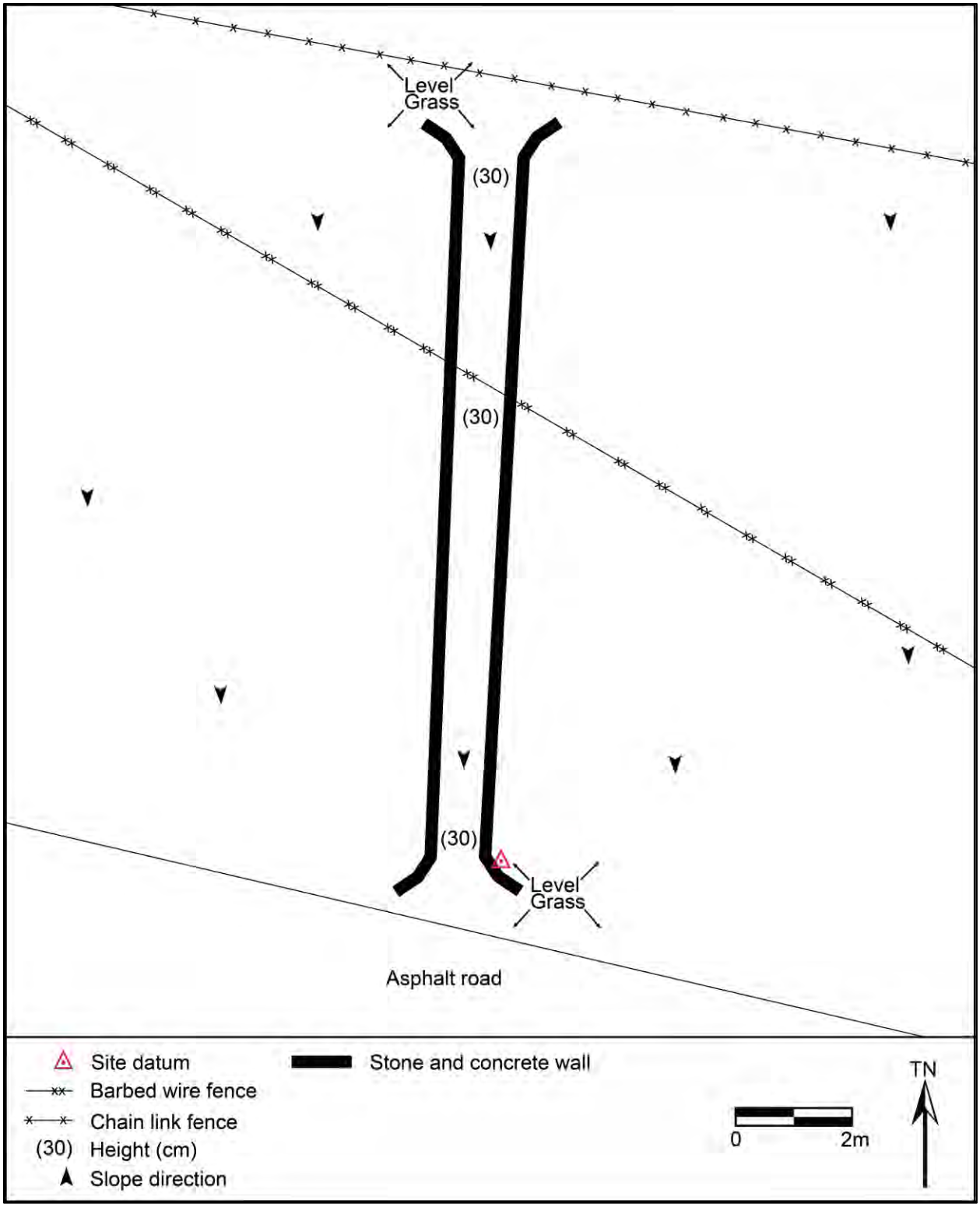


Figure 44. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 3, concrete and stone channel.

Feature 4 (concrete channel) and **Feature 5** (concrete retaining wall) are located along the southern edge of the exterior of the chain link fence in the central portion of Site E (Figure 45 through Figure 47). The chain link fence surrounds cleared land with antenna, satellite, and radar infrastructure associated with NASA KPGO. They are positioned on cleared ground, and the channel runs down the slope, terminating before the slope reaches its steepest point (over 60 degrees). Both the channel and the retaining wall are constructed from concrete and the floor of the channel is also concrete. Feature 4 measures 4.1 m long by 0.9 m wide by 0.2 m deep. Feature 5 measures 1.08 m long by 0.2 m wide by 0.2 m high.



Figure 45. Site 50-30-06-XXXXX (TS-001), Feature 4 and 5, concrete channel and retaining wall (view to northwest).



Figure 46. Site 50-30-06-XXXXX (TS-001), Feature 5, concrete retaining wall (view to north). Feature 4 (concrete channel) visible in background.

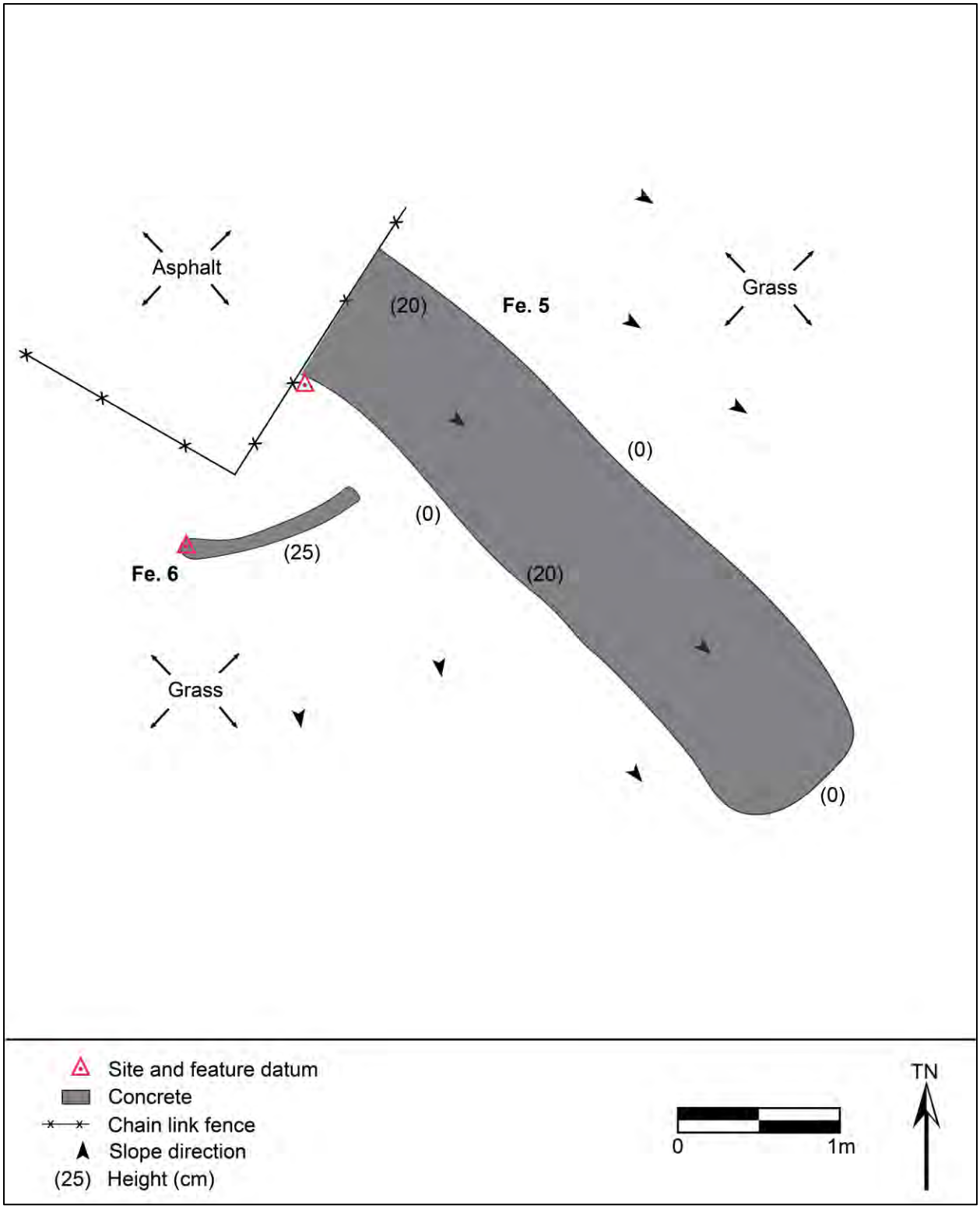


Figure 47. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 4 and 5, concrete channel and retaining wall.

Feature 6 (concrete channel) and **Feature 7** (concrete retaining wall) are located along the southeastern edge of the exterior of the chain link fence in the central portion of Site E (Figure 48 through Figure 51). The chain link fence surrounds cleared land with antenna, satellite, and radar infrastructure associated with NASA KPGO. They are positioned on cleared ground, and the channel runs down the slope, terminating before the slope reaches its steepest point (over 60 degrees). Both the channel and the retaining wall are constructed from concrete and the floor of the channel is also concrete. Feature 6 measures 2.4 m long by 1 m wide by 0.2 m deep. Feature 7 measures 1.08 m long by 0.2 m wide by 0.4 m high.



Figure 48. Site 50-30-06-XXXXX (TS-001), Feature 6 and 7, concrete channel and retaining wall (view to north).



Figure 49. Site 50-30-06-XXXXX (TS-001), Feature 6 and 7, concrete channel and retaining wall (view to west). Feature 7 is visible in the foreground and Feature 6 is visible in the background.



Figure 50. Site 50-30-06-XXXXX (TS-001), Feature 7, concrete retaining wall (view to west).

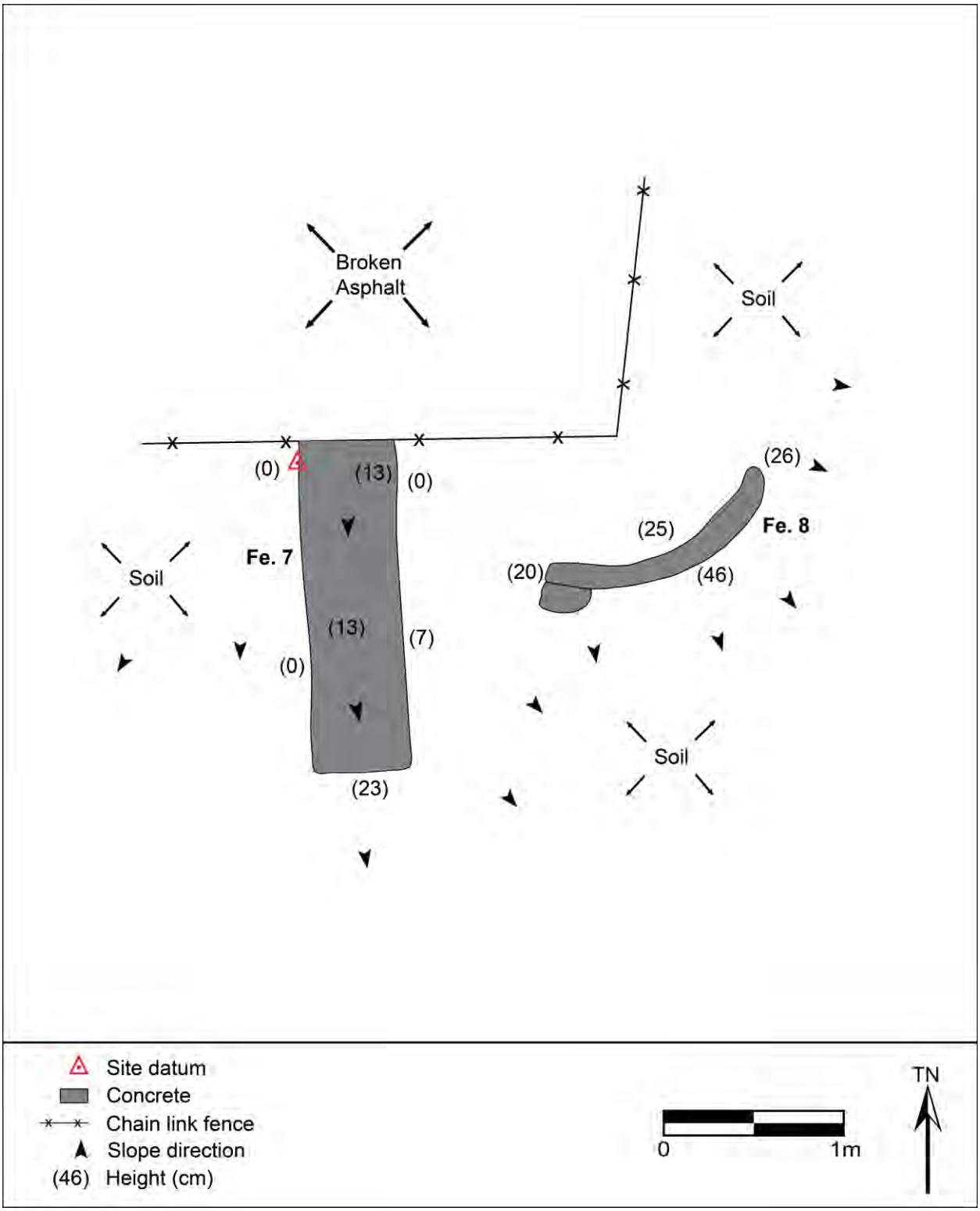


Figure 51. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 6 and 7, concrete channel and retaining wall.

Feature 8 (concrete channel) and **Feature 9** (concrete retaining wall) are located along the southeastern edge of the exterior of the chain link fence in the central portion of Site E (Figure 52 through Figure 54). The chain link fence surrounds cleared land with antenna, satellite, and radar infrastructure associated with NASA KPGO. They are positioned on cleared ground, and the channel runs down the slope, terminating before the slope reaches its steepest point (over 60 degrees). Both the channel and the retaining wall are constructed from concrete and the floor of the channel is also concrete. Feature 8 measures 2 m long by 0.9 m wide by 0.2 m deep. Feature 9 measures 1.6 m long by 0.75 m wide by 0.66 m high.



Figure 52. Site 50-30-06-XXXXX (TS-001), Feature 8, concrete channel (view to northeast).



Figure 53. Site 50-30-06-XXXXX (TS-001), Feature 9, concrete retaining wall (view to west).

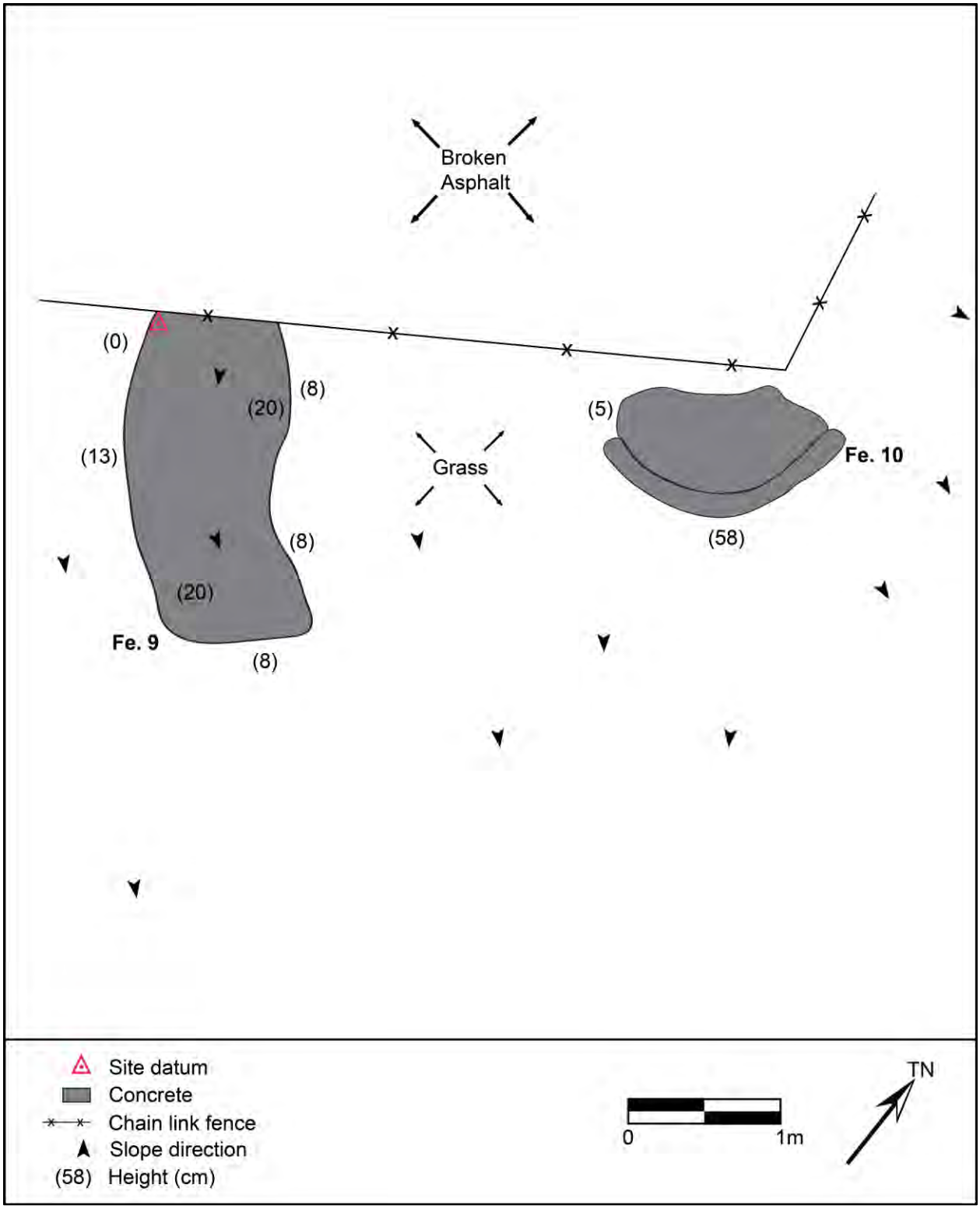


Figure 54. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 8 and 9, concrete channel and retaining wall.

Feature 10 is a concrete retaining wall, located along the southwestern edge of the chain link fence in the central portion of Site E (Figure 55, Figure 56). The chain link fence surrounds cleared land with antenna, satellite, and radar infrastructure associated with NASA KPGO. It is positioned on cleared ground and constructed of concrete. Feature 10 measures 0.84 m long by 0.1 m wide by 0.3 m high.



Figure 55. Site 50-30-06-XXXXX (TS-001), Feature 10, concrete retaining wall (view to northwest).

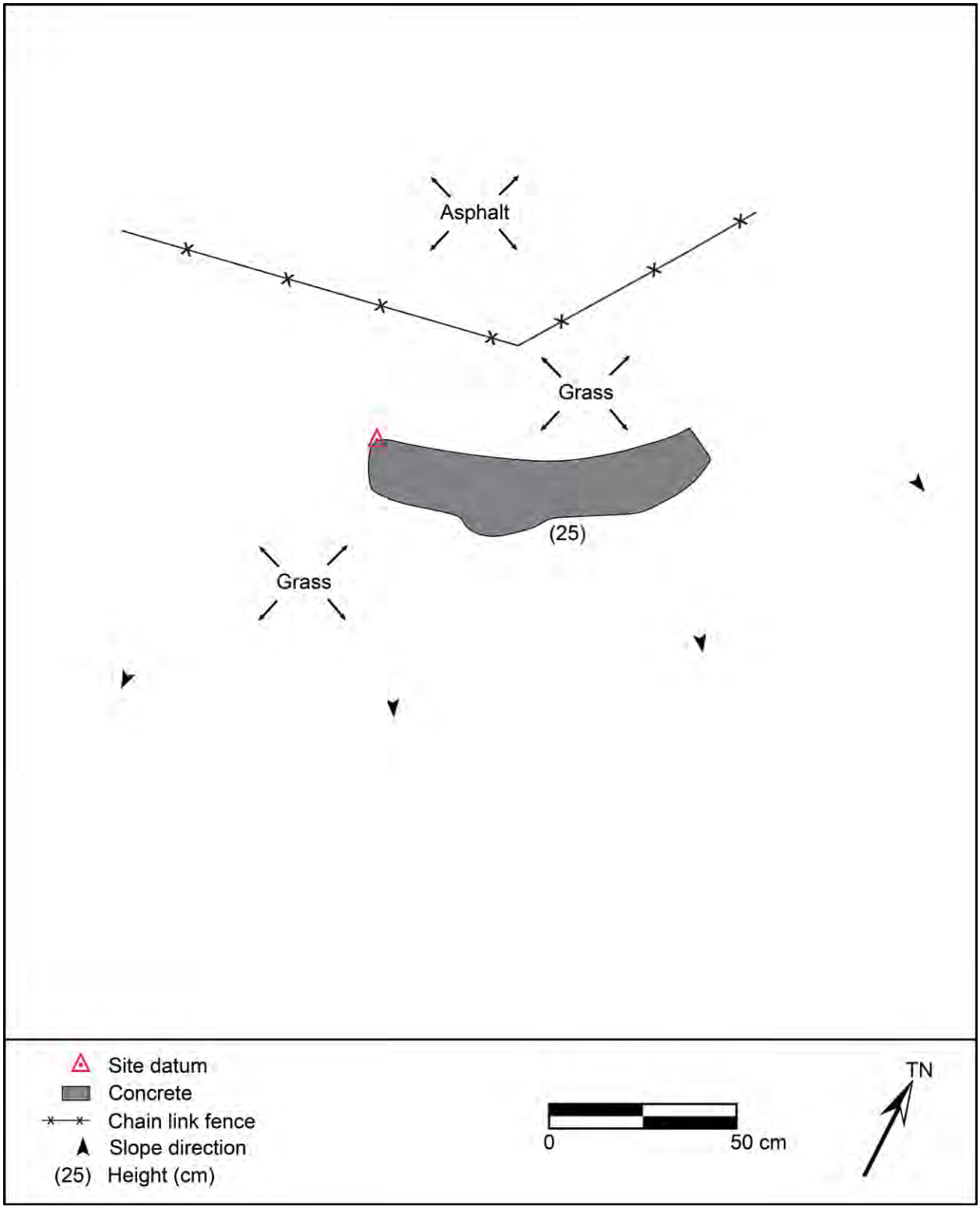


Figure 56. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 10, concrete retaining wall.

Feature 11 is a retaining wall constructed of stacked basalt stone with concrete mortar. It is located on the western edge of the chain link fence in the central portion of Site E (Figure 57, Figure 58). The chain link fence surrounds cleared land with antenna, satellite, and radar infrastructure associated with NASA KPGO. Feature 11 is located to the east of the asphalt road which runs through the center of the project area. It is located on a slight slope, on ground that has been cleared and planted with grass and landscaped. The basalt stones are medium to large cobble size and are subangular and angular in nature. The wall course is stacked two to three courses high and filled with concrete. Feature 11 measures 1.94 m long by 0.59 m wide by 0.46 m high.



Figure 57. Site 50-30-06-XXXXX (TS-001), Feature 11, basalt stone retaining wall (view to east).

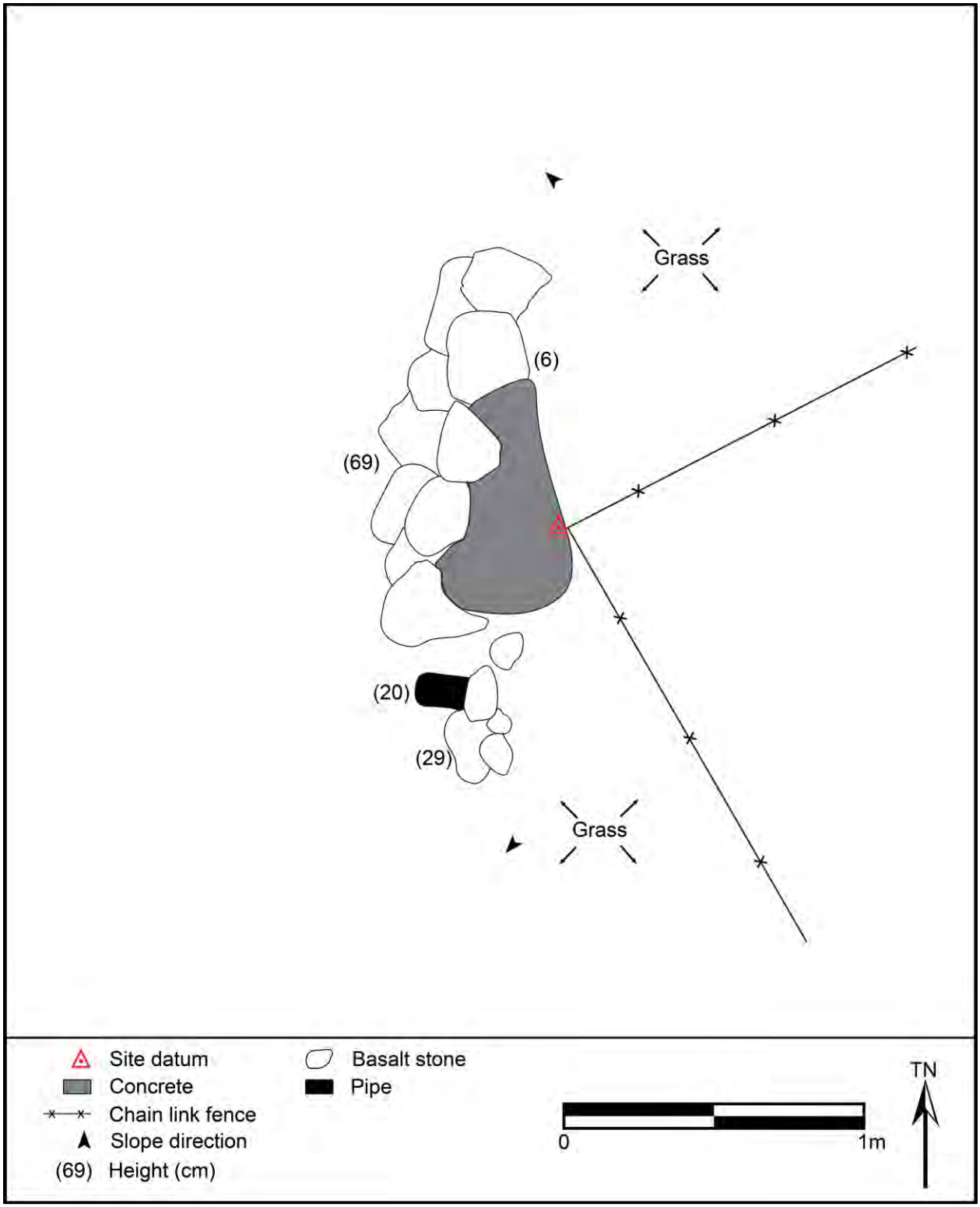


Figure 58. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 11, basalt stone retaining wall.

Feature 12 is a concrete building foundation, located in the southeastern portion of Site D, southeast and downslope of the asphalt road which passes through the central portion of the project area (Figure 59 through Figure 61), inside of the barbed wire fenced area. Feature 12 is constructed of concrete and has four rectangular raised pads on the corners, with a smaller, fifth raised pad on the northwestern side. Metal bolts and electrical wiring are present on the raised pads. It is likely associated with inactive infrastructure, such as antenna, radar, and/or satellite structures at NASA KPGO. It measures 4.4 m long by 4.4 m wide by 0.42 m high.



Figure 59. Site 50-30-06-XXXXX (TS-001), Feature 12, concrete foundation (view to northeast).



Figure 60. Site 50-30-06-XXXXX (TS-001), Feature 12, concrete foundation (view to west).

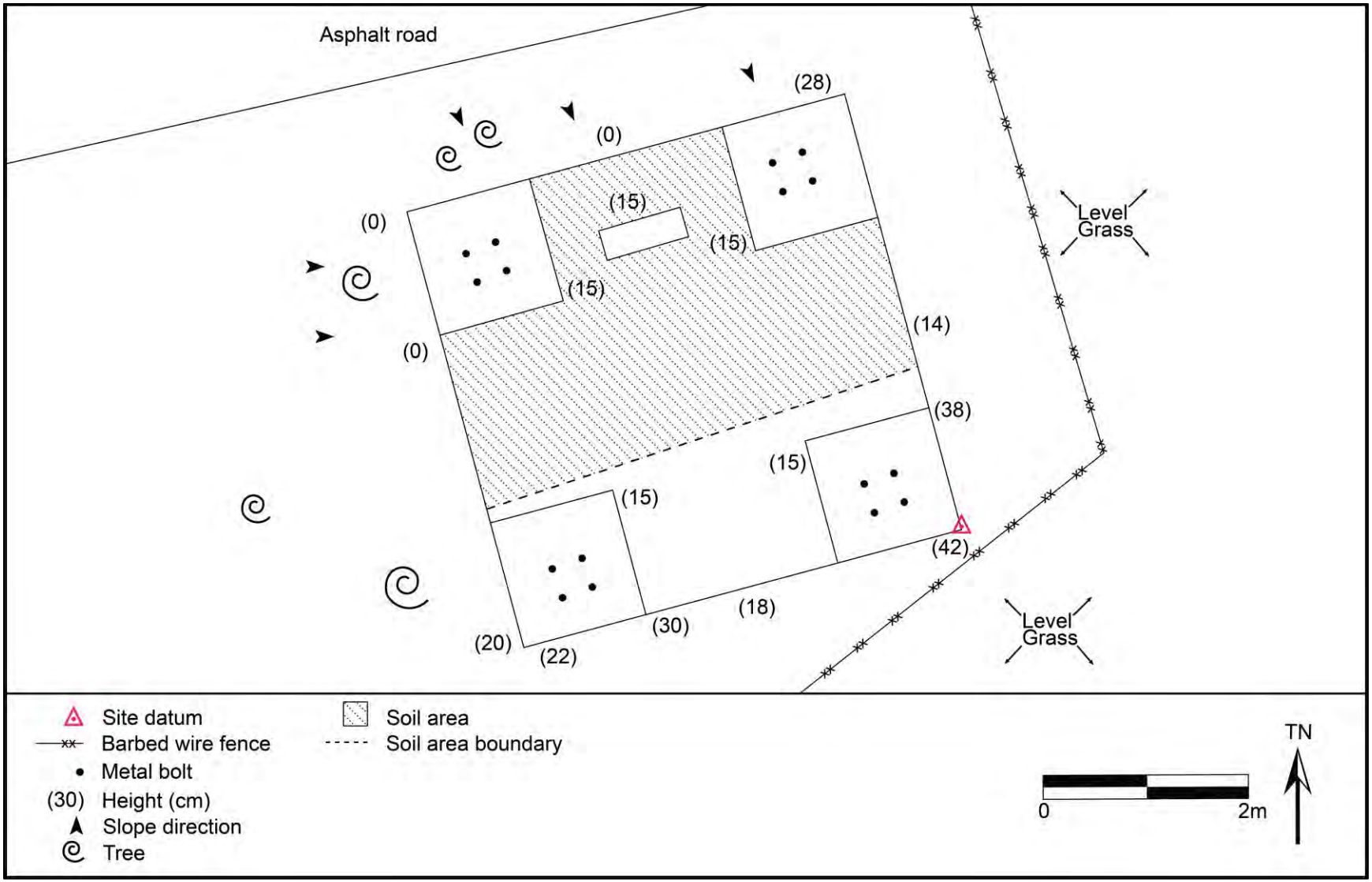


Figure 61. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 12, concrete foundation.

Feature 13 is a concrete building foundation, located in the southern central portion of the project area in Site D (Figure 62 through Figure 64). It is located to the west of the western arm of the asphalt road which passes through the central portion of the project area. It is inside the barbed wire fenced area and outside of a smaller chain link fenced area, which encloses a structure and satellite, radar, and/or antenna infrastructure. Feature 13 is constructed of concrete and has exposed rebar on the top of the slab. No markings are visible. It is likely associated with inactive infrastructure, such as buildings, antenna, radar, and/or satellite structures at NASA KPGO. Feature 13 measures 2.6 m long by 1.3 m wide by 0.35 m high.



Figure 62. Site 50-30-06-XXXXX (TS-001), Feature 13, concrete foundation (view to north).



Figure 63. Site 50-30-06-XXXXX (TS-001), Feature 13, concrete foundation (view to west).

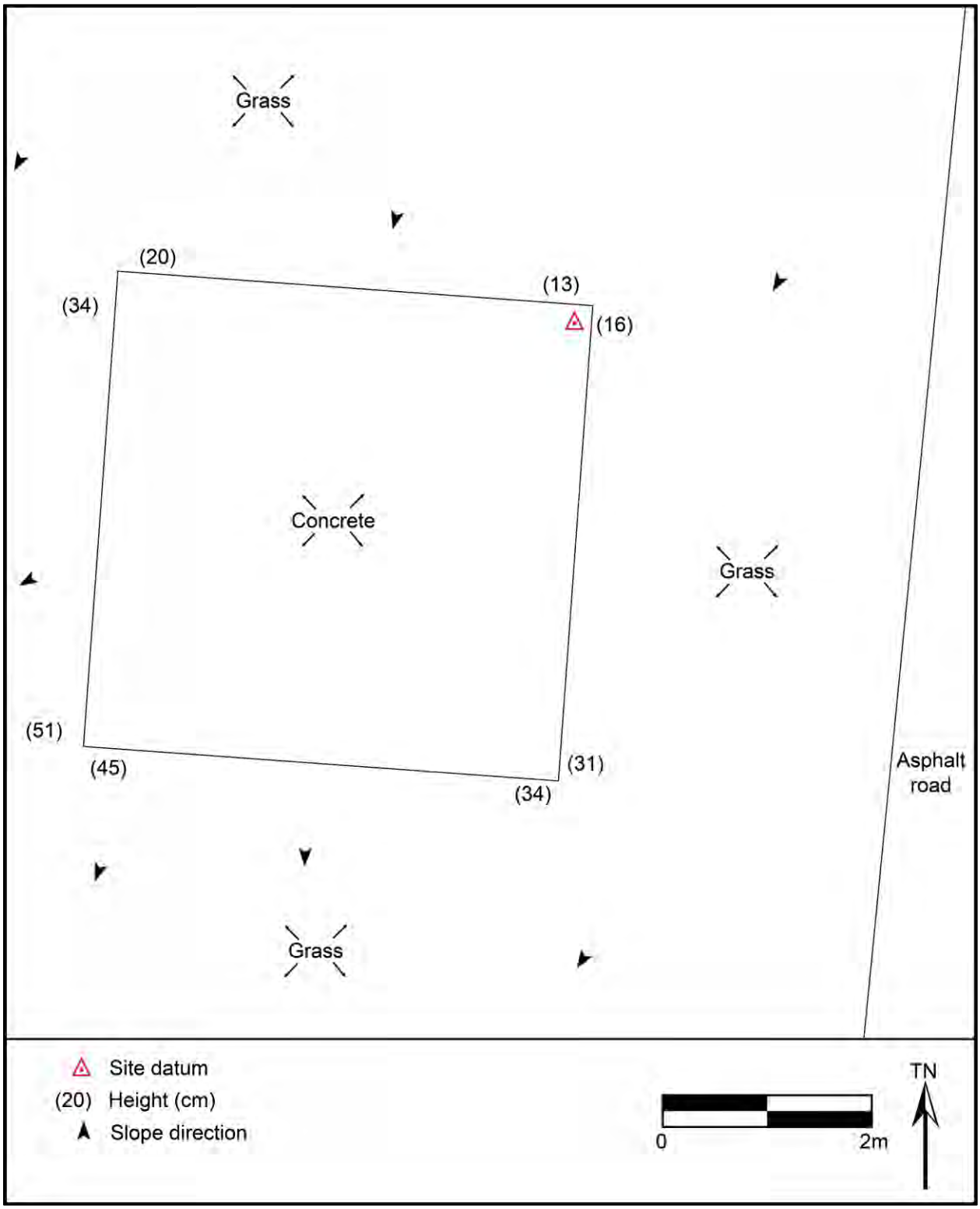


Figure 64. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 13, concrete foundation.

Feature 14 is a concrete and basalt stone channel (Figure 65 through Figure 67) that extends outside from the chain link fenced area at Site A, which surrounds cleared land with asphalt driveways, structures, and inactive radar, antenna, and satellite infrastructure associated with NASA KPGO. The station manager reported that the site was used by the US Navy, and it is currently unoccupied. Feature 14 is located on the edge, but outside of the northwestern edge of the fenced area, within the southwestern portion of the project area. The channel is constructed of concrete and terminates before the slope reaches its steepest point (over 60 degrees). The sides of the channel are constructed with basalt stone and concrete, and the floor of the channel is concrete. The channel is located on a slope greater than 60 degrees and functions to control water at KPGO. Feature 14 measures 2.6 m long by 1.3 m wide by 0.35 m high.



Figure 65. Site 50-30-06-XXXXX (TS-001), Feature 14, concrete and basalt stone channel (view to northeast).



Figure 66. Site 50-30-06-XXXXX (TS-001), Feature 14, concrete and basalt stone channel (view to southeast).

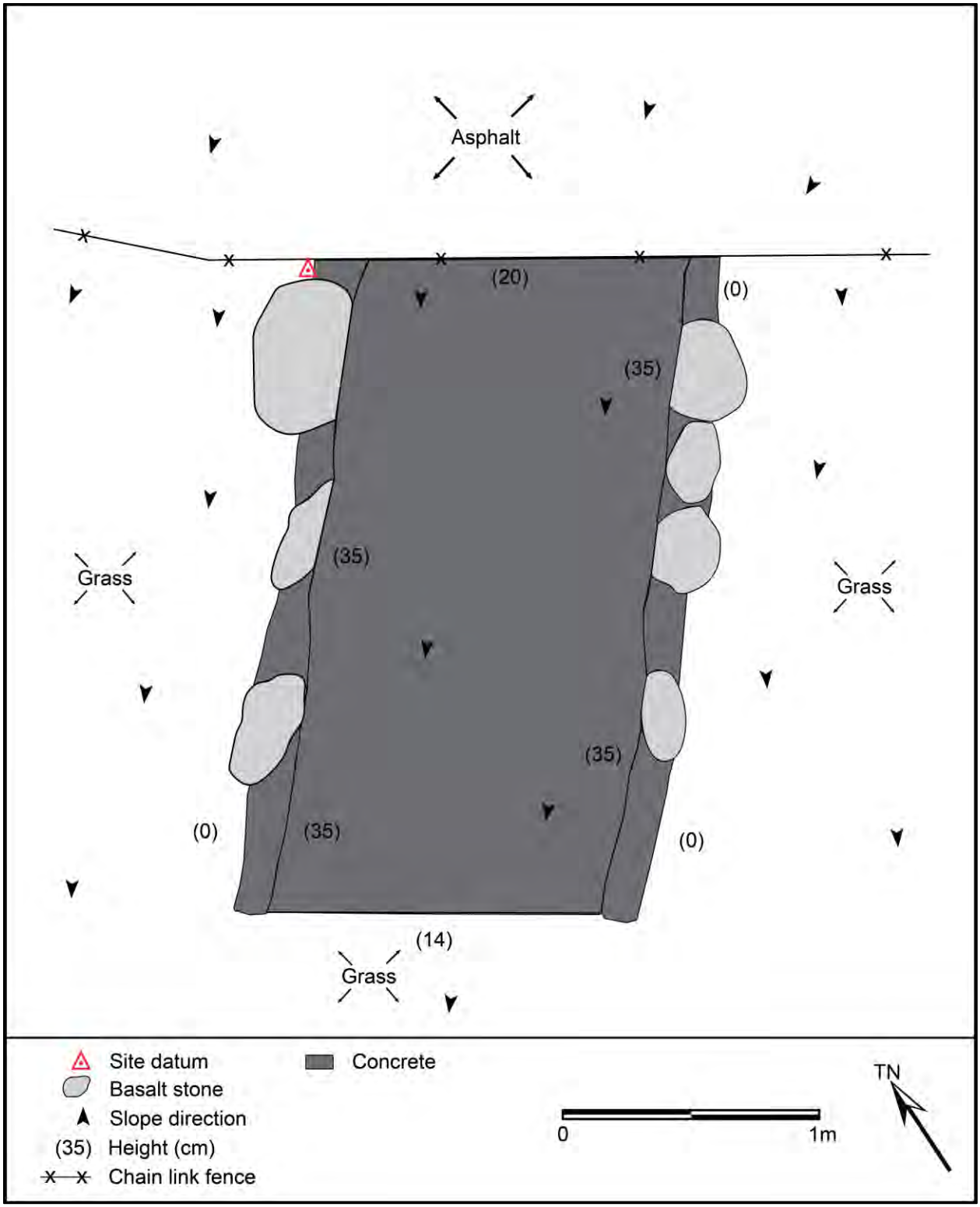


Figure 67. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 14, concrete and basalt stone channel.

Feature 15 is a concrete channel (Figure 68, Figure 69) that extends outside from the chain link fenced area at Site A, which surrounds cleared land with asphalt driveways, structures, and inactive radar, antenna, and satellite infrastructure associated with NASA KPGO. The station manager reported that the site was used by the US Navy, and it is currently unoccupied. Feature 15 is located outside of the southwestern edge of the fenced area, within the southwestern portion of the project area. Its construction is stepped, and it has two steps before terminating before the slope reaches its steepest point (over 60 degrees). The entire channel is constructed of concrete and concrete blocks. The floor of the channel is concrete. The channel is located on a slope greater than 60 degrees and functions to control water at KPGO. Feature 15 measures 2.9 mlong by 1.2 m wide by 0.85 m high.



Figure 68. Site 50-30-06-XXXXX (TS-001), Feature 15, concrete channel (view to east).

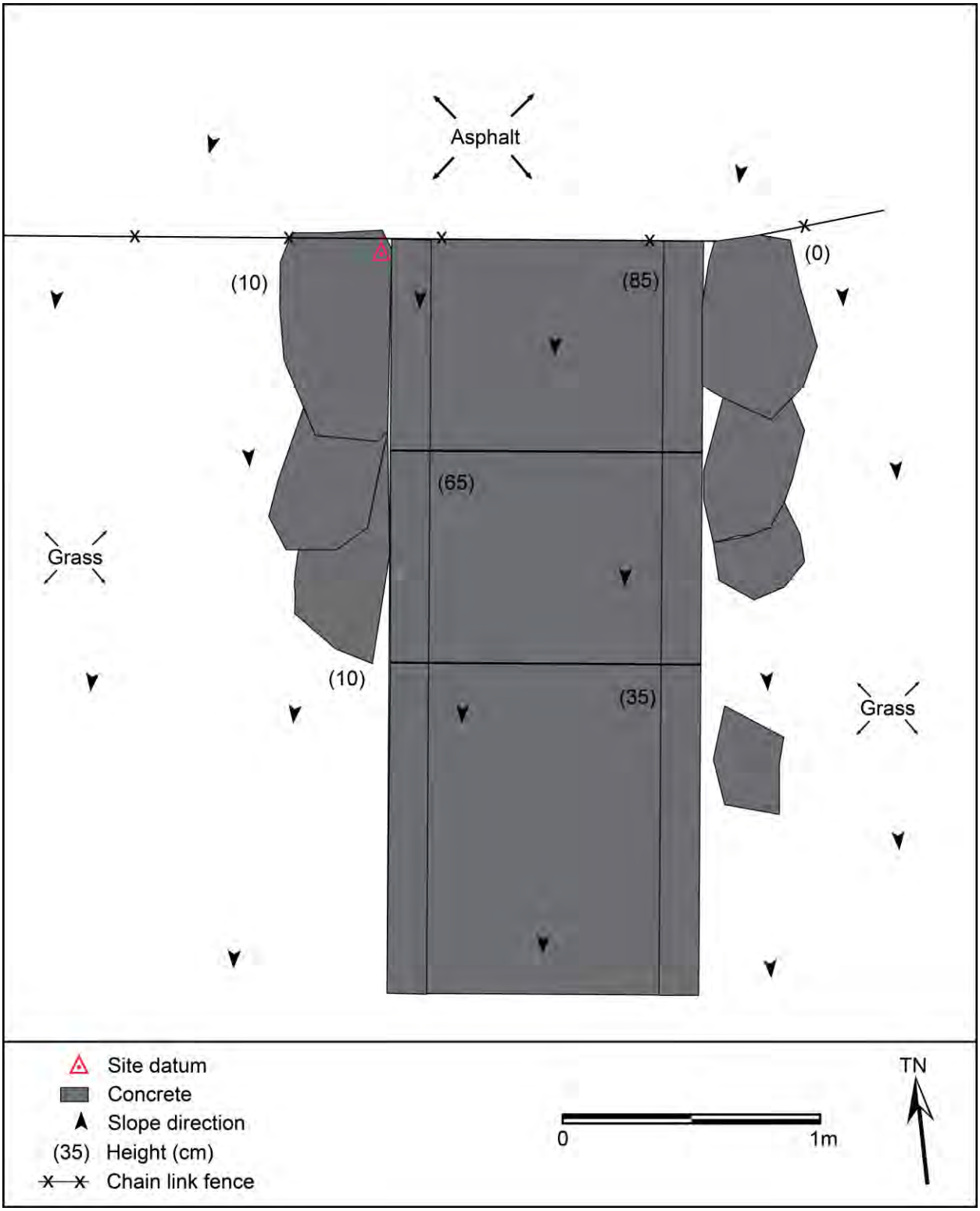


Figure 69. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 15, concrete channel.

Feature 16 is an asphalt foundation (Figure 70 through Figure 74) located in the central northern portion of Site C. It is located to the west of the asphalt road running through the project area within a mowed grass meadow within the barbed wire fenced project area. The asphalt foundation is on a berm, lower in elevation than the asphalt road, but higher in elevation than the rest of the mowed grass meadow. The asphalt foundation has three metal plates bolted to the asphalt (Figure 73). The metal plates create a tripod shape, and may be a remnant of inactive infrastructure, such as antenna, radar, and/or satellite structures associated with NASA KPGO. Feature 16 measures 6 m long by 5.5 m wide and it is flush to the ground.



Figure 70. Site 50-30-06-XXXXX (TS-001), Feature 16, asphalt foundation (view to east).



Figure 71. Site 50-30-06-XXXXX (TS-001), Feature 16, asphalt foundation (view to west).



Figure 72. Site 50-30-06-XXXXX (TS-001), Feature 16, asphalt foundation (view to northwest).

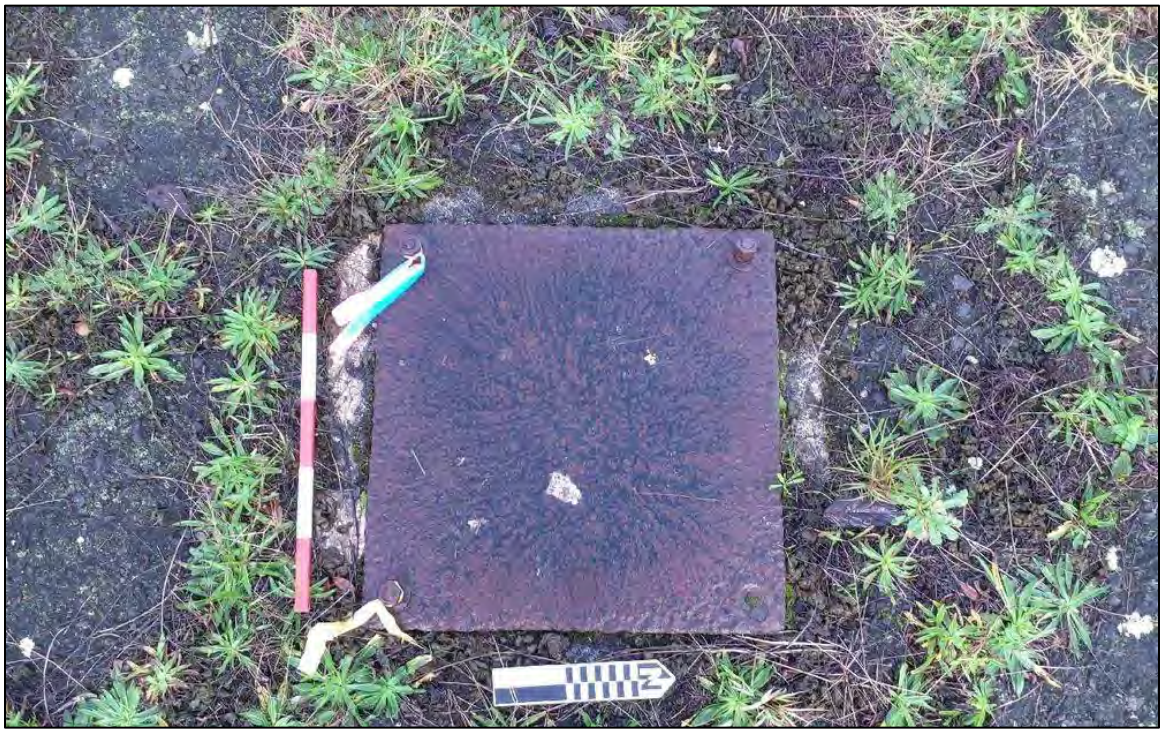


Figure 73. Site 50-30-06-XXXXX (TS-001), Feature 16, asphalt foundation, close up plan view image of metal covering on asphalt.

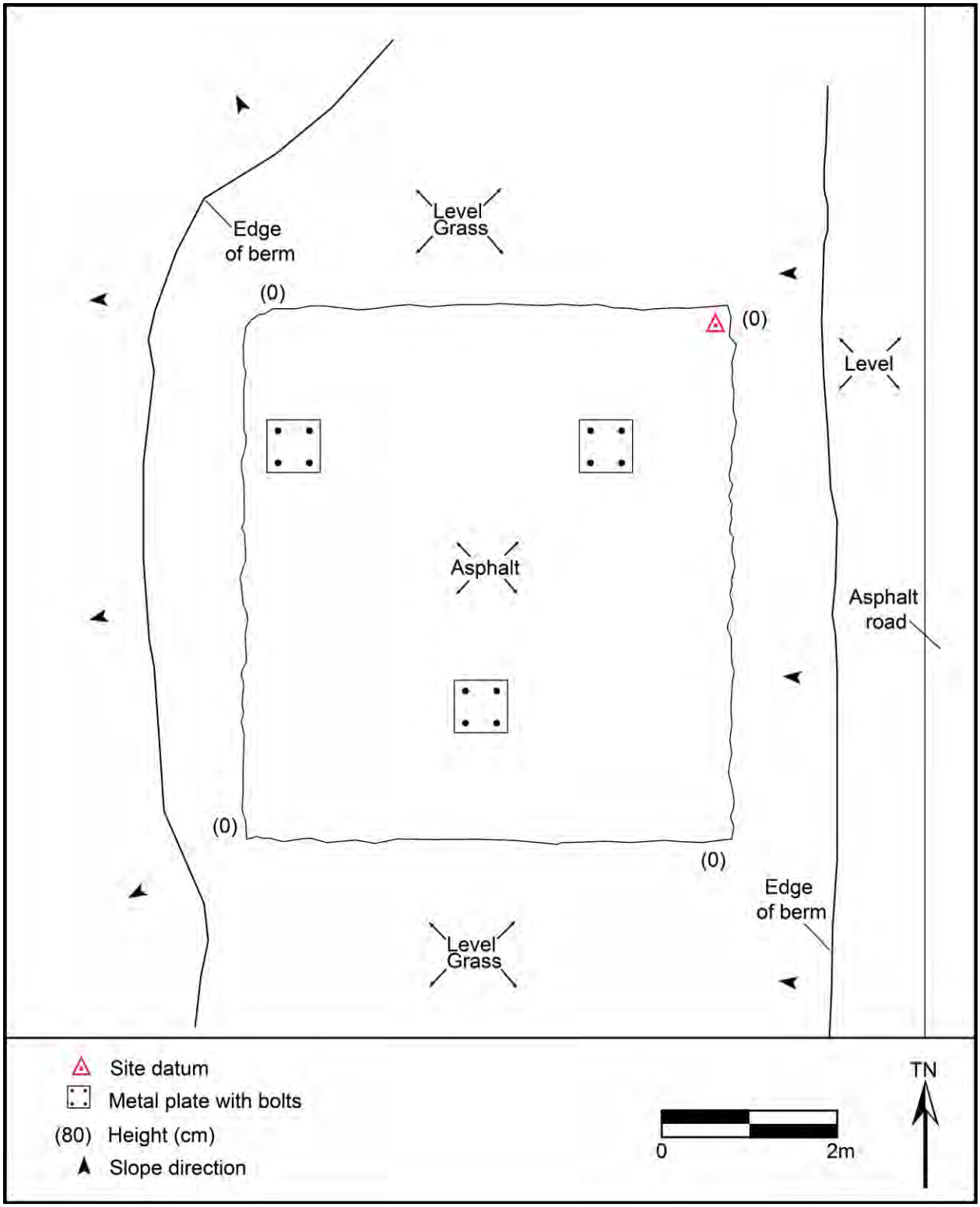


Figure 74. Plan map of Site 50-30-06-XXXXX (TS-001), Feature 16, asphalt foundation.

Feature 17 is a concrete and basalt channel (Figure 75 through Figure 77) located in the southern portion of Site C. The channel originates on the edge of a chain link fence, which surrounds cleared land with antenna and radar infrastructure associated with NASA KPGO. The channel is constructed of concrete and stacked basalt stone with concrete mortar. The basalt stones are medium to large subangular to angular cobbles. The channel wall is stacked one to two courses high. Feature 17 is on a slope greater than 60 degrees, running northeast to southwest, and at the base of the channel (southwest), is a metal grate and a concrete and stone diversion wall, which prevents runoff from spilling directly onto the asphalt roadway, which runs roughly east-west. The diversion wall is constructed of concrete and basalt stone with concrete mortar, which is stacked four to five courses high. Feature 17 measures 12.8 m long by 1.25 m wide by 1 m high.



Figure 75. Site 50-30-06-XXXXX (TS-001), Feature 17, concrete and stone channel (view to east).



Figure 76. Site 50-30-06-XXXXX (TS-001), Feature 17, metal grate and wall at base of channel (view to east).

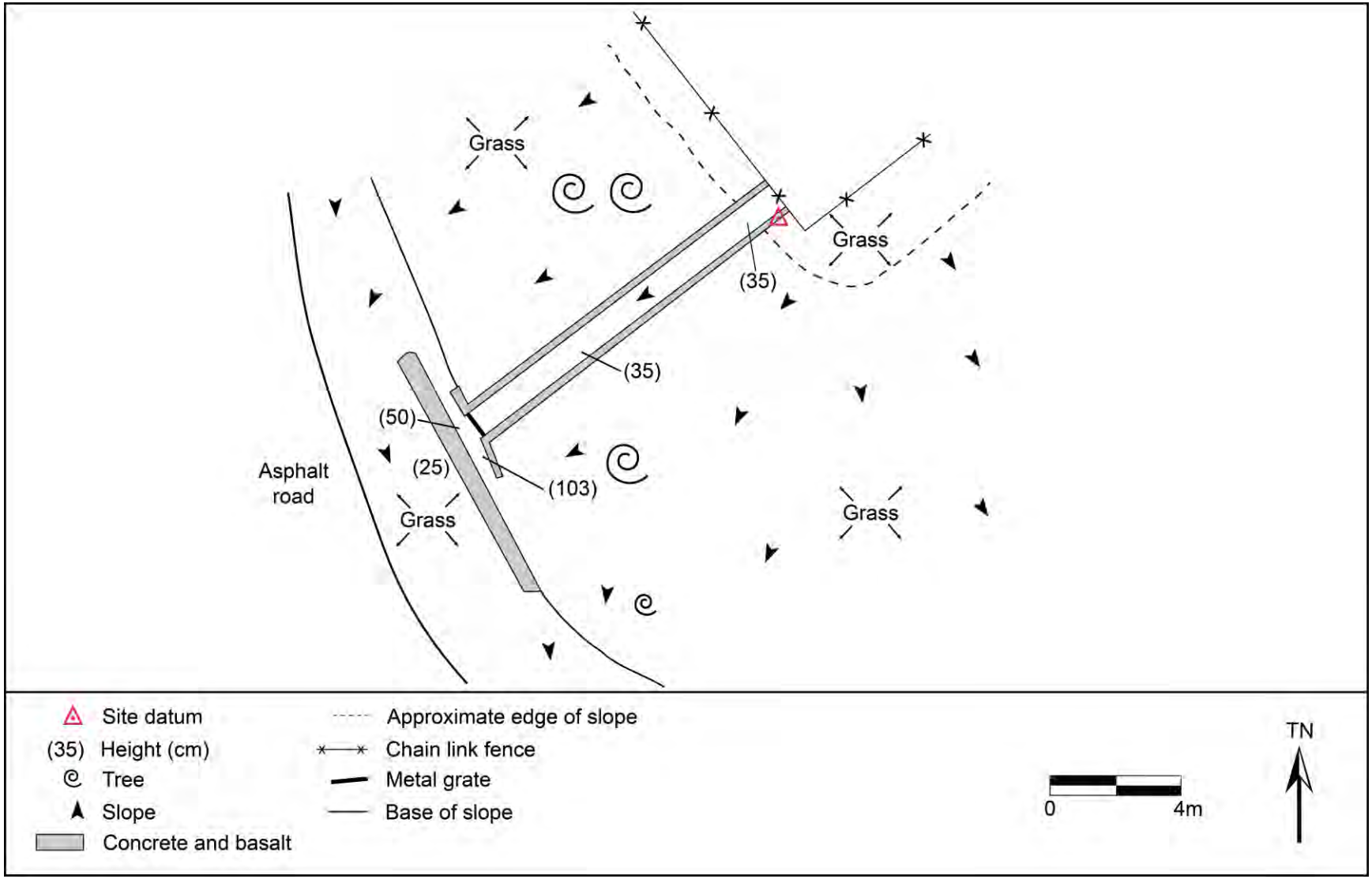


Figure 77. Plan-view map of Site 50-30-06-XXXXX (TS-001), Feature 17, a concrete and stone channel.

SIHP 50-30-06-YYYYY
TS-002
Site Type: Terrace/Retaining wall
Number of Features: 1
Dimensions: 8 m L x 11 m W x 0.4 m H
Condition: Fair
Age: Post-Contact
Function: Temporary habitation/Erosion control
Significance: not significant
Integrity: Location

Site Description

SIHP 50-30-06-YYYYY is stone terrace/retaining wall (Figure 79 through Figure 85), located in the northeastern portion of Site E (Figure 78). This is the same feature that was documented by Walker and Rosendahl (1990) as a retaining wall. It is located in a flat, grassy area, on the interface of the forest and the cleared area. It is located just outside the northeast corner of a chain link fence, which surrounds cleared land with antenna and radar infrastructure associated with NASA KPGO. The terrace is constructed of subangular and rounded stacked basalt stone and stacked one to three courses high. Concrete is included in the structure of the terrace/retaining wall on the eastern end (Figure 84). There are loose basalt stones, which have fallen from the alignment, and a secondary alignment extends to the northeast. The terrace is filled with soil and grass.

The terrace/retaining wall was interpreted as being post-Contact in origin, and the inclusion of concrete within the eastern portion of the stacked wall may indicate that it dates to the twentieth century. The terrace/retaining wall has a temporary habitation and/or erosion control function, possibly related to the period of sandalwood harvest in the area and/or the development of KPGO infrastructure.

The terrace/retaining wall is constructed of concrete and basalt stones, and the basalt stones are medium to large cobble size and are subangular and rounded in nature. The wall is stacked one to two courses high.

No cultural materials were documented at the site. SIHP - YYYYY is not significant because it is not likely to yield information important in history or prehistory. It retains integrity of location. The site has been adequately documented during this study and has low excavation potential to reveal additional information about the past. No further work is recommended.



Figure 78. Historic property feature components associated with SIHP 50-30-06-YYYYY (TS-002) during the AIS in the NASA KPGO Project Area.



Figure 79. Site 50-30-06-YYYYY (TS-002), terrace/retaining wall (view to northwest).



Figure 80. Site 50-30-06-YYYYY (TS-002), terrace/retaining wall (view to southwest).



Figure 81. Site 50-30-06-YYYYY (TS-002), terrace/retaining wall (view to west).



Figure 82. Site 50-30-06-YYYYY (TS-002), terrace/retaining wall (view to south).



Figure 83. Site 50-30-06-YYYYY (TS-002), terrace/retaining wall (view to south).



Figure 84. Site 50-30-06-YYYYY (TS-002), terrace/retaining wall (view to northwest). Note the fragments of concrete in the construction of the eastern portion of the terrace/retaining wall.

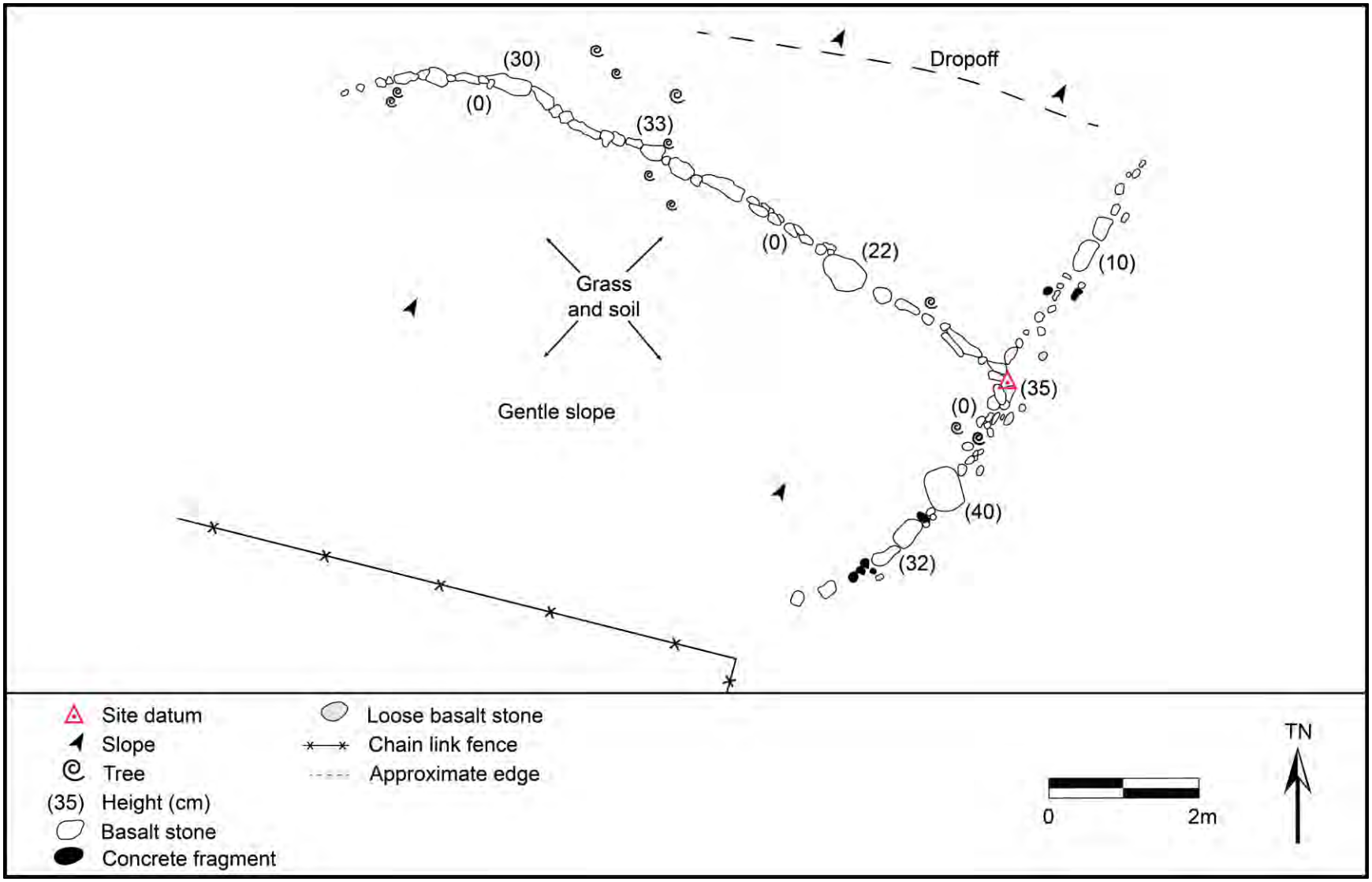


Figure 85. Plan map of Site 50-30-06-YYYYY (TS-002), terrace/retaining wall.

5.0 SIGNIFICANCE ASSESSMENTS

The Code of Federal Regulations, Title 36, Part 60 (36 CFR §60.4) stipulates that all identified historic properties must be assessed for their significance and states:

> To be significant, a historic property shall possess integrity of location, design, setting, materials, workmanship, feeling, and association and shall meet one or more of the following criteria:
>
> (A) That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (B) That are associated with the lives of persons significant in our past; or
>
> (C) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (D) That have yielded, or may be likely to yield, information important in prehistory or history.

The State of Hawai'i has developed a system for evaluating significance of historic properties under Hawai'i Administrative Rules, Title 13, Chapter 275 (HAR §13-275-6, Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered under Sections 6E-7 and 6E-8, HRS). This system is patterned after Federal Regulations 36 CFR §60.4 and is meant to provide a framework for the evaluation of significance.

To be significant, a historic property shall possess integrity of location, design, setting, materials, workmanship, feeling, and association and shall meet one or more of the following criteria as defined in HAR §13-275-6:

Criterion "a" Be associated with events that have made an important contribution to the broad patterns of our history;

Criterion "b" Be associated with the lives of persons important in our past;

Criterion "c" Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;

Criterion "d" Have yielded, or is likely to yield, information important for research on prehistory or history; or

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

5.1 ASSESSED SIGNIFICANCE OF HISTORIC PROPERTIES IN THE PROJECT AREA

SIHP 50-30-06-XXXXX (TS-001) is not clearly associated with specific events related to geodetic data collection that have made a significant contribution to the broad patterns of our history and is thus ineligible for listing on the NRHP (36 CFR §60.4 Criterion A)_or HRHP (HAR §13-275-6 Criterion a). It is not associated with the lives of significant persons in our past (36 CFR §60.4 Criterion B, HAR §13-275-6 Criterion b), nor does it embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master or possess high artistic values (36 CFR §60.4 Criterion C, HAR §13-275-6 Criterion c). The features that make up TS-001 are not likely to yield information important in history or prehistory (36 CFR §60.4 Criterion D, HAR §13-275-6 Criterion d). It does not have an important value to the Native Hawaiian community or another ethnic group (HAR §13-275-6 Criterion e).

SIHP -XXXXX (TS-001) does retain some integrity of location, design, setting, quality of workmanship, feeling, materials, and association. The resource is recommended not eligible for listing in the NRHP because it does not adequately convey the characteristics that would qualify it for listing in the NRHP.

SIHP 50-30-06-YYYYY (TS-002) is not clearly associated with events that have made a significant contribution to the broad patterns of our history (36 CFR §60.4 Criterion A, HAR §13-275-6 Criterion a), it is not associated with the lives of significant persons in our past (36 CFR §60.4 Criterion B, HAR §13-275-6 Criterion b), and it does not embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master or possess high artistic value (36 CFR §60.4 Criterion C, HAR §13-275-6 Criterion c). As a post-contact terrace that is potentially associated with SIHP -XXXXX, NASA KPGO infrastructure, it is not likely to yield additional information important in history or prehistory (36 CFR §60.4 Criterion D, HAR §13-275-6 Criterion d). It does not have an important value to the Native Hawaiian community or another ethnic group (HAR §13-275-6 Criterion e).

SIHP -YYYYY (TS-002) does retain some integrity of location, but the design, setting, quality of workmanship, materials, feeling, and association have been compromised by activities at the NASA KPGO facility such as dumping, the inclusion of additional materials, and erosion of the terrace/retaining wall itself, all of which alter the characteristics qualifying it for listing. The resource is recommended as not eligible for listing in the NRHP because it does not adequately convey the characteristics qualifying it for listing in the NRHP.

The location and form of these historic properties provide information about how the Kōkeʻe area has been utilized in the post-Contact period. Information about the infrastructure associated with the NASA Kōkeʻe Park Geophysical Observatory and other use of the area in the post-Contact period informs our understanding of the landscape. The current proposed project will not adversely impact the two historic properties.

Table 6. Significance Assessments and Recommended Mitigation for Historic Properties Features Documented Within the NASA KPGO Project Area

SIHP No.	Fe.	Type	Function	Age	Signifi-cance	Integrity	Recommended Mitigation
50-30-06-XXXXX (TS-001)	1-17	Complex of 20th Century NASA Kōkeʻe Park Geophysical Observatory Infrastructure Features	Building and equipment foundations; transportation ; and water and erosion control	Post-1961	Not significant	L, D, S, Q, F, M, A	No mitigation recommended
50-30-06-YYYYY (TS-002)	N/A	Terrace/ Retaining wall	Temporary habitation/ Erosion control	Post-Contact	Not significant	L	No further work

5.2 LISTING ELIGIBILITY EVALUATION

The National Historic Preservation Act of 1966 (as amended) authorizes the Secretary of Interior to expand and maintain a National Register of Historic Places (NRHP) that contains a listing of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture. A property may be listed in the NRHP if it retains one or more aspects of integrity and one or more eligibility criteria defined in 36 CFR §60.4.

The two historic properties identified in the project area subjected to an AIS were evaluated for inclusion in the NRHP. SIHP 50-30-02-XXXXX (TS-001) and -YYYYY (TS-002) were recommended as not eligible for listing on the NRHP. The eligibility recommendations, based on 36 CFR §60.4 for the NRHP, are presented below and summarized in Table 7. SIHP 50-30-02-YYYYY (TS-002) has been adequately documented and is thus recommended for no further work. No mitigation is recommended for 50-30-02-XXXXX (TS-001).

Table 7. Recommendations of Eligibility for Inclusion in the NRHP and Mitigation Recommendations for Historic Properties Identified During the AIS of the NASA KPGO AIS Project Area

SIHP Number	36 CFR §60.4 Significance	NRHP Eligibility Recommendation	Mitigation Recommendation
50-30-06-XXXXX (TS-001)	Not significant	Not eligible	No mitigation recommended
50-30-06- YYYYY (TS-002)	Not significant	Not eligible	No further work

5.3 PROJECT EFFECT

The purpose of this AIS is to identify and document all historic properties and assess their integrity and significance. Further, it identifies potential for the project to impact significant historic properties and provides agreed-upon mitigation commitments to address the identified adverse impacts. Additionally, this report may assist the State of Hawaiʻi in managing the archaeological resources present within its landholdings. It provides detailed information on the location, character, and relative significance of the historic properties present within the survey area. Based on the findings of this AIS, NASA and Navy's effect determination is "No historic properties affected"

under HRS Chapter 6E, pursuant to Hawai‘i Administrative Rules (HAR) §13-275-7(a)(2). Under 36 CFR 800, NASA and Navy’s effect determination is “No adverse effect.”

The present program of site recording was undertaken to gather information about the sites, not to mitigate any adverse impacts to these historic properties. Significance assessments and mitigation recommendations have been made to meet AIS requirements and are based on the integrity and significance of each property.

5.4 MITIGATION RECOMMENDATIONS

No mitigation is recommended for SIHP 50-30-06-XXXXX (TS-001), as it will not be impacted by this project.

SIHP 50-30-06-YYYYY (TS-002) has been adequately documented during this study and has low excavation potential to reveal additional information about the past. No further work is recommended.

Neither of the two historic properties that were inventoried during the AIS will be adversely impacted by the current project, as NASA is proposing to maintain long-term use of the 23 acres of State lands (totaling 16 acres of leased lands and 7 acres of easements) for continued operation of KPGO after existing real estate agreements for these State lands are set to expire in 2030. No change in any use or maintenance of existing infrastructure is planned at KPGO, and no construction, renovation, or demolition of facilities is planned.

5.5 DISPOSITION OF MATERIALS

All field records (descriptions, notes, and photographs) resulting from the AIS have been temporarily housed in the Pacific Legacy Kailua, O‘ahu office. These will be provided to the landowner once all analysis and write-up have been completed. Long-term curation specifics will be determined by the landowner, per HAR 13-276-6(a).

6.0 SUMMARY AND INTERPRETATION

Pacific Legacy, Inc. completed this AIS for the 23-acre NASA Kōkeʻe Park Geophysical Observatory Project Area. The historic properties that were identified and recorded during the current AIS include two newly identified historic properties (SIHP 50-30-06-XXXXX and SIHP 50-30-06-YYYYY), which consist of post-Contact features (a complex of NASA KPGO infrastructure and a terrace) which function as building and equipment foundations, transportation, water and erosion control, and a temporary habitation feature. These historic properties indicate that the Kōkeʻe area has been, and continues to be, utilized in the post-Contact period for NASA KPGO operations and Kōkeʻe State Park recreation activities. No pre-Contact features were documented.

SIHP 50-30-06-XXXXX (TS-001) and 50-30-06-YYYYY (TS-002) are assessed as not significant and not eligible for listing on the NRHP. SIHP 50-30-06-YYYYY (TS-002) is recommended for no further work, as this historic property has been adequately documented. The current project will have no effect on SIHP 50-30-06-XXXXX (TS-001); therefore, no mitigation is recommended.

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Appendix G

Public Scoping and Draft EIS Comment Meeting Materials

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Public Scoping Meetings

List of Interested Parties Contacted During Scoping

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Category	Group
Federal, state, and local elected officials	• Federal Elected Officials ▪ U.S. Senators Mazie K. Hirono Brian Schatz • U.S. House of Representatives ▪ Congressional District I: Ed Case ▪ Congressional District II: Jill N. Tokuda • State Elected Officials ▪ Governor: Josh Green ▪ Lieutenant Governor: Sylvia Luke ▪ Attorney General: Anne E. Lopez ▪ State Senate District 8: Ronald D. Kouchi • State Assembly ▪ House District 15: Nadine K. Nakamura ▪ House District 16: Luke A. Evslin ▪ House District 17: Dee Morikawa ▪ Senate Committees Public Safety and Intergovernmental Affairs and Military Water and Land Ways and Means ▪ House Committees Corrections, Military and Veterans Water and Land Finance • Local Elected Officials ▪ County of Kaua‘i Mayor Derek S.K. Kawakami ▪ County Council Mel Rapozo (Council Chair) KipuKai Kuali‘i (Council Vice Chair) Addison Bulosan (Councilmember) Bernard P. Carvalho, Jr. (Councilmember) Felicia Cowden (Councilmember) Bill DeCosta (Councilmember) Ross Kagawa (Councilmember)
Federal, state, and local regulatory and non-regulatory government agencies	• Federal Agencies ▪ Advisory Council on Historic Preservation ▪ National Oceanic and Atmospheric Administration Fisheries ▪ U.S. Army Corps of Engineers Honolulu District ▪ U.S. Coast Guard District 14 ▪ U.S. Department of the Interior, Office of Hawaiian Relations ▪ U.S. Environmental Protection Agency ▪ USFWS, Kilauea Point National Wildlife Refuge ▪ USFWS, Pacific Islands Fish and Wildlife Office ▪ USDA Forest Service, Institute of Pacific Islands Forestry ▪ USDA, Hawai‘i and Western Pacific State Office ▪ U.S. Geological Survey, Honolulu Field Station ▪ National Park Service • State Agencies

Category	Group
	▪ Department of Agriculture ▪ Agribusiness Development Corporation ▪ DLNR ▪ DLNR BLNR ▪ DLNR DOFAW ▪ DLNR Land Division (Kaua‘i District) ▪ DLNR OCCL (Conservation District) ▪ DLNR-SHPD ▪ DLNR Division of State Parks ▪ DLNR Commission on Water Resource Management ▪ Department of Transportation ▪ OHA ▪ OHA, Kaua‘i Burial Council ▪ Department of Health, Clean Water Branch ▪ OPSD ▪ OPSD, Environmental Review Program ▪ OPSD, CZM Program ▪ Department of Business, Economic Development and Tourism ▪ Department of Hawaiian Homelands ▪ Department of the Attorney General ▪ Department of Defense (State of Hawai‘i) ▪ Boards and Commissions ▪ Kaua‘i Circuit Court ▪ Kaua‘i District Office, Division of State Parks ▪ Hawai‘i State Parks • Regional/Local Agencies ▪ County of Kaua‘i Departments: Parks and Recreation Water Kaua‘i Emergency Management Agency Fire Police Economic Development Planning Public Works Transportation County of Kaua‘i Office of Boards and Commissions ▪ University of Hawai‘i System Kaua‘i Community College Kaua‘i Agricultural Research Center Pacific Cooperative Studies Unit ▪ Native Hawaiian Federal Interagency Working Group, current members include: Advisory Council on Historic Preservation Office of the Deputy Under Secretary of Defense for Installations and Environment Small Business Administration Office of Native Hawaiian Relations
Native Hawaii Organizations	• ‘Āina Momona (State of Hawai‘i) • Association of Hawaiian Civic Clubs (State of Hawai‘i) • Hawaiian Native Corporation (supports NHOs – State of Hawai‘i)

Category	Group
	• Koʻolau Foundation (State of Hawaiʻi) • Native Hawaiian Hospitality Association (State of Hawaiʻi) • Kawaileo Law A Limited Liability Law Company (State of Hawaiʻi) • Council For Native Hawaiian Advancement (State of Hawaiʻi) • Na Koa Ikaika Ka Lahui Hawaiʻi (Kauaʻi) • Na ʻOhana Papa O Manā (Kauaʻi) • EAO Hawaiʻi Inc. (Kauaʻi) • Nā Kuleana o Kānaka ʻŌiwi (Kauaʻi) • Hanalei River Heritage Foundation (Kauaʻi) • ALU LIKE, Inc. (Kauaʻi) • Kauaʻi Kupuna Council • Kauaʻi Burial Council
Community planning groups, and other community and civic organizations	• Community Planning Groups ▪ Kauaʻi Planning & Action Alliance • Community Organizations ▪ Hui Makaʻāinana O Makana ▪ Waipā Foundation ▪ Waimea Community Association • DON Advocacy Groups ▪ AMVETS Department of Hawaiʻi • Civic Groups ▪ Kauaʻi Planning & Action Alliance ▪ Hawaiʻi Community Foundation ▪ Kilauea Community Agricultural Center - Aina Hoʻokupu O Kilauea ▪ Kauaʻi Philippine Cultural Center ▪ Ke Kumu O Hihinui Cultural Center ▪ Kauaʻi Museum ▪ Kōkeʻe Natural History Museum
Small business associations, economic development/ tourism organization, and recreational and real estate interests	• Economic Development Organizations ▪ Kauaʻi Chamber ▪ Kauaʻi Filipino Chamber of Commerce • Tourism ▪ Camp Sloggett ▪ Waimea Japanese Cemetery ▪ Kauaʻi Visitors Bureau (Sue Kanoho) ▪ Smith Family Garden Luau ▪ Kōkeʻe Lodge ▪ The Cabins at Kōkeʻe
Local environmental organizations and other Non-Governmental Organizations	• Government Programs ▪ DLNR DOFAW Natural Area Reserves System ▪ Kauaʻi Seabird Habitat Conservation Plan • Environmental Organizations – Local ▪ National Tropical Botanical Gardens, Plant Extinction Prevention Program ▪ Kauaʻi Forest Bird Recovery Project ▪ Kauaʻi Watershed Alliance ▪ Hanalei Watershed Hui ▪ Kauaʻi North Shore Community Foundation

Category	Group
	▪ North Shore Community Land Trust ▪ Kauaʻi Invasive Species Committee ▪ Kōkeʻe Resource Conservation Program ▪ Keahole Defense Coalition • Environmental Organizations – Regional/National ▪ Earthjustice ▪ Surfrider Foundation ▪ Sierra Club – Kauaʻi Chapter ▪ Reef Guardians ▪ Save our Shearwaters ▪ Conservation Council for Hawaiʻi ▪ Kahea – The Hawaiian Environmental Alliance ▪ Hawaiʻi Audubon Society ▪ Hawaiian Islands Land Trust ▪ Native Hawaiian Plant Society ▪ Hawaiʻi Wildlife Center ▪ Nā Kiaʻi Kai ▪ Nature Conservancy - Hawaiʻi Chapter ▪ Pesticide Action Network North America • Fishing/Diving ▪ Hawaiʻi Big Game Fishing Club ▪ Hawaiʻi Freshwater Fishing Association • Boating/Yacht Clubs/Marinas ▪ Nawiliwili Yacht Club ▪ Kauaʻi Sailing Association ▪ West Side Boaters Association ▪ Holo Holo Charters ▪ Catamaran Kahanu ▪ Captain Andy's ▪ Kauai Sea Tours ▪ Napali Odyssey ▪ Makana Charters ▪ Seasport Divers ▪ Nā Pali Riders ▪ Blue Dolphin Charters
Local media outlets	• Print ▪ Kauaʻi Island News ▪ The Garden Island ▪ MidWeek Kauaʻi ▪ The Honolulu Star-Advertiser ▪ Hawaiʻi Tribune-Herald ▪ Ka Wai Ola • TV ▪ KITV 4 (ABC) ▪ KHON2 (Fox and CW) ▪ Hawaiʻi News Now • Radio ▪ Kong Radio 93.5 ▪ KHKU 94.3 FM ▪ KFMN FM 97

Category	Group
	▪ KJMQ Jamz 98.1 ▪ Sunny 101.3 ▪ Hawai‘i Public Radio (HPR) • Online ▪ Honolulu Civil Beat ▪ Kaua‘i Now ▪ Waimea Theater On-Screen Advertising
Individual community members (not associated with groups) interested in cultural and natural resources preservation, military use of the land, public access, etc.	• Dennis Eguchi • Pastor Daryl Kua • Alethea Kaohi • Bob Westerman • Toni Ricci • Lyle Tabata • Charlie Iona • Marissa Faye • Josh Mori • Keiko Napier • Kaua Mata • Tia Korete • Terry Lily • Barbara “Maka‘ala” Ka‘aumoana
Residents, business, agricultural operations, schools, and property owners near PMRF	• Communities of Kekaha, Waimea, Hanapepe, Ele‘ele, Port Allen, Kalaheo, Lawai, Omao, Koloa, Poipu, Kapa‘a, and Līhu‘e • Schools – Kaua‘i District, Waimea Complex ▪ Kekaha Elementary School ▪ Ni‘ihau High and Elementary School ▪ Waimea High School ▪ Waimea Canyon Middle School ▪ Ke Kula Ni‘ihau O Kekaha Public Charter School ▪ Kula Aupuni Ni‘ihau A Kahelelani Aloha Public Charter School ▪ St. Theresa’s School

Legend: AMVETS = American Veterans; BLNR = Board of Land and Natural Resources; CZM = Coastal Zone Management; DLNR = Department of Land and Natural Resources; DOFAW = DLNR Division of Forestry and Wildlife; DON = Department of the Navy; NHO = Native Hawaiian Organization; OHA = Office of Hawaiian Affairs; OPSD = Office of Planning and Sustainable Development; SHPD = State Historic Preservation Division; U.S. = United States; USDA = U.S. Department of Agriculture; USFWS = U.S. Fish and Wildlife Service.

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Public Scoping Meetings

Direct Scoping Postcard

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E Pane Mai Ka Nonoi O Nohili

Answering the requests of Nohili

U.S. Navy Pacific Missile Range Facility and NASA Kōkeʻe Park Geophysical Observatory Real Estate Environmental Impact Statement

The Navy and NASA invite you to participate in the environmental planning process and submit comments.

The U.S. Department of the Navy (Navy) and the National Aeronautics and Space Administration (NASA) are jointly preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts of proposed real estate agreements with the State of Hawaiʻi for the Pacific Missile Range Facility (PMRF) and the Kōkeʻe Park Geophysical Observatory (KPGO). The Navy and NASA invite you to participate in the environmental planning process.

The Navy proposes to maintain long-term Department of Defense use of 8,348 acres of State of Hawaiʻi lands on Kauaʻi for operational continuity and sustainment of the military readiness mission. The Navy operates on 410 acres of the total acres leased from the State. The majority of the leased and easement areas remain intentionally undeveloped as they are used as an encroachment buffer and security for the facility's mission. NASA proposes to maintain long-term use of 23 acres of State of Hawaiʻi land on Kauaʻi for continued operations of KPGO. The Proposed Action is needed because existing real estate agreements for these State lands are set to expire between 2027 and 2030.

The Navy and NASA will host public scoping meetings at three locations on Kauaʻi. Attend any of the public scoping meetings to talk story, learn more, and submit written or oral comments. Your voice is important to this planning process. Meetings will be held from 5 to 8 p.m. HST at the following locations:

Public Scoping Meetings:

Tuesday, June 4, 2024
Kauaʻi Veterans Center, 3215 Kauaʻi Veterans Memorial Hwy., Līhuʻe

Wednesday, June 5, 2024
Kekaha Neighborhood Center, 8130 Elepaio Rd., Kekaha

Thursday, June 6, 2024
Sheraton Kauaʻi Coconut Beach Resort, 650 Aleka Loop, Kapaʻa

Agenda:

5 to 8 p.m.
Information stations – meet the project team, talk story, and ask questions. Visit the comments station to provide a written or oral comment.

6 to 6:30 p.m.
Project presentation by Navy and NASA.

For more information, visit PMRF-KPGO-EIS.com

Naval Facilities Engineering Systems Command, Hawai'i
Environmental OPHEV2
Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Wells
400 Marshall Road, Building X-11
Pearl Harbor, HI 96860

Public Comment Period

The Navy and NASA are initiating a public scoping period under the National Environmental Policy Act and Hawai'i Revised Statutes (HRS) Chapter 343 to receive comments on the scope of the EIS. Members of the public are encouraged to participate in the environmental review process by providing input on the proposed real estate action including potential alternatives, environmental or cultural concerns, information the public would like the Navy and NASA to know, and any other information the public would like to see addressed in the EIS. The scoping meetings will also serve as an opportunity to obtain public input concerning potential effects to historic properties pursuant to Section 106 of the National Historic Preservation Act and HRS Section 6E-42. Your voice is important to this planning process.

The public scoping period begins ***May 8, 2024*** and ends ***June 17, 2024.*** Please attend a public scoping meeting and visit the project website to learn more.

For language assistance or special accommodations, contact the PMRF Public Affairs Officer at (808) 335-4740 or PMRFPublicAffairs@us.navy.mil. Requests for language assistance or special accommodations should be made at least seven days prior to the public meeting.

Submit Comments in Person, Online, or by Mail

Submit comments by ***June 17, 2024.***
The public may submit comments in any of the following ways:

- In person at a public scoping meeting
- Through the project website at PMRF-KPGO-EIS.com
- By email to info@PMRF-KPGO-EIS.com
- By mail, postmarked by ***June 17, 2024*** to the following address:
  Naval Facilities Engineering Systems Command, Hawai'i
  Environmental OPHEV2
  Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Wells
  400 Marshall Road, Building X-11
  Pearl Harbor, HI 96860

The Navy and NASA propose to evaluate potential environmental impacts to the following resource areas. The public is invited to provide input on these and other resources that should be considered in the EIS.

Social Environment

- Archaeological and historic resources
- Cultural practices
- Visual resources
- Public health and safety
- Land use
- Socioeconomics
- Environmental justice

Physical Environment

- Air quality and greenhouse gases
- Water resources

Biological Environment

- Biological resources

Built Environment

- Utilities
- Transportation
- Hazardous materials and wastes

Public Scoping Meetings

Posters

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E Pane Mai Ka Nonoi O Nohili

Answering the requests of Nohili

U.S. Navy Pacific Missile Range Facility and NASA Kōke'e Park Geophysical Observatory Real Estate Environmental Impact Statement

Aloha and Welcome















Your participation is important to this planning process

PMRF-KPGO-EIS.com



Why We Are Here Tonight

- The Navy and NASA will evaluate the potential environmental impacts of proposed real estate agreements with the State of Hawai‘i, Department of Land and Natural Resources for the Pacific Missile Range Facility and Kōke‘e Park Geophysical Observatory.
- The scoping meetings will also serve as an opportunity to obtain public input concerning potential effects to historic properties pursuant to Section 106 of the National Historic Preservation Act and Hawai‘i Revised Statutes Section 6E-42.
- This is the beginning of the environmental planning process.
- The Navy and NASA invite you to participate and to provide your comments.
- Your comments can help the Navy and NASA evaluate potential environmental impacts.





About the Navy Pacific Missile Range Facility (PMRF)



PMRF is the world's largest instrumented multi-domain training and testing facility. What makes PMRF unique is its ability to simultaneously support surface, subsurface, air, and space operations.



Personnel at PMRF engage and actively participate with the community.



On Kaua'i, the Navy is the largest high-tech employer and third largest overall employer. Most of the 900 personnel at PMRF are civilians, including many from the local community. PMRF contributes approximately $150 million annually in salary, contract goods, and services to the local economy.

PMRF and KPGO Timeline

1964 - 2007
- Navy and NASA enter into real estate agreements with the State of Hawai'i

1988
- Navy establishes Natural Resources Management Plan for PMRF

1998
- Navy establishes Integrated Cultural Resources Management Plan for PMRF

2014
- Navy establishes Readiness and Environmental Protection Integration Program projects for PMRF

2019
- Lua Kupapa'u O Nohili (crypt) is constructed

2027 - 2030
- Current real estate agreements expire



About the Kōke'e Park Geophysical Observatory (KPGO)



The Kōke'e Park Geophysical Observatory (KPGO) is located on a remote ridge within Kōke'e State Park in the western portion of Kaua'i.



NASA operates KPGO to collect geodetic data about the Earth's shape, orientation in space, and gravity. This data supports modern navigation technology such as the Global Positioning System (GPS) that is used every day in a wide variety of devices, from handheld smartphones to satellites. This data is also used for scientific studies, spacecraft navigation, and the geolocation of Earth observations.



Continued operations at KPGO would ensure that data-related operations of global and local significance can continue, allowing multiple agencies' missions to persist without interruption.



NASA has issued a Use Permit to the Navy for use of portions of KPGO to conduct PMRF mission support with radar, telemetry, and communications services.

NASA's lease began in 1965 when KPGO was part of the NASA Manned Space Flight Network. Since that time, KPGO has supported many NASA and external projects and has hosted a variety of equipment; it is a highly flexible and crucial geodetic site.

NASA's Space Geodesy Project maintains a global network of space geodetic observing instruments. The network is comprised of sites around the world that use four primary observation techniques.



The Navy currently has leaseholds and easements for 8,348 acres of State land.

NASA currently has leaseholds and easements for 23 acres of State land for operations at Kōkeʻe Park Geophysical Observatory.

Preserving the long-term use of these State lands is critical for military readiness, continuation of ongoing military training and testing, and maintaining data collection efforts of global significance.

NASA has issued a Use Permit to the Navy for use of portions of KPGO to conduct PMRF mission support with radar, telemetry, and communications services.

Current Land Agreements – West Kauaʻi



PROPOSED ACTION

- The Navy proposes to maintain long-term Department of Defense use of 8,348 acres of State lands on Kauaʻi for operational continuity and sustainment of the military readiness mission.
- The 8,348 acres is comprised of:
  - 684 acres of leaseholds
  - 7,664 acres of easements
- NASA proposes to maintain long-term use of 23 acres of leased lands and easements on Kauaʻi for continued operation of Kōkeʻe Park Geophysical Observatory (KPGO).

The Navy and NASA existing real estate agreements for State lands were established in 1964 and 1965 and are expiring between 2027 and 2030.

The Navy operates on 410 acres of the total acres leased from the State of Hawaiʻi. The remaining acres are used as buffer zones, conservation areas, infrastructure, and access corridors.

ALTERNATIVES

- **Alternative 1: Succeeding Current Real Estate Agreements.** The Navy and NASA would apply to the State of Hawaiʻi Department of Land and Natural Resources for new long-term real estate agreements in the same manner, similar duration, and for the same uses as the current leases and easements.
- **Alternative 2: Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds.** The Navy and NASA would pursue fee simple acquisition of 700 acres (684—Navy, 16—NASA) of leaseholds, and otherwise obtain use of the remaining acreage as described in Alternative 1.
- **Alternative 3: No Action Alternative.** The Navy and NASA would not seek any real estate agreements for the State lands on Kauaʻi after expiration of the leases and easements between 2027 to 2030.

The Navy and NASA propose to evaluate the potential environmental impacts of each of these alternatives in the Environmental Impact Statement.



ENVIRONMENTAL RESOURCES

The Navy and NASA propose to evaluate potential environmental impacts for each of the alternatives on the following resource areas. The public is invited to provide input on these and other resources that should be considered in the Environmental Impact Statement.

Social Environment

- Archaeological and historic resources
- Cultural practices
- Visual resources
- Public health and safety
- Land use
- Socioeconomics
- Environmental justice

Physical Environment

- Air quality and greenhouse gases
- Water resources

Biological Environment

- Biological resources

Built Environment

- Utilities
- Transportation
- Hazardous materials and wastes



Waiokapua Bay, at PMRF



Sea turtle on beach at PMRF



Laysan albatross at PMRF



PMRF hosts Hālau Hula at Nohili Dunes



Nohili Dunes



Sea turtle hatchling



Hawai'i's state bird, the nēnē, or Hawaiian goose



CONSERVATION AND COMMUNITY

Stewardship and Care of the Land

Personnel who work at the Pacific Missile Range Facility (PMRF) take great pride in their role as caretakers of the cultural and natural resources they are entrusted with.

CULTURAL RESOURCES PRESERVATION



The Lua Kupapa'u O Nohili (crypt) preserves and honors iwi kūpuna (ancestral remains) found on PMRF



Mānā Town Japanese cemetery from the sugar plantation days

NATURAL RESOURCES CONSERVATION THROUGH PARTNERSHIPS



Conservation of Laysan albatross through translocation program



Conservation of green sea turtles and their nests



Conservation of sensitive species at Honopū Valley

CLEAN ENERGY AND RESILIENCY THROUGH RENEWABLE ENERGY PROJECTS



Solar facility and battery energy storage system at PMRF

COMMUNITY SERVICE



Local scientists and students take part in natural resource surveys



PMRF celebrates with the community at Kekaha Family Fun Day



PMRF hosts the community at Earth Day events

E Pane Mai Ka Nonoi O Nohili

Answering the requests of Nohili



NEPA/HEPA/Historic Preservation Process and Community Involvement

WE WANT TO HEAR FROM YOU

The National Environmental Policy Act (NEPA); Section 106 of the National Historic Preservation Act (NHPA); Hawai‘i Revised Statutes (HRS) Chapter 343 and Hawai‘i Administrative Rules (HAR) Chapter 11-200.1, collectively referred to as the Hawai‘i Environmental Policy Act (HEPA); and HRS Section 6E-42 require federal agencies and the State of Hawai‘i Department of Land and Natural Resources, respectively, to:

- Consider the environmental impacts of proposed projects.
- Consider the potential effects of their actions on historic properties and look for ways to avoid, minimize, or mitigate them.
- Get early public input on resources and alternatives to be evaluated.

COMMUNITY INVOLVEMENT

Opportunities for formal public participation in the EIS process occur during two stages:

1. During the scoping period, following publication of the Notice of Intent (NOI) and the Environmental Impact Statement Preparation Notice (EISPN).
2. During the public comment period following publication of the Draft EIS.

The Navy and NASA value and welcome your input.

THE EIS PROCESS

1. Prepare Description of Proposed Action and Alternatives
2. Publish EIS Preparation Notice
   Publish Notice of Intent
   Scoping Meeting
   (Public Scoping Period 5/8/2024 - 6/17/2024)
   We are here
3. Complete Baseline Studies
4. Prepare Draft EIS
5. Release Draft EIS to Public
   Publish Notice of Availability
6. Public Review / Public Comment Meetings
   (Spring 2025)
7. Respond to Public Comments
8. Prepare Final EIS
9. Release Final EIS to Public
   Publish Notice of Availability
10. Final EIS Acceptability Determination by Department of Land and Natural Resources
11. Publish Record of Decision
12. Implement Action

NEPA | HRS Ch. 343 | NEPA/HRS Ch. 343

Public participation helps the Navy, NASA, and Department of Land and Natural Resources make informed decisions.

Thank you for your participation.

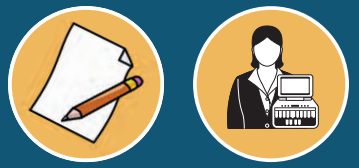


How to Submit Comments

Submit Comments in Person, Online, or by Mail

Submit comments by ***June 17, 2024***. The public may submit comments in any of the following ways:

- In person at a public scoping meeting
- Through the project website at **PMRF-KPGO-EIS.com**
- By email to **info@PMRF-KPGO-EIS.com**
- By mail, postmarked by ***June 17, 2024*** to the following address:







Naval Facilities Engineering Systems Command, Hawai'i
Environmental OPHEV2
Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Wells
400 Marshall Road, Building X-11
Pearl Harbor, HI 96860

For language assistance or special accommodations, ask a representative at today's meeting, or contact the PMRF Public Affairs Officer, at (808) 335-4740, or PMRFPublicAffairs@us.navy.mil.

Public Scoping Meetings
Project Information Sheet

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U.S. Navy Pacific Missile Range Facility and NASA Kōkeʻe Park Geophysical Observatory Real Estate Environmental Impact Statement



Public Scoping Fact Sheet

Public Scoping Meeting Schedule

Attend any of the three public scoping meetings to talk story, learn more, and submit comments. Your voice is important to this planning process.

DATE	LOCATION	AGENDA
Tuesday, June 4, 2024	Kauaʻi Veterans Center 3215 Kauaʻi Veterans Memorial Hwy, Līhuʻe	• 5 to 8 p.m. Information stations – meet the project team, talk story, and ask questions. Visit the comments station to provide a written or oral comment. • 6 to 6:30 p.m. Project presentation by Navy and NASA.
Wednesday, June 5, 2024	Kekaha Neighborhood Center 8130 Elepaio Road, Kekaha	
Thursday, June 6, 2024	Sheraton Kauaʻi Coconut Beach Resort 650 Aleka Loop, Kapaʻa	**MEETING TIME:** 5 to 8 p.m. HST

Please Check In!

Scoping is the public's opportunity to provide comments to help the Navy and NASA focus their analysis. Please visit the project website at PMRF-KPGO-EIS.com

Welcome

The U.S. Navy (Navy) and the National Aeronautics and Space Administration (NASA) are jointly preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts of proposed real estate agreements with the State of Hawai`i for the Pacific Missile Range Facility (PMRF) and the Kōke`e Park Geophysical Observatory (KPGO). The Navy and NASA invite you to participate in this environmental planning process.

What are the Navy and NASA Proposing?

The Navy currently leases or holds easements for approximately 8,348 acres of State of Hawai`i land primarily for passive encroachment buffer as well as for mission readiness, access, and utilities for PMRF on Kaua`i. The Navy proposes to maintain long-term Department of Defense use of the 8,348 acres of State of Hawai`i lands on Kaua`i for operational continuity and sustainment of the military readiness mission.

The Navy operates on 410 acres of the total acres leased from the State of Hawai`i. The remaining acres are used as buffer zones, conservation areas, infrastructure, and access corridors.

NASA currently leases or holds easements for 23 acres of State of Hawai`i land for operations of KPGO. NASA has issued a Use Permit to the Navy for use of portions of KPGO to conduct PMRF mission support with radar, telemetry, and communications services.

NASA operates KPGO to collect geodetic data about the Earth's shape, orientation in space, and gravity. This data supports modern navigation technology such as the Global Positioning System (GPS) that is used every day in a wide variety of devices, from handheld smartphones to satellites. In addition, this data is used for scientific studies, spacecraft navigation, and the geolocation of Earth observations.

NASA proposes to maintain long-term use of the 23 acres of leased lands and easements for continued operation of KPGO. The Proposed Action is needed because existing real estate agreements for these State lands are set to expire between 2027 and 2030.

On Kaua`i, the Navy is the largest high-tech employer and third largest overall employer. Most of the 900 personnel at PMRF are civilians, including many from the local community. PMRF contributes approximately $150 million annually in salary, contract goods, and services to the local economy.

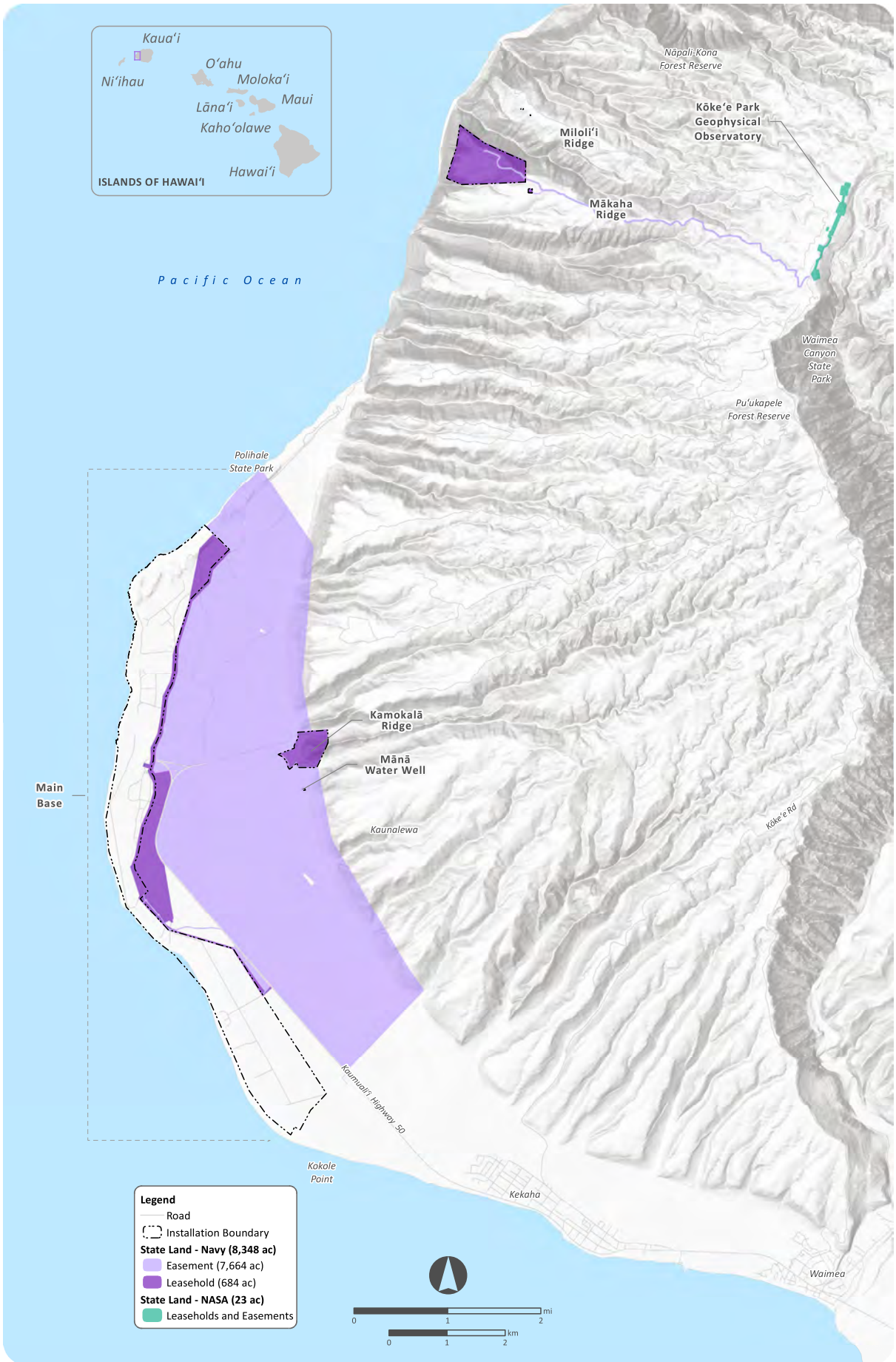


Figure 1. Project Map

Action Alternatives

Alternative 1: Succeeding Current Real Estate Agreements.

Under this alternative, the Navy and NASA would apply to the Department of Land and Natural Resources for new long-term real estate agreements in the same manner, similar duration, and for the same uses as the current leases and easements. The Navy's agreements would include 684 acres of land leased exclusively by the Navy and 7,664 acres of easements. NASA's agreements would include 16 acres of land leased exclusively by NASA, 7 acres of easement lands, and would continue its Use Permit with the Navy. This alternative would not change any use or maintenance of existing infrastructure and would not involve construction, renovation, or demolition of facilities.

Alternative 2: Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds.

Under this alternative, the Navy and NASA would pursue fee simple acquisition of 700 acres (684 acres for Navy use and 16 acres for NASA use) of leaseholds, and otherwise obtain use of the remaining acreage as described in Alternative 1. The new Navy fee simple land of 684 acres would include 392 acres of land at the Main Base, 89 acres at Kamokalā Ridge, 0.29 acre at the Mānā Water Well, 0.015 acre at Miloli`i Ridge, 203 acres at Mākaha Ridge, and the NASA fee simple land would include 16 acres at KPGO. This acreage would be transferred from ownership by the State of Hawai`i to the United States. This alternative would not change any use or maintenance of existing infrastructure and would not involve construction, renovation, or demolition of facilities.

Alternative 3: No Action Alternative.

Under the No Action Alternative, the Navy and NASA would not seek any real estate agreements for the State lands on Kaua`i after expiration of the leases and easements between 2027 to 2030. The current real estate agreements for 8,348 acres with the Navy and 23 acres with NASA would expire. All existing infrastructure would be removed, or abandoned in place, from Navy and NASA leased and easement lands.

Preliminary Environmental Resources to be Studied

The Navy and NASA propose to evaluate potential environmental impacts for each of the alternatives on the following resource areas. The public is invited to provide input on these and other resources that should be considered in the EIS.

Social Environment

- Archaeological and historic resources
- Cultural practices
- Visual resources
- Public health and safety
- Land use
- Socioeconomics
- Environmental justice

Physical Environment

- Air quality and greenhouse gases
- Water resources

Biological Environment

- Biological resources

Built Environment

- Utilities
- Transportation
- Hazardous materials and wastes



PMRF honors ancestral Native Hawaiians in summer solstice event.



Sea turtle on beach at PMRF.



Nohili Dunes.



Waiokapua Bay, at PMRF.



Hawai'i's state bird, the nēnē, or Hawaiian goose.



Solar panels at PMRF.

About the Navy Pacific Missile Range Facility and NASA Kōkeʻe Park Geophysical Observatory

Pacific Missile Range Facility

PMRF is the world's largest instrumented multi-domain training and testing facility. What makes PMRF unique is its ability to simultaneously support surface, subsurface, air, and space operations. For portions of PMRF, the Navy has lease agreements with the State of Hawaiʻi for 8,348 acres, comprised of 684 acres of leaseholds and 7,664 acres of easements. The Navy operates on 410 acres of the total acres leased from the State. The majority of the leased and easement areas remain intentionally undeveloped as they are used as an encroachment buffer and security for the facility's mission. For more information, visit https://cnrh.cnic.navy.mil/Installations/PMRF-Barking-Sands/

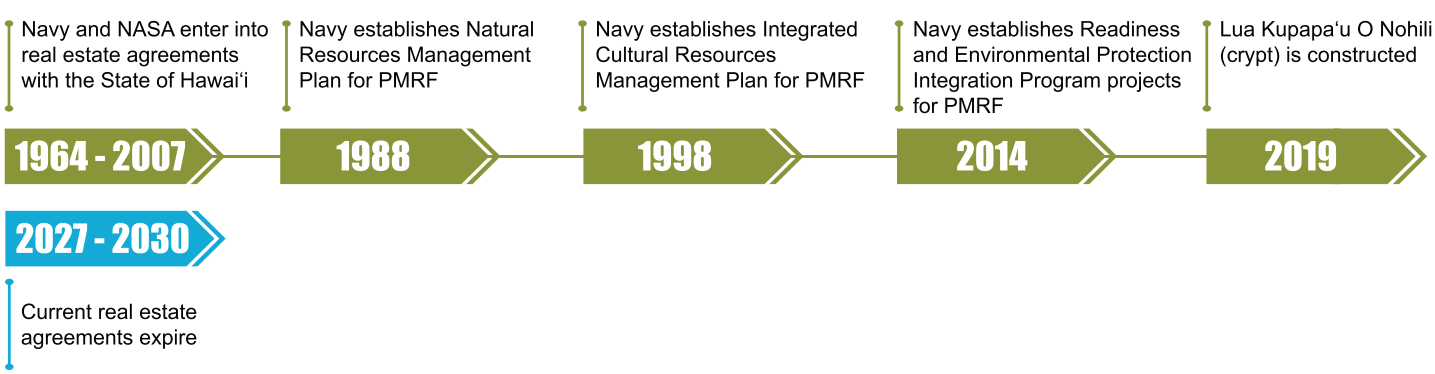
PMRF engages and actively participates with the community. Personnel who work at PMRF take great pride in their role as caretakers of the cultural and natural resources they are entrusted with. As the third largest employer on Kauaʻi, many of the personnel are from the community.

Kōkeʻe Park Geophysical Observatory

NASA's Kōkeʻe Park Geophysical Observatory (KPGO) is located on a remote ridge within Kōkeʻe State Park. NASA operates the observatory to collect geodetic data that contributes to daily measurements of the Earth's orientation in space and rotation. This data is used for scientific studies and a wide variety of positioning and navigation applications. For more information, visit https://space-geodesy.nasa.gov/NSGN/sites/KPGO/KPGO.html

Preserving the long-term Department of Defense and NASA use of these State lands is critical for military readiness, continuation of ongoing military training and testing, and maintaining data collection efforts of global and local significance. It also ensures the continued conservation management by the Navy and NASA of natural and cultural resources on these lands.

PMRF and KPGO Timeline



What is the Space Geodesy Project at KPGO?

The Space Geodesy Project (SGP) maintains a global network of space geodetic observing instruments. The network is comprised of sites around the world that use four primary observation techniques:

- Very Long Baseline Interferometry (VLBI)
- Satellite Laser Ranging
- Doppler Orbitography by Radiopositioning Integrated on Satellite (DORIS)
- Global Navigation Satellite System (GNSS)

The International Terrestrial Reference Frame (ITRF) is determined by the observations made from the instruments listed above and is the foundation for virtually all Earth observations and georeferenced data used by society. This data is fundamental for:

- Positioning and navigation in space/air and on land/sea
- Tracking sea level changes
- Tsunami early warning systems
- Volcano deformation measurements
- Predicting flood patterns
- Studying glacier dynamics

What is KPGO?

The Kōkeʻe Park Geophysical Observatory (KPGO) is one of the core sites for NASA's SGP. The mission of KPGO is to collect geodetic data to support the geolocation of Earth observation from both land and space as well as scientific investigations of the Earth's surface and interior.

Why is KPGO Important?

NASA and the scientific community use the data collected by KPGO to study ecosystems, water cycles, geological hazards, sea-level change, crustal-dynamics, and many other Earth science topics. Many of these applications rely on the long history and continuity of the geodetic data collected from the current KPGO location.

Why Kōkeʻe State Park?

KPGO is in Kōkeʻe State Park at an elevation of 3,600 feet near the Waimea Canyon, isolated from radio broadcasts that would interfere with the sensitive measurements made by the VLBI system. The location on the island of Kauaʻi is also critical for tying the Hawaiian Islands into the ITRF that contributes towards improving positioning and navigation accuracy on and around Hawaiʻi.

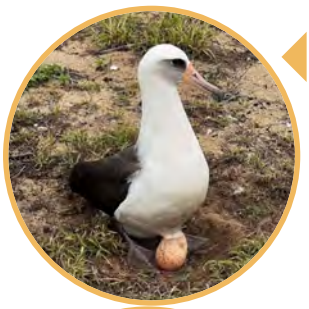
Stewardship and Care of the Land

Personnel who work at PMRF take great pride in their role as caretakers of the cultural and natural resources they are entrusted with.

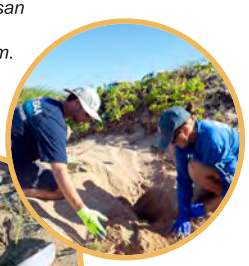
E Pane Mai Ka Nonoi O Nohili

Answering the requests of Nohili

NATURAL RESOURCES CONSERVATION THROUGH PARTNERSHIPS



Conservation of Laysan albatross through translocation program.





Conservation of green sea turtles and their nests.



Conservation of sensitive species at Honopū Valley.

CULTURAL RESOURCES PRESERVATION



The Lua Kupapa'u O Nohili (crypt) preserves and honors iwi kūpuna (ancestral remains) found on PMRF.



Mānā Town Japanese cemetery from the sugar plantation days.

COMMUNITY SERVICE



Local scientists and students take part in natural resource surveys.



PMRF celebrates with the community at Kekaha Family Fun Day.



PMRF hosts the community at Earth Day events.

CLEAN ENERGY AND RESILIENCY THROUGH RENEWABLE ENERGY PROJECTS



Solar facility and battery energy storage system at PMRF.

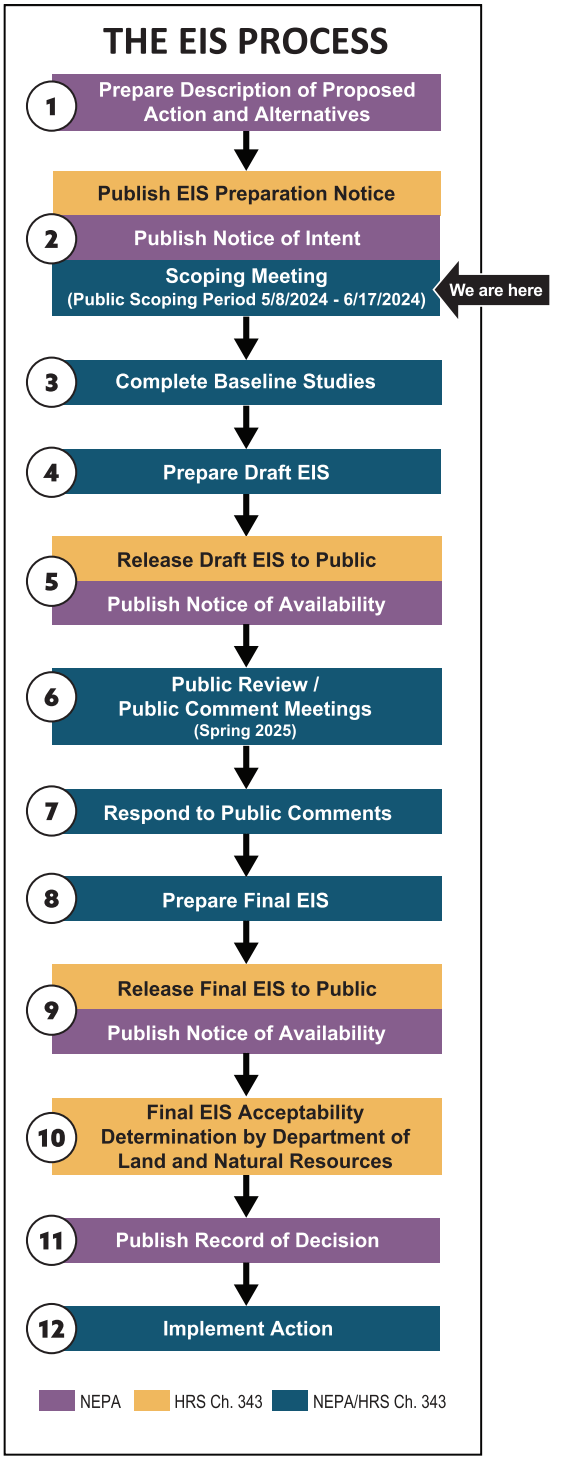
In 2023, the Department of Defense Readiness and Environmental Protection Integration (REPI) program awarded $5.29 million to natural resource conservation projects on Kaua`i. Approximately $26.7 million was awarded for all of Hawai`i.

NEPA/HEPA/Historic Preservation Process and Community Involvement

The Navy and NASA are jointly preparing the EIS pursuant to the National Environmental Policy Act (NEPA). The EIS will also be used by the Hawai`i Department of Land and Natural Resources under Hawai`i Revised Statutes (HRS) Chapter 343 and Hawai`i Administrative Rules Chapter 11-200.1, collectively referred to as the Hawai`i Environmental Policy Act (HEPA), in its decision making as to whether and what type of real estate agreement it may grant the Navy and NASA.

The EIS Process diagram (at right) illustrates the stages of public involvement in the NEPA and HEPA environmental processes. The public involvement processes for NEPA and HEPA for this EIS are running concurrently to meet the requirements for both state and federal laws and regulations.

The NEPA/HEPA scoping meetings will also serve as an opportunity to obtain public input concerning potential effects to historic properties pursuant to Section 106 of the National Historic Preservation Act (NHPA) and HRS Section 6E-42.



Community Involvement

The Navy and NASA are initiating a public scoping process to receive comments on the scope of the EIS. Members of the public are encouraged to participate in the environmental planning process by providing input on the proposed real estate action including potential alternatives, environmental or cultural concerns, information the public would like the Navy and NASA to know, and any other information the public would like to see addressed in the EIS, and the project's potential to affect historic properties pursuant to Section 106 of the NHPA and HRS Section 6E-42.

The Navy and NASA are proud contributing members of the local community. The Navy and NASA value and welcome input from the community, as well as the chance to share, communicate, and inform the community about the EIS and the need for the real estate agreements.

Opportunities for formal public participation in the EIS process occur during two stages:

1. During the scoping period, following publication of the Notice of Intent (NOI) and the Environmental Impact Statement Preparation Notice (EISPN).
2. During the comment period following publication of the Draft EIS.

What is Scoping?

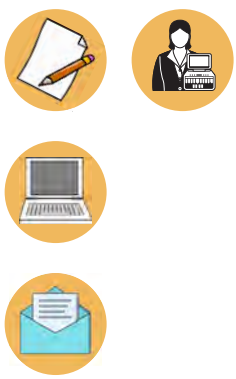
Scoping occurs at the beginning of the NEPA/HEPA process to help the Navy and NASA understand community-specific concerns regarding the Proposed Action and the planned analysis. Scoping encourages the participation of other federal, state, and local agencies, Native Hawaiian Organizations, environmental, cultural, and other groups, and the general public. Scoping helps determine what should be studied in this EIS including the alternatives and resources to be analyzed.

How to Submit Comments

Submit Comments in Person, Online, or by Mail.

Submit comments by ***June 17, 2024***. The Navy and NASA encourage the public to attend a public scoping meeting and to visit the project website to learn more.

The public may submit comments in any of the following ways:



- In person at a public scoping meeting
- Through the project website at **PMRF-KPGO-EIS.com**
- By email to **info@PMRF-KPGO-EIS.com**
- By mail, **postmarked by *June 17, 2024*** to the following address:

  Naval Facilities Engineering Systems Command, Hawai`i
  Environmental OPHEV2
  Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Wells
  400 Marshall Road, Building X-11
  Pearl Harbor, HI 96860

For language assistance or special accommodations, contact the PMRF Public Affairs Officer, at (808) 335-4740 or PMRFPublicAffairs@us.navy.mil.

Notes:

We appreciate your time and interest.

For more information visit the project website at PMRF-KPGO-EIS.com

Public Scoping Meetings

Comment Form

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Public Scoping Meeting Comment Form

Date: _____

Please submit comments for the scoping process by June 17, 2024. The Navy and NASA encourage the public to speak to project representatives available at tonight's meeting and to visit the website for project updates. The public may submit comments in any of the following ways:

- In person at a public scoping meeting
- Through the project website at **PMRF-KPGO-EIS.com**
- By email to **info@PMRF-KPGO-EIS.com**
- By mail, postmarked by June 17, 2024 (see address below)

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Please provide your mailing address to receive future notifications about the project.

1. Name:_____
2. Organization/Affiliation (if applicable): _____
3. Mailing Address:_____

In the event the contents of specific comments are incorporated into the environmental review analysis, released in whole or in part in response to a Freedom of Information Act request, or otherwise disclosed to the public, the Navy and NASA will include the name of the individual or entity submitting the comment, but will not publish or otherwise disclose other potentially-identifying information such as home addresses, e-mail addresses, or telephone numbers.

Please turn in this form at a public scoping meeting, submit online at PMRF-KPGO-EIS.com, send by email to info@PMRF-KPGO-EIS.com or mail to:

Naval Facilities Engineering Systems Command, Hawai'i, Environmental OPHEV2
Attn: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Wells
400 Marshall Road, Building X-11
Pearl Harbor, HI 96860

** Please Print Clearly **

YOUR INPUT MATTERS

Visit PMRF-KPGO-EIS.com

Scan QR code for project website

Draft EIS Public Meetings

List of Interested Parties Contacted During Comment Period

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Category	Group
Federal, state, and local elected officials	• Federal Elected Officials ▪ U.S. Senators Mazie K. Hirono Brian Schatz • U.S. House of Representatives ▪ Congressional District I: Ed Case ▪ Congressional District II: Jill N. Tokuda • State Elected Officials ▪ Governor: Josh Green ▪ Lieutenant Governor: Sylvia Luke ▪ Attorney General: Anne E. Lopez ▪ State Senate District 8: Ronald D. Kouchi • State Assembly ▪ House District 15: Nadine K. Nakamura ▪ House District 16: Luke A. Evslin ▪ House District 17: Dee Morikawa ▪ Senate Committees Public Safety and Military Affairs Water and Land Ways and Means Energy and Intergovernmental Affairs Agriculture and Environment Hawaiian Affairs ▪ House Committees Corrections, Military and Veterans Water and Land Finance Housing Public Safety Energy and Environment Judiciary and Hawaiian Affairs • Local Elected Officials ▪ County of Kaua‘i Mayor Derek S.K. Kawakami ▪ County Council Mel Rapozo (Council Chair) KipuKai Kuali‘i (Council Vice Chair) Addison Bulosan (Councilmember) Bernard P. Carvalho, Jr. (Councilmember) Felicia Cowden (Councilmember) Bill DeCosta (Councilmember) Ross Kagawa (Councilmember) Fern Holland (Councilmember) Arryl Kaneshiro (Councilmember)
Federal, state, and local regulatory and non-regulatory government agencies	• Federal Agencies ▪ Advisory Council on Historic Preservation ▪ National Oceanic and Atmospheric Administration Fisheries ▪ U.S. Army Corps of Engineers Honolulu District ▪ U.S. Coast Guard District 14

Category	Group
	▪ U.S. Department of the Interior, Office of Hawaiian Relations ▪ U.S. Environmental Protection Agency ▪ U.S.Fish and Wildlife Service (FWS), Kīlauea Point National Wildlife Refuge ▪ USFWS, Pacific Islands Fish and Wildlife Office ▪ U.S. Department of Agriculture (DA) Forest Service, Institute of Pacific Islands Forestry ▪ USDA, Hawai'i and Western Pacific State Office ▪ U.S. Geological Survey (GS), Honolulu Field Station ▪ National Park Service ▪ U.S. Small Business Administration ▪ USDA, Hawai'i Field Station ▪ U.S. Department of Energy (DOE) ▪ U.S. Environmental Protection Agency (EPA), Pacific Southwest, Region 9 ▪ U.S. Naval Observatory ▪ PMRF civilian and contract employees • State Agencies ▪ SOH Department of Agriculture and Biosecurity ▪ SOH Agribusiness Development Corporation (ADC) ▪ DLNR ▪ DLNR BLNR ▪ DLNR Division of Forestry and Wildlife (DOFAW) ▪ DLNR DOFAW, Kaua'i Branch ▪ DLNR DOFAW, Natural Area Reserves System (NARS) ▪ DLNR Land Division (LD) ▪ DLNR LD, ~~(~~Kaua'i District Office~~)~~ ▪ DLNR Office of Conservation and Coastal Lands (OCCL), ~~(~~Conservation District~~)~~ ▪ DLNR State Historic Preservation Division~~-~~(SHPD) ▪ DLNR Division of State Parks (SP) ▪ DLNR Commission on Water Resource Management (CWRM) ▪ DLNR Division of Aquatic Resources (DAR) ——DLNR Engineering Division (ENG) ▪ SOH Department of Transportation (DOT) ▪ Office of Hawaiian Affairs (OHA) ▪ OHA Kaua'i Island Burial Council ▪ OHA Ni'ihau Island Burial Council ▪ SOH Department of Health (DOH), Clean Water Branch (CWB) ▪ SOH Office of Planning and Sustainable Development (OPSD) ▪ SOH OPSD, Environmental Review Program (ERP) ▪ SOH OPSD, Coastal Zone Management (CZM) Program ▪ SOH Department of Business, Economic Development and Tourism ▪ SOH Department of Hawaiian Homelands ▪ SOH Department of the Attorney General ▪ SOH Department of Defense (State of Hawai'i) ▪ SOH Department of Land Management ▪ SOH Department of Education ▪ SOH Department of Education, Facilities Development Branch, Planning Section ▪ SOH Boards and Commissions

Category	Group
	▪ SOH Clean Water Branch ▪ SOH Clean Water Branch, Reef Mitigation ▪ SOH Department of Transportation ▪ SOH State Historic Preservation Division ▪ Kaua‘i Circuit Court ▪ Kaua‘i District Office, Division of State Parks • Regional/Local Agencies ▪ County of Kaua‘i Departments: Parks and Recreation Water Kaua‘i Emergency Management Agency Fire Police Economic Development Planning Public Works Transportation Office of Boards and Commissions ▪ University of Hawai‘i (UH) System Kaua‘i Community College (KCC) Kaua‘i Agricultural Research Center Pacific Cooperative Studies Unit (PCSU) UH at Mānoa, Ethnic Studies ▪ Native Hawaiian Federal Interagency Working Group, current members include: Advisory Council on Historic Preservation Office of the Deputy Under Secretary of Defense for Installations and Environment Small Business Administration Office of Native Hawaiian Relations
Native Hawaii Organizations	• ‘Āina Momona, Wahiawa Ahupua‘a LCA 7714B Apana 6 RP 7813 (State of Hawai‘i) • Association of Hawaiian Civic Clubs (State of Hawai‘i) • Hawaiian Native Corporation (supports NHOs – State of Hawai‘i) • Ko‘olau Foundation (State of Hawai‘i) • Native Hawaiian Hospitality Association (State of Hawai‘i) • Kawaileo Law,-A Limited Liability Law Company (State of Hawai‘i) • Council For Native Hawaiian Advancement (State of Hawai‘i) • Na Koa Ikaika Ka Lahui Hawai‘i (Kaua‘i) • Na ‘Ohana Papa O Manā (Kaua‘i) • EAO Hawai‘i Inc. (Kaua‘i) • Nā Kuleana o Kānaka ‘Ōiwi (Kaua‘i) • Hanalei River Heritage Foundation (Kaua‘i) • ALU LIKE, Inc. (Kaua‘i) • Kaua‘i Kupuna Council • Kaua‘i Burial Council • Aha Moku Council Kaua‘i - Mano O Kalanipo • Hui Mālama Polihale • The Children of the Land

Category	Group
	• ʻOhana Keanaʻaina, Keliʻikoa, Kaiʻaokamalie & Kai • ʻOhana Keohokālole • Na Hui O Kaneiolouma • Ahahui Kiwila Hawaiʻi O Moʻikeha • E Ola Kākou Hawaiʻi • E Ola Mau Na Leo O Kekaha • Hoʻokano Family Land Trust • Hoʻōla Lāhui Hawaiʻi • Kākoʻo ʻŌiwi • Kaunalewa • Kuaʻāina Ulu ʻAuamo • Mahamoku ʻOhana Council • Mālama Anahola • Mālama Hulēʻia • Na Kuʻauhau ʻo Kahiwakaneikopolei • Na Moʻokupuna O Wailua • Niʻihau – Niʻihau O Kahele Lani • Sovereign Councils of the Hawaiian Homestead Associations • Wai Koa Kauaʻi
Community planning groups, and other community and civic organizations	• Community Planning Groups ▪ Kauaʻi Planning & Action Alliance ▪ Kekaha Host Benefits Program, Citizen Action Committee • Community Organizations ▪ Hui Makaʻāinana O Makana ▪ Waipā Foundation ▪ Waimea Community Association ▪ Kauaʻi Philippine Cultural Center ▪ Ke Kumu O Hihinui Cultural Center ▪ Waimea Japanese Cemetery ▪ Boys and Girls Club, West Kauaʻi ▪ Church of Jesus Christ of Latter-Day Saints ▪ Kauaʻi Community Science Center ▪ Kekaha Pop Warner ▪ KVMH Auxiliary Association ▪ Ruff Ryderz Baseball ▪ St. Theresa Catholic Church ▪ Waimea Theater ▪ West Kauaʻi (Waimea) Rotary, District 5000 ▪ West Kauaʻi Lions Organization ▪ West Kauaʻi United Methodist Church ▪ Westside Christian Center ▪ George K. Cypher ʻOhana ▪ Maʻa ʻOhana ▪ DON Advocacy Groups ▪ AMVETS Department of Hawaiʻi ▪ Civic Groups ▪ Kauaʻi Planning & Action Alliance ▪ Hawaiʻi Community Foundation ▪ Kilauea Community Agricultural Center - Aina Hoʻokupu O Kilauea

Category	Group
	▪ Kauaʻi Philippine Cultural Center ▪ Ke Kumu O Hihinui Cultural Center ▪ Kauaʻi Museum ▪ Kōkeʻe Natural History Museum ▪ Hui o Laka at Kōkeʻe Natural History Museum ▪ Hanalei Hawaiian Civic Club ▪ Koʻolauloa Hawaiian Civic Club ▪ Koʻolaupoko Hawaiian Civic Club ▪ Queen Deborah Kapule Hawaiian Civic Club
Small business associations, economic development/ tourism organization, and recreational and real estate interests	• Businesses ▪ EAL Consult ▪ Kauaʻi Island Utility Cooperative (KIUC) ▪ Kekaha Agriculture Association (KAA) ▪ Luluku Farmerʻs Association ▪ West Kauaʻi Business and Professional Association ▪ Hawaiʻi Health Systems Corporation - Kauaʻi Region ▪ B&T Contractors, LLC • Economic Development Organizations ▪ Kauaʻi Chamber of Commerce ▪ Kauaʻi Filipino Chamber of Commerce ▪ Hanapēpē Economic Alliance ▪ Kauaʻi Economic Development Board • Tourism ▪ YWCA Kauaʻi, Camp Sloggett ▪ Waimea Japanese Cemetery ▪ Kauaʻi Visitors Bureau ▪ Smith Family Garden Luau ▪ Kōkeʻe Lodge ▪ The Cabins at Kōkeʻe (Akamai Hawaiʻi Properties)
Local environmental organizations and other Non-Governmental Organizations	• Government Programs ▪ Kauaʻi Seabird Habitat Conservation Plan ▪ Bishop Museum • Environmental Organizations – Local ▪ National Tropical Botanical Gardens, Limahuli Garden and Preserve ▪ Plant Extinction Prevention Program (PEPP) ▪ Kauaʻi Forest Bird Recovery Project ▪ Kauaʻi Watershed Alliance ▪ Hanalei Watershed Hui ▪ Kauaʻi North Shore Community Foundation ▪ North Shore Community Land Trust ▪ Kauaʻi Invasive Species Committee ▪ Kōkeʻe Resource Conservation Program ▪ Keahole Defense Coalition ▪ Kauaʻi Monk Seal Watch Program ▪ Kauaʻi Climate Action Coalition ▪ Kauaʻi EV ▪ Zero Waste Kauaʻi • Environmental Organizations – Regional/National ▪ Earthjustice ▪ Surfrider Foundation, Kauaʻi Chapter

Category	Group
	▪ Sierra Club of Hawai‘i ▪ Sierra Club – Kaua‘i Chapter ▪ Reef Guardians ▪ Save our Shearwaters ▪ Conservation Council for Hawai‘i ▪ Kahea – The Hawaiian Environmental Alliance ▪ Hawai‘i Audubon Society ▪ Hawai‘i~~an Islands~~ Land Trust ▪ Native Hawaiian Plant Society ▪ Hawai‘i Wildlife Center ▪ Nā Kia‘i Kai ▪ The Nature Conservancy –~~–~~ Hawai‘i Chapter ▪ Pesticide Action Network North America • Fishing/Diving ▪ Hawai‘i Big Game Fishing Club ▪ Hawai‘i Freshwater Fishing Association ▪ Kaua‘i Sea Farm • Boating/Yacht Clubs/Marinas ▪ Nawiliwili Yacht Club ▪ Kaua‘i Sailing Association ▪ Kikiaola West-Side Boaters Association ▪ Holo Holo Charters ▪ Catamaran Kahanu ▪ Captain Andy’s ▪ Kauai Sea Tours ▪ Napali Odyssey ▪ Makana Charters ▪ Seasport Divers ▪ Nā Pali Riders ▪ Blue Dolphin Charters ▪ Kānehūnāmoku Voyaging Academy ▪ Kaua‘i Sea Rider Adventure Tours ▪ Kaua‘i Sailing Association
Local media outlets	• Print ▪ Kaua‘i Island News ▪ The Garden Island ▪ MidWeek Kaua‘i ▪ The Honolulu Star-Advertiser ▪ Hawai‘i Tribune-Herald ▪ Ka Wai Ola • TV ▪ KITV 4 (ABC) ▪ KHON2 (Fox and CW) ▪ Hawai‘i News Now • Radio ▪ Kong Radio 93.5 ▪ KHKU 94.3 FM ▪ KFMN FM 97 ▪ KJMQ Jamz 98.1 ▪ Sunny 101.3

Category	Group
	▪ Hawai‘i Public Radio (HPR) • Online ▪ Honolulu Civil Beat ▪ Kaua‘i Now ▪ Waimea Theater On-Screen Advertising
Individual community members (not associated with groups) interested in cultural and natural resources preservation, military use of the land, public access, etc.	• Dennis Eguchi • Pastor Daryl Kua • Bob Westerman • Toni Ricci • Lyle Tabata (B&T Contractors, LLC) • Charlie Iona • Marissa Faye • Josh Mori • Keiko Napier • Kaua Mata • Tia Korete • Terry Lily • Barbara “Maka‘ala” Ka‘aumoana • Lisa Ellen Smith (GJB and Associates) • Nicholas Franklin (HHSC-KR) • Manuel DeCosta (Kuldoro Kulaloia Lineage) • Allison Turner (ManTech Interntional) • Kiah Imai (Peraton) • Matt Sneed (PMRF) • Iokepa Imaikalani (The Return Voyage) • Inette Miller (The Return Voyage) • Darryl Kua (Westside Christian Center Assembly of God) • Lana Bilbo • Makani Brun • K Cadanova • Keala Heanani Carter • Ray Catania Puhi • R. Chong • Thomas Clements • Sherri Cummings • Mike Curtis • Carol Donaldson • Brad Donaldson • Breanna Flanagan • Peleke Flores • Marjorie Gifford • Lisa Grandinetti • Regina Gregory • Jesse Guirao • Mary A. Hannah • Randall Hee

Category	Group
	• Joan Heller • Hayden Hislop • Hanna Hodak • Kevin Houck • Charlie Iona • Alethea Kaohi and Ohana • Sommer Kauakahi • Debra Kekaualua • Charles King • Alma Koetje • Jordan Lemke • Kaua Mata • Irie N. • James Nakaahiki, III • Dorothy Nakazawa • Kainoa Nakazawa • Melissa Nash • Jonathan Olores • Catherine Orlans • Linda Oshiro • Alice C. Parker • Sandy Phillips • David Phillips • Malcolmn Pryor • Naadia Puri • Cheree Rapozo • Toni Ricci • Tiani Ruiz • Corrina Sabala • Louise Sausen • Anastasia Schmoll • Bill Skelton • Richard Spotts • Lauren Kamalei Stovall • S. Strom • Claire Tonry • James Trujillo • Maria Walker • Valerie Weiss • Robert Westerman • Susan Wiener • Don H. Wilson, USN, Retired • Ann Wooten • Wesley K. Yadao • Karen C. Yadao • Jason Yotsuda

Category	Group
	• Bill Zimmerman • Sequoy
Residents, business, agricultural operations, schools, and property owners near PMRF	• Communities of Kekaha, Waimea, Hanapepe, Ele'ele, Port Allen, Kalaheo, Lawai, Omao, Koloa, Poipu, Kapa'a, and Līhu'e • Schools – Kaua'i District, Waimea Complex ▪ Kekaha Elementary School ▪ Ni'ihau High and Elementary School ▪ Waimea High School ▪ Waimea Canyon Middle School ▪ Ke Kula Ni'ihau O Kekaha Public Charter School ▪ Kula Aupuni Ni'ihau A Kahelelani Aloha Public Charter School ▪ St. Theresa's School

Legend: AMVETS = American Veterans; BLNR = Board of Land and Natural Resources; CZM = Coastal Zone Management; DLNR = Department of Land and Natural Resources; DOFAW = DLNR Division of Forestry and Wildlife; DON = Department of the Navy; NHO = Native Hawaiian Organization; OHA = Office of Hawaiian Affairs; OPSD = Office of Planning and Sustainable Development; SHPD = State Historic Preservation Division; SOH = State of Hawai'i; UH = University of Hawai'i; U.S. = United States; USDA = U.S. Department of Agriculture; USDOE = U.S. Department of Energy; USEPA = U.S. Environmental Protection Agency; USFWS = U.S. Fish and Wildlife Service; USGS = U.S. Geological Survey.

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Draft EIS Public Meetings

Direct Mailing Postcard

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E Pane Mai Ka Nonoi O Nohili

Answering the requests of Nohili

U.S. Navy Pacific Missile Range Facility and NASA Kōkeʻe Park Geophysical Observatory Real Estate Environmental Impact Statement

The Navy and NASA invite you to participate in the environmental planning process and submit comments.

The U.S. Department of the Navy (Navy) and the National Aeronautics and Space Administration (NASA) have jointly prepared a Draft Environmental Impact Statement (EIS) to evaluate the potential environmental impacts of proposed real estate agreements with the State of Hawaiʻi for the Pacific Missile Range Facility (PMRF) and the Kōkeʻe Park Geophysical Observatory (KPGO). **The Navy and NASA invite you to review the Draft EIS and provide public comments.**

The Navy proposes to retain the use of 8,172 acres of State of Hawaiʻi lands on Kauaʻi in support of continued military training, testing, and facility operations at PMRF. The Navy operates on approximately 410 acres of the total acres leased from the state. The majority of the leasehold and easement areas remain intentionally undeveloped as they are used as an encroachment buffer and security for the facility's mission. NASA proposes to retain the use of 23 acres of State of Hawaiʻi land on Kauaʻi in support of maintaining data collection efforts of global and local significance at KPGO. The Proposed Action is needed because existing real estate agreements for these state lands are set to expire between 2027 and 2030.

The Navy and NASA will host public meetings at three locations on Kauaʻi. Each meeting will include a live online broadcast and public comment opportunity. Attend any of the public meetings to talk story, learn more, and submit written or oral comments. Meetings will be held from 5 to 8 p.m. HST at the locations listed below. To participate online, register at PMRF-KPGO-EIS.com.

Public Meetings:

Tuesday, July 15, 2025
Kauaʻi Veterans Center, 3215 Kauaʻi Veterans Memorial Hwy., Līhuʻe

Wednesday, July 16, 2025
Kekaha Neighborhood Center, 8130 Elepaio Rd., Kekaha

Thursday, July 17, 2025
Sheraton Kauaʻi Coconut Beach Resort, Makai Ballroom, 650 Aleka Loop, Kapaʻa

Agenda:

5 to 6 p.m.
Information stations – meet the project team, talk story, and ask questions. Visit the comments station to provide a written or oral comment.

6 to 6:30 p.m.
Presentation by Navy and NASA.

6:30 to 8 p.m.
Oral comments from the public in person and online.

For more information, visit PMRF-KPGO-EIS.com

Naval Facilities Engineering Systems Command, Environmental OPHEV2
Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Ling
400 Marshall Road, Building X-11
Pearl Harbor, HI 96860

Public Comment Period

These public meetings will be conducted in accordance with the National Environmental Policy Act and in support of Hawai‘i Revised Statutes (HRS) Chapter 343 to receive comments on the Draft EIS. Members of the public are encouraged to participate in the environmental review process by providing input on the proposed real estate action including on the environmental impacts of the alternatives, environmental or cultural concerns, information the public would like the Navy and NASA to know, and any other information the public would like to see addressed in the Final EIS. The public meetings will also serve as an opportunity to obtain public input concerning potential effects to historic properties pursuant to Section 106 of the National Historic Preservation Act and HRS Section 6E-8. Your voice is important to this planning process.

The public review and comment period begins ***June 20, 2025***, and ends ***August 7, 2025***. Please attend a public meeting and visit the project website to learn more.

For language assistance or special accommodations, contact the PMRF Public Affairs Officer at (808) 335-4740 or PMRFPublicAffairs@us.navy.mil. Requests for language assistance or special accommodations should be made at least 7 days prior to the public meeting.

Submit Comments in Person, Online, or by Mail

Submit comments by ***August 7, 2025, 11:59 p.m. HST.***
The public may submit comments in any of the following ways:

- In person or online at a public meeting
- Through the project website at PMRF-KPGO-EIS.com
- By email to info@PMRF-KPGO-EIS.com
- By mail, postmarked by ***August 7, 2025***, to the following address:
  Naval Facilities Engineering Systems Command
  Environmental OPHEV2
  Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Ling
  400 Marshall Road, Building X-11, Pearl Harbor, HI 96860

The public is invited to provide input on the environmental analysis presented in the Draft EIS. The Navy and NASA analyzed potential environmental impacts to the following resource areas:

- **Archaeological and Architectural Resources**
- **Cultural Practices**
- **Biological Resources**
- **Land Use and Access**
- **Socioeconomics**
- **Water Resources**
- **Utilities**
- **Public Health and Safety**
- **Air Quality and Greenhouse Gases**
- **Transportation**
- **Hazardous Materials and Waste**
- **Visual Resources**

A copy of the Draft EIS is available at PMRF-KPGO-EIS.com and at the Waimea Public Library (Kaua‘i) and the Hawai‘i Documents Center (Hawai‘i State Library, O‘ahu).

Draft EIS Public Meetings

Posters

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E Pane Mai Ka Nonoi O Nohili

Answering the requests of Nohili

U.S. Navy Pacific Missile Range Facility and NASA Kōke'e Park Geophysical Observatory Real Estate Environmental Impact Statement

Aloha and Welcome















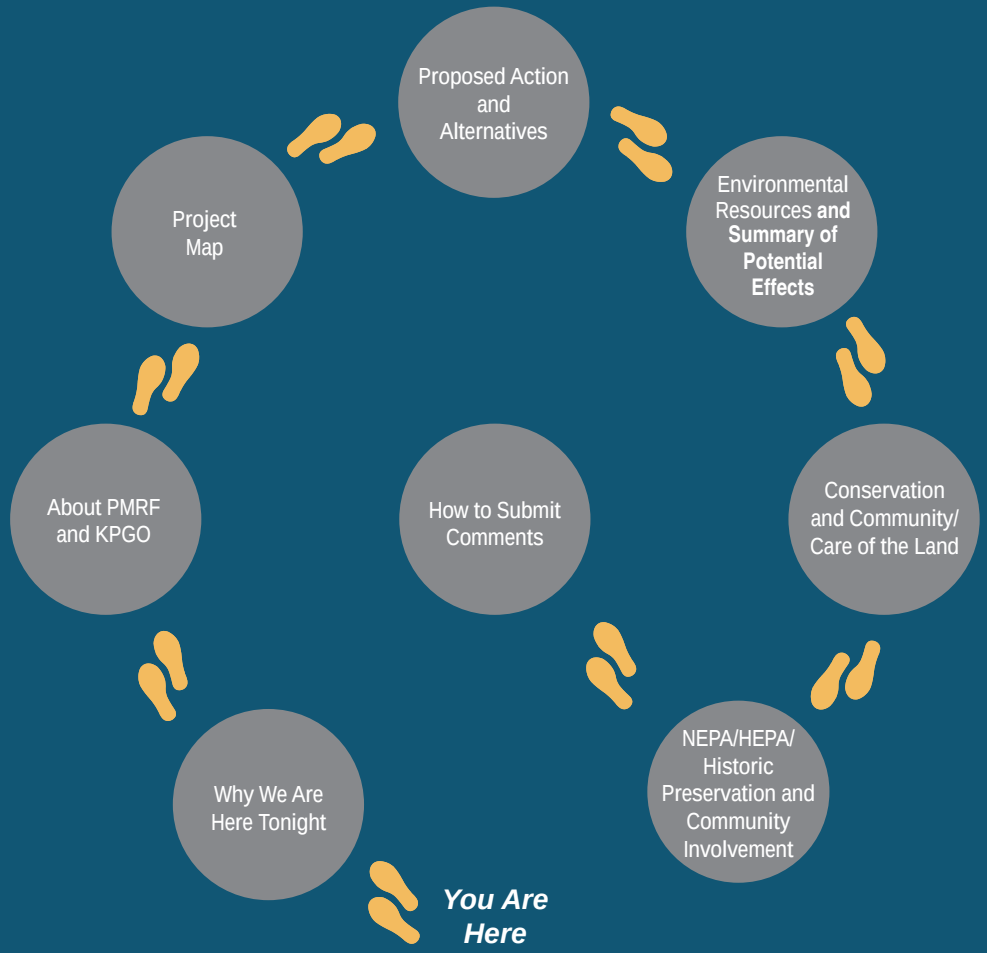
Your participation is important to this planning process

PMRF-KPGO-EIS.com



Why We Are Here Tonight

- The Navy and NASA evaluated the potential environmental impacts of proposed real estate agreements with the State of Hawai‘i, Board of Land and Natural Resources for the Pacific Missile Range Facility and Kōke‘e Park Geophysical Observatory.
- These public meetings also serve as an opportunity to obtain public input concerning potential effects to historic properties pursuant to Section 106 of the National Historic Preservation Act and Hawai‘i Revised Statutes Section 6E-8.
- The Navy and NASA invite you to participate and to provide your comments on the Draft Environmental Impact Statement.
- Your comments can help the Navy and NASA evaluate potential environmental impacts.





About the Navy Pacific Missile Range Facility (PMRF)



PMRF is the world's largest instrumented multi-domain training and testing facility. What makes PMRF unique is its ability to simultaneously support surface, subsurface, air, and space operations.



Personnel at PMRF engage and actively participate with the community.



On Kaua'i, the Navy is the largest high-tech employer and third largest overall employer. Most of the 900 personnel at PMRF are civilians, including many from the local community. PMRF contributes approximately $150 million annually in salary, contract goods, and services to the local economy.

PMRF and KPGO Timeline

1964 - 2007

- Navy and NASA enter into real estate agreements with the State of Hawai'i

1988

- Navy and NASA establish Integrated Natural Resources Management Plans for PMRF and KPGO

1998

- Navy and NASA establish Integrated Cultural Resources Management Plans for PMRF and KPGO

2014

- Navy establishes Readiness and Environmental Protection Integration Program projects for PMRF

2019

- Lua Kupapa'u O Nohili (crypt) is constructed

2024

- Navy hosts Aha 'Awa ceremony rededicating Lua Kupapa'u O Nohili (crypt) expansion for safe keeping of iwi kūpuna

2027 - 2030

- Current real estate agreements expire



About the Kōke'e Park Geophysical Observatory (KPGO)



KPGO is located on a remote ridge within Kōke'e State Park in the western portion of Kaua'i.



NASA operates KPGO to collect geodetic data about the Earth's shape, orientation in space, and gravity. This data supports modern navigation technology such as the Global Positioning System (GPS) that is used every day in a wide variety of devices, from handheld smartphones to satellites. This data is also used for scientific studies, spacecraft navigation, and the geolocation of Earth observations.



Continued operations at KPGO would ensure that data-related operations of global and local significance can continue, allowing multiple agencies' missions to persist without interruption.

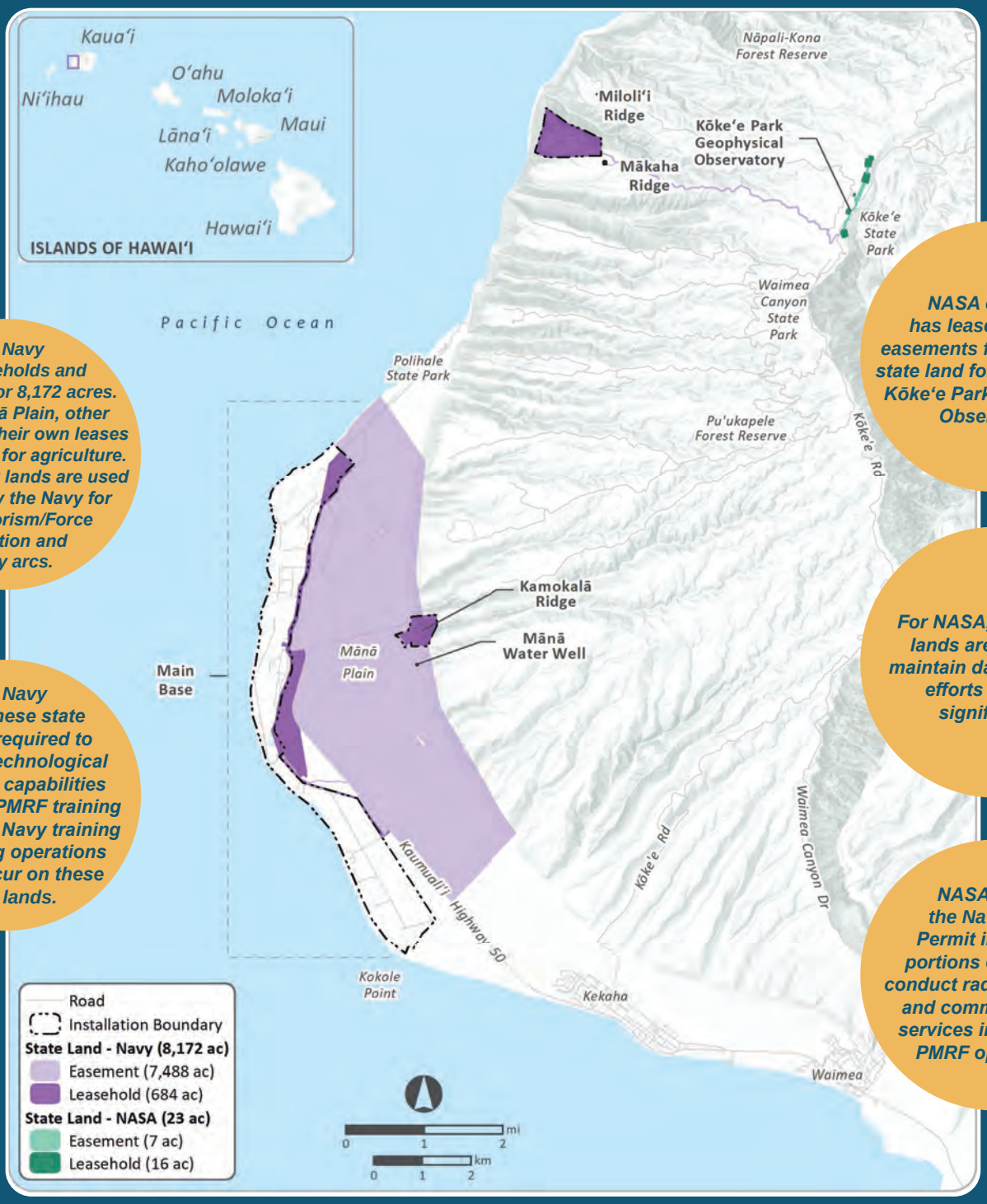


NASA's Space Geodesy Project maintains a global network of space geodetic observing instruments. The network is comprised of sites around the world that use four primary observation techniques.

NASA's lease began in 1965 when KPGO was part of the NASA Manned Space Flight Network. Since that time, KPGO has supported many NASA and external projects and has hosted a variety of equipment; it is a highly flexible and crucial geodetic site.

NASA issued the Navy a Use Permit in 2016 for portions of KPGO to conduct radar, telemetry, and communications services in support of Pacific Missile Range Facility operations.





The Navy has leaseholds and easements for 8,172 acres. On the Mānā Plain, other entities hold their own leases with the state for agriculture. The easement lands are used passively by the Navy for Anti-Terrorism/Force Protection and safety arcs.

The Navy use of these state lands is required to maintain technological and safety capabilities supporting PMRF training and testing. Navy training and testing operations do not occur on these state lands.

NASA currently has leaseholds and easements for 23 acres of state land for operations at Kōke'e Park Geophysical Observatory.

For NASA, these state lands are critical to maintain data collection efforts of global significance.

NASA issued the Navy a Use Permit in 2016 for portions of KPGO to conduct radar, telemetry, and communications services in support of PMRF operations.

Current Land Agreements – West Kaua'i



PROPOSED ACTION

- The Navy proposes to retain the use of 8,172 acres of state lands on Kauaʻi for operational continuity and sustainment in support of continued military training, testing, and facility operations at the Pacific Missile Range Facility (PMRF).
- The 8,172 acres is comprised of:
  - 684 acres of leaseholds
  - 7,488 acres of easement lands
- NASA proposes to retain the use of 23 acres of state lands on Kauaʻi in support of continued operations including measurements of the Earth's rotation and local land motion at the Kōkeʻe Park Geophysical Observatory (KPGO).

The Navy and NASA existing real estate agreements for state lands were established in 1964 and 1965 and are expiring between 2027 and 2030.

The Navy operates on 410 acres of the total acres leased from the State of Hawaiʻi. The remaining acres are used as buffer zones, conservation areas, infrastructure, and access corridors.

ALTERNATIVES

- **Alternative 1: Succeeding Current Real Estate Agreements.** The Navy and NASA would apply to the Board of Land and Natural Resources for new real estate agreements at fair market value for a similar duration and for the same uses as the current leases and easements.
- **Alternative 2: Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds.** The Navy and NASA would pursue fee simple acquisition at fair market value of up to 700 acres (684 acres for Navy use and 16 acres for NASA use) of leaseholds and otherwise obtain use of the same easement lands as described in Alternative 1.
- **Alternative 3: No Action Alternative.** The state would not grant Navy and NASA any new real estate agreements for the state lands on Kauaʻi (8,172 acres Navy, 23 acres NASA) after expiration of the leases and easements between 2027 and 2030.

The Draft EIS presents a detailed analysis of the potential environmental impacts of each of these alternatives.



ENVIRONMENTAL RESOURCES STUDIED

The Navy and NASA evaluated potential environmental impacts of each of the alternatives on the following resource areas. The public is invited to provide input on the environmental analysis presented in the Draft EIS.

- Archaeological and Architectural Resources
- Cultural Practices
- Biological Resources
- Land Use and Access
- Socioeconomics
- Water Resources
- Utilities
- Public Health and Safety
- Air Quality and Greenhouse Gases
- Transportation
- Hazardous Materials and Waste
- Visual Resources

Summary of Draft EIS Analysis

The Draft EIS contains summary tables and detailed analysis of the potential effects to resources studied, including consideration of applicable best management practices, standard operating procedures, and mitigation measures already in place. The Navy and NASA have also identified enhanced management measures to further reduce and offset potential effects.



Waiapua'a Bay, at PMRF



Sea turtle on beach at PMRF



Laysan albatross at PMRF



PMRF hosts Hālau Hula at Nohili Dunes



Nohili Dunes



Sea turtle hatchling



Hawai'i's state bird, the nēnē, or Hawaiian goose



The Navy and NASA are committed to continued stewardship of the ʻāina. As such, the Navy and NASA are including enhanced management measures that propose protections for the ʻāina.

SUMMARY OF POTENTIAL EFFECTS

RESOURCE	ALTERNATIVES 1 AND 2	ENHANCED MANAGEMENT MEASURES (EMM)	NO ACTION ALTERNATIVE
ARCHAEOLOGICAL AND ARCHITECTURAL	Regulatory protections remain unchanged	Increase access to information about archaeological and architectural resources; see EMM-1 for details	Loss of federal protections under historic preservation programs; current stressors from ongoing operations would remain, and BMPs and the ICRMP would remain in place
CULTURAL PRACTICES	Moderate access restrictions	Develop an Access Management Plan for PMRF that balances public access and PMRF's mission requirements; see EMM-2 for details	Access limitations during demolition and/or removal activities
BIOLOGICAL	Navy and NASA programs would continue (REPI projects, PMRF INRMP, nature-based solutions [e.g., for erosion control]); effects to general vegetation, general wildlife, special status species, and critical habitat would continue to occur from ongoing operations	Provide the public with annual wildlife summaries, status updates, data reports, and research studies; see EMM-3 for details	Long-term protection of special status species and their habitats, as well as management and control of invasive species by the Navy and NASA, would not continue and DLNR would assume such responsibilities; loss of Navy and NASA programs
LAND USE AND ACCESS	Remain consistent with regulatory requirements, no changes or new restrictions, long-term beneficial effect from fair market value of the real estate transactions		No new restrictions; access limitations during demolition and/or removal activities
SOCIOECONOMICS	Benefits to the economy would continue from employment opportunities at PMRF and KPGO; fair market value from the real estate transactions	Establish the One Kauaʻi Hui (Stakeholder Advisory Group); see EMM-4 for details	Potential in reduction in spending and loss of employment at both PMRF and KPGO
WATER RESOURCES	No degradation to water quality, no effect to beneficial uses of water resources, no contamination of a drinking water source; will not create noncompliance with the Clean Water Act, nor alter floodplains, nor increase hazards of flooding	Establish a Navy-DLNR-DHHL-ADC-Kauaʻi County Working Group to collaboratively manage water resources in West Kauaʻi; see EMM-5 for details	Navy would no longer operate the Kawaiʻele pump station, support sand berm openings at coastal outlets, nor maintain Mānā Water Well, thus increasing flood potential; effects to groundwater and contamination of a drinking water source should the state not continue these operations
UTILITIES	No changes to current usage; no exceedance of capacity or demand; continue to comply with regulations		Reduction of potable water capacity for PMRF and increased demand on Kauaʻi County Water Department
PUBLIC HEALTH AND SAFETY	Continued ongoing use and storage of fuels and oils, missile operations, ordnance storage and movement, and radar operations; Public Health & Safety programs would continue	Improve closure protocol and public notification during launch activities; see EMM-6 for details	Short-term effect from transport of ordnance; missile launches decrease from loss of telemetry and tracking at Mākaha Ridge; current Public Health & Safety programs would not continue (wildfire risk)
AIR QUALITY AND GREENHOUSE GASES	No changes to ambient air quality conditions and no exceedances of federal or state ambient air quality standards	In addition to BMPs (see Draft EIS Section 2.5) and Community Coordination (see Draft EIS Section 1.7.5), Draft EIS Chapter 5 describes actions the Navy and NASA are currently taking to mitigate, avoid, and minimize effects from the Proposed Action and existing mitigation measures that would continue to be implemented under the action alternatives. The Navy and NASA have identified EMMs that aim to provide additional protections for the ʻāina. Under the No Action Alternative and pursuant to the existing real estate agreements, any return of state property would involve complex negotiations with the State of Hawaiʻi for the transfer of various environmental and cultural responsibilities now performed by Navy and NASA back to the state. Mitigation measures for the No Action Alternative would occur at a later time and are therefore not included in the Draft EIS.	Short-term emissions from demolition activities; discontinuation of operations
TRANSPORTATION	No change to current conditions, no changes in traffic volumes accessing facilities on the existing roadway network		Short-term road closures from demolition activities
HAZARDOUS MATERIALS AND WASTE	No increase in the use or generation of hazardous materials or waste		Short-term effect from transport of hazardous materials and waste; small decrease in the amount of hazardous materials and waste (including solid waste)
VISUAL RESOURCES	No change to the existing scenic viewpoint		Due to lack of visibility of facilities, no change to existing scenic viewpoint

KEY:

NOT ADVERSE, NOT SIGNIFICANT | ADVERSE, NOT SIGNIFICANT | ADVERSE, SIGNIFICANT

ADC = Agribusiness Development Corporation; **BMP** = Best Management Practice; **DHHL** = Department of Hawaiian Home Lands; **DLNR** = Department of Land and Natural Resources; **EIS** = Environmental Impact Statement; **EMM** = Enhanced Management Measures (see Draft EIS Section 5.2); **INRMP** = Integrated Natural Resources Management Plan; **REPI** = Department of Defense Readiness and Environmental Protection Integration



CONSERVATION AND COMMUNITY

Stewardship and Care of the Land

Personnel who work at the Pacific Missile Range Facility (PMRF) take great pride in their role as caretakers of the cultural and natural resources with which they are entrusted.

CULTURAL RESOURCES PRESERVATION



The Lua Kupapaʻu O Nohili (crypt) preserves and honors iwi kūpuna (ancestral remains) found on PMRF. Initially constructed in 2019, Lua Kupapaʻu O Nohili was expanded and rededicated in 2024.



Mānā Town Japanese cemetery from the sugar plantation days

NATURAL RESOURCES CONSERVATION THROUGH PARTNERSHIPS



Conservation of Laysan albatross through translocation program



Conservation of green sea turtles and their nests



Conservation of sensitive species at Honopū Valley

CLEAN ENERGY AND RESILIENCY THROUGH RENEWABLE ENERGY PROJECTS



Solar facility and battery energy storage system at PMRF

COMMUNITY SERVICE



Local scientists and students take part in natural resource surveys



PMRF celebrates with the community at Kekaha Family Fun Day



PMRF hosts the community at environmental awareness events

E Pane Mai Ka Nonoi O Nohili

Answering the requests of Nohili



NEPA/HEPA/Historic Preservation Process and Community Involvement

WE WANT TO HEAR FROM YOU

The National Environmental Policy Act (NEPA); Section 106 of the National Historic Preservation Act (NHPA); Hawai‘i Revised Statutes (HRS) Chapter 343 and Hawai‘i Administrative Rules (HAR) Chapter 11-200.1, collectively referred to as the Hawai‘i Environmental Policy Act (HEPA); and HRS Section 6E-8 require federal agencies and the State of Hawai‘i Department of Land and Natural Resources, respectively, to:

- Consider the environmental impacts of proposed projects.
- Consider the potential effects of their actions on historic properties and look for ways to avoid, minimize, or mitigate them.
- Get early public input on resources and alternatives to be evaluated.

COMMUNITY INVOLVEMENT

Opportunities for formal public participation in the EIS process occur during two stages:

1. During the scoping period, following publication of the Notice of Intent (NOI) and the Environmental Impact Statement Preparation Notice (EISPN).
2. During the public comment period following publication of the Draft EIS (current phase).

The Navy and NASA value and welcome your input.

THE EIS PROCESS

1. Prepare Description of Proposed Action and Alternatives
2. Publish EIS Preparation Notice
   Publish Notice of Intent
   Public Scoping Period / Scoping Meetings (May 8, 2024 – June 17, 2024)
3. Complete Baseline Studies
4. Prepare Draft EIS
5. Release Draft EIS to Public
   Publish Notice of Availability
6. Draft EIS Public Review Period / Public Meetings (June 20, 2025 - August 7, 2025) — **We are here**
7. Respond to Public Comments
8. Prepare Final EIS
9. Release Final EIS to Public
   Publish Notice of Availability
10. Final EIS Acceptability Determination by Board of Land and Natural Resources
11. Publish Record of Decision
12. Implement Action

NEPA | HRS Ch. 343 | NEPA/HRS Ch. 343

Public participation helps the Navy, NASA, and Board of Land and Natural Resources make informed decisions.

Thank you for your participation.



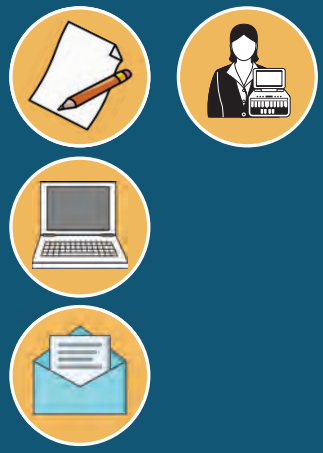
A copy of the Draft EIS is available at PMRF-KPGO-EIS.com and at the Waimea Public Library (Kaua‘i) and the Hawai‘i Documents Center (Hawai‘i State Library, O‘ahu).

How to Submit Comments

Submit Comments in Person, Online, or by Mail

Submit comments by ***August 7, 2025, 11:59 p.m. HST***. The public may submit comments in any of the following ways:

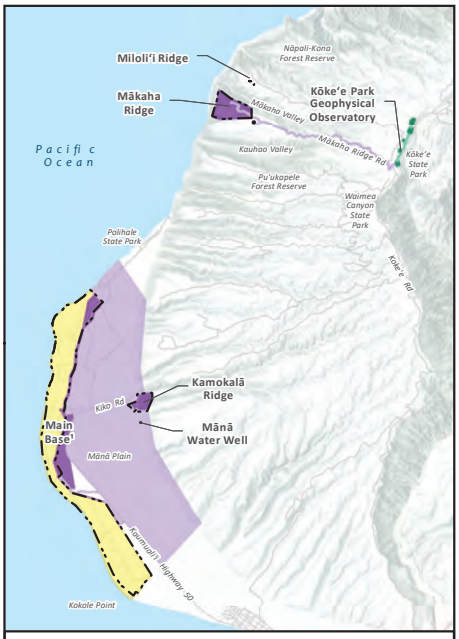
- In person or online at a public meeting
- Through the project website at **PMRF-KPGO-EIS.com**
- By email to **info@PMRF-KPGO-EIS.com**
- By mail, postmarked by ***August 7, 2025***, to the following address:
  Naval Facilities Engineering Systems Command, Environmental OPHEV2
  Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Ling
  400 Marshall Road, Building X-11
  Pearl Harbor, HI 96860



For language assistance or special accommodations, ask a representative at today’s meeting, or contact the PMRF Public Affairs Officer at **(808) 335-4740** or **PMRFPublicAffairs@us.navy.mil**.



Alternatives Carried Forward for Analysis

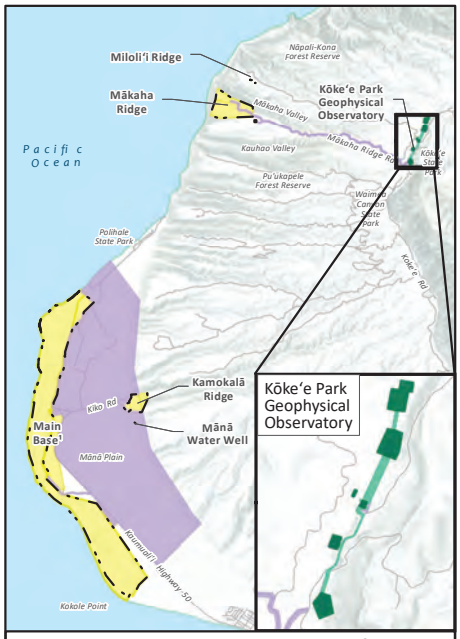


Alternative 1 Succeeding Current Real Estate Agreements

Navy Administrative Jurisdiction (1,933 ac)
- Fee Simple (1,933 ac)

State Land - Navy (8,172 ac)
- Easement (7,488 ac)
- Leasehold (684 ac)

State Land - NASA (23 ac)
- Easement (7 ac)
- Leasehold (16 ac)



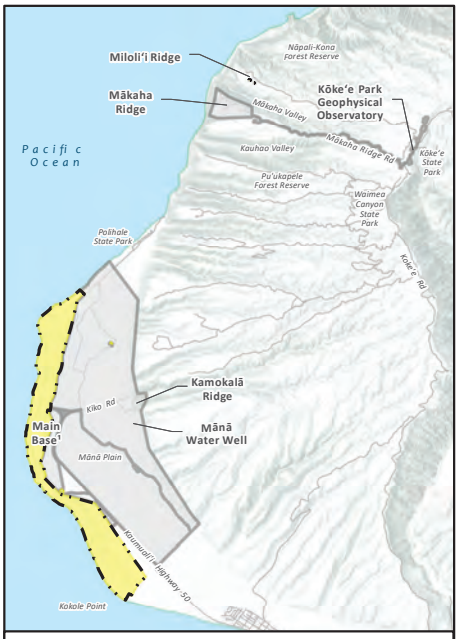
Alternative 2 Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds

Navy Administrative Jurisdiction (2,617 ac)
- Fee Simple

State Land - Navy (7,488 ac)
- Easement

NASA Administrative Jurisdiction (16 ac)
- Fee Simple

State Land - NASA (7 ac)
- Easement



Alternative 3 No Action Alternative

- Project Area

Navy Administrative Jurisdiction (1,933 ac)
- Fee Simple

0 1.5 3 mi

[1]Main Base is a common naming convention for Navy fee simple, leasehold, and easement lands on the Mānā Plain. This EIS only analyzes potential effects from the Proposed Action on the leasehold and easement lands in the Project Area.
Date: 6/10/2025 Source: DOD, 2023; Esri, 2023; Hawaii Statewide GIS, 2023. Note ac = acres
G:\C_ProjectLibrary\023032 PMRF NASA Land Retention\02-Maps_DEIS_V3\Figure ES-2 All Alternatives.mxd

Alternatives Screening Process

The Navy and NASA used the following screening factors to select reasonable alternatives that would allow their missions to be fulfilled:
- Maintain long-term use of state lands currently used to support Department of Defense (DoD) and NASA missions on Kaua'i;
- Preserve current DoD and NASA operations on Kaua'i;
- Retain existing DoD and NASA infrastructure on Kaua'i; and
- Support Department of Land and Natural Resources management of public lands and associated environmental and conservation programs on Kaua'i.

Alternatives Considered But Not Carried Forward	
Alternative	**Description**
Succeeding Leases and Easements Except for Current Leases at Mākaha Ridge and KPGO	The Navy and NASA would obtain succeeding leases and easements on leased land not currently located in the State of Hawai'i's Conservation District. These would include leaseholds at Main Base, Kamokalā Ridge, Mānā Water Well, and Miloli'i Ridge, but would not include succeeding leaseholds or easements at Mākaha Ridge or KPGO.
Succeeding Leases Only (No Succeeding Easements)	The Navy and NASA would only obtain succeeding lease agreements and not succeeding easements. These would include succeeding leaseholds at Main Base, Kamokalā Ridge, Mānā Water Well, Miloli'i Ridge, Mākaha Ridge, and KPGO, but not easements at Main Base, Kamokalā Ridge, Mākaha Ridge, or KPGO.
Shorter Duration	The Navy and NASA would obtain succeeding real estate agreements for a short duration (less than 25 years).

All screening factors must be met for an alternative to be considered reasonable.

Draft EIS Public Meetings
Project Information Sheet

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U.S. Navy Pacific Missile Range Facility and NASA Kōkeʻe Park Geophysical Observatory Real Estate Environmental Impact Statement (EIS)



Draft EIS Fact Sheet

Public Meeting Schedule

Attend any of the three Draft EIS public meetings to talk story, learn more, and submit comments on the Draft EIS. Each meeting will include a live online broadcast and public comment opportunity. The meetings will include information stations, a presentation that will be broadcast live online, and oral comments from the public in person and online. To participate online, register at PMRF-KPGO-EIS.com

DATE	LOCATION	AGENDA
Tuesday, July 15, 2025	Kauaʻi Veterans Center 3215 Kauaʻi Veterans Memorial Hwy, Līhuʻe	Meeting Time: 5 to 8 p.m. HST **In-Person:** • 5 to 8 p.m. Information stations – meet the project team, talk story, and ask questions. Visit the comments station to provide a written or oral comment. **In-Person and Online:** • 6 to 6:30 p.m. Presentation by Navy and NASA. • 6:30 to 8 p.m. Oral comments from the public in person and online.
Wednesday, July 16, 2025	Kekaha Neighborhood Center 8130 Elepaio Road, Kekaha	
Thursday, July 17, 2025	Sheraton Kauaʻi Coconut Beach Resort, Makai Ballroom 650 Aleka Loop, Kapaʻa	

Please Check In!

This public review and comment period is your opportunity to provide comments on the Draft EIS. Your voice is important to the planning process. Please visit the project website at PMRF-KPGO-EIS.com

Welcome

The U.S. Navy (Navy) and the National Aeronautics and Space Administration (NASA), as applicants and joint lead agencies, have prepared a Draft Environmental Impact Statement (EIS) to evaluate the potential environmental impacts of proposed real estate agreements with the State of Hawai`i for the Pacific Missile Range Facility (PMRF) and the Kōke`e Park Geophysical Observatory (KPGO). The Navy and NASA invite you to participate in this planning process.

What are the Navy and NASA Proposing?

The Navy currently leases or holds easements for approximately 8,172 acres of State of Hawai`i land primarily for passive encroachment buffer as well as for mission readiness, access, and utilities for PMRF on Kaua`i. The Navy proposes to retain the use of 8,172 acres of state lands on Kaua`i for operational continuity and sustainment in support of continued military training, testing, and facility operations at PMRF.

The Navy operates on approximately 410 acres of the total acres leased from the State of Hawai`i. The remaining acres are used as buffer zones, conservation areas, infrastructure, and access corridors.

NASA currently leases or holds easements for 23 acres of State of Hawai`i land for operations of KPGO. NASA issued the Navy a Use Permit in 2016 for portions of KPGO to conduct radar, telemetry, and communications services in support of PMRF operations.

NASA operates KPGO to collect geodetic data about the Earth's shape, orientation in space, and gravity. This data supports modern navigation technology such as the Global Positioning System (GPS) that is used every day in a wide variety of devices, from handheld smartphones to satellites. In addition, this data is used for scientific studies, spacecraft navigation, and the geolocation of Earth observations. NASA proposes to retain the use of 23 acres of state lands on Kaua`i in support of continued operations including measurements of the Earth's rotation and local land motion at KPGO.

The Proposed Action is needed because existing real estate agreements for these state lands are set to expire between 2027 and 2030.

On Kaua`i, the Navy is the largest high-tech employer and third largest overall employer. Most of the 900 personnel at PMRF are civilians, including many from the local community. PMRF contributes approximately $150 million annually in salary, contract goods, and services to the local economy.

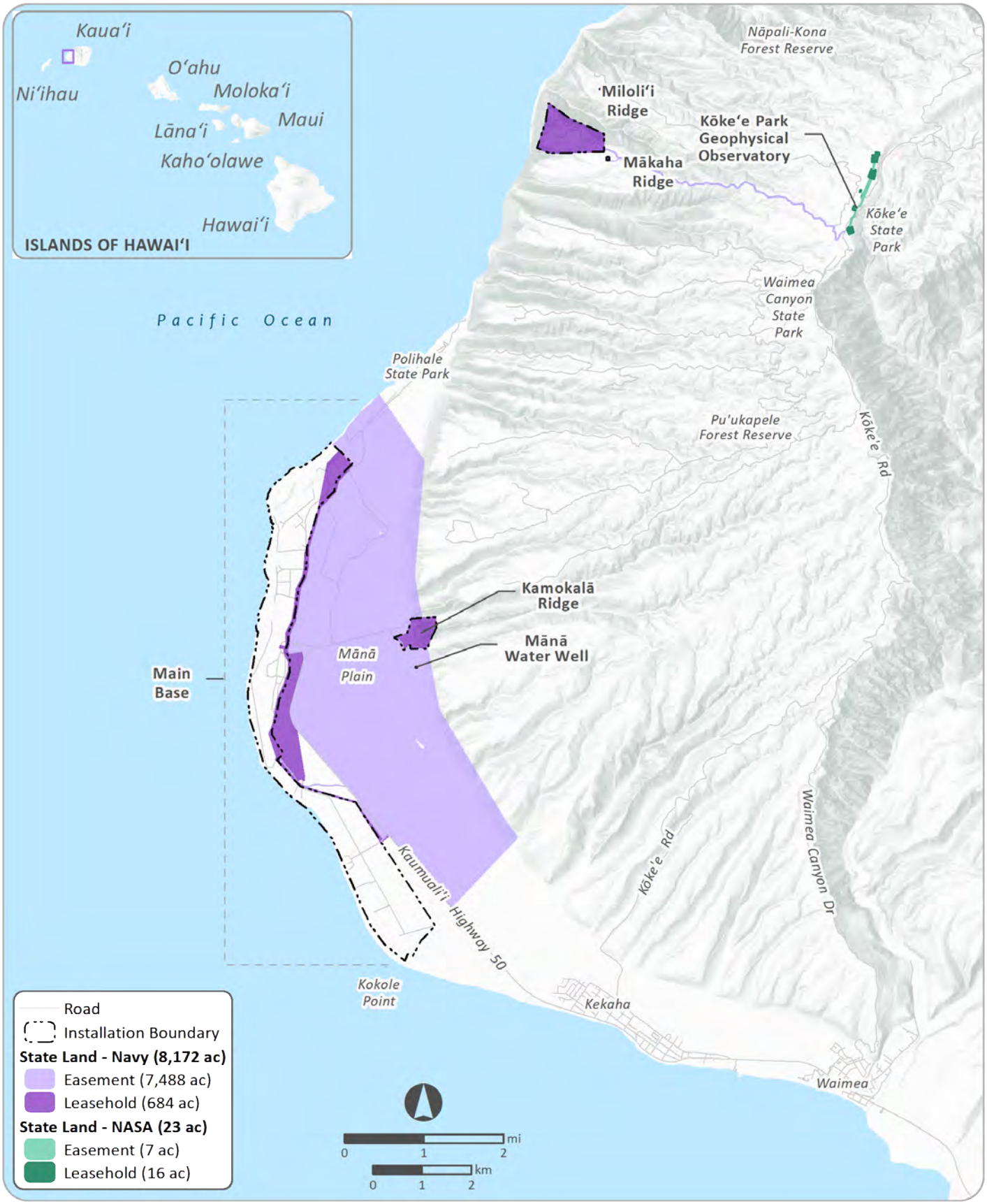


Figure 1. Project Map

Action Alternatives

Alternative 1: Succeeding Current Real Estate Agreements.

Under this alternative, the Navy and NASA would apply to the Board of Land and Natural Resources (BLNR) for new long-term real estate agreements at fair market value, for a similar duration, and for the same uses as the current leases and easements. The Navy's agreements would include 684 acres of land leased exclusively by the Navy and 7,488 acres of easement lands (for a total of 8,172 acres). NASA's agreements would include 16 acres of land leased exclusively by NASA and 7 acres of easement lands (for a total of 23 acres). NASA would enter into a new real estate agreement with the Navy for continued use of the leasehold and easement lands. Under this alternative, there would be no changes to the type or frequency of current activities occurring on state leased and easement lands. This alternative would not change any use or maintenance of existing infrastructure and would not involve construction, renovation, or demolition of facilities. This alternative would also preserve the Navy- and NASA-funded natural and cultural resource management activities on the leased and easement lands.

Alternative 2: Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds.

Under this alternative, the Navy and NASA would pursue fee simple acquisition at fair market value of up to 700 acres (684 acres for Navy use and 16 acres for NASA use) of leaseholds and otherwise obtain use of the same easement lands as described in Alternative 1. The new Navy fee simple land of 684 acres would include 392 acres of land at the Main Base[1], 89 acres at Kamokalā Ridge, 0.29 acre at the Mānā Water Well, 0.015 acre at Miloli`i Ridge, 203 acres at Mākaha Ridge, and the NASA fee simple land would include 16 acres at KPGO. This acreage would be transferred from ownership by the State of Hawai`i to the U.S. Government. This alternative would not change any use or maintenance of existing infrastructure and would not involve construction, renovation, or demolition of facilities.

Alternative 3: No Action Alternative.

Under the No Action Alternative, the state would not grant Navy and NASA any new real estate agreements for the state lands on Kaua`i (8,172 acres Navy, 23 acres NASA) after expiration of the leases and easements between 2027 and 2030.

In this EIS, the No Action Alternative consists of the potential steps that would take place if the new real estate agreements for leases and easements are not granted to the Navy and NASA after their expiration. The analysis of the environmental resources also examines the loss of the Navy and NASA programs and potential effects to the resource; however, the full effect of such an alternative cannot be determined due to the uncertainty of how the Navy and NASA would reduce their operations, the state's future management of its returned lands, and what each party may negotiate.

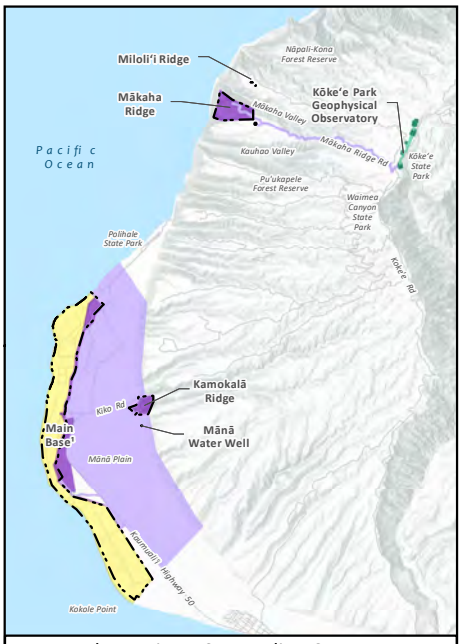
[1] Note that "Main Base" is a common naming convention for Navy fee simple, leasehold, and easement lands on the Mānā Plain. This EIS only analyzes potential effects from the Proposed Action on the leasehold and easement lands in the Project Area.

Action Alternatives

Alternatives Screening Process

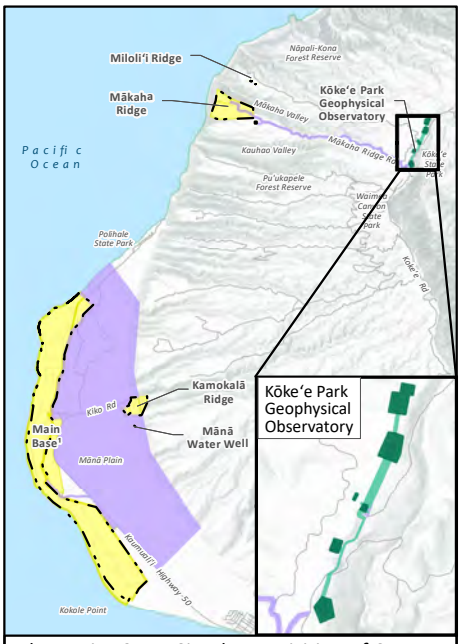
The Navy and NASA used the following screening factors to select reasonable alternatives that would allow their missions to be fulfilled:

- Maintain long-term use of state lands currently used to support Department of Defense (DoD) and NASA missions on Kaua`i;
- Preserve current DoD and NASA operations on Kaua`i;
- Retain existing DoD and NASA infrastructure on Kaua`i; and
- Support Department of Land and Natural Resources management of public lands and associated environmental and conservation programs on Kaua`i.



Alternative 1 Succeeding Current Real Estate Agreements

Navy Administrative Jurisdiction (1,933 ac)
Fee Simple (1,933 ac)
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Easement (7,488 ac)
Leasehold (684 ac)
State Land - NASA (23 ac)
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Leasehold (16 ac)



Alternative 2 Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds

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Easement
NASA Administrative Jurisdiction (16 ac)
Fee Simple
State Land - NASA (7 ac)
Easement



Alternative 3 No Action Alternative

Project Area
Navy Administrative Jurisdiction (1,933 ac)
Fee Simple

[1]Main Base is a common naming convention for Navy fee simple, leasehold, and easement lands on the Mānā Plain. This EIS only analyzes potential effects from the Proposed Action on the leasehold and easement lands in the Project Area.
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G:\C_ProjectLibrary\023032 PMRF NASA Land Retention\02-Maps_DEIS_V3\Figure ES-2 All Alternatives.mxd

Figure 2. Alternatives Carried Forward for Analysis

Alternatives Considered But Not Carried Forward	
Alternative	**Description**
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Shorter Duration	The Navy and NASA would obtain succeeding real estate agreements for a short duration (less than 25 years).

Environmental Resources Studied

The Navy and NASA evaluated the potential environmental impacts of each of the alternatives on the following resource areas. The public is invited to provide input on the environmental analysis presented in the Draft EIS.

- Archaeological and Architectural Resources
- Cultural Practices
- Biological Resources
- Land Use and Access
- Socioeconomics
- Water Resources
- Utilities
- Public Health and Safety
- Air Quality and Greenhouse Gases
- Transportation
- Hazardous Materials and Waste
- Visual Resources



PMRF honors ancestral Native Hawaiians in summer solstice event.



Nohili Dunes.



Sea turtle on beach at PMRF.



Hawai'i's state bird, the nēnē, or Hawaiian goose.



Waiapua'a Bay at PMRF.



Solar panels at PMRF.

Summary of Draft EIS Analysis

The Draft EIS contains summary tables and detailed analysis of the potential effects to resources studied, including consideration of applicable best management practices, standard operating procedures, and mitigation measures already in place. The Navy and NASA have also identified enhanced management measures to further reduce and offset potential effects. A copy of the Draft EIS is available at PMRF-KPGO-EIS.com and at the Waimea Public Library (Kaua`i) and the Hawai`i Documents Center (Hawai`i State Library, O`ahu).

Summary of Potential Effects

The Navy and NASA are committed to continued stewardship of the ʻāina. As such, the Navy and NASA are including enhanced management measures that propose protections for the ʻāina.

RESOURCE	ALTERNATIVES 1 AND 2	ENHANCED MANAGEMENT MEASURES (EMM)	NO ACTION ALTERNATIVE
ARCHAEOLOGICAL AND ARCHITECTURAL	Regulatory protections remain unchanged	Increase access to information about archaeological and architectural resources; see EMM-1 for details	Loss of federal protections under historic preservation programs; current stressors from ongoing operations would remain, and BMPs and the ICRMP would remain in place
CULTURAL PRACTICES	Moderate access restrictions	Develop an Access Management Plan for PMRF that balances public access and PMRF's mission requirements; see EMM-2 for details	Access limitations during demolition and/or removal activities
BIOLOGICAL	Navy and NASA programs would continue (REPI projects, PMRF INRMP, nature-based solutions [e.g., for erosion control]); effects to general vegetation, general wildlife, special status species, and critical habitat would continue to occur from ongoing operations	Provide the public with annual wildlife summaries, status updates, data reports, and research studies; see EMM-3 for details	Long-term protection of special status species and their habitats, as well as management and control of invasive species by the Navy and NASA, would not continue and DLNR would assume such responsibilities; loss of Navy and NASA programs
LAND USE AND ACCESS	Remain consistent with regulatory requirements, no changes or new restrictions, long-term beneficial effect from fair market value of the real estate transactions		No new restrictions; access limitations during demolition and/or removal activities
SOCIOECONOMICS	Benefits to the economy would continue from employment opportunities at PMRF and KPGO; fair market value from the real estate transactions	Establish the One Kauaʻi Hui (Stakeholder Advisory Group); see EMM-4 for details	Potential in reduction in spending and loss of employment at both PMRF and KPGO
WATER RESOURCES	No degradation to water quality, no effect to beneficial uses of water resources, no contamination of a drinking water source; will not create noncompliance with the Clean Water Act, nor alter floodplains, nor increase hazards of flooding	Establish a Navy-DLNR-DHHL-ADC-Kauaʻi County Working Group to collaboratively manage water resources in West Kauaʻi; see EMM-5 for details	Navy would no longer operate the Kawaiʻele pump station, support sand berm openings at coastal outlets, nor maintain Mānā Water Well, thus increasing flood potential; effects to groundwater and contamination of a drinking water source should the state not continue these operations
UTILITIES	No changes to current usage; no exceedance of capacity or demand; continue to comply with regulations		Reduction of potable water capacity for PMRF and increased demand on Kauaʻi County Water Department
PUBLIC HEALTH AND SAFETY	Continued ongoing use and storage of fuels and oils, missile operations, ordnance storage and movement, and radar operations; Public Health & Safety programs would continue	Improve closure protocol and public notification during launch activities; see EMM-6 for details	Short-term effect from transport of ordnance; missile launches decrease from loss of telemetry and tracking at Mākaha Ridge; current Public Health & Safety programs would not continue (wildfire risk)
AIR QUALITY AND GREENHOUSE GASES	No changes to ambient air quality conditions and no exceedances of federal or state ambient air quality standards	In addition to BMPs (see Draft EIS Section 2.5) and Community Coordination (see Draft EIS Section 1.7.5), Draft EIS Chapter 5 describes actions the Navy and NASA are currently taking to mitigate, avoid, and minimize effects from the Proposed Action and existing mitigation measures that would continue to be implemented under the action alternatives. The Navy and NASA have identified EMMs that aim to provide additional protections for the ʻāina. Under the No Action Alternative and pursuant to the existing real estate agreements, any return of state property would involve complex negotiations with the State of Hawaiʻi for the transfer of various environmental and cultural responsibilities now performed by Navy and NASA back to the state. Mitigation measures for the No Action Alternative would occur at a later time and are therefore not included in the Draft EIS.	Short-term emissions from demolition activities; discontinuation of operations
TRANSPORTATION	No change to current conditions, no changes in traffic volumes accessing facilities on the existing roadway network		Short-term road closures from demolition activities
HAZARDOUS MATERIALS AND WASTE	No increase in the use or generation of hazardous materials or waste		Short-term effect from transport of hazardous materials and waste; small decrease in the amount of hazardous materials and waste (including solid waste)
VISUAL RESOURCES	No change to the existing scenic viewpoint		Due to lack of visibility of facilities, no change to existing scenic viewpoint

KEY:

NOT ADVERSE, NOT SIGNIFICANT | ADVERSE, NOT SIGNIFICANT | ADVERSE, SIGNIFICANT

ADC = Agribusiness Development Corporation; **BMP** = Best Management Practice; **DHHL** = Department of Hawaiian Home Lands; **DLNR** = Department of Land and Natural Resources; **EIS** = Environmental Impact Statement; **EMM** = Enhanced Management Measures (see Draft EIS Section 5.2); **INRMP** = Integrated Natural Resources Management Plan; **REPI** = Department of Defense Readiness and Environmental Protection Integration

Figure 3. Summary of Potential Effects

About the Navy Pacific Missile Range Facility and NASA Kōke`e Park Geophysical Observatory

Pacific Missile Range Facility

PMRF is the world's largest instrumented multi-domain training and testing facility. What makes PMRF unique is its ability to simultaneously support surface, subsurface, air, and space operations. For portions of PMRF, the Navy has real estate agreements with the State of Hawai`i for 8,172 acres, comprised of 684 acres of leaseholds and 7,488 acres of easements. The Navy operates on approximately 410 acres of the total acres leased from the state. The majority of the leasehold and easement areas remain intentionally undeveloped as they are used as an encroachment buffer for the facility's mission. For more information, visit https://cnrh.cnic.navy.mil/Installations/PMRF-Barking-Sands/

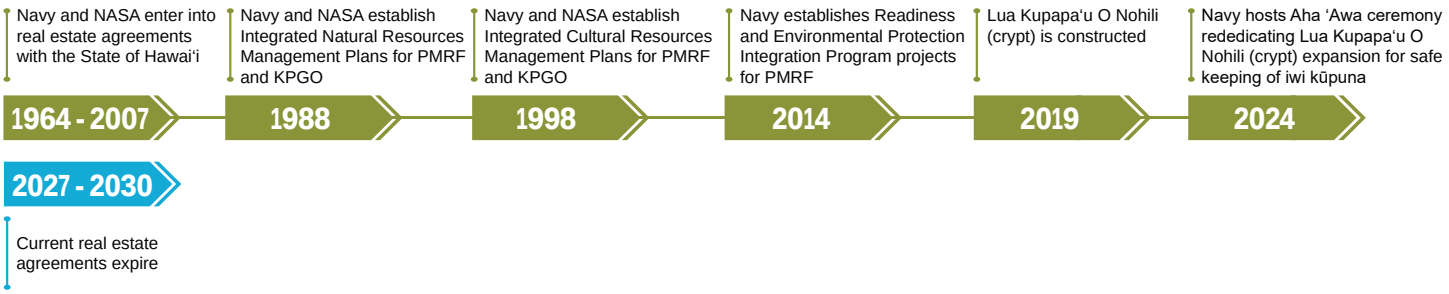
PMRF engages and actively participates with the community. Personnel who work at PMRF take great pride in their role as caretakers of the cultural and natural resources they are entrusted with. As the third largest employer on Kaua`i, many of the personnel are from the community.

Kōke`e Park Geophysical Observatory

NASA's KPGO is located on a remote ridge within Kōke`e State Park. NASA operates the observatory to collect geodetic data that contributes to daily measurements of the Earth's orientation in space and rotation. This data is used for scientific studies and a wide variety of positioning and navigation applications. For more information, visit: https://space-geodesy.nasa.gov/NSGN/sites/KPGO/KPGO.html

The Navy use of these state lands is required to maintain technological and safety capabilities supporting PMRF training and testing. Navy training and testing operations do not occur on these state lands. For NASA, these state lands are critical to maintain data collection efforts of global significance.

PMRF and KPGO Timeline



What is the Space Geodesy Project at KPGO?

The Space Geodesy Project (SGP) maintains a global network of space geodetic observing instruments. The network is comprised of sites around the world that use four primary observation techniques:

- Very Long Baseline Interferometry (VLBI)
- Satellite Laser Ranging
- Doppler Orbitography by Radiopositioning Integrated on Satellite (DORIS)
- Global Navigation Satellite System (GNSS)

The International Terrestrial Reference Frame (ITRF) is determined by the observations made from the instruments listed above and is the foundation for virtually all Earth observations and georeferenced data used by society. This data is fundamental for:

- Positioning and navigation in space/air and on land/sea
- Tracking sea level changes
- Tsunami early warning systems
- Volcano deformation measurements
- Predicting flood patterns
- Studying glacier dynamics

What is KPGO?

KPGO is one of the core sites for NASA's SGP. The mission of KPGO is to collect geodetic data to support the geolocation of Earth observation from both land and space as well as scientific investigations of the Earth's surface and interior.

Why is KPGO Important?

NASA and the scientific community use the data collected by KPGO to study ecosystems, water cycles, geological hazards, sea-level change, crustal-dynamics, and many other Earth science topics. NASA data products produced using KPGO are also used for spacecraft operations and for positioning, navigation, and timing services like GPS. Many of these applications rely on the long history and continuity of the geodetic data collected from the current KPGO location.

Why Kōkeʻe State Park?

KPGO is in Kōkeʻe State Park at an elevation of 3,600 feet near the Waimea Canyon, isolated from radio broadcasts that would interfere with the sensitive measurements made by the VLBI system. The location on the island of Kauaʻi is also critical for tying the Hawaiian Islands into the ITRF that contributes towards improving positioning and navigation accuracy on and around Hawaiʻi.

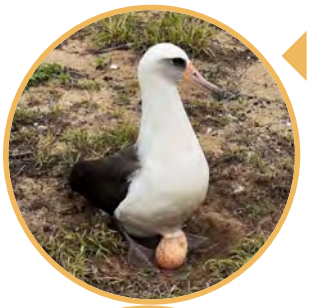
Stewardship and Care of the Land

Personnel who work at PMRF take great pride in their role as caretakers of the cultural and natural resources with which they are entrusted.

E Pane Mai Ka Nonoi O Nohili

Answering the requests of Nohili

NATURAL RESOURCES CONSERVATION THROUGH PARTNERSHIPS



Conservation of Laysan albatross through translocation program.





Conservation of green sea turtles and their nests.



Conservation of sensitive species at Honopū Valley.

CULTURAL RESOURCES PRESERVATION



The Lua Kupapa'u O Nohili (crypt) preserves and honors iwi kūpuna (ancestral remains) found on PMRF. Initially constructed in 2019, Lua Kupapa'u O Nohili was expanded and rededicated in 2024.





Mānā Town Japanese cemetery from the sugar plantation days.

COMMUNITY SERVICE



Local scientists and students take part in natural resource surveys.



PMRF celebrates with the community at Kekaha Family Fun Day.



PMRF hosts the community at environmental awareness events.

CLEAN ENERGY AND RESILIENCY THROUGH RENEWABLE ENERGY PROJECTS



Solar facility and battery energy storage system at PMRF.

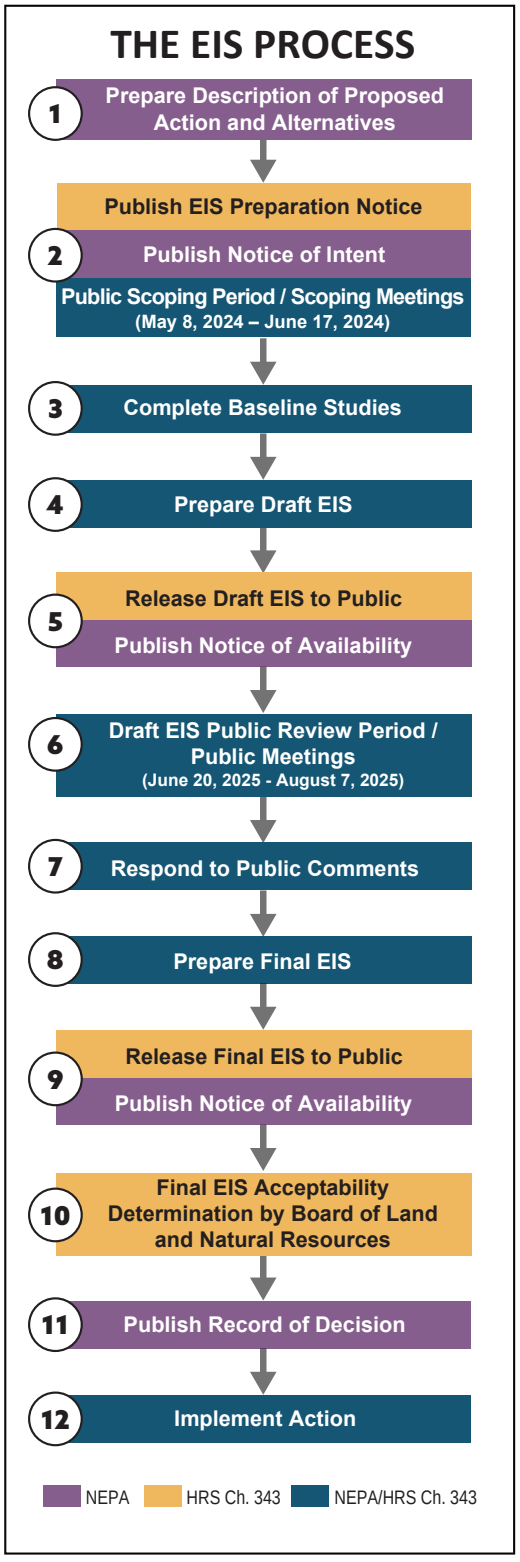
In 2024, the Department of Defense Readiness and Environmental Protection Integration (REPI) program awarded $4.85 million, and another projected $1.5 million in 2025, to natural resource conservation projects on Kaua'i. In 2023, approximately $26.7 million was awarded for all of Hawai'i.

NEPA/HEPA/Historic Preservation Process and Community Involvement

The Navy and NASA are jointly preparing the EIS pursuant to the National Environmental Policy Act (NEPA). The EIS will also be used by the Hawai`i Department of Land and Natural Resources under Hawai`i Revised Statutes (HRS) Chapter 343 and Hawai`i Administrative Rules Chapter 11-200.1, collectively referred to as the Hawai`i Environmental Policy Act (HEPA), in its decision making as to whether and what type of real estate agreement it may grant the Navy and NASA.

The EIS Process diagram (at right) illustrates the stages of public involvement in the NEPA and HEPA environmental processes. The public involvement processes for NEPA and HEPA for this EIS are running concurrently to meet the requirements for both state and federal laws and regulations.

The NEPA/HEPA public meetings will also serve as an opportunity to obtain public input concerning potential effects to historic properties pursuant to Section 106 of the National Historic Preservation Act (NHPA) and HRS Section 6E-8.



Community Involvement

The Navy and NASA have prepared a Draft EIS for public review and comment. Members of the public are encouraged to participate in the planning process by providing input on the proposed real estate action including on the environmental impacts of the alternatives, environmental or cultural concerns, information the public would like the Navy and NASA to know, and any other information the public would like to see addressed in the Final EIS, and the project's potential to affect historic properties pursuant to Section 106 of the NHPA and HRS Section 6E-8.

The Navy and NASA are proud contributing members of the local community. The Navy and NASA value and welcome input from the community, as well as the chance to share, communicate, and inform the community about the EIS and the need for the real estate agreements.

Opportunities for formal public participation in the EIS process occur during two stages:

1. During the scoping period (which occurred in spring 2024) following publication of the Notice of Intent and the Environmental Impact Statement Preparation Notice.
2. During the comment period following publication of the Draft EIS (current phase).

What's Next?

After the Draft EIS public review and comment period closes, the Navy and NASA will review all comments received and will prepare the Final EIS. After publication of the Final EIS, there is a 30-day wait period, and concurrently, BLNR will determine acceptability of the Final EIS. The Navy and NASA will then publish a Record of Decision. The Record of Decision is a concise public record that will address the Navy and NASA decision.

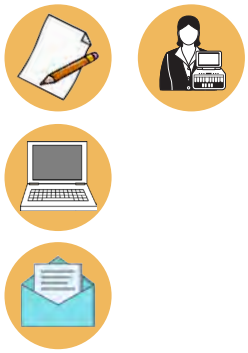
How to Submit Comments

Submit Comments in Person, Online, or by Mail.

Submit comments by ***August 7, 2025, 11:59 p.m. HST.*** The Navy and NASA encourage the public to attend a public meeting, submit comments on the Draft EIS, and visit the project website to learn more.

The public may submit comments in any of the following ways:

- In person or online at a public meeting
- Through the project website at **PMRF-KPGO-EIS.com**
- By email to **info@PMRF-KPGO-EIS.com**
- By mail, postmarked by ***August 7, 2025,*** to the following address:
  Naval Facilities Engineering Systems Command
  Environmental OPHEV2
  Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Ling
  400 Marshall Road, Building X-11
  Pearl Harbor, HI 96860



For language assistance or special accommodations, contact the PMRF Public Affairs Officer at (808) 335-4740 or PMRFPublicAffairs@us.navy.mil.

A copy of the Draft EIS is available at PMRF-KPGO-EIS.com and at the Waimea Public Library (Kaua`i) and the Hawai`i Documents Center (Hawai`i State Library, O`ahu).

We appreciate your time and interest. For more information visit the project website at PMRF-KPGO-EIS.com

Draft EIS Public Meetings

Comment Form

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Public Meeting Comment Form

Date: _____

Please submit comments on the Draft EIS by August 7, 2025, 11:59 p.m. HST. The Navy and NASA encourage the public to speak to project representatives available at tonight's meeting and to visit the website for project updates. The public may submit comments in any of the following ways:

- In person at a public meeting
- Through the project website at **PMRF-KPGO-EIS.com**
- By email to **info@PMRF-KPGO-EIS.com**
- By mail, postmarked by August 7, 2025 (see address below)

** Please Print Clearly ** Additional Space is Provided on Back **

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Please provide your mailing address to receive future notifications about the project.

1. Name:_____
2. Organization/Affiliation (if applicable): _____
3. Mailing Address:_____

In the event the contents of specific comments are incorporated into the environmental review analysis, released in whole or in part in response to a Freedom of Information Act request, or otherwise disclosed to the public, the Navy and NASA will include the name of the individual or entity submitting the comment, but will not publish or otherwise disclose other potentially-identifying information such as home addresses, e-mail addresses, or telephone numbers.

Please turn in this form at a public meeting, submit online at PMRF-KPGO-EIS.com, send by email to info@PMRF-KPGO-EIS.com, or mail to:

Naval Facilities Engineering Systems Command, Environmental OPHEV2
Attn: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Ling
400 Marshall Road, Building X-11
Pearl Harbor, HI 96860

** Please Print Clearly **

YOUR INPUT MATTERS

Visit PMRF-KPGO-EIS.com

Scan QR code for project website

Appendix H

Environmental Impact Statement Notices

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Scoping Notifications
Environmental Impact Statement Scoping Notices

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SoEVENTFUL

A SUNRISE TO SUNSET LOOK AT SOME OF THE BIGGEST EVENTS ON KAUA'I

EMAIL APANG@MIDWEEK.COM

MAY 25
YOGA MORNING

Participate in a yoga practice and a class at the Hanalei farmers market in Hale Hālāwai 'Ohana O Hanalei. Learn from international yoga and meditation teacher Mary Susan Stults. The farmers market will run from 9:30 a.m. to noon. Admission is $25.



PHOTO COURTESY GETTY IMAGES/ AJA KOSKA

Saturday, May 25, 10-11:30 a.m.
For more info, visit eventbrite.com (search "Yoga at the Farmers' Market in Hanalei, Hawaii")

23 MAY
DOG THERAPY

Youth ages 12-18 are welcome to de-stress with Gus Gus the mini golden-doodle at Līhu'e Public Library. Gus Gus will visit with his owner, Jeff. Attendees can pet, sit, talk to and hang out with the pup. A same-day sign-up is required and limited slots are available.

Thursday, May 23, 2:30-3:30 p.m.
For more information, call 808-241-3222

26 MAY
MAKERS MARKET

Every fourth Sunday of the month, the Wailua Bay Creators Fair takes over Hilton Garden Inn Kauai Wailua Bay. Vendors sell everything from art, clothing and accessories to photography, wood carvings, home decor and so much more — and it's all Kaua'i-made. There will also be live entertainment and food for purchase.

Sunday, May 26
8:30 a.m.-1 p.m.
For more information, visit gohawaii.com.



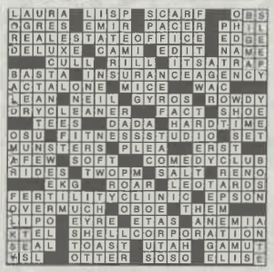
Drivers

Full Time
Service Driver
UNITEK SOLVENT SERVICES
an Employee Owned Company. Starting pay Type 3 $20/hr.
CDL $24.00+
Call (808)864-6870

Answers To This Week's
SUDOKU PUZZLE

6	4	2	7	1	9	5	3	8
9	5	1	2	8	3	7	6	4
3	7	8	5	6	4	2	9	1
7	3	9	1	2	8	6	4	5
1	2	4	6	3	5	8	7	9
8	6	5	9	4	7	1	2	3
2	9	6	3	5	1	4	8	7
4	1	7	8	9	6	3	5	2
5	8	3	4	7	2	9	1	6

Answers To This Week's
CROSSWORD PUZZLE



Answers To This Week's
SPOT 10 DIFFERENCES



U.S. Navy Pacific Missile Range Facility and NASA Kōke'e Park Geophysical Observatory Real Estate Environmental Impact Statement

NASA

The Navy and NASA invite you to participate in the environmental planning process and submit comments.

The U.S. Department of the Navy (Navy) and the National Aeronautics and Space Administration (NASA) are jointly preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts of proposed real estate agreements with the State of Hawai'i for the Pacific Missile Range Facility (PMRF) and the Kōke'e Park Geophysical Observatory (KPGO). The Navy and NASA invite you to participate in the environmental planning process.

The Navy proposes to maintain long-term Department of Defense use of 8,348 acres of State of Hawai'i lands on Kaua'i for operational continuity and sustainment of the military readiness mission. The Navy operates on 410 acres of the total acres leased from the State. The majority of the leased and easement areas remain intentionally undeveloped as they are used as an encroachment buffer and security for the facility's mission. NASA proposes to maintain long-term use of 23 acres of State of Hawai'i land on Kaua'i for continued operations of KPGO. The Proposed Action is needed because existing real estate agreements for these State lands are set to expire between 2027 and 2030.

The Navy and NASA will host public scoping meetings at three locations on Kaua'i. Attend any of the public scoping meetings to talk story, learn more, and submit written or oral comments. Your voice is important to this planning process. Meetings will be held from 5 to 8 p.m. HST at the following locations:

PUBLIC SCOPING MEETINGS

Tuesday, June 4, 2024	Wednesday, June 5, 2024	Thursday, June 6, 2024
Kaua'i Veterans Center 3215 Kaua'i Veterans Memorial Hwy. Līhu'e	Kekaha Neighborhood Center 8130 Elepaio Road. Kekaha	Sheraton Kaua'i Coconut Beach Resort 650 Aleka Loop. Kapa'a

AGENDA

5 to 8 p.m.	6 to 6:30 p.m.
Information stations – meet the project team, talk story, and ask questions. Visit the comments station to provide a written or oral comment.	Project presentation by Navy and NASA.

The Navy and NASA are initiating a public scoping period under the National Environmental Policy Act and Hawai'i Revised Statutes (HRS) Chapter 343 to receive comments on the scope of the EIS. Members of the public are encouraged to participate in the environmental planning process by providing input on the proposed real estate action including potential alternatives, environmental or cultural concerns, information the public would like the Navy and NASA to know, and any other information the public would like to see addressed in the EIS. The scoping meetings will also serve as an opportunity to obtain public input concerning potential effects to historic properties pursuant to Section 106 of the National Historic Preservation Act and HRS Section 6E-42. Your voice is important to this planning process.

The public scoping period begins ***May 8, 2024, and ends June 17, 2024***. Please attend a public scoping meeting and visit the project website to learn more. For language assistance or special accommodations, contact the PMRF Public Affairs Officer, at (808) 335-4740 or PMRFPublicAffairs@us.navy.mil. Requests for language assistance or special accommodations should be made at least seven days prior to the public meeting.

Submit Comments in Person, Online, or by Mail. Submit comments by ***June 17, 2024***. The public may submit comments in any of the following ways: In person at a public scoping meeting, through the project website at PMRF-KPGO-EIS.com, by email to info@PMRF-KPGO-EIS.com, or by mail, postmarked by ***June 17, 2024*** to the following address: Naval Facilities Engineering Systems Command, Hawai'i, Environmental OPHEV2, Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Wells, 400 Marshall Road, Building X-11, Pearl Harbor, HI 96860.

For more information visit PMRF-KPGO-EIS.com

SALARY

Continued from **A1**

student performance rank in the top 10 nationwide. "That is a direct result from the superintendent, his team, our teachers, our principals and vice principals," he said.

However, Ward earlier called Hawaii's public education system mediocre.

"I would be willing to pay $500 million or $100 million, or $10 million, or whatever it takes to get us in the top five or the top 10 in the nation," Ward said. "Right now we can't even read and do math in third grade."

Ward said he would support increasing the superintendent's salary if the performance was worthy.

"I'm not sure we've agreed to reward something that otherwise is mediocrity," Ward said.

Currently, the state Board of Education does not have a suggested salary for the superintendent.

Former BOE Chair Warren Haruki previously said during a public meeting that the BOE should consider establishing a salary commission to review the superintendent's salary.

State Rep. Trish La Chica (D, Waipio-Mililani) — vice chair of the House Education Committee — emphasized that SB 3207 does not call for an immediate raise. The superintendent would still be subject to a thorough review process by the BOE.

"This is really a policy of ensuring stability in our leadership," she said.

Woodson later told the Honolulu Star-Advertiser that he's in "robust and very strong support" of SB 3207 and called Hayashi a "very hard worker."

The perception of those in opposition to the bill, Woodson said, does not align with reality.

He thanked Hayashi's team and his leadership in placing Hawaii's fourth grade reading scores in the top 10 nationwide, and praised Hayashi's "particular sprinting of how he worked during the fires."

If the superintendent's salary cap doesn't increase, Woodson said other salary problems could arise for positions including the assistant superintendent and deputy superintendent, whose pay are linked to the superintendent's.

"That would have compounding negative impacts because then you have the complex-area superintendents, whose pay is aligned with the deputies and assistants, and then you have principals and vice principals," Woodson said. "It would basically force all the compensation down to the school level, potentially downward. That is the wrong direction."

La Chica said during the House floor session that reducing the superintendent's salary back to $150,000 could trigger an exodus of "great administration and the leader" who oversee 20,000 employees.

Vanessa Otts, a former DOE teacher for 5-1/2 years, testified in writing that the superintendent should not be entitled to higher pay.

However, she also doesn't want other administrators' pay to be limited.

"If the superintendent's salary reverts to $150,000 after his contract expires in 2025, then anyone making more than that would also have a salary reduction because there's a rule that none of the Superintendent's subordinates can earn more than the boss," Otts wrote.

Otts then told the Star-Advertiser that raising the salary cap could be a good idea if the Legislature provides data in support.

During a March House Education Committee meeting, Haruki pointed out that among six other school districts of comparable size and student enrollment, Hayashi has the lowest salary at $248,000.

Among the six other districts, the second-lowest-paid superintendent earns $280,000. Others are paid $310,000, $330,000, $380,000 and $598,000 — in Georgia's Gwinnett County, Haruki said.

But Otts said Hayashi's salary of $248,000 earns him more than 30 0ther state superintendents across the country.

"This session, they were saying how there's no money for important things in the Department of Education and all they seem to be interested in is raising the salaries of people who are already making six figure salaries," Otts said. "It seemed like they wanted to raise the salaries simply so that they could raise all the other salaries underneath them."



PHOTOS BY **CINDY ELLEN RUSSELL** / CRUSSELL@STARADVERTISER.COM

CAMERAS

Continued from **A1**

on Thursday. "The majority of the victims for these crimes are tourists."

According to Resolution 64, "tourists are known to leave cameras, sunglasses, wallets, purses and other valuables in their vehicles while visiting the scenic points, making the vehicles susceptible to unauthorized entry into a motor vehicle violations (i.e. break-ins), thefts, and subsequent financial fraud and other related crimes."

Although auto burglaries are seasonal — with more incidents occurring during the summer as visitors arrive to the island — on average, HPD receives about 50 car break-in reports monthly, he said.

But as far as HPD's sought-after camera technology to catch thieves or avert crimes, Lynch said it's not anything new. "It's the same as being used in Chinatown and in Waikiki," he added.

Still, East Oahu's surveillance cameras will be a bit different.

Instead of being attached to street lights or poles at fixed locations in urban Honolulu, HPD wants to lease portable trailers that will feature cameras atop a mastlike pole.

"These cameras are the things you kind of see in Home Depot or Lowe's parking lot or even Longs



The Halona Blow Hole parking lot is one of the sites being considered for the mobile video surveillance cameras to deter vehicle break-ins. Above, Jasmin Platcer and Elizabeth Schirnhofer, both visiting from Austria, took a selfie Tuesday at the blow hole. At left, a camera towers over the Moiliili Longs Drugs parking lot.

Moiliili; there's the white trailer with the blue light on it, and it's got the tall mast," Lynch told the committee. "These cameras are deterrents, in the sense that when the bad guys know when someone is watching, they change their behaviors or they go somewhere else."

The cost to the city will be about $3,000 a month per security trailer, according to Lynch.

Video footage gleaned from these mobile cameras will be used to identify suspects. "If we can identify them, then we can go after them and prosecute them for the crime that they committed in front of the camera," he said.

Lynch said this program could be applied to other spots around Oahu. "Within the rules and the laws, they can be moved into other areas, and they can assist us in the same way the private sector uses them to protect their assets," he said.

Committee Chair Val Okimoto asked whether someone could steal these largely unattended mobile trailers.

"Well, they secure them," Lynch replied, adding, "What we used to do is take the tires off the trailer and put them on blocks. That way they can't take them away."

He noted the project's main benefit is that HPD will not be using city-owned equipment.

"We're going to lease them," said Lynch. "And so, if they get damaged or stolen or whatever … it's on the leasing company. … If it's broken or damaged, they pull the old one out, and they bring us a new one that's ready to go. So we don't have to deal with the maintenance or the fixing or the repairing or any of that."

And he stressed it would be premature for the city to own this equipment.

"There's a huge avenue of infrastructure required to have these cameras," he said, noting, "Footage is recorded and remotely monitored."

Okimoto also asked how the video footage would be reviewed, by HPD or others.

"Part of the lease is actually somebody sitting there watching it, not one of us," Lynch said, alluding to HPD's ongoing staffing shortage of more than 400 officers. "It's somebody with this leasing company that we would be dealing with. That's another attractive grab for us in the sense that it's cheaper to have this person do that than it would (be for the police). And then there's rules about us watching and stuff like that."

Lynch noted recorded video footage would only cover daylight hours. "Because at night these (crimes) don't happen," he added.

Before the meeting, City Council Chair Tommy Waters — whose Council district covers East Honolulu — told the Honolulu Star-Advertiser that HPD has allocated $64,000 toward this pilot project for fiscal year 2025 only, which begins July 1.

"Public safety remains our top priority. In 2023 alone, 225 vehicle break-ins were reported at East Honolulu lookouts," Waters said via email. "The proposed resolution aims to tackle the disturbing criminal activities at East Honolulu's scenic lookouts."

But HPD's proposed surveillance program has drawn mixed reactions.

Via written testimony, East Oahu resident Maddy Walsh said she backed the idea "because I believe it will enhance my own safety and peace of mind, deter theft and other crimes in these areas, and act as an efficient use of Hawaii's law enforcement resources."

"While the language of this resolution seems to be targeted more towards helping tourists, I think this resolution will have an overall positive impact on the safety and peace of mind of locals like me who leave their cars unattended to hike and visit these East Oahu sites," she said.

Oahu resident Natalie Iwasa said she opposed the project.

"Concerns I have with overt government surveillance include the impact it has on people, e.g., 'the chilling effect' of public surveillance," Iwasa wrote in her public testimony. "It can cause people to decide against exercising their basic rights, like freedom of speech or peaceful protest."

In spite of privacy concerns, Waters said the project has received other levels of support.

"Within the East Oahu communities, my understanding is that the Hawaii Kai Neighborhood Board and community members support the pilot project," he said. "Additionally, the Waialae-Kai Neighborhood Board requested overt video monitoring for the Diamond Head Lookouts at the April 18, 2024, meeting."

Although Resolution 64 was heard, Okimoto postponed the item. After the meeting, Jame Schaedel, Okimoto's policy adviser, said the resolution was deferred for amendments and will return May 23 for further review.

Meanwhile, HPD did not immediately respond to questions over which company will contract with the city to lease these security trailers.

U.S. Navy Pacific Missile Range Facility and NASA Kōkeʻe Park Geophysical Observatory Real Estate Environmental Impact Statement

The Navy and NASA invite you to participate in the environmental planning process and submit comments.

The U.S. Department of the Navy (Navy) and the National Aeronautics and Space Administration (NASA) are jointly preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts of proposed real estate agreements with the State of Hawai'i for the Pacific Missile Range Facility (PMRF) and the Kōkeʻe Park Geophysical Observatory (KPGO). The Navy and NASA invite you to participate in the environmental planning process.

The Navy proposes to maintain long-term Department of Defense use of 8,348 acres of State of Hawai'i lands on Kaua'i for operational continuity and sustainment of the military readiness mission. The Navy operates on 410 acres of the total acres leased from the State. The majority of the leased and easement areas remain intentionally undeveloped as they are used as an encroachment buffer and security for the facility's mission. NASA proposes to maintain long-term use of 23 acres of State of Hawai'i land on Kaua'i for continued operations of KPGO. The Proposed Action is needed because existing real estate agreements for these State lands are set to expire between 2027 and 2030.

The Navy and NASA will host public scoping meetings at three locations on Kaua'i. Attend any of the public scoping meetings to talk story, learn more, and submit written or oral comments. Your voice is important to this planning process. Meetings will be held from 5 to 8 p.m. HST at the following locations:

PUBLIC SCOPING MEETINGS

Tuesday, June 4, 2024	Wednesday, June 5, 2024	Thursday, June 6, 2024
Kaua'i Veterans Center	Kekaha Neighborhood Center	Sheraton Kaua'i Coconut Beach Resort
3215 Kaua'i Veterans Memorial Hwy, Lihu'e	8130 Elepaio Road, Kekaha	650 Aleka Loop, Kapa'a

AGENDA

5 to 8 p.m.	6 to 6:30 p.m.
Information stations – meet the project team, talk story, and ask questions. Visit the comments station to provide a written or oral comment.	Project presentation by Navy and NASA.

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For more information visit PMRF-KPGO-EIS.com

O'ahu housing market bounces back in April

Andrew Gomes
STAR-ADVERTISER

HONOLULU — O'ahu's housing market rebounded in April with year-over-year gains after mostly slumps in March.

Sale volume and median prices both rose for single-family houses and condominiums in April compared with the same month in 2023, according to data released Monday by the Honolulu Board of Realtors.

The single-family home market had bigger gains, with a 26 percent jump in sales to 262 in April from 208 a year earlier, and a 10 percent rise in the median sale price to $1,100,000 from $999,995.

For condos the number of sales edged up 2.6 percent to 431 in April from 420 a year earlier while the median price increased 5.6 percent to $528,000 from $500,000.

The gains in April followed mostly year-over-year decreases in March. For sales the declines in March ranged from 2.5 percent for single-family homes to 22.5 percent for condos.

Median prices in March were mixed, with a 1.5 percent tick higher for single-family homes and a 6.7 percent drop for condos.

The median price is a point at which half the sales were for more and half were for less.

Fran Gendrano, president of the Honolulu Board of Realtors and principal broker at KFG Properties Inc., said in a statement that despite the momentum change, sales remained at softened levels compared with recent years.

The report from the trade association said that based on a 12-month moving average of sales, April's average trailed the pre-pandemic moving average in 2019 by about 26 percent for single-family homes and 18 percent for condos, and was about 40 percent below the peak moving averages in 2021 and 2022.



CINDY ELLEN RUSSELL / STAR-ADVERTISER

This duplex property with a combined five bedrooms and four bathrooms on a 3,672-square-foot lot in Liliha sold in April for $1.1 million, which also was the median sale price for all single-family homes sold on O'ahu in April.

High mortgage interest rates, which more than doubled from about 3 percent in early 2022, have been a big drag on sales.

Yet, despite the average 30-year fixed rate rising to 7.2 percent last week from 6.6 percent in January, Gendrano said the positive movement in Oahu's housing market from March to April is a good sign.

"The month-over-month rise in sales indicates buyers are active in the market despite higher mortgage rates," she said.

Chad Takesue, chief operating officer for local real estate brokerage firm Locations, said in a Monday company report that O'ahu's housing market is "muted but stable."

Takesue expects steady sales and moderate price increases to continue through summer months that represent the peak home-buying season.

"Pent-up buyer demand is counteracting the dampening effects of higher mortgage rates and economic uncertainty," he said in the report.

Takesue also said that some softness in the condo market has been due to challenges in the cost and availability of property insurance but that this situation is expected to be temporary because constraints in the affordability and availability of single-family homes will drive activity in the condo market.

Generally, levels of inventory of homes for sale and buyer demand continue to favor sellers.

Inventory of homes for sale at the end of April would be depleted in 2.8 months for single-family homes and 4.2 months for condos if no new inventory were added and demand stayed at the monthly average from the past 12 months, according to the Board of Realtors report.

'Compulsive gambler' asks for 30-month federal sentence

Peter Boylan
STAR-ADVERTISER

A Kona man who bilked 45 investors in his online lei business out of $1.2 million to fuel a high-stakes gambling habit in Las Vegas is asking a federal judge to sentence him Wednesday to 2-1/2 years in prison.

Newton Kaleo Okamoana Deleon, 48, is a "compulsive gambler," and his habit led him "down a path of destruction" that cost him his career as an educator, his marriage and a relationship with his three children, his attorney, Michael Green, wrote in a sentencing memorandum filed April 30.

From at least 2017 and continuing through December 2020, Deleon used money from his investors to pay for his wagering addiction.

When he was up big, Deleon wrote to senior U.S. District Judge Hellen Gillmor that he "lived a whole month in the Penthouse suite at the Bellagio. I was gambling everyday. I'd lose, then I'd get more money (through the fraudulent activity associated with the case) and I went on this crazy streak. At one point, I was up $600,000 in two days. … I bought two Rolexes and two cars, a Chevy Tahoe and a Chevy Traverse … and in less than 24 hours I lost all the money. I had to go back to the dealer to return my car."

His gambling got so severe that at one point Deleon was "living in his car with no money for shelter." After losing $300,000 in Las Vegas in 2020, Deleon wrapped the cord of a blow dryer around his neck and tried to kill himself.

Green also asked that Deleon be required to undergo treatment for addiction.

Deleon was on supervised release in California where he lived before sentencing, but has been in custody since Jan. 22 at the Metropolitan Detention Center, Los Angeles.

Deleon was allegedly arrested Jan. 22 in Santa Ana, Calif., "for an offense in violation of federal, state, or local law while on pretrial release, in violation of the standard conditions of pretrial release," according to federal court records.

Deleon was arrested following a fight with his fiancee, which Deleon described as a "loud verbal argument" in a letter to Gillmor.

Prior to his arrest, Deleon, who earned undergraduate and master's degrees, was working for the Vista Unified School District in North San Diego providing online classes to students enrolled in Advanced Placement biology and AP environmental science courses.

In 2018, with his "marriage in shambles," Deleon concocted a scheme to fuel his gambling habit where investors would put $5,000 into his business for a period of three months and get at least $7,500 back.

In the agreements he asked investors to sign with his business, leiorders.com, Deleon would repay the investors their "principal loan investment plus a substantial return within a set time frame, usually approximately one month," according to a federal criminal information authored by Assistant U.S. Attorney Rebecca A. Perlmutter and filed Sept. 6.

"(Deleon) also promised to repay a return of profit, ranging from approximately 10 percent to 40 percent and additional fees ranging between approximately $100 to $500 per day if the principal and return were not repaid by the agreement's designated approximate one-month period." Deleon "well knew that he would not be able to repay the principal" or additional return promised in the agreements.

Deleon allegedly told investors that he needed investment funds to buy "flowers and supplies for lei purchase orders that he already had executed with third parties," like well-known casino hotels in Las Vegas, according to federal court records.

He told one investor that once the lei were delivered to the third parties, the third parties would "take approximately one month to pay" Deleon and that Deleon would then "repay the principal investment loan and split the profit" with the investors as a return.

He created loan agreements and promissory notes to give the "false appearance of legitimate financial transactions upon which investors could rely."

Deleon used "unauthorized and false branded logos and forged signatures" to fool investors into buying Deleon's story that he had large business lei orders with third parties.

Deleon entered into a plea agreement with the U.S. Department of Justice on Sept. 25 to plead guilty to "engaging in a wire fraud scheme and artifice to defraud and engaging in monetary transactions in property derived from specified unlawful activity."

In exchange, federal prosecutors agreed not to file additional charges related to the wire fraud scheme, including any "aggravated identity theft charges," based on the information now known to the government.

He is facing up to 20 years in federal prison, up to a $250,000 fine and three years of federal probation after he gets out on the wire fraud charges and up to 10 years, a fine of up to $250,000 and three years of supervised release on the property transaction charge.

In an April 30 letter to Gillmor, Deleon apologized to the "victims who I hurt emotionally, financially and morally. I am very sorry for taking advantage of their kindness and honesty to commit the crimes I am guilty of. I am sorry for using the trust they had in me by taking their hard earned money and using it to feed my gambling addiction."

"There is no excuse for my action and for what I have done to all of them I take full responsibility," wrote Deleon.

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U.S. Navy Pacific Missile Range Facility and NASA Kōke'e Park
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nation&world



AFP / GETTY IMAGES

The U.S. has stepped up its criticism of Israel, saying it's not doing enough to protect Palestinian civilians in the Gaza Strip. People inspected an impact crater Wednesday at the site of a building bombed by Israel in Rafah, in the southern Gaza Strip.

U.S. delays weapons shipment to Israel over invasion concerns

Jordan Fabian, Galit Altstein and Roxana Tiron
Bloomberg News

Defense Secretary Lloyd Austin said the U.S. has paused the supply of "high-payload" munitions to Israel over concerns about a potential military offensive on the Gazan city of Rafah.

The delivery was supposed to contain 3,500 bombs, split roughly evenly between 2,000-pound and 500-pound explosives, according to a senior administration official. Austin, speaking separately, said no final decision has been made on the shipment.

Israel needs to account for the protection of civilians in Rafah, where the U.S. wants "no major conflict to take place," Austin told a Senate Appropriations panel Wednesday. Washington is worried about the damage the large bombs could inflict on dense urban areas like Rafah, where about 1.4 million Palestinians are sheltering from Israel's war with Hamas.

Austin said a 2,000-pound bomb could do a lot of "collateral damage."

Israeli Prime Minister Benjamin Netanyahu's office declined to comment on the weapons delay, and it's unclear if it will have much impact on the military's operations in Gaza. Still, it speaks to growing tensions between Netanyahu and President Joe Biden, who's voiced opposition to an attack on Rafah and reaffirmed that message in a call between the leaders Monday.

Privately, Israeli officials have expressed deep frustration and warned their U.S. counterparts the delay could jeopardize cease-fire and hostage negotiations at a crucial moment, according to a person briefed on the discussions. The Israelis told U.S. officials that pressure should be put on Hamas, not on Israel, the person added, declining to be named in order to detail the sensitive discussions.

The U.S. has stepped up its criticism of Israel in recent months, saying it's not doing enough to protect civilians and allow aid into the besieged Palestinian territory, parts of which the United Nations says are on the verge of famine. "There have been far too many casualties in this battle space," Austin said.

At the same time, Biden has said his support for Israel is ironclad, and he's defended its right to pursue a strategy of destroying Hamas, an Islamist group backed by Iran.

Austin was questioned about the weapons shipment by members of the congressional panel. "Does this not send the wrong message to our ally Israel and embolden Iran and Iranian-backed groups?" asked Sen. Jerry Moran, a Kansas Republican. "We should not signal to our enemies that our support is conditional."

Republican Sen. Susan Collins of Maine called the pause "a decision that most members of Congress would take issue with."

But the Biden administration signaled it might hold up other shipments to Israel. In a briefing Wednesday, State Department spokesman Matthew Miller said the U.S. was "reviewing other potential weapon systems," although he declined to go into detail.

Biden's decision on the arms supplies marks one of the most significant moments of discord between Israel and its most important ally since Hamas' Oct. 7 assault, which started the war. Hamas, designated a terrorist organization by the U.S., killed 1,200 people and abducted roughly 250 when its fighters stormed into southern Israel from Gaza.

Israel's retaliatory bombardment and ground offensive on the Mediterranean enclave have killed almost 35,000 people, according to the Hamas-run health ministry.

This week, Israel told residents in some parts of eastern Rafah to move out immediately in a possible prelude to an assault. It urged them to travel north to a "humanitarian area" near the Gazan city of Khan Younis, much of which has been destroyed. Israel says it's working to ensure there will be enough tents, food and medicine for the civilians.

Israel's military also took control of and closed the Rafah border crossing between Gaza and Egypt on Tuesday. It's the main entry point for aid going into Gaza and the United Nations said it should be reopened quickly.

On Wednesday, Israel reopened the nearby Kerem Shalom crossing and said trucks with humanitarian supplies were moving into Gaza. For now, Israeli officials are saying their operations in Rafah are limited and are downplaying the notion that a full-on offensive has begun.

Airstrikes further strain Ukrainian energy system

By Anastasiia Malenko and Pavel Polityuk
Reuters

KYIV, UKRAINE >> Russian missiles and drones struck nearly a dozen Ukrainian energy infrastructure facilities Wednesday, causing serious damage at three Soviet-era thermal power plants and blackouts in multiple regions, officials said.

Ukraine's air force said it shot down 39 of 55 missiles and 20 of 21 attack drones used for the attack, which piles more pressure on the energy system more than two years after Russia launched its full-scale invasion.

"Another massive attack on our energy industry!" Energy Minister German Galushchenko wrote on the Telegram app.

Two people were injured in the Kyiv region and one was hurt in the Kirovohrad region, Interior Minister Ihor Klymenko said.

Galushchenko said power generation and transmission facilities in the Poltava, Kirovohrad, Zaporizhzhia, Lviv, Ivano-Frankivsk and Vinnytsia regions were targeted.

Some 350 rescuers raced to minimize the damage to energy facilities, 30 homes, public transport vehicles, cars and a fire station, the interior ministry said.

National power grid operator Ukrenergo said it was forced to introduce electricity cuts in nine regions for consumers and that it would expand them nationwide for businesses during peak evening hours until 11 p.m.

Ukrenergo CEO Volodymyr Kudrytskyi, interviewed by the Ukrainska Pravda media outlet, said electricity imports would not make up for power shortages. He said hydropower stations had also been hit, clarifying an earlier company statement omitting hydro stations from the list of affected facilities.

Russia's defence ministry said it struck Ukraine's military-industrial complex and energy facilities in retaliation for Kyiv's strikes on Russian energy facilities.

WWII anniversary

President Volodymyr Zelenskyy noted the attacks were launched on the day Ukraine marks the end of World War II.

"This is how the Kremlin marks the end of World War II in Europe, with a massive strike, attempting to disrupt the lives of our people with its Nazism," he said in his nightly video address.

In an earlier online address, Zelenskyy singled out what he said was the West's limited progress in curbing Russian energy revenue and some countries that attended President Vladimir Putin's inauguration for a fifth term in the Kremlin on Tuesday.

Fighting Nazism back then, he said, was "when humanity unites, opposes Hitler, instead of buying his oil and coming to his inauguration."

Convicts to serve

Ukraine's parliament passed a bill Wednesday that will allow some convicts to serve in the military in exchange for the possibility of parole at the end of their service, a move aimed at replenishing the army's depleted ranks after more than two years of war.

The bill must still be signed into law by Zelenskyy. It was not immediately clear if he would do so, given the sensitivity of the matter.

The policy echoes a practice used by Russia, which has committed tens of thousands of convicts to the war, allowing it to gain the upper hand in bloody assaults by sheer force of numbers. While Russia has enlisted all manner of prisoners, the Ukrainian bill says that those convicted of premeditated murder, rape or other serious offenses will not be eligible — although some lawmakers said involuntary manslaughter convictions could be considered.

The New York Times contributed to this report.

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Johnson survives Greene's ouster attempt

Catie Edmondson, Carl Hulse and Kayla Guo
THE NEW YORK TIMES



KENNY HOLSTON / THE NEW YORK TIMES

Rep. Marjorie Taylor Greene (R-Ga.) speaks to reporters outside the Capitol in Washington, D.C., after attempting to oust House Speaker Mike Johnson (R-La.) from his post on Wednesday, May 8, 2024.

WASHINGTON, D.C. — Speaker Mike Johnson on Wednesday easily batted down an attempt by Rep. Marjorie Taylor Greene of Georgia to oust him from his post, after Democrats linked arms with most Republicans to fend off a second attempt by GOP hard-liners to strip the gavel from their party leader.

The vote to kill the effort was an overwhelming 359-43, with seven voting "present." Democrats flocked to Johnson's rescue, with all but 39 of them voting with Republicans to block the effort to oust him.

Members of the minority party in the House have never propped up the other party's speaker, and when the last Republican to hold the post, Kevin McCarthy, faced a removal vote last fall, Democrats voted en masse to allow the motion to move forward and then to jettison him, helping lead to his historic ouster.

This time, the Democratic support made the critical difference, allowing Johnson, who has a minuscule majority, to avoid a removal vote altogether. While for weeks Greene had appeared to be on a political island in her drive to get rid of yet another GOP speaker, 11 Republicans ultimately voted to allow her motion to move forward.

That was the same number of Republicans who voted in October to allow the bid to remove McCarthy to advance — but back then, they were joined by every Democrat.

"I appreciate the show of confidence from my colleagues to defeat this misguided effort," Johnson told reporters shortly after Wednesday's vote.

"As I've said from the beginning and I've made clear here every day, I intend to do my job. I intend to do what I believe to be the right thing, which is what I was elected to do, and I'll let the chips fall where they may. In my view, that is leadership."

"Hopefully," he added, "this is the end of the personality politics and the frivolous character assassination that has defined the 118th Congress."

The lopsided vote solidified the dynamic that has defined Johnson's speakership, like McCarthy's before him: Each time the Republican leader has been faced with a critical task, such as averting a government shutdown or a catastrophic default on the nation's debt, he has relied on a bipartisan coalition of mainstream lawmakers to steer around far-right opposition and provide the votes to accomplish it.

The result has been the empowerment of Democrats at the expense of the hard right, the very phenomenon that Greene raged against as she rose on the House floor Wednesday — drawing boos from some of her colleagues — to lay out a scathing case against Johnson and what she called the "uniparty" he empowered.

"Our decision to stop Marjorie Taylor Greene from plunging the House of Representatives and the country into further chaos is rooted in our commitment to solve problems for everyday Americans in a bipartisan manner," Rep. Hakeem Jeffries of New York, the Democratic leader, told reporters shortly after the vote. "We will continue to govern in a reasonable, responsible and results-oriented fashion, and put people over politics all day and every day."

Greene's move to oust Johnson came roughly three weeks after the speaker pushed through a long-stalled $95 billion national security spending package to aid Israel, Ukraine and other U.S. allies over the objections of Greene and other right-wing Republicans who staunchly opposed sending additional aid to Ukraine.

Lawmakers loudly jeered Greene as she called up the resolution and read it aloud. As she recited the measure, a screed that lasted more than 10 minutes, Republicans lined up on the House floor to shake Johnson's hand and pat him on the back.

"Given a choice between advancing Republican priorities or allying with Democrats to preserve his own personal power, Johnson regularly chooses to ally himself with Democrats," Greene said, reading from her resolution.

She concluded with the official call for his removal: "Now, therefore be it resolved that the office of the speaker of the House of Representatives is hereby declared to be vacant."

It marked the second time in less than a year that Republicans have sought to depose their own speaker, coming about seven months after GOP rebels succeeded, with Democratic support, in removing McCarthy.

Earlier in the week, Greene had seemed to hesitate over whether she would actually call the ouster vote. For two consecutive days, she met for hours with Johnson, flanked by her chief ally, Rep. Thomas Massie of Kentucky, and floated a list of demands in exchange for not calling the vote.

Among the demands were cutting off all future U.S. aid to Ukraine, defunding the Justice Department and imposing a 1% across the board cut on all spending bills if lawmakers are unable to negotiate a deal to fund the government in September.

But Johnson had remained cool to their entreaties, and told reporters that he was not negotiating with Greene and Massie.

That put Greene, whose combative political brand is premised on her unrelenting appetite to fight with the establishment of her party, out on a limb.

She had little choice but to call up a vote she knew would fail, but had been threatening for weeks. Even after Jeffries made it clear that Democrats would vote to block any ouster attempt, she was still determined to undermine Johnson publicly and force Democrats to bail him out.

"This is exactly what the American people needed to see," she told reporters on the House steps after the vote. "I didn't run for Congress to come up here and join the uniparty, and the uniparty was on full display today."

"The Democrats now control Speaker Johnson," she added.

Just 32 Democrats voted to allow Greene's motion to move forward, while another seven voted "present," registering no position.

Greene initially filed the motion against Johnson in late March, just as lawmakers were voting on a $1.2 trillion spending bill he pushed through the House over the opposition of the majority of Republicans. She called the move a "betrayal" and said she wanted to send the speaker a "warning," then left the threat dangling for weeks.

Johnson plowed ahead anyway, putting together an aid package for Ukraine — a move Greene previously said was a red line that would prompt her to seek his ouster, but which did not lead her to immediately make good on her threat.

"I'm actually going to let my colleagues go home and hear from their constituents," Greene said following the vote, predicting that Republicans would join her bid to get rid of Johnson after getting an earful from voters irate about the foreign aid bill. Instead, many of them heard just the opposite and returned to Washington voicing skepticism about removing Johnson.

If she had been successful Wednesday, Greene would have prompted only the second vote on the House floor in more than 100 years on whether to oust the speaker.

When Rep. Matt Gaetz of Florida instigated McCarthy's removal in October, such a spectacle had not been seen in the chamber since 1910.

But this time, Greene had a more difficult time finding support for removing the speaker.

House Republicans were wary of throwing the chamber into another period of chaos like the one that paralyzed the House for weeks after McCarthy's ouster, and have privately seethed about the public disarray Greene's threat has sown.

Even ultraconservatives like Gaetz expressed uneasiness with firing another speaker, suggesting that the move risked handing over control of the House to Democrats given Republicans' rapidly narrowing margin of control.

Former President Donald Trump also came to Johnson's defense, urging Republicans on social media minutes after the vote to kill Greene's effort, arguing that polling showed Republicans doing well in the November elections, and that a show of division would undermine the party.

"If we show DISUNITY, which will be portrayed as CHAOS, it will negatively affect everything!" he wrote.

He called Johnson "a good man who is trying very hard," but did not slam the door altogether on the idea of removing him.

"We're not in a position" to do so now, with such a small Republican majority in the House, Trump wrote. "At some point, we may very well be, but this is not the time."

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West Kauai United Methodist Church
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Around the world

General Assembly to back Palestinian membership

UNITED NATIONS >> The United Nations General Assembly today is set to back a Palestinian bid to become a full U.N. member by recognizing it as qualified to join and sending the application back to the U.N. Security Council to "reconsider the matter favorably."

The Palestinians are reviving their bid to become a full U.N. member — a move that would effectively recognize a Palestinian state — after the U.S. vetoed it in April in the 15-member U.N. Security Council.

Japan to allow commercial hunting of large fin whales

TOKYO >> Japan will add large fin whales to its list of commercial whaling species, government spokesperson Yoshimasa Hayashi said Thursday, five years after leaving an international body that regulates the commercial hunt of the marine mammals.

Japan resumed commercial whaling in its territorial waters and exclusive economic zones in 2019, after withdrawing from the International Whaling Commission.

This week its Fisheries Agency sought public comment on a draft revision of its aquatic resource control policies that would allow commercial catching of fin whales. "Whales are important food resources and should be sustainably utilized, based on scientific evidence," said Hayashi, the chief cabinet secretary, referring to widening the allowable catch to include fin whales.

Camera footage released of police killing Black airman

Under mounting pressure to offer a justification for the fatal police shooting of a U.S. Air Force senior airman in his apartment last week, a Florida sheriff Thursday released body camera footage of the deadly encounter.

The footage shows Senior Airman Roger Fortson, 23, answering the door of his apartment in the Florida Panhandle and immediately being shot by a deputy from the Okaloosa County Sheriff's Office. The video also shows that Fortson was holding a gun, and authorities have maintained that the deputy "reacted in self-defense."

The release of the footage came amid growing questions from the airman's family and their lawyers who had accused the deputy of entering the wrong apartment, of not knocking or announcing himself and of bursting through the door.

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Justices rule against women whose cars were confiscated

By Adam Liptak
New York Times



NEW YORK TIMES / APRIL 16

By a 6-3 vote Thursday, the Supreme Court ruled that innocent owners of cars seized by police are not entitled to an immediate hearing to reclaim their vehicles.

WASHINGTON >> The Supreme Court on Thursday made it harder for people whose property had been seized by police to argue for its swift return.

By a 6-3 vote, the court ruled against two Alabama women who had sought prompt hearings to recover cars they owned that had been taken by police in connection with crimes committed by others.

"After a state seizes and seeks civil forfeiture of personal property, due process requires a timely forfeiture hearing but does not require a separate preliminary hearing," Justice Brett Kavanaugh wrote for the majority.

In dissent, Justice Sonia Sotomayor said the majority had adopted a wooden approach to a pressing problem.

"The majority today holds that due process never requires the minimal check of a retention hearing before a police officer deprives an innocent owner of her car for months or years," Sotomayor wrote.

Even as the court rejected the women's argument that the Constitution requires streamlined procedures, five justices expressed grave misgivings about the practice of confiscating property said to have been used to commit crimes, known as civil asset forfeiture.

The court ruled in two cases. One of them started after Halima Culley bought a 2015 Nissan Altima for her son to use at college. He was pulled over by police in 2019 and arrested when they found cannabis. They also seized Culley's car.

That same year, Lena Sutton lent her 2012 Chevrolet Sonic to a friend. He was stopped for speeding and arrested after police found methamphetamine. Sutton's car was also seized.

Alabama law in effect at the time let so-called innocent owners reclaim seized property, and both women ultimately persuaded judges to return their cars. It took more than a year in each case, though there was some dispute about whether the women could have done more to hasten the process.

Culley and Sutton filed class actions in federal court saying they should have been afforded prompt interim hearings to argue for the return of the vehicles while their cases moved forward. Lower courts ruled against them.

Kavanaugh wrote that the Constitution's due process clause does not require the preliminary hearing the women sought.

"Culley and Sutton's argument for a separate preliminary hearing appears in many respects to be a backdoor argument for a more timely hearing so that a property owner with a good defense against forfeiture can recover her property more quickly," he wrote. "But the court's precedents already require a timely hearing."

Alabama has since amended its forfeiture law to allow owners of seized property to request expedited hearings.

"Our decision today does not preclude those legislatively prescribed innovations," Kavanaugh wrote. "Rather, our decision simply addresses the baseline protection of the due process clause."

Chief Justice John Roberts and Justices Clarence Thomas, Samuel Alito, Neil Gorsuch and Amy Coney Barrett joined the majority opinion.

Ukraine attacks Russian oil facilities

By Constant Meheut
New York Times

KYIV, UKRAINE >> Ukrainian drones struck two oil depots and a refinery across Russia in a 24-hour period, including one deep in Russian territory, officials on both sides said Thursday, as Kyiv presses a campaign aimed at hampering the country's military operations and putting strain on its most important industry.

Radiy Khabirov, head of Russia's Bashkiria region, near Kazakhstan, said a drone hit the Neftekhim Salavat oil refinery, one of the country's largest, around midday Thursday, sending plumes of smoke into the sky. The facility is more than 700 miles from the Ukrainian border, in a sign that Ukraine is increasingly capable of striking farther into Russia.

An official from Ukraine's special services, speaking on condition of anonymity to discuss sensitive military matters, said Ukraine was behind the assault. The official said Ukraine was also responsible for two other drone strikes overnight that hit oil depots in Russia's Krasnodar region, southeast of Ukraine.

The strikes follow some 20 similar attacks since the beginning of the year. Military analysts say they are an attempt by Ukraine to disrupt the Russian military's logistical routes and combat operations by targeting the facilities that supply fuel for its tanks, ships and planes.

Ukrainian officials also hope the strikes can undermine the Russian energy complex, which is at the core of the country's economy and war effort — accounting for about one-third of Russia's federal budget revenue — although it is too early to say whether they can have any serious impact.

The U.S. government has publicly urged Ukraine to stop its attacks on Russian oil refineries out of concern that they could affect global oil markets.

But Ukraine has instead doubled down on its strategy. In April, Ukraine struck Russia's third-largest refinery, about 800 miles from its border with Russia. The refinery hit Thursday is also one of Russia's biggest, with a capacity to process 10 million metric tons of oil a year, according to Gazprom, its owner.

Ukraine's rationale for these attacks appears to be that by disrupting Russian military logistics, it could buy time for Ukrainian troops on the battlefield, who are outnumbered, undergunned and steadily losing ground to Russian forces.

In recent months Ukraine has increasingly relied on asymmetrical tactics to disrupt Russian operations, including sabotage activities against railway infrastructure and ammunition depots.

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For more information visit PMRF-KPGO-EIS.com

In Budapest, China's Xi hails ties with Hungary

By Andrew Higgins
New York Times

WARSAW, POLAND >> Chinese President Xi Jinping on Thursday found another safe zone in a continent increasingly wary of his country, meeting in Budapest with Hungarian Prime Minister Viktor Orban, the European Union's perennial odd man out as a vocal supporter of warm relations with both China and Russia.

As happened at his previous stop in Serbia, Xi received a red-carpet welcome and was spared from protesters.

After their talks Thursday ended, Xi and Orban held what was billed as a news conference, but it consisted of their reading statements without taking questions, a format preferred by the Chinese leader.

They pledged to elevate already-friendly relations to an "all-weather comprehensive strategic partnership" — a sharp divergence from the view of China held by the European Union, of which Hungary is a member, as "a partner for cooperation, an economic competitor and a systemic rival."

Orban, under fire from many fellow European leaders for pushing what he calls a "policy of peace" in Ukraine — effectively a demand that its president, Volodymyr Zelenskyy, capitulate to avoid further bloodshed — offered "special thanks" to Xi for "the steps that the People's Republic of China is taking to create peace."

China has declined to condemn Russia's full-scale invasion of Ukraine and, according to the United States, has helped Russia's military continue its assault on Ukrainian territory by providing satellite imagery to Russian forces, along with jet fighter parts, microchips and other dual-use equipment.

"Our voice, the voice of Hungary, is a lonely voice in Europe. Today, Europe is on the side of war. The only exception is Hungary, which calls for an immediate cease-fire and peace negotiations," Orban said, applauding China's own vague peace plan, announced in 2023.

With nothing to announce on Ukraine beyond calls for peace, Hungary and China focused on economic cooperation. The Hungarian foreign minister, Peter Szijjarto, announced 18 joint projects, including a high-speed railway to the international airport from downtown Budapest and a new rail line across the country to transport electric cars, batteries and other products from Chinese factories planned for eastern Hungary to European markets in the West. They also agreed to cooperate on nuclear energy projects.

obituaries

H. Wallace 'Wally' Jaynes

1935-2024

A very good son, brother, a wonderful husband, a proud and loving dad, grand dad, great granddad and a strong, true and forever friend. A man who loved and respected God and country. Best not forget a kind and loving friend of animals.



Jaynes

Wally lived his life learning and doing what needed to be done and willingly facing whatever challenges life presented. A man of many interests, Wally loved working, diving, flying, reading and music; played guitar, bongos and keyboard. Wally started his early working career in the logging industry of Northern California, by the age of 19, he owned his own log hauling truck. He often worked two and sometimes three jobs while raising a family: his boys Kenny, Steve and Dean. Wally was a master carpenter, a builder and a contractor. Living in the Laguna Beach area was a major part of his life, he was naturally a water enthusiast and took up diving with his friends long before diving became such a popular sport. Diving and construction transitioned him to underwater construction and owning his own underwater construction company, Orca Divers in Laguna Beach. While working in that field he became an explosives expert and handled the explosives work required to build out the Dana Point Harbor and other projects along the So. California coast.

Strangely enough this led to Wally starting a career in photography. When underwater photos were needed for a 3-mile underwater pipeline job, he rented an underwater camera and successfully (with 15 minutes of instructions from the camera store owner) took the photos requested along with the doing the mechanical drawings he always provided for the job. (Wally's mom, Virginia was a wonderful artist who worked for Walt Disney and Walter Lantz back in the day, and his brother Ken was a Military man who taught him mechanical drawing.) From that experience Wally enrolled in So. Coast College to study photography, soon to open his own rental darkroom. The Darkroom soon became a Laguna Beach icon of some 35 years, darkroom, camera store, custom printing, studio, wedding and event photography, videography, postproduction, etc.

Wally was a man of many interests and skills. He designed, drew plans and built two homes for us and was a skilled furniture and cabinet maker.

At the age of 44 he met and soon married his wife Doris, then adding two teenage boys to his family. David and John Estrada became his boys, and they were blessed to have him as a father and friend.

Wally should have written a book. He had a great memory of his many adventures and could tell story after story.

Wally was a patriot at heart. Wally's love of the country was best expressed in his love of and 40 plus years as a volunteer with the Air Force Auxiliary, Civil Air Patrol. He loved the challenge of flying search and rescue missions, and among those missions his best moment was when finding a crash site with the plane crew alive and waiting for rescue (most 'finds' don't have such happy endings). He is ending his career with Civil Air Patrol as Lt. Colonel with many years as Safety Officer in both California and here in Hawai'i.

Wally would say the best part of life was being a friend and helping others. That is what really sums up his life. And of course, being the best husband and father ever. Love you forever.

A Celebration of his Life will be held on Thursday May 16, 2024, at St. Catherine's Church with visitation beginning 8:30 a.m., funeral mass beginning at 10 a.m. and burial to follow at St. Catherine's Kealia Cemetery.

In lieu of flowers the family requests donations be made to Kaua'i Hospice in memory of Wally Jaynes.

Kaua'i Memorial Gardens and St. Catherine's Church assisted the family with arrangements.

Michael Miyuki Cardinez

Michael Miyuki Cardinez, known for his ready smile and servant heart, peacefully left for Paradise on Feb. 28, 2024. He was an active member in the Kaua'i Church of Christ, Lihu'e. Michael was born in Waimea, Kaua'i, on Aug. 13, 1949. He served in the United States Navy for four years before becoming a Radar Technician at Makaha Ridge, Koke'e from where he retired.



Michael was preceded in passing by his father Steven Cardinez, mother Evelyn (Oyakawa) Estrada, brother Ronald Cardinez, sister Lydia Castillo, brother-in-law David Banquel and the mother of his children, Monda Haney.

He is survived by his brothers Clarence (Carmen) Cardinez of California, Manolo (Ces) Delos Reyes of Kaumakani, James (Angela) Delos Reyes of Kaumakani, Steven (Karen) Cardinez of Florida, Alex (Shari) Cardinez of California, sisters Frances Bunao of Lihu'e, Carol (Burt) Gonsalves of California, Alicia Estrada of Hanama'ulu, Celia Marie Mancia of Oregon, Nelda Banquel of Hanapepe and his stepmother Evelyn "Nana" Cardinez of Kaumakani (who sadly passed on March 14, 2024).

Michael also leaves behind his children Kalei (Alden) Cardinez of Hanama'ulu, Kananiokala (Harvey) Makekau of Hanama'ulu, Mikey (Carolan) Cardinez of Kapa'a and TC (Andrea) Cardinez of Wailua. He will remain a constant guide to his beloved grandchildren Cobie Cardinez, Megan Rego, Keona Nakamura, Kaiona Nakamura, Ricky Rego, Nainoa Cardinez, Auree Cardinez, Daniel Makekau and Sherilyn Makekau as well as his most precious great grandchildren Taiden Cardinez, Tia Cardinez, Kawehi Rego and Kamaielauli'i Yap and his grand pups Hale, Nani, Pepe, Mali'e, Li'i, Hema and Lilo. Michael is also survived by numerous cousins, nieces and nephews.

A celebration of his life will be held on Tuesday, May 28, 2024, at the Kaua'i War Memorial Convention Hall, starting at 11:30 am. The family requests casual attire and welcomes flowers. Please come, talk story and enjoy heavy pupu and desserts with his 'Ohana.

Borthwick Kaua'i Mortuary assisted the 'Ohana with arrangements.

Francisco 'Cisco' Campos Jr.

Francisco "Cisco" Campos Jr. passed away on Monday, April 29, 2024, at Straub Medical Center in Honolulu, at the age of 76 years old. He was born on March 27, 1948, in Waimea, Kaua'i.



Campos



He was a veteran of the U.S. Air Force who served in the Vietnam War. He worked for the County of Kauai Public Works Department Solid Waste Division for over 20 years and then retired as a baggage supervisor for United Airlines in 2016.

He is survived by his five daughters Tasha (Tommy) Stetter of Illinois, Leanna Campos (Rueben Games) of Waimea, Leilani Campos of Honolulu, Laola Campos (Chad Ishida) of Waimea, Noe Campos (Kawai Rapozo) of Waimea, grandchildren Jacey (Mana) Alquiza, Drayden, Jaycob, Daylen (Brennan) Ferrara, Pomai, Malu, Ezekiel, Ezra, Ivory, Kayce, great-grandchildren Kayzee-Marie, Tyson, Taelyn-Marie, Kaine, Irie Reign, sister Fely Dement of Hanapepe, numerous uncles, aunts, nieces, nephews and cousins.

A service will be held on Sunday, May 12, 2024, at the Garden Island Mortuary in Lawa'i, beginning at 2 p.m., and burial will be on Monday, May 13, 2024, at 11 a.m. at Kaua'i Veterans Cemetery in Hanapepe. The family suggests casual attire and requests that flowers be omitted.

Garden Island Mortuary assisted family with arrangements.

births

- Rachel Medeiros and Stephen Emayo greeted their daughter, Selena Evangeline Emayo, weighing 7 pounds, on March 14, 2024, at Kauai Veterans Memorial Hospital.
- Kaleigh and Nathan Smith greeted their daughter, Emma Nanea Smith, weighing 7 pounds, 11 ounces, on March 2, 2024, at Kauai Veterans Memorial Hospital.
- Dennis Erakdrik and Raini Henry-Erakdrik greeted their fifth child, a girls, Skylar Bethany Erakdrik, weighing 7 pounds, 3.9 ounces, on March 3, 2024, at Wilcox Medical Center.
- Naomi and Riley Harrington greeted their third child, a boy, Niall Nainoa Ryohei Harrington, weighing 7 pounds, 14 ounces, on March 4, 2024, at Wilcox Medical Center. Mrs. Harrington is the former Naomi Taylor.
- Melissa Vega-Guerpo and Romeo Guerpo greeted their son, Aven Guerpo, weighing 8 pounds, 7 ounces, on March 6, 2024, at Kauai Veterans Memorial Hospital.
- Stevie and Heather Sokei-Lutz greeted their fourth child, a boy, Huxley Kaito Itsuo Sokei-Lutz, weighing 8 pounds, 5 ounces, on March 7, 2024, at Wilcox Medical Center.
- Anais Werkmeister-Baumann and Ka'imi Hermosura greeted their son, Kekela Hermosura-Werkmeister, weighing 7 pounds, 4 ounces, on March 8, 2024, at Kauai Veterans Memorial Hospital.

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For more information visit PMRF-KPGO-EIS.com

NEWS OF THE WEIRD

Brown Bear, Brown Bear And 2 Driving Fools

A Scottish woman, Moira Gallacher, 72, and her friend, Charmian Widdowson, were touring Romania in April, enjoying a drive through the Carpathian Mountains, *People* reported. They happened upon two brown bears and stopped to get a picture with them. Then, Widdowson pulled up to the bear for another photo-op.

"I rolled down the window; I thought he wanted to be friends," Widdowson told STV News. "He started getting into the car and bit my friend."

She said she thought the bear approached because he heard the women talking about getting something to eat.

"I think he … decided he had to eat my friend."

Gallacher was wearing a thick jacket with two layers underneath; although the bear clamped down on her hand with its jaws, she escaped with minor wounds.

In other Weird happenings:

Shopping Cart Spree

On April 9, investigators caught their targets in a puzzling money-making scheme in Rochelle Park, New Jersey.

SEE PAGE 7



How These Bandits Roll

ILLUSTRATION BY MARK GALACGAC

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1 JUNE — MUSIC CONCERT

Ebb & Flow Arts presents Duo Diorama, featuring violinist Minghuan Xu and pianist Winston Choi, at St. Michaels All Angels Episcopal Church in Līhu'e. The concert will also feature works by Béla Bartók, Alfred Schnittke, Dmitri Shostakovich, John Corigliano, Augusta Read Thomas and Robert Pollock. Admission is free.

Saturday, June 1, 7 p.m.
For more info, visit ebbandflowarts.org

2 JUNE — FOOD FESTIVAL

Enjoy dishes prepared by more than 25 island chefs, various musical entertainment groups and more at Taste of Hawai'i at Smith's Tropical Garden in Kapa'a. Gate admission is $200 and advance tickets on eventbrite.com are $165.

Sunday, June 2, 11:30 a.m.-3:30 p.m.
Purchase tickets at eventbrite.com (search "Taste of Hawaii is the ultimate Sunday Brunch by Rotary Club of Kapaa")

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JUNE 1 — PRIDE PARADE

A Pride Parade to kick off Pride Month starts on Rice Street at Vidinha Stadium and ends at Historic County Lawn, where there will be a festival following the parade. Expect food trucks, small business and craft vendors, community resources, and live entertainment.

Saturday, June 1, 9 a.m.-2 p.m.
For more info, visit kauaipridеparade.com



PHOTO COURTESY AARON FEINBERG

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For more information visit PMRF-KPGO-EIS.com

Serial criminal can keep $12.5M settlement

Peter Boylan
STAR-ADVERTISER

HONOLULU — The 38-year-old man awarded $12.5 million after he sued the city following injuries suffered in a 2021 police pursuit appeared in court Wednesday to face federal charges that he used a ghost gun while selling methamphetamine in Waianae.

It is the second time Jonaven Perkins-Sinapati was arrested on drug and gun charges this month.

Despite the criminal charges, there is no chance the city can recoup any of the $12.5 million awarded Perkins-Sinapati in the civil case.

"The City's settlement agreements are generally not contingent upon future conduct but are intended to compensate plaintiffs for verifiable damages resulting from negligent acts of the City or its employees and/or to resolve cases in the best interests of the City," according to a statement to the Honolulu Star-Advertiser from Scott Humber, Mayor Rick Blangiardi's communications director. "The Perkins-Sinapati settlement agreement did not include a contingency provision for future criminal conduct."

Perkins-Sinapati, a convicted felon with more than 40 arrests and citations, was charged by criminal complaint Saturday with possession with intent to distribute 50 grams or more of a mixture or substance containing a detectable amount of methamphetamine and possessing a firearm in furtherance of a drug trafficking crime, according to federal court records.

A hearing on the U.S. Department of Justice's motion to detain Perkins-Sinapati without bail until trial is scheduled for June 4 before U.S. Magistrate Judge Rom A. Trader.

Among the reasons cited by the government that Perkins-Sinapati should be held without bail is that he is a danger to the community, a flight risk and "the alleged offenses were "committed on release pending felony trial," according to the motion authored by Assistant U.S. Attorney Barbara Eucker.

Perkins-Sinapati's attorney, Michael Green, did not immediately return a Star- Advertiser request from comment.

A preliminary hearing on the federal charges is scheduled for Sept. 9 in Trader's court.

On May 23, the Honolulu Police Department got an anonymous tip that Perkins-Sinapati was operating a black Jaguar sport utility vehicle and was wanted on an outstanding state warrant with a bail amount of $1 million, according to a federal criminal complaint.

Perkins-Sinapati was previously charged in state court May 7 with several firearm and ammunition offenses, third-degree promotion of a dangerous drug, and second-degree reckless endangering.

He is scheduled for an arraignment and plea in that case on Monday at 8:30 a.m. At this time there is no court determination deferring one prosecution until resolution of the other.

On May 23, an HPD officer saw the black Jaguar SUV and witnessed a passenger throw a dark bag out of the window.

The officer recovered the bag and allegedly found 108 grams of methamphetamine.

In the bag, the officer also allegedly found a loaded, homemade 9mm pistol, "bearing no manufacturer number nor serial number," 14 rounds of 9mm Luger ammunition, and four rounds of 40-caliber Smith and Wesson Hornady ammunition.

HPD pulled Perkins-Sinapati over at the intersection of Farrington Highway and Lualualei Homestead Road.

The officer saw ammunition in the cup holder of the Jaguar. HPD arrested him and his passenger on suspicion of multiple state gun charges.

A fanny pack found in the car allegedly had 48 grams of methamphetamine in it.

Perkins-Sinapati faces enhanced penalties if convicted in state court because he has prior felony convictions for car theft, robbery and promotion of a dangerous drug.

On May 4 at about 1:13 p.m., Perkins-Sinapati allegedly fired a gun in a residential area near Ewa Makai Middle School.

The city agreed to pay $12.5 million to Perkins-Sinapati, the driver of a car that crashed on Sept 12, 2021, in Makaha during a pursuit by Honolulu police officers who allegedly left the scene, only to return and pretend they were not involved in the pursuit.

Three Honolulu Police Department officers are awaiting trial for allegedly causing the high-speed chase and crash and covering it up.

Officers Joshua J.S. Nahulu, 37, Erik X.K. Smith, 25, and Jake R.T. Bartolome, 35, were fired by the department in February. A fourth officer, Robert G. Lewis III, whose age was not released, also faces criminal charges in connection with the crash and cover-up.

All four entered not-guilty pleas on March 23, 2023, and go to trial Oct. 7. June 3.



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obituaries

Brian S. Kubota

Memorial services for Brian S. Kubota will be at Immanuel Lutheran Church at 3 p.m. on Friday, May 31, 2024. Brian died Sunday, May 19, 2024. He will be laid to rest at Oak Hill Cemetery in Lawrence, Kansas.


Kubota

Brian Shigeo Kubota was born in Waimea, Kaua'i, Hawai'i, on March 16, 1943, to Shigeomi and Bernice Aiko (Hamamura) Kubota. He attended Koloa Grammar School and Kaua'i High School in Lihu'e, Hawai'i. He graduated from Iowa State University, Ames, Iowa, with a degree in Landscape Architecture and Urban and Regional Planning. He married Virginia (Ginny) Gutz on April 29, 1967. In addition to his wife, he is survived by his children: Vicki, Chicago, Illinois, and Jeff, Lawrence, Kansas. Also surviving are siblings: Adele (Don) Stevens, Honolulu, Hawai'i; Louella Rita, Makawao, Maui, Hawai'i; Sue Kubota, Honolulu, Hawai'i; and Burt (Debra) Kubota, Koloa, Kaua'i, Hawai'i. He was also Uncle to eight nieces and nephews.

After graduating from Iowa State University, Brian was employed by Howard, Needles, Tammen & Bergendoff from 1966-1969. He then moved to Lawrence, Kansas, and worked for the city as the Assistant Planning Director. In 1970 he joined the partnership of Robertson, Peters, Erickson, and Williams and also worked as Assistant Professor of Architecture from 1972-1973. In 1978 he established Landplan Engineering, a branch of Peters, Kubota, Glenn. Some of Brian's well-known urban design projects are Downtown Lawrence, Maupintour Travel Service (International Headquarters Building), Lawrence City Hall, Alvamar Country Club, Broken Arrow and South Junior High Schools, Lawrence Public Library and Trailridge Apartments. Alvamar West Golf Course, Orchards Golf Course, Holcomb Park and Buford M Watson, Jr. Park are additional site plans he designed. Brian won awards for Maupintour, Lawrence Town Center, Lawrence City Hall, and the Federal Office Building, Topeka, Kansas.

Brian served as National President and Vice President of ASLA (American Society of Landscape Architects) and many boards and task forces throughout the years. He also served as ASLA Prairie Gateway Chapter trustee for several terms. He attained Fellowship status in ASLA due to his contributions, professional accomplishments, attitude, and character. He was President of the Boys' Club, Board Member of the Lawrence Chamber of Commerce, and Building Committee Member/Consultant of Immanuel Lutheran Church. He was also a Consultant for Corpus Christi Catholic Church and St. Lawrence Catholic Center.

After retiring from Landplan Engineering, he developed The Villas, one of Lawrence's first empty-nester, single-family home developments and The Cove, a townhouse empty-nester development. He's been a consultant for numerous developers throughout his career.

Brian and Ginny spent many winters in Naples, Florida. He also loved to golf and enjoyed trips on his Harley-Davidson motorcycle. Many family vacations were spent with relatives in Hawai'i and exploring other parts of the country. A little-known fact about Brian is that he enjoyed singing karaoke.

In lieu of flowers, the family suggests memorials to Immanuel Lutheran Church, 2104 Bob Billings Pkwy, Lawrence, KS 66049 or Visiting Nurses of Douglas County, P.O. Box 1260. Lawrence, KS 66044.

Online condolences made at rumsey-yost.com

Rev. Dr. Harold 'Doc' Itsuo Ayabe

Rev. Dr. Harold "Doc" Itsuo Ayabe, 89, of Kaneohe, former pastor of Windward Missionary Church and retired Department Chair and Professor Emeritus of Educational Psychology at the University of Hawai'i Manoa, went home to be with his Lord and Savior, Jesus Christ, on May 14, 2024. Doc was born on Dec. 29, 1934, in Lawa'i, Kaua'i, Hawai'i.


Ayabe

He is survived by daughter Rev. Dr. Sharon Ayabe, brother Tadashi Jerry, sister Kikumi Kay Harada, sisters-in-law Edna Holdeman, Gloria Young, Thelma Chikuma, Lillian Nishihara, hanai granddaughter Dr. Corrie Yoshimura Fang, numerous nieces and nephews.

He was preceded in death by his wife, the love of his life, Ann Satoko (Nishihara) Ayabe, daughter Dr. Cheryl Emiko Milanio, parents Shohachi and Kikuo (Nagano) Ayabe, older brothers Katsumi, Keiso Henry, Noboru and older sister Hitoe Hirano.

A Celebration of Life memorial service will be held at Kalihi Union Church Main Sanctuary, 2214 N King Street, Honolulu, Hawai'i on Wednesday, June 5, 2024. Visitation at noon. Services at 1 p.m.

Arrangements provided by Hosoi Garden Mortuary. Flowers by Beretania Florist.

Michael Manzano Abigania

Michael Manzano Abigania, of Mission Viejo, California, loving husband, father, grandfather, brother, and friend, went to be with the Lord on Sunday, March 17, 2024. He was born in Vigan, Ilocos Sur, Philippines on June 8, 1952.

Michael is survived by his wife, Arminda Pascual Abigania; daughters, Sherry (Franklin Jr.) Matthews, Michelle (Victor) Abigania-Libunao, Melany (Eric) Abigania-Chun; grandchildren, Makana, Kainani Libunao, Malia, Micah, Jacob, Jade Matthews; brothers, Louis (Edith) Abigania, Robert (Doris) Abigania, Richard (Tess) Abigania, Glenn (Sharon) Abigania, Reynold Abigania; sisters, Nancy Abigania, Vicky Abigania, Christine (Bernard Sr.) Mabini, Alice (Reggie) Hunt, and Brenda (Ho-Tai) Zerba.

Michael was preceded in death by his parents Rufo and Mary Abigania and sister Cynthia Dela Cruz.

Family and friends are invited to a Celebration of Life on Saturday, June 8, at St. John's Episcopal Church located in Ele'ele, at 10 a.m. Casual attire is requested.

EARTHWEEK: DIARY OF A CHANGING WORLD

For week ending Friday

By Steve Newman

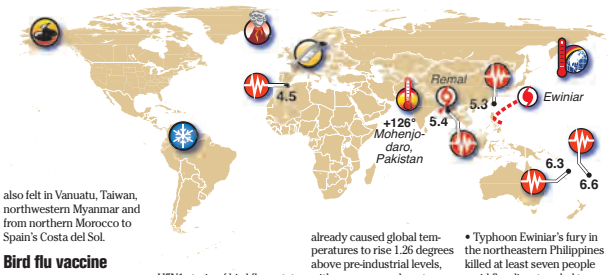
Orange rivers

Scientists say melting permafrost is likely turning dozens of Alaskan rivers and streams an orange color. The new rusty hue is believed to be caused by minerals once frozen in the soil now flushing into previously crystal-clear waterways. Researchers from the U.S. Geological Survey, the National Park Service and the University of California, Davis, say the degraded rivers and streams could have significant implications for drinking water and fisheries in Arctic watersheds. "We (now) see a lot of different types of metals in these waters," said researcher Taylor Evinge. "One of the most dominant metals is iron. That's what is causing the color change."

Earthquakes

The Tongan capital and other low-lying areas were evacuated due to fears of a tsunami following a massive undersea temblor that rocked the island nation.

• Earth movements were also felt in Vanuatu, Taiwan, northwestern Myanmar and from northern Morocco to Spain's Costa del Sol.



Bird flu vaccine

A new Dutch study finds that bird flu vaccines given to laying hens are effective and could soon be used to protect poultry from a virus that has ravaged birds and other species around the world. The tests were carried out at two farms and showed the vaccine was effective against the virus for eight weeks after vaccination. Egg prices have soared as the highly pathogenic avian influenza killed or forced the culling of millions of poultry around the world. Since there is a threat of the H5N1 strain of bird flu mutating to more easily infect people, researchers say swift vaccine development would be our best protection.

Warming yardstick

Researchers at Britain's University of Leeds have concluded that three individual years of very high global average temperatures will be enough to say that the world has breached the 1.5-degree Celsius climate warming goal set out in the 2015 Paris Agreement. Carbon emissions have already caused global temperatures to rise 1.26 degrees above pre-industrial levels, with some years almost reaching 1.5 degrees. "Once you've crossed the 1.5-degree threshold in your annual temperature changes on three occasions (consecutive or not), it's very likely that we will have crossed the Paris Agreement 1.5-degree level," said climate expert Lawrence Jackson.

Tropical cyclones

Cyclone Remal left at least 65 people dead across eastern India and Bangladesh, one of the longest-lasting on record.

• Typhoon Ewiniar's fury in the northeastern Philippines killed at least seven people amid flooding, toppled trees and fierce wind.

Vanished glaciers

Venezuela has become the first country in the Americas to lose all of its glaciers due to global heating. The six former glaciated peaks in the state of Merida were once a source of great pride and the origin of legends that relate them to mythical white eagles. The International Climate and Cryosphere Initiative recently declared that the remaining Humboldt Glacier, also known as La Corona or "the crown," is already too small to be classified as a glacier any longer. "Our tropical glaciers began to disappear in the 1970s and their absence is felt," astrophysicist Alejandra Melfo told the TV network Telemundo. "It is a great sadness, and the only thing we can do is use their legacy to show children how beautiful our Sierra Nevada once were."

Iceland eruption

Iceland's restive Reykjanes Peninsula produced its fifth eruption since December and the most powerful since the volcanic area became active again three years ago. The country's Met Office said lava fountains reached 115 feet in height. Residents of the small fishing town of Grindavik were forced to evacuate yet again as lava surged from the new fissure. The nearby Blue Lagoon geothermal spa was also closed and evacuated again.

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Distributed by Andrews McMeel Syndication; ©MMXXIV Earth Environment Service

Make peace with nature, official warns

By Jake Spring
Reuters

SAO PAULO >> The world must make peace with nature or risk fueling more global conflicts like the war in Gaza, the president of the upcoming United Nations COP16 biodiversity summit said Friday.

The October summit in Colombia is charged with negotiating next steps to implement the landmark 2022 Kunming-Montreal accord — likened to the Paris Agreement on climate change, but for nature — in order to address the drastic decline in biodiversity globally.

Climate change, deforestation, pollution and habitat destruction have led to a 69% decline in global wildlife populations since 1970, according to nonprofit WWF.

Colombia's environment minister, Susana Muhamad, laid out her priorities as COP16 president, along with a warning if the world fails to reform global governance to solve problems like the climate crisis.



BRUNO KELLY / REUTERS / 2017

An aerial view shows deforested land in Brazil during "Operation Green Wave," conducted by a Brazilian environmental agency.

"The situation currently in Palestine, where humanity is observing how a people of the world is being crushed militarily. And there's not even the capacity of the U.N. to provide the humanitarian relief," Muhamad said during a five-minute speech at the Atlantic Council think tank in Washington.

"That situation is what we could expect in a lack of governance and in a chaotic world because of the climate crisis."

Muhamad said the "suicidal war against nature" is causing conflict to increase, but did not elaborate on the connection.

Multilateral institutions are not equipped to deal with unprecedented challenges like climate change and must be overhauled or risk the world slipping into rule by the strong through violence, Muhamad said.

Colombia's top priorities for COP16 include an "intense" discussion on how to reform the global financial system that will allow developing countries to make strong environmental commitments without taking on more debt, she said.

Countries must submit biodiversity targets before the summit. Colombia will prioritize working with U.N. officials to measure how those commitments line up with 2030 goals in the Kunming-Montreal agreement, she said.

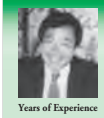
Colombia also will seek to boost the participation of Indigenous people and traditional communities in the process, by organizing three pre-summit events giving them an opportunity to lobby governments.

NOTICE REGARDING FILES OF DECEASED ATTORNEY
CLAYTON C. IKEI

Current and former clients of Clayton C. Ikei may attempt to recover their client files and funds. The Hawai'i Supreme Court appointed Eric Lee Niemeyer as Trustee to collect and inventory Mr. Ikei's client files and funds and return them to his clients. Such clients may respond to this notice within the next 90 days using the information below. Trustee prefers Email but will respond regardless. Trustee will destroy unclaimed files after the set time.

ERIC LEE NIEMEYER
700 Richards St., Ste. 1108
Honolulu, Hawai'i 96813
e-mail: hawaii.lawyer@hotmail.com
Telephone: (541)840-2840

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FDI-19160-A AECSPAD 2/2024

Trump sees 'breaking point' for U.S. if he gets jail time

By Susan Heavey
Reuters

WASHINGTON >> Donald Trump said Sunday he would accept home confinement or jail time after his historic conviction on criminal charges by a New York jury last week but that it would be tough for the public to accept.

Trump is scheduled to be sentenced July 11, four days before Republicans gather to formally choose their presidential nominee to face Democratic President Joe Biden in November's election.

Prison time is rare for people convicted in New York state of felony falsification of business records, the charge Trump, the Republican presidential candidate, faced at his trial. The maximum sentence for such a charge is four years' imprisonment.

"I'm not sure the public would stand for it," the former president told Fox News of a potential prison sentence.

"I think it'd be tough for the public to take. You know, at a certain point there's a breaking point."

Trump has vowed to appeal his conviction by the New York jury, which found him guilty of 34 felony counts over falsifying documents to cover up a payment to silence a porn star ahead of the 2016 election.

To succeed on appeal, Trump, 77, must demonstrate that Justice Juan Merchan made significant errors overseeing the trial.

His lawyers have said they expect to take the case to the Supreme Court. On Sunday, Trump, who tried to oust Merchan from the case, repeated allegations of bias by the judge and the district attorney in the case.

"The United States Supreme Court MUST DECIDE!" Trump wrote on social media.

Trump plans to appeal after his July 11 sentencing date, his lawyers say. If an appeal in New York state courts proves unsuccessful, he could appeal to the Supreme Court. Trump's attorneys would have to persuade at least four of the court's nine justices to hear his case.



DOUG MILLS / NEW YORK TIMES

Former President Donald Trump on Sunday said he was not sure the U.S. public "would stand for it" if he were to receive a prison sentence for his felony business fraud conviction. Trump headed to a news conference Friday in New York.

To prevail, Trump would then have to demonstrate that the state prosecution violated his federal constitutional rights and that his legal team followed proper procedures during earlier stages of his legal proceedings.

'Speak out against this'

Trump has used his conviction to step up his fundraising efforts but has not otherwise sought to mobilize his supporters, in contrast to his comments protesting his 2020 loss to Biden that were followed by a deadly attack by his supporters on Jan. 6, 2021, on the U.S. Capitol.

Asked what Trump supporters should do if he were jailed, Republican National Committee Co-Chair Lara Trump told CNN, "Well, they're gonna do what they've done from the beginning, which is remain calm and protest at the ballot box on November 5th. There's nothing to do other than make your voices heard loud and clear and speak out against this."

Some Trump supporters have hung U.S. flags upside down following the verdict. The inverted flag has been a symbol of distress or protest in America for over 200 years.

At least one Democratic lawmaker expressed concern Sunday about the potential for Trump's supporters to respond violently to his conviction.

"His base listens to him. They don't listen to Lara Trump. And this is another dangerous appeal to violence," Democratic U.S. Rep. Adam Schiff told CNN.

But U.S. House Speaker Mike Johnson, a Trump ally, said any response must be lawful.

"We are the rule-of-law party — chaos is not a conservative value. We have to fight back, and we will with everything in our arsenal. But we do that within the confines of the rule of law," Johnson told "Fox News Sunday."

The matter is unlikely to be resolved before the November presidential election, when Trump will seek to take back the White House from Biden. Opinion polls show a close race between the two men and suggest that his conviction could hurt him with some Republican voters and independents.

In other developments:

>> Roughly a day since joining TikTok, Trump had attracted 3 million followers on the short video social media platform that he tried to ban as president on national security grounds.

Biden's election campaign is already on TikTok, with over 340,000 followers, although Biden has signed a bill that would ban the app, which is used by 170 million Americans, if its Chinese owner, ByteDance, fails to divest it.

Trump posted a launch video on his account, which has the address @realdonaldtrump, on Saturday night. The video, which has more than 56 million views, showed Trump greeting fans at an Ultimate Fighting Championship fight in Newark, N.J.

>> Lara Trump on Sunday denounced Larry Hogan, the Republican Senate candidate in Maryland, for urging Americans to "respect the verdict" against Trump — criticizing a prized recruit who has given the party a chance of winning a seat that has reliably been held by Democrats.

Hogan "doesn't deserve the respect of anyone in the Republican Party at this point, and quite frankly anybody in America, if that's the way you feel," Trump, who is married to Trump's son Eric, said in an interview on CNN. She did not directly answer follow-up questions about whether the Republican Party would continue to support Hogan.

The New York Times contributed to this report.

Around the world

Netanyahu aide says Israel accepts Biden's Gaza plan

JERUSALEM >> An aide to Prime Minister Benjamin Netanyahu confirmed Sunday that Israel had accepted a framework for winding down the Gaza war now being advanced by U.S. President Joe Biden, though he described it as flawed and in need of much more work.

In an interview with Britain's Sunday Times, Ophir Falk, chief foreign policy advisor to Netanyahu, said Biden's proposal was "a deal we agreed to — it's not a good deal, but we dearly want the hostages released, all of them."

Rising heat could worsen Gaza Strip crisis, U.N. warns

Aid groups remain unable to deliver "basic necessities" including tents and clean drinking water to millions of Palestinians in the Gaza Strip as temperatures rise and diseases spread, a United Nations humanitarian official said Sunday, as talks continued about reopening a critical border crossing that has been closed for weeks.

Scott Anderson, a senior official at UNRWA, the main U.N. agency aiding Palestinians in Gaza, told CBS News on Sunday that the trickle of supplies has not been enough to meet people's basic needs.

Boeing and NASA reschedule Starliner debut for Wednesday

Boeing and NASA said Sunday their teams are preparing the first crewed launch of the new Starliner space capsule Wednesday after scrubbing its inaugural test flight Saturday.

The craft will carry two astronauts to the International Space Station. NASA said its teams traced the problem encountered during Saturday's countdown to a ground power supply.

Teacher placed on leave over 'mock slave auction' in class

A fifth grade teacher in Massachusetts who held a "mock slave auction" and used a racial slur in a classroom has been placed on paid administrative leave, the district superintendent said.

The mock auction was held in January during a history lesson, the superintendent of Public Schools of Northborough and Southborough, Gregory Martineau, said in a letter to parents dated Wednesday. In April the teacher read a book to the class and used a racial slur not in the book.

Star-Advertiser news services

Hunter Biden to begin trial today in gun case

By Glenn Thrush
New York Times

WASHINGTON >> Hunter Biden will go on trial on gun charges Monday in Delaware within walking distance of his father's campaign headquarters in Wilmington, less than a week after former President Donald Trump's felony conviction in New York.

A year ago the younger Biden seemed unlikely to face trial on the weapon charges he was facing over a firearm application that prosecutors say was falsified, or from more serious charges of failing to pay taxes from overseas business activities at a time when he was using drugs and alcohol heavily and spending lavishly.

But a plea deal, which offered him some immunity from prosecution and did not include prison time, imploded in July. The judge in the case punched holes in the agreement, to the delight of Trump's Republican allies in Congress who tried to scuttle that deal and have portrayed Biden's legal problems as equivalent to those of their party's 2024 presidential candidate in an effort to impeach President Joe Biden.

Still, it is the son — not the father — who will be on trial twice during an election year.

He is set to report to the fourth-floor courtroom of Judge Maryellen Noreika when jury selection begins today at 9 a.m. in a trial expected to last three to five days. The other, set to begin in September, involves a series of tax offenses related to his failure to file returns for a number of years.

In September a federal grand jury charged Hunter Biden with three felonies: lying to a federally licensed gun dealer, making a false claim on the federal firearm application used to screen applicants and possessing an illegally obtained gun for 11 days, from Oct. 12 to 23, 2018.

"Hunter Biden possessed a firearm while knowing he was an unlawful user of or addicted to any stimulant, narcotic drug or any other controlled substance, in violation of federal law," prosecutors said.

If convicted, Biden could face up to 25 years in prison and $750,000 in fines. But nonviolent first-time offenders who have not been accused of using the weapon in another crime rarely get serious prison time for the charges. In fact, legal experts say it is more likely a sentence could include a central element of the original plea deal: mandatory enrollment in a firearm diversion program intended to reduce incarceration rates for the least serious gun crimes.

U.S. Navy Pacific Missile Range Facility and NASA Kōkeʻe Park Geophysical Observatory Real Estate Environmental Impact Statement

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For more information visit PMRF-KPGO-EIS.com

Red Hill tank ventilation rattles some residents

Kevin Knodell
STAR-ADVERTISER

HONOLULU — The Navy has begun tank ventilation and air quality monitoring at the Red Hill fuel storage facility.

Navy Closure Task Force-Red Hill announced on its mobile app last week that the state Department of Health had approved its plans to begin cleaning operations and venting of the facility's Tank No. 8.

It's the latest step in the closure process of the Red Hill facility. But some residents are nervous about potential health and environmental risks as the plan moves forward.

Walter Chun, a member of the Red Hill Community Representation Initiative, said in an email that the Navy's plan to "intentionally discharge the vapor and particulates from the 12.5M gallon fuel tank at Red Hill … to the environment (risks) human exposures to hazardous substances, especially for children and infants, and pose a potential wildfire risk for the nearby residential neighborhoods."

The Navy task force has installed nine air quality monitoring stations around Red Hill's perimeter, including the at Halawa Correctional Facility. Navy officials said the stations will monitor air quality as well as atmospheric data such as air speed and wind direction.

"NCTF-RH has worked closely with DOH to ensure ventilation of the tanks is done in a manner that will not pose a risk to human health," said task force deputy commander Rear Adm. Marc Williams in a statement included in the news release on the app. "Our team is committed to safely decommissioning the facility, and tank ventilation operations get us another step closer to this goal."

In November 2021, JP-5 jet fuel stored at Red Hill tainted the Navy's Oahu water system that serves 93,000 people. The facility sits just 100 feet above a critical aquifer which most of Honolulu relies on for drinking water and for years local health and water officials warned the fuel posed a serious risk to Oahu's water supply. The Navy for its part insisted the World War II-era facility was safe and critical for national security.

After months of resisting a state emergency order to drain the tanks, in March 2022 the Pentagon announced that Red Hill would be defueled and permanently shut down.

It took a joint military task force nearly a year to make repairs and upgrades to the aging facility and the pipelines connecting them to Joint Base Pearl Harbor-Hickam to safely extract over 104 million gallons of fuel from the tanks.

Repairs concluded in summer 2023 and by March the defueling task force had removed most of the fuel with the exception of residual sludge within the tanks that would require deeper cleaning to remove.

The defueling task force's commander Vice Adm. John Wade told the Honolulu Star-Advertiser in an exit interview before NCTF-RH took over operations that while the removal of the fuel got one major risk out of the way, many more dangers remain before the closure process is over.

"Defueling had its own challenges and risks, closure and long-term environmental remediation will bring new challenges and new risks," Wade said. "So it's critical to the … health of the workers and the community and the environment to focus on safety."

During the February meeting of the Red Hill Community Representation Initiative, the facility's former fuel director Shannon Bencs attended and asked officials how they will approach community safety as they try to clear out gases and chemicals. "Now that you've defueled the tanks and the pipelines, now there's poisonous toxic fumes in those tanks, and the only way to vent them out is through the top of Red Hill and then through the (vents)," Bencs said, warning that it will be "extremely toxic, and it will flow down to Halawa Valley and down to Pearl Harbor."

Rear Adm. Stephen Barnett, commander of Navy Region Hawaii, told Bencs, "that is something that we'll be working through as far as the ventilation," and that the Navy would ensure the community would be notified.

Members of the CRI have been critical of officials, accusing them of withholding information and dodging questions. The Navy has in turn argued that CRI members have been aggressive and disrespectful. The EPA has called for a mediator to be brought in to manage the dispute.

"Although the CRI raised concerns with the allowance of discharging contaminants and pollutants in March 2024, both the Navy and EPA ignored these concerns," said Chun. "Their focus since March was attempting to control the CRI meetings. Our focus in Hawaii must narrow in on the practices to allow intentional contaminants and pollutants to harm people and the environment."

The CRI put out a public notice Wednesday night that said venting operations would begin the next day and will continue until all 14 tanks that held fuel are degassed, with operations set to take place daily between 6 a.m. and 8 p.m. and advising "the discharge from the tanks is not filtered or captured. There is a risk of exposure to toxic fumes from the discharge. People are advised to be vigilant about their health."

The CRI advised that people living or working in the vicinity of Moanalua, Salt Lake, Halawa Correctional Facility, and all military housing surrounding the Red Hill fuel tanks should be aware and recommended people consider limiting time outdoors and wearing masks.

In a Thursday media release, state health officials said their conditional approval of the venting plan requires the Navy to notify the public at least 12 hours before the start of venting a tank, and that it immediate notify the Health Department if it detects an "exceedance" of expected chemicals in the air and stop the venting.

The approval also limits the number of tanks that may be vented in a calendar year to six, the number of tanks that may be vented at any time to two, and requires the Navy to notify DOH within 24 hours of starting to vent a second tank.

Green: Maui wildfire victims have until June 15 to register for One 'Ohana Fund

Kacie Yamamoto
STAR-ADVERTISER

Families who lost a loved one, or people who suffered serious injury, in the August wildfires on Maui now have until June 15 to submit a registration form for the One 'Ohana Fund, Gov. Josh Green announced Friday.

The deadline for registered claimants to submit completed claim forms is July 15.

The extension will give Maui wildfire survivors more time to decide whether they want to seek compensation through the fund.

Announced in November, the $175 million One 'Ohana Fund was designed to allow those eligible to participate in settlements and avoid lengthy and uncertain litigation for claims of wildfire-induced losses. The fund aims to provide money to affected families and individuals quickly.

Payments to surviving family members who lost loved ones will be $1.5 million, while settlements for people who suffered severe injuries will vary.

The deadline for applications was last extended to May 31 at the beginning of May.

"From the time we introduced the fund in November, our intention was to provide families with a timely option that would potentially allow healing and recovery more quickly," Green said in a news release.

"The response from the survivor community last time we extended the deadline was encouraging, and I want to respect the requests of other survivors and their counsel to have additional time to determine what is right for their families."

The fund encompasses contributions from Hawaiian Electric ($75 million), the state of Hawaii ($65 million), Kamehameha Schools ($17.5 million), Maui County ($10 million), Charter/Spectrum ($2.5 million), Hawaiian Telcom ($2.5 million) and West Maui Land Co. ($2.5 million).

"Survivors and their attorneys have been asking for additional time to complete their submissions of claims to the fund," retired Judge Ronald Ibarra, who serves as the fund's administrator, said in the release.

"We all believe that this compassionate extension is aligned with the mission of the fund, to give survivors the option of seeking compensation without the risks that accompany litigation."

The fund began accepting applications March 1, and since then it has received 48 registrations from families who have lost loved ones and 17 registrations from injured survivors, according to the release.

The fund is already processing these claims, and the extension will not delay this process for claims already submitted.

Ibarra said the program expects to begin making payments to those approved within the next 60 to 90 days.

Honolulu-based attorney Richard M. Sakoda, who represents an applicant family and has been communicating with other survivors' families, requested the first deadline extension in April and said he supports the most recent registration extension as well.

"I wholeheartedly support this extension and appreciate the compassion behind the decision," Sakoda said in the release.

"We have seen that claims to the fund have increased, as families have learned more about the uncertainties of litigation."

Phase I of the One 'Ohana Fund focuses on providing compensation to families who lost loved ones and to people severely injured in the fires. Phase II will involve the settlement of commercial and residential property claims.

The Maui wildfires killed at least 101 people and destroyed or damaged almost 3,000 structures.

Applications and more information for the fund can be found at www.mauicompensationfund.com.

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For more information visit PMRF-KPGO-EIS.com

nation&world

Biden to sign order letting him seal border

By Josh Wingrove and Erik Wasson
Bloomberg News

WASHINGTON >> President Joe Biden will sign an executive order today halting certain asylum claims at the U.S.-Mexican border until crossings fall dramatically, a sweeping attempt to curb the flow of migrants and address one of his biggest liabilities ahead of November's election with Republican Donald Trump.

The move would effectively prevent new asylum claims by migrants who walk across the border until levels drop by roughly two-thirds of where they stand today, according to people familiar with the matter, who requested anonymity to detail the plans before they are publicly announced.

The measure would kick in once levels hit roughly 2,500 crossings per day between ports of entry. U.S. authorities recorded about 4,300 encounters per day in April with undocumented migrants between ports of entry, the most recent data available. That means the administration can move quickly to bar a large swath of asylum claims, though the policy is sure to be challenged in court.

Lawmakers and others have been invited to the White House for an event this afternoon, the people said. Biden would allow asylum claims to resume only once border encounters fall to about 1,500 a day, the people said. The Associated Press reported earlier on the president's plans.

The order is Biden's most aggressive move yet to address the crisis on the U.S.-Mexican border, which has seen record levels of migrants and taxed communities across the country struggling to deal with the influx of new arrivals. A bipartisan Senate plan that would have given Biden similar powers was blocked by Republicans earlier this year at Trump's behest, denying the president a political win and prompting him to act unilaterally.

Today's order is politically risky. It will invite criticism from Biden's left flank, which has blasted moves to ramp up deportations as an inhumane approach to the crisis. That has the potential to stymie his efforts to shore up an electoral coalition already riven by divisions over his handling of the Israel-Hamas war and overarching concerns over his age and fitness to serve a second term.

But the move underscores how the administration has been compelled to act alone to address an issue that has become a centerpiece of the 2024 election. The action could allow Biden to highlight how Republicans killed the bipartisan bill.

Trump has hammered Biden on the border, ramping up attacks on immigrants and spotlighting violent crimes allegedly committed by people who crossed the border. Polls show a close race between Trump and Biden, and voters say the border and immigration are critical issues.

Biden's timing reflects an effort to deter an increase in crossings that typically happens in summer and early fall right before the election, and comes amid a political transition in Mexico.

Outgoing Mexican President Andres Manuel Lopez Obrador has taken steps to curb crossings. His successor, Claudia Sheinbaum, who was elected the next leader Sunday, doesn't take office until Oct. 1, and it is unclear what actions she will continue to take. The U.S. administration has said it has no reason to expect a change.

Border crossings have already fallen from the highs seen in late 2023, and Biden has taken steps in recent weeks to tighten immigration rules and drive down those numbers further. In May the administration proposed a rule that would allow the U.S. to expedite expulsions of undocumented migrants seeking to claim asylum in certain cases, though the change will only affect a small percentage of those caught on the border.

Biden will look to enact some of the changes under Section 212(f) of the Immigration and Nationality Act, a disputed authority that will surely invite legal challenges. Trump's actions on immigration while president, including his controversial travel ban, also invoked those authorities and tested the boundaries of the law. Some of his measures were overturned in court, limiting the options available to Biden.

The American Civil Liberties Union led the charge against the Trump administration's attempt to block asylum in 2018. The group has signaled that it is ready to challenge any order that limits asylum at the border.

Top Department of Homeland Security officials have stressed the limits of executive action. More broadly, the White House has argued the main constraint on addressing the situation at the border is a lack of funding and staffing — issues Biden can't address on his own. The White House has repeatedly said any executive action it takes will not match the power that a bill passed by Congress would have.

Still, Republicans have criticized the expected move. "It's too little too late," House Speaker Mike Johnson told Fox News on Sunday. "The only reason he's doing that is because the polls say that it's the biggest issue in America."

The New York Times contributed to this report.



CRAIG HUDSON / REUTERS

President Joe Biden is expected to sign an executive order today letting him temporarily seal the U.S. border with Mexico to migrants when crossings surge. Biden boarded Air Force One as he departed Monday for Connecticut from Delaware Air National Guard Base in New Castle, Del.

Trump's harder line on immigration appears to resonate, polls show

By Jazmine Ulloa
New York Times

WASHINGTON >> Former President Donald Trump has described his plans to remove large numbers of immigrants lacking permanent legal status from the country if elected to a second term by citing the mass deportations under President Dwight D. Eisenhower in the 1950s.

In that initiative, federal agents and law enforcement officers used military techniques such as sweeps, raids and surveillance checkpoints — as well as a blunt form of racial profiling — to round up workers living in the country illegally and load them onto buses and boats. As many as 1.3 million people were expelled, mostly Mexican and Mexican American workers, some of whom were U.S. citizens. Crucial to the initiative — named Operation Wetback, for the racial slur — was intense anti-immigrant sentiment. Officials at the time used that sentiment to justify family separations and overcrowded and unsanitary detention conditions — practices that the Trump administration would deploy decades later in its own immigration enforcement.

As the 2024 presidential election heats up, some Latino advocacy and immigrant-rights groups are sounding the alarm that Trump's tactics could amount to a repetition of a sordid chapter of American history. But recent polling shows that Trump's position on immigration appears to be resonating. About half of Americans have said they would support mass deportations of immigrants in the country illegally, according to a CNN poll conducted in January by the research firm SSRS.

Authorities have reported record numbers of migrant apprehensions at the southern border for three straight years, including 2.4 million apprehensions in the fiscal year that ended in September. Although the numbers have dropped sharply in recent months, immigration remains an albatross for President Joe Biden: Even some Democratic mayors have complained that they need help from the federal government to contend with the migrant populations in their cities.

Trump's restrictive approach to immigration, both legal and illegal, helped push Americans of various political stripes to support more permissive policies.

During his first term Trump narrowed the path to asylum, sharply reduced the numbers of visas and refugee admissions and enacted a travel ban on people from several countries, most of which had Muslim majorities. His administration rolled back protections for immigrants brought into the country illegally as children, and it separated migrant families at the southern border.

By the time he left the White House, more Americans favored increasing immigration for the first time in six decades of Gallup polling.

But more recent surveys from Gallup and others have found that the number of people who believe immigration is generally beneficial to the country's culture and economic growth has been slowly eroding from a recent high. A small but growing minority of Americans are increasingly concerned about its impact on drugs, crime, taxes and national identity.

An open-ended Gallup poll released April 30 found that for the third straight month, most Americans cited immigration as the most important problem facing the United States. That was the longest stretch that the issue had topped the list in the survey's 24-year history. A Gallup poll released Friday showed immigration dropping to second on the list in May, still high by historical standards.

It is not just illegal immigration causing consternation. A different poll in March from The Associated Press-NORC Center for Public Affairs Research found that Americans have become more worried about immigrants in the country legally committing crimes, though many studies have found no correlation between immigration and crime, regardless of whether people entered the country legally.

In February a nationwide New York Times/Siena College poll showed that 49% of voters either strongly or somewhat supported making it harder for migrants at the southern border to seek asylum in the United States, slightly more than the 43% who either strongly or somewhat opposed doing so.

As Democrats and Republicans have drifted further apart on immigration, Republicans are far more likely to cite immigration as a top concern.

A Pew study in February found that 70% of Republicans described the challenges at the southern border as a "crisis," compared with just 22% of Democrats. Another poll in 2023 from Gallup showed 73% of Republicans wanted immigration to be decreased. By contrast, only 18% of Democrats said they wanted the same. Republicans were also far more likely to see immigrants as worsening the country's social and moral values, job opportunities and taxes.

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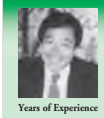
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City land donation proposed for homes

Andrew Gomes
STAR-ADVERTISER

HONOLULU — For the third time in two decades, city officials are seeking to make residential use out of a large parcel of vacant city land in Kailua.

Two Honolulu City Council members plan to introduce a resolution on Tuesday, June 4, proposing to largely give the 10-acre site, valued at $10.5 million, to the state Department of Hawaiian Home Lands (DHHL) so the agency can develop about 20 single-family homesteads for beneficiaries.

If successful, the plan would dispose of an unused property in the Kalaheo Hillside area that the city has owned for 63 years, and establish the first DHHL homestead in Kailua.

Two prior attempts, however, have failed. And some adjacent neighbors previously have opposed development of housing on the parcel despite it being zoned for single-family housing.

Council member Esther Kia'aina, whose district includes Kailua, has authored the resolution with Council Chair Tommy Waters.

Kia'aina said Friday that the proposal represents a historic opportunity for the city to establish the first-ever DHHL community in Kailua and to honor Prince Kuhio, who was pivotal in establishing the homestead program and the City and County of Honolulu.

"Through this city land transfer, we hope to address the critical need for housing on O'ahu while helping our Native Hawaiian community," she said in a statement. "Establishing a Hawaiian homestead in Kailua will ensure that Native Hawaiians can continue to live and thrive in this special place."



CRAIG T. KOJIMA / STAR-ADVERTISER

This vacant 10-acre parcel in the Kalaheo Hillside area of Kailua, Hawai'i, has been owned by the City of Honolulu since 1961 and is zoned for residential use. A pair of Honolulu City Council members proposed largely gifting the land to the state Department of Hawaiian Home Lands for homestead use.

Honolulu Mayor Rick Blangiardi endorsed the proposal.

"This initiative is consistent with the city's firm commitment to address O'ahu's affordable housing crisis by partnering with other organizations that share the responsibility and desire to facilitate the availability of affordable housing for Native Hawaiians — a community significantly impacted by the rising costs of land on O'ahu," he said in a statement.

The effort by Kia'aina and Waters represents a third try in the past two decades by city officials to have the land once slated for an elementary school to become housing.

The city bought the property from Kaneohe Ranch in 1961 to provide land for an envisioned Kalaheo Elementary School. At the time the city was in charge of building schools.

In the years since new-school development was transferred to the state Department of Education, plans for Kalaheo Elementary were abandoned because four existing elementary schools in the area — Aikahi, Kailua, Kainalu and Mokapu — were sufficient.

With no need for a school on the site, the state Board of Education approved the city's desire to dispose of the parcel, which has views of the ocean and borders 18 homes along with the Kailua Assembly of God church below roughly 200 acres of preservation land.

In 2006, city leaders identified the site as one of a dozen city properties suited for low-income or homeless transitional housing.

But that effort, which envisioned contributing the land to a public-private development partnership at little cost to produce 60 multifamily homes, was never realized despite motivation to help address a critical need for affordable housing.

Another plan was floated in 2015 to sell the property for fair market value to a private developer via sealed bids. The Council's then-chair, Ernie Martin, introduced a resolution to seek bidders, but that effort fizzled as well.

Martin's plan encountered pushback from area residents who expressed concerns with issues that included traffic and land stability.

Ikaika Anderson, who at the time was the area's representative on the Council, reported that an overwhelming message from Kalaheo Hillside residents was that the city shouldn't sell the land to the highest bidder for residential development.

"The community opposes development and any sale," Anderson said at the time.

Hawaii's affordable housing crisis has only gotten worse over the past two decades. At the same time, DHHL has a lot of capital to expand its homestead development work.

The state Legislature in 2022 appropriated $600 million for the agency to mainly develop homesteads for beneficiaries, who must be at least 50 percent Hawaiian to directly receive 99-year land leases for $1 a year from DHHL but must pay for or build their own houses.

About 28,700 applicants are on DHHL's wait list for homesteads, and the agency aims to use the $600 million to produce 2,180 lots. Most of these lot development projects are large-scale, such as 450 lots at East Kapolei II on O'ahu, 380 lots at Laiopua Villages on Hawai'i Island and 161 lots at Pu'uhona on Maui.

DHHL is pursuing some small projects as well. They include 20 lots in Ho'olehua on Molokai and 25 lots on 3 acres of preservation-zoned land in Hawai'i Kai being acquired from Kamehameha Schools.

If the Kailua land deal is approved, DHHL could establish its first homestead community in the Windward O'ahu community.

"This conveyance is much more than the passing of land from one government agency to another; it is about giving our ohana the opportunity to root themselves in a community for generations to come," DHHL Director Kali Watson said.

"Transferring this land from the city to DHHL is a priceless gift that will create lasting benefits for our ohana," Watson said in a statement. "This partnership paves the way for our beneficiaries to build a community in Kailua, underscoring the tangible outcomes achievable through collaborations like this."

The resolution proposes to mainly give DHHL the land as an important public purpose.

City property tax assessors value the land at $10.5 million. The resolution proposes a sale price of $495,323. This amount, according to the resolution, represents the city's cost for previously exchanging land in Ewa with DHHL as part of the city's rail project.

obituaries

Reynaldo Jacinto Abrigo

Reynaldo Jacinto Abrigo passed away on May 17, 2024, in Lihu'e at the age of 54. He was born on April 17, 1970, in the Philippines. He was a cook.

He was preceded in death by father Ramon Abrigo.

He is survived by mother Charito Abrigo, daughter Mina (Ferdie) Guerrero, sons Reyson Abrigo, Kasen Abrigo, sister Maribel (Lito) Mejia, brother Nino (Jodi) Abrigo, two grandchildren, numerous nieces and nephews.

A service is Thursday, June 13, 2024, at Immaculate Conception Church in Lihu'e. Visitation begins at 8:30 a.m., Mass at 10 a.m., and burial to follow at Kalapaki Bay Memorial Park.

Borthwick Kaua'i Mortuary is assisting the family with arrangements.

Susan Pedronan Andrade

Susan Pedronan Andrade passed away on May 18, 2024, in Aiea, O'ahu at the age of 83. She was born on July 6, 1940, in Bangui, Ilocos Norte, Philippines. She was a supply clerk and nurse aide.

She was preceded in death by husband Alfred Andrade, parents Gregorio Pedronan and Luisa Pedronan, brothers Marcello Pedronan Sr., Nicomedes Pedronan and Elpidio Pedronan.

She is survived by brother Flor Pedronan, sisters Nives Soriano and Helen Pedronan.

A service is Saturday, June 15, 2024, at Holy Cross Catholic Church in Kalaheo. Visitation begins at 8:45 a.m., Mass at 9:45 a.m., and burial to follow at Holy Cross Catholic Church Cemetery.

Borthwick Kaua'i Mortuary is assisting the family with arrangements.

Michael Manzano Abigania



Abigania

Michael Manzano Abigania, of Mission Viejo, California, loving husband, father, grandfather, brother, and friend, went to be with the Lord on Sunday, March 17, 2024. He was born in Vigan, Ilocos Sur, Philippines on June 8, 1952.

Michael is survived by his wife, Arminda Pascual Abigania; daughters, Sherry (Franklin Jr.) Matthews, Michelle (Victor) Abigania-Libunao, Melany (Eric) Abigania-Chun; grandchildren, Makana, Kainani Libunao, Malia, Micah, Jacob, Jade Matthews; brothers, Louis (Edith) Abigania, Robert (Doris) Abigania, Richard (Tess) Abigania, Glenn (Sharon) Abigania, Reynold Abigania; sisters, Nancy Abigania, Vicky Abigania, Christine (Bernard Sr.) Mabini, Alice (Reggie) Hunt, and Brenda (Ho-Tai) Zerba.

Michael was preceded in death by his parents Rufo and Mary Abigania and sister Cynthia Dela Cruz.

Family and friends are invited to a Celebration of Life on Saturday, June 8, at St. John's Episcopal Church located in Ele'ele, at 10 a.m. Casual attire is requested.

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PHOTO COURTESY KŌLOA LANDING RESORT

JUNE 8
POKE FEST

The fourth annual Kaua'i Poke Fest returns to Kōloa Landing Resort with celebrity chef Sam Choy. The festival will feature live entertainment, 20 professional and amateur chefs and more than 600 pounds of fresh 'ahi poke. Proceeds will go toward Hawai'i Community Foundation's Maui Strong Fund.

Saturday, June 8, 2-7 p.m.
To purchase tickets, visit bit.ly/4bT49yc

8 JUNE

COMIC CON

Enjoy a day full of fun family entertainment at Kaua'i Comic Con 3, which takes place at Royal Sonesta Kaua'i Resort (3610 Rice St.) in Līhu'e. Comic cans can expect special guests, a cosplay contest and other activities. The event also features an array of vendors offering a range of merchandise and collectibles. Tickets are $25 for adults and free for children age 12 and under when accompanied by a paying adult.

Saturday, June 8, 11 a.m.-6 p.m.
For more info and ticket purchases, visit kauaicomicconvention.com

8 JUNE

ART EXHIBIT

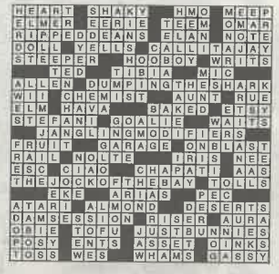
Kaua'i Society of Artists' annual art exhibit, Washed Up, will have its opening reception at 2600 Kaumuali'i Hwy. in Līhu'e. Attendees can view unique artworks created out of marine debris cleaned up off of Kaua'i shorelines. Admission is free.

Saturday, June 8-Friday, June 28
For more info, visit kauaisocietyofartists.org

Answers To This Week's
SUDOKU PUZZLE

8	9	7	2	3	6	4	5	1
2	5	1	8	4	7	6	3	9
4	6	3	1	5	9	8	2	7
7	3	6	4	8	1	2	9	5
9	2	8	5	7	3	1	4	6
1	4	5	6	9	2	3	7	8
5	7	2	3	1	8	9	6	4
3	1	9	7	6	4	5	8	2
6	8	4	9	2	5	7	1	3

Answers To This Week's
CROSSWORD PUZZLE



Answers To This Week's
SPOT 10 DIFFERENCES



U.S. Navy Pacific Missile Range Facility and NASA Kōke'e Park Geophysical Observatory Real Estate Environmental Impact Statement

NASA

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No ka Hōʻola ʻŌlelo Hawaiʻi ma ka Heʻenalu



Na Kaʻiwakīkahapono L. Foster, Grade 12
S.M. Kamakau Public Charter School

A ʻau mālie
Eia mai ka makakai heʻenalu
Kai heheʻe kākala o ka moku
ʻAuhea ʻoukou e nā hoa heʻenalu, nā hoa haku mele, nā hoa aloha ʻōlelo, aloha lāhui.
Oʻahu o Kākuhihewa
Koʻolauloa, Koʻolaupoko
Aia nō Kona, Aia nō ʻEwa
Aia ʻo Waialua, Aia ʻo Waiʻanae
Aia ka piko i Kūkaniloko
Hānau ʻia nā aliʻi
Kani mai ʻo ʻŌpuku me Hāweo
Ola nā mamo o Kākuhihewa

Ikēia mahina e hoʻohanohano ai kākou i ko kākou ʻōlelo makuahine, ka ʻōlelo Hawaiʻi, haʻaheo au e hāpai i kēia lono hoʻohauʻoli hauli.

I ka makahiki i hala iho nei, ua hoʻokumu ko Kamakau i ka pūʻali heʻenalu ʻōlelo Hawaiʻi piha, mua loa o ko Hawaiʻi pae ʻāina, o kēia au. A komo mākou ma nā hoʻokūkū heʻenalu ʻāpuni ʻo kō Oʻahu pae ʻāina. A paio aku paio mai mākou me nā kula kiʻekiʻe ʻē aʻe, e like hoʻi me kō Kamehameha, kō Punahou, kō Kahuku, kō Waialua, kō Waiʻanae, a pēlā wale aku.

Ma ka wā iā Kākuhihewa, aia kekahi kūlana nalu kaulana āna i heʻe ai. ʻO ia ʻo Mākāhā, i Kou, i Honolulu.

"Kū ka puna, ke koʻa i uka
Ka mākāhā o ka nalu o Kākuhihewa
Ua ʻō ʻia, nohāhā ka papa"

Aloha nō! ʻAʻole hoʻi i kamaʻāina nā maka o kēia hanauna i ia kūlana nalu. ʻAʻole paha i kamaʻāina nā pepeiao o kēia hanauna i ke kani haʻihaʻi o ia poʻinanalu. ʻAʻole paha i kamaʻāina nā ihu o kēia hanauna i ke ea ʻehukai ke pā mai ka makani Kona. ʻAʻole nō hoʻi i pae kēia hanauna ma ua nalu ala no ke kūkulu ʻia o kekahi pā pōhaku pale kai ma laila. Minamina!

Eia nō naʻe ka manawa e ʻau, pae, a heʻe nei i mua. Ola nō kēia mau lama ʻālohilohi o ka wā i hala ma o nā moʻolelo, nā mele hīmeni, me nā mele oli. No kākou, nā mamo ʻōlelo Hawaiʻi o kēia hanauna ke kuleana e hoʻāla i nā inoa o kēia mau wahi i ola ma o nā mele, ma nā waihona noʻonoʻo, ma nā naʻau, a ma nā waha hoʻi o kēlā me kēia kanaka o Hawaiʻi pae ʻāina.

No laila e nā hoa, eia nō mākou, ko Kamakau e kū nei i ka welo o kēia ʻohana ʻōlelo Hawaiʻi ma ka hoʻōla ʻana i ka ʻōlelo Makuahine ma kā mākou mau hana like ʻole, e laʻa hoʻi me ka hoe waʻa me ka heʻe nalu.

Ola nā iwi iā kākou
Ola ka inoa ʻo Mākāhā!
Ola ka ʻōlelo!
Ola ka lāhui! ■

U.S. Navy Pacific Missile Range Facility and
NASA Kōkeʻe Park Geophysical Observatory
Real Estate Environmental Impact Statement

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The public scoping period begins *May 8, 2024, and ends June 17, 2024*. Please attend a public scoping meeting and visit the project website to learn more. For language assistance or special accommodations, contact the PMRF Public Affairs Officer, at (808) 335-4740 or PMRFPublicAffairs@us.navy.mil. Requests for language assistance or special accommodations should be made at least seven days prior to the public meeting.

Submit Comments in Person, Online, or by Mail. Submit comments by *June 17, 2024*. The public may submit comments in any of the following ways: In person at a public scoping meeting, through the project website at PMRF-KPGO-EIS.com, by email to info@PMRF-KPGO-EIS.com, or by mail, postmarked by *June 17, 2024* to the following address: Naval Facilities Engineering Systems Command, Hawai'i, Environmental OPHEV2, Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Wells, 400 Marshall Road, Building X-11, Pearl Harbor, HI 96860.

For more information visit PMRF-KPGO-EIS.com

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Scoping Notifications

Notice of Intent

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including the agenda, is available on the DHB website, *https://www.health.mil/dhb*. A copy of the agenda or any updates to the agenda for the June 4, 2024, meeting will be available on the DHB website. Any other materials presented in the meeting may also be obtained at the meeting.

Purpose of the Meeting: The DHB provides independent advice and recommendations to maximize the safety and quality of, as well as access to, health care for DoD health care beneficiaries. The purpose of the meeting is to provide progress updates on specific tasks before the DHB. In addition, the DHB will receive information briefings on current issues related to military medicine.

Agenda: The DHB anticipates receiving updates from the DHB Public Health Subcommittee's tasking on Effective Public Health Communication Strategies with DoD personnel and the DHB Trauma and Injury Subcommittee's tasking on Prolonged Theater Care. The DHB also anticipates receiving briefings about the National Center for Disaster Medicine and Public Health and the Health of the Force Report.

Meeting Accessibility: Pursuant to 5 U.S.C. 552b and 41 CFR 102–3.140 through 102–3.165, this meeting is open to the public from 12:00 p.m. to 5:30 p.m. on June 4, 2024. The meeting will be held by videoconference/teleconference. The number of participants is limited and is on a first-come basis. All members of the public who wish to participate must register by emailing their name, rank/title, and organization/company to *dha.dhb@health.mil* or by contacting Dr. Clarice Waters at (703) 275–6003 no later than Tuesday, May 28, 2024. Once registered, participant access information will be provided.

Special Accommodations: Individuals requiring special accommodations to access the public meeting should contact Dr. Clarice Waters at (703) 275–6003 at least five (5) business days prior to the meeting so that appropriate arrangements can be made.

Written Statements: Any member of the public wishing to provide comments to the DHB related to its current taskings or mission may do so at any time in accordance with section 10(a)(3) of the FACA, 41 CFR 102–3.105(j) and 102–3.140, and the procedures described in this notice. Written statements may be submitted to the DHB's Designated Federal Officer (DFO), CAPT Clausen, at *shawn.s.clausen.mil@health.mil.* Supporting documentation may also be included, to establish the appropriate historical context and to provide any necessary background information. If the written statement is not received at least five (5) business days prior to the meeting, the DFO may choose to postpone consideration of the statement until the next open meeting. The DFO will review all timely submissions with the DHB President and ensure they are provided to members of the DHB before the meeting that is subject to this notice. After reviewing the written comments, the President and the DFO may choose to invite the submitter to orally present their issue during an open portion of this meeting or at a future meeting.

Dated: May 6, 2024.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2024–10123 Filed 5–8–24; 8:45 am]

BILLING CODE 6001–FR–P

DEPARTMENT OF DEFENSE

Department of the Navy

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Notice of Intent To Prepare an Environmental Impact Statement for Pacific Missile Range Facility and Kōkeʻe Park Geophysical Observatory Real Estate

AGENCY: Department of the Navy (DON), Department of Defense (DoD), and National Aeronautics and Space Administration (NASA).

ACTION: Notice.

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA) of 1969 and regulations implemented by the Council on Environmental Quality, the Department of the Navy (DON) and National Aeronautics and Space Administration (NASA), the DON and NASA announce their intent to prepare an Environmental Impact Statement (EIS) to evaluate the potential environmental effects associated with the continued long-term DoD use of 8,348 acres of State lands on Kauai, Hawaii for operational continuity and sustainment (in support of continued military training, testing, and facility operations) at the Pacific Missile Range Facility (PMRF), and the continued long-term NASA use of 23 acres of State lands on Kauaʻi, Hawaii in support of continued operations (including measurements of the Earth's rotation and local land motion) at Kōkeʻe Park Geophysical Observatory (KPGO).

DATES: The 40-day public scoping period begins on May 8, 2024, and extends to June 17, 2024. Comments must be postmarked or submitted electronically via the project website no later than 11:59 p.m. Hawaii Standard Time (HST) on June 17, 2024 for consideration in the Draft EIS.

Public scoping meetings are planned as follows:

- June 4, 2024, from 5:00–8:00 p.m. HST at Kauaʻi Veterans Center, 3215 Kauaʻi Veterans Memorial Highway, Līhuʻe
- June 5, 2024, from 5:00–8:00 p.m. HST at Kekaha Neighborhood Center, 8130 Elepaio Road, Kekaha
- June 6, 2024, from 5:00–8:00 p.m. HST at Sheraton Coconut Beach Resort, 650 Aleka Loop, Kapaʻa

The purpose of the scoping period is to provide the public with information related to the Proposed Action, its purpose and need, environmental resources to be analyzed in the EIS, the NEPA and HEPA process, consultation under NHPA, and public involvement opportunities. The DON and NASA are providing a web-based platform, as well as public scoping meetings for the public to learn about the Proposed Action and alternatives and to provide scoping comments. Comments must be postmarked or submitted electronically via the website no later than 11:59 p.m. HST on June 17, 2024 for consideration in the Draft EIS.

ADDRESSES: The DON and NASA invite all interested parties to submit scoping comments on the EIS or information regarding historic properties or Section 106 consulting party interest through the project website at *http://www.PMRF-KPGO-EIS.com* or by mail to: Naval Facilities Engineering Systems Command, Hawaii, Environmental OPHEV2, Attention: PMRF and KPGO RE EIS Project Manager, Ms. Kerry Wells, 400 Marshall Road, Building X–11, Pearl Harbor, HI 96860.

FOR FURTHER INFORMATION CONTACT:

DON: Commander, Navy Region Hawaii, Attn: Mr. Danny Hayes, Environmental Public Affairs Specialist, by telephone (808–473–0662) or email (*danny.r.bxhayes6.civ@us.navy.mil*).

NASA: Shari A. Miller, NASA; EIS Project Manager, by telephone (757–824–2327) or email (*Shari.A.Miller@nasa.gov*).

SUPPLEMENTARY INFORMATION:

As the proposed action involves State lands, the EIS will be a joint NEPA, Hawaii Environmental Policy Act (HEPA) (as governed by Hawaii Revised Statutes [HRS] chapter 343), and Hawaii Administrative Rules (HAR) section 11–200.1 (implementing HRS chapter 343) document; therefore, the public scoping processes will run concurrently and will jointly meet NEPA and HEPA

requirements. The DON and NASA are initiating a 40-day public scoping process to receive comments on the scope of the EIS including identification of potential alternatives and environmental concerns, information and analyses relevant to the Proposed Action, issues the public would like to see addressed in the EIS, and the project's potential to affect historic properties pursuant to section 106 of the National Historic Preservation Act (NHPA) of 1966. DON's action proponent for this proposal is Commander, Navy Region Hawaii.

The DON's purpose for the Proposed Action is to maintain long-term DoD use of 8,348 acres of State lands (including leaseholds and easement lands) on Kaua'i, Hawaii for operational continuity and sustainment of the military readiness mission. NASA's purpose for the Proposed Action is to maintain long-term use of 23 acres of State land on Kaua'i, Hawaii for continued operations of KPGO. The Proposed Action is needed because the existing real estate agreements are set to expire between 2027 and 2030. Preserving the long-term DoD and NASA use of these State lands is critical for military readiness, continuation of ongoing military training and testing, and maintaining data collection efforts of global significance. It also ensures the continued conservation management by the DON and NASA of natural and cultural resources on these lands.

For the Hawaii Department of Land and Natural Resources (DLNR), in addition to its role as the lessor of State lands, the proposed real estate action presents an opportunity for the agency to secure a revenue source to support its management of public lands and associated environmental and conservation programs. Fees from leases and easements are put into a State fund as required by law.

By ensuring continued DON and NASA operations on Kaua'i, the real estate action would also preserve local jobs and income for the residents of Kaua'i, financially contribute to the overall economic well-being of Kaua'i, and maintain continued conservation management of natural and cultural resources on State lands at no cost to the State of Hawaii.

The DON and NASA have identified two preliminary action alternatives to carry forward for analysis in the EIS, along with the No Action Alternative.

Alternative 1 (Succeeding Current Real Estate Agreements): The DON and NASA would apply to DLNR for new long-term real estate agreements in the same manner and for the same uses as the current leases and easements.

Alternative 2 (Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds): The DON and NASA would pursue fee simple acquisition of 700 acres (684—DON, 16—NASA) of leaseholds, and otherwise obtain use of the remaining acreage as described in Alternative 1.

Alternative 3 (No Action Alternative): The DON and NASA would not seek any real estate agreements for the State lands on Kaua'i after expiration of the leases and easements between 2027 to 2030. The current real estate agreements for 8,348 acres with the DON and 23 acres with NASA would expire. All existing infrastructure would be removed, or abandoned in place (as determined by the existing real estate agreements), from the DON and NASA leased and easement lands.

Consistent with Council on Environmental Quality regulations and HAR section 11–200.1–24(b), the scope of the analysis for the alternatives in this EIS is proportionate to the potential for environmental impacts. The following 13 resources have a potential for impacts and are analyzed in this EIS: archaeological and historic resources, cultural practices, biological resources, land use, socioeconomics, environmental justice, water resources, utilities, public health and safety, air quality and greenhouse gases, transportation, hazardous materials and wastes, and visual resources. The EIS will analyze measures that would avoid, minimize, or mitigate environmental effects. The DON and NASA will conduct coordination, consultation, and permitting activities required by the NHPA, the Endangered Species Act, the Clean Water Act, the Coastal Zone Management Act, Hawaii Revised Statues chapter 183C and HAR chapter 13–5, HAR chapter 6E, and other laws and regulations determined to be applicable to the project.

This EIS will satisfy both Federal and State of Hawaii requirements and provide the necessary analyses to allow the DON, NASA, and DLNR to consider the environmental effects of the Proposed Action and alternatives as part of their decision-making. The DON and NASA encourages Federal, State, and local agencies, and interested persons to provide comments concerning the alternatives proposed for study and environmental issues for analysis in the EIS, as well as to identify specific environmental resources the DON and NASA should consider when developing the Draft EIS. The DON and NASA will prepare the Draft EIS and will include analyses of potential effects to the resources the DON, NASA, and the commenting public have identified. All comments received during the public scoping period will be considered during EIS preparation.

Comments must be postmarked or submitted electronically by email to *info@PMRF-KPGO-EIS.com,* and/or electronically through the EIS website at *www.PMRF-KPGO-EIS.com.* Comments must be posted by 11:59 p.m. HST on June 17, 2024.

After the scoping period, the DON and NASA will develop the Draft EIS. The DON and NASA intend to release the Draft EIS in summer of 2025, the Final EIS in spring of 2026, with a Record of Decision signed in late spring of 2026.

Dated: May 6, 2024.

Emily A. Pellegrino,

Program Analyst, Directives and Regulatory Team, National Aeronautics and Space Administration.

J.E. Koningisor,

Lieutenant Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2024–10167 Filed 5–8–24; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER23–2764–004.

Applicants: Northeastern Power & Gas, LLC.

Description: Tariff Amendment: Amendment to 12 to be effective 9/25/2023.

Filed Date: 5/3/24.

Accession Number: 20240503–5171.

Comment Date: 5 p.m. ET 5/24/24.

Docket Numbers: ER24–1420–001.

Applicants: Sierra Estrella Energy Storage LLC.

Description: Tariff Amendment: Response to Deficiency Letter to be effective 3/18/2024.

Filed Date: 5/3/24.

Accession Number: 20240503–5097.

Comment Date: 5 p.m. ET 5/24/24.

Docket Numbers: ER24–1421–001.

Applicants: Superstition Energy Storage LLC.

Description: Tariff Amendment: Superstition Energy Storage LLC submits tariff filing per 35.17(b): Response to Deficiency Letter to be effective 3/18/2024.

Filed Date: 5/3/24.

Accession Number: 20240503–5098.

Scoping Notifications

Environmental Impact Statement Preparation Notice

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JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA





STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA

P.O. BOX 621
HONOLULU, HAWAII 96809

DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RYAN K.P. KANAKA'OLE
FIRST DEPUTY

DEAN D. UYENO
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

April 29, 2024

Mary Alice Evans, Acting Director
Office of Planning and Sustainable Development
c/o Environmental Review Program
235 South Beretania Street, Room 702
Honolulu, Hawai'i 96813

SUBJECT: Publication of the Environmental Impact Statement Preparation Notice (EISPN) for the Proposed Pacific Missile Range Facility and Kōke'e Park Geophysical Observatory Real Estate Project Located in Kekaha, West Kaua'i on the Island of Kaua'i, Further Identified as Tax Map Key(s): (4)1-2-001:001, 006, & 010; (4)1-2-002:001, 010-013, 015, & 024-030; (4) 1-2-016:011; (4) 1-4-001:002, 013, 014, & 999; and (4) 2-1-003:018

Dear Ms. Evans:

With this letter, the Department of Land and Natural Resources (DLNR) submits the Pacific Missile Range Facility and Kōke'e Park Geophysical Observatory Real Estate Environmental Impact Statement Preparation Notice (EISPN) for publication in the next available edition of The Environmental Notice on May 8, 2024. The applicants for the action are the United States Department of the Navy (U.S. Navy) and the National Aeronautics and Space Administration (NASA).

The DLNR has coordinated with the applicants to determine the appropriate level of environmental review for the action. So as to not overlook any potentially significant impact to the natural and/or human environment, an Environmental Impact Statement will be prepared pursuant to Hawai'i Revised Statutes (HRS) §343-5(e) and Hawai'i Administrative Rules (HAR) §11-200.1-14(d)(2).

The required publication form and files have been provided electronically via the "Online Submittal Form" on the Office of Planning and Sustainable Development, Environmental Review Program website. The submittal includes a .pdf file of the EISPN and .zip file containing a shapefile of the project's location boundary. Concurrent with the electronic submittal and as required by HAR §11-200.1-5(4)(B), paper copies of the EISPN have been submitted to the nearest state library (Waimea Public Library, Kaua'i) and the Hawai'i Documents Center (Hawai'i State Library, O'ahu).

Pursuant to HAR §11-200.1-23(10)(c), publication of the EISPN in *The Environmental Notice* initiates a 30-day public comment period for parties to provide comments regarding potential effects of the proposed action. A Notice of Intent for the project will also be published in the Federal Register. The applicants are preparing a single EIS compliant with both the Hawai'i Environmental Impact Statements law (HRS Chapter 343) and the National Environmental Policy Act as allowed under HAR §11-200.1-31.

Should you have any questions, please contact Mr. Russell Tsuji, Land Division Administrator at (808) 587-0422.

Sincerely,

Dawn N.S. Chang,
Chairperson

From: webmaster@hawaii.gov
To: DBEDT OPSD Environmental Review Program
Subject: New online submission for The Environmental Notice
Date: Wednesday, May 1, 2024 8:41:33 AM

Action Name

Pacific Missile Range Facility and Kōkeʻe Park Geophysical Observatory Real Estate Environmental Impact Statement

Type of Document/Determination

Environmental impact statement preparation notice (EISPN)

HRS §343-5(a) Trigger(s)

- (1) Propose the use of state or county lands or the use of state or county funds
- (2) Propose any use within any land classified as a conservation district

Judicial district

Waimea, Kauaʻi

Tax Map Key(s) (TMK(s))

(4) 1-2-002:001; (4) 1-2-002:012; (4) 1-2-002:015; (4) 1-2-002:027; (4) 1-2-002:028; (4) 1-2-001:006; (4) 1-2-016:011; (4) 1-4-001:999; (4) 1-2-002:029; (4) 1-2-002:030; (4) 2-1-003:018; (4) 1-2-001:001; (4) 1-2-002:024; (4) 1-2-002:025; (4) 1-2-002:026; (4) 1-4-001:002; (4) 1-4-001:013; (4) 1-4-001:014; (4) 1-2-002:013; (4) 1-2-001:010; (4) 1-2-002:010; (4) 1-2-002:011; (4) 1-4-001:013

Action type

Applicant

Other required permits and approvals

Numerous

Discretionary consent required

Use of State land

Approving agency

Department of Land and Natural Resources, Land Division

Agency contact name

Russell Tsuji

Agency contact email (for info about the action)

dlnr.land@hawaii.gov

Email address or URL for receiving comments

info@PMRF-KPGO-EIS.com

Agency contact phone

(808) 587-0419

Agency address

1151 Punchbowl Street
Room 220
Honolulu, Hawaii 96813
United States
Map It

Public Scoping Meeting information

6/4/2024, 5-8pm 3215 Kaua‘i Veterans Memorial Highway, Līhu‘e

Accepting authority

State of Hawaii Board of Land and Natural Resources

Applicant

United States Department of the Navy

Applicant contact name

Kerry Wells

Applicant contact email

info@PMRF-KPGO-EIS.com

Applicant contact phone

(808) 473-0662

Applicant address

400 Marshall Road
Building X-11
Pearl Harbor, Hawaii 96860
United States
Map It

Is there a consultant for this action?

Yes

Consultant

Cardno GS-AECOM Pacific Joint Venture

Consultant contact name

Michele Lefebvre

Consultant contact email

info@PMRF-KPGO-EIS.com

Consultant contact phone

(808) 791-9872

Consultant address

737 Bishop Street
Suite 3050
Honolulu, Hawaii 96813
United States
Map It

Action summary

The Navy proposes to retain the use of 8,348 acres of State lands on Kauaʻi, Hawaiʻi, for operational continuity and sustainment (in support of continued military training, testing, and facility operations) at Pacific Missile Range Facility (PMRF). NASA proposes to retain the use of 23 acres of State lands on Kauaʻi, Hawaiʻi, in support of continued operations including measurements of the Earth's rotation and local land motion at Kōkeʻe Park Geophysical Observatory (KPGO).

Attached documents (signed agency letter & EA/EIS)

- 240429-ERP-Transmittal-Letter-for-PMRF-EISPN-RUSH-part-1-signed.pdf
- PMRF-and-KPGO-RE-EIS-Version-Report-EISPN-1May2024.pdf

Action location map

- PMRF-and-KPGO-Real-Estate-EIS-Location-Boundary.zip

Authorized individual

Michele Lefebvre

Authorization

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

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ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE

for

PACIFIC MISSILE RANGE FACILITY AND KŌKEʻE PARK GEOPHYSICAL OBSERVATORY REAL ESTATE

KAUAʻI, HAWAIʻI

May 2024

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Project Information Summary (Abstract)

Project Name:	Pacific Missile Range Facility and Kōkeʻe Park Geophysical Observatory Real Estate Environmental Impact Statement	
Applicants (Joint Lead Agencies under NEPA):	United States Department of the Navy Naval Facilities Engineering Systems Command Environmental OPHEV2 400 Marshall Road Building X-11 Pearl Harbor, HI 96860 Contact: Kerry Wells Phone: 808-473-0662 Email:info@PMRF-KPGO-EIS.com	National Aeronautics and Space Administration Goddard Space Flight Center 34200 Fulton Street Wallops Island, VA 23337, Contact: Shari Miller Phone: 757-824-2327 Email: Shari.A.Miller@nasa.gov
Approving Agency:	Department of Land and Natural Resources, Land Division 1151 Punchbowl Street, Room 220 Honolulu, Hawaiʻi 96813 Phone: 808-587-0419 Email: dlnr.land@hawaii.gov	
Accepting Authority:	State of Hawaii Board of Land and Natural Resources	
Planning Consultant:	Cardno GS-AECOM Pacific Joint Venture Local Office: Stantec GS Inc. 737 Bishop Street, Suite 3050 Honolulu, HI 96813 Contact: Michele Lefebvre Phone: 808-791-9872 Email: info@PMRF-KPGO-EIS.com	
Location:	County of Kauaʻi, Hawaiʻi	
District:	Waimea	
Tax Map Keys:	(4) 1-2-002:001, (4) 1-2-002:012, (4) 1-2-002:015, (4) 1-2-002:027, (4) 1-2-002:028, (4) 1-2-001:006, (4) 1-2-016:011, (4) 1-4-001:999, (4) 1-2-002:029, (4) 1-2-002:030, (4) 2-1-003:018, (4) 1-2-001:001, (4) 1-2-002:024, (4) 1-2-002:025, (4) 1-2-002:026, (4) 1-4-001:002, (4) 1-4-001:013, (4) 1-4-001:014, (4) 1-2-002:013, (4) 1-2-001:010, (4) 1-2-002:010, (4) 1-2-002:011, (4) 1-4-001:013	
Land Area:	Navy lease area and easements: 8,348 acres	NASA lease area and easements: 23 acres
Recorded Fee Owner:	State of Hawaiʻi	
Existing Use:	Navy Uses: Antenna structures, ordnance storage/assembly facilities, missile tracking and surveillance facilities, water well, undeveloped land used for safety zone buffers, drainage management, roadways, and access to utilities	NASA Uses: Kōkeʻe Park Geophysical Observatory, antenna structures, data collection systems, and supportive infrastructure
State Land Use District:	Agricultural, Conservation	
Zoning:	Agricultural, Conservation, Open Space, Special Treatment – Ecological	
Flood Zone Designation:	A, AE, D, VE, X	

Proposed Action:	The Navy proposes to retain the use of 8,348 acres of State lands on Kaua‘i, Hawai‘i, for operational continuity and sustainment (in support of continued military training, testing, and facility operations) at Pacific Missile Range Facility (PMRF). NASA proposes to retain the use of 23 acres of State lands on Kaua‘i, Hawai‘i, in support of continued operations including measurements of the Earth’s rotation and local land motion at Kōke‘e Park Geophysical Observatory (KPGO).
HRS Chapter 343 Trigger(s):	Proposed use of state or county lands, propose any use within any land classified as a Conservation District

Project Summary:

The United States (U.S.) Department of the Navy (Navy) and the National Aeronautics and Space Administration (NASA) as applicants and joint lead agencies have prepared this Environmental Impact Statement Preparation Notice (EISPN) and a separate Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS) in accordance with the following: the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [U.S.C.] 4321 et seq.), as amended by the Fiscal Responsibility Act of 2023 (Public Law [P.L.] No. 118-5, div. C, tit. III, 321(b), 137 Stat. 10, 40 (amending NEPA § 107) (2023) (codified at 42 U.S.C. § 4336a); Council on Environmental Quality, Navy and NASA policies and regulations; and Hawai‘i Revised Statutes (HRS) Chapter 343 and Hawai‘i Administrative Rules (HAR) § 11-200.1. The Navy proposes to retain the use of 8,348 acres of State lands on Kaua‘i, Hawai‘i, for operational continuity and sustainment (in support of continued military training, testing, and facility operations) at the Pacific Missile Range Facility (PMRF). NASA proposes to retain the use of 23 acres of State lands on Kaua‘i, Hawai‘i, in support of continued operations including measurements of the Earth’s rotation and local land motion at Kōke‘e Park Geophysical Observatory (KPGO). The Proposed Action is needed because the existing real estate agreements for these lands are set to expire between 2027 and 2030. The Navy and NASA are considering two action alternatives and the No Action Alternative. The Draft EIS will evaluate potential environmental impacts associated with these alternatives. The following resource areas are evaluated: archaeological and historic resources, cultural practices, biological resources, land use, socioeconomics, environmental justice, water resources, utilities, public health and safety, air quality and greenhouse gases, transportation, hazardous materials and wastes, and visual resources.

Pacific Missile Range Facility and Kōkeʻe Park Geophysical Observatory Real Estate Environmental Impact Statement Preparation Notice

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Abbreviations and Acronyms

ACHP	Advisory Council on Historic Preservation
AFFF	Aqueous Film Forming Foam
APE	Area of Potential Effects
ARPA	Archaeological Resources Protection Act
AT	Anti-Terrorism
BMP	Best Management Practice
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
CIA	Cultural Impact Assessment
CNRH	Commander, Navy Region Hawai‘i
CO	Carbon Monoxide
COMNAVREG	Commander, Navy Region
CRM	Cultural Resources Management
CZMA	Coastal Zone Management Act
DAR	Division of Aquatic Resources
DHHL	State of Hawai‘i Department of Hawaiian Home Lands
DLNR	Department of Land and Natural Resources
DoD	Department of Defense
DOFAW	DLNR Division of Forestry and Wildlife
DOH	Hawai‘i Department of Health
DORIS	Doppler Orbitography and Radio-positioning Integrated by Satellite
EIS	Environmental Impact Statement
EISPN	Environmental Impact Statement Preparation Notice
EO	Executive Order
ESA	Endangered Species Act
ESQD	Explosive Safety Quantity Distance
GHA	Ground Hazard Area
GHG	Greenhouse Gas
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
HAR	Hawai‘i Administrative Rules
HEPA	Accepted Term for Hawai‘i Revised Statutes Chapter 343
HRS	Hawai‘i Revised Statutes
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
ITRF	International Terrestrial Reference Frame
KISC	Kaua‘i Invasive Species Committee
KPGO	Kōke‘e Park Geophysical Observatory
MBTA	Migratory Bird Treaty Act
MOA	Memorandum of Agreement
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NASA	National Aeronautics and Space Administration
Navy	Department of the Navy
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NRHP	National Register of Historic Places
O_3	Ozone
OPNAVINST	Office of the Chief of Naval Operations Instruction
PA	Programmatic Agreement
P.L.	Public Law
PCB	Polychlorinated Biphenyl
PFAS	Per- and Polyfluoroalkyl Substances
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter Less than or Equal to 2.5 Microns in Diameter
PM_{10}	Particulate Matter Less than or Equal to 10 Microns in Diameter
PMRF	Pacific Missile Range Facility
RADAR	Radio Detecting and Ranging

RDT&E	Research, development, test and evaluation
REPI	Readiness and Environmental Protection Integration
SECNAVINST	Secretary of the Navy Instruction
SGP	Space Geodesy Project
SHPD	State Historic Preservation Division
SHPO	State Historic Preservation Office
SLUD	State Land Use District
SO_2	Sulfur Dioxide
SOP	Standard Operating Procedure
SOS	Save Our Shearwaters
T&E	Test and Evaluation
U.S.	United States
U.S.C.	United States Code
USCB	United States Census Bureau
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VLBI	Very Long Baseline Interferometry

1 Purpose of and Need for the Proposed Action

This chapter provides the following: an introduction and overview of the project; the project location, background, purpose of and need for the Proposed Action; scope of analysis; relevant laws and regulations; and public and agency participation.

1.1 Project Introduction and Overview

The United States (U.S.) Department of the Navy (Navy) and the National Aeronautics and Space Administration (NASA) are joint lead agencies and are preparing a Draft Environmental Impact Statement (EIS) in coordination with the Hawai‘i Department of Land and Natural Resources (DLNR) (Hawai‘i Administrative Rules [HAR] § 11-200.1-23 (a)(4)). The EIS will evaluate the potential environmental consequences of the Navy’s and NASA’s proposal to retain the use of 8,348 acres and 23 acres, respectively, of State lands including leaseholds and easement lands on Kaua‘i, Hawai‘i, for operational continuity and sustainment (in support of the military’s continued and ongoing military training, testing, and facility operations) at the Pacific Missile Range Facility (PMRF), and NASA’s continued operations including measurements of the Earth’s rotation and local land motion at Kōke‘e Park Geophysical Observatory (KPGO).

The Navy’s current real estate agreements with DLNR include 684 acres of leaseholds and 7,664 acres of easement lands, for a total of 8,348 acres. These existing Navy real estate agreements with DLNR are set to expire between 2027 and 2030. The Navy’s current leases and easements are primarily used for passive encroachment buffers, as well as for mission readiness (see Section 1.2 and Appendix D), access, and utilities at the following five general locations: Main Base, Kamokalā Ridge, Mānā Water Well, Miloli‘i Ridge, and Mākaha Ridge. No ground-based training occurs on these parcels. The Navy’s 8,348 acres of leaseholds and easement lands are part of the larger PMRF installation.

NASA’s current real estate agreements with DLNR include 16 acres of leaseholds and 7 acres of easement lands, for a total of 23 acres. NASA uses the land for operations at KPGO that include collecting and coordinating geodetic data that contribute to daily measurements of the Earth’s rotation and orientation in space. NASA issued the Navy a Use Permit in 2016 for portions of KPGO to conduct radar, telemetry, and communications services in support of PMRF operations. In addition to their mission operations, the Navy and NASA also conduct environmental management and stewardship activities on these lands.

These leases and easements collectively comprise the Project Area that will be analyzed in the EIS.

Figure 1-1 depicts an overview of general locations for PMRF and KPGO (Main Base, Kamokalā Ridge, Mānā Water Well, Miloli‘i Ridge, Mākaha Ridge, and KPGO) on the Island of Kaua‘i. The Project Area includes leaseholds and easement lands within these locations; it does not include the 1,933 acres of federally owned fee simple lands.

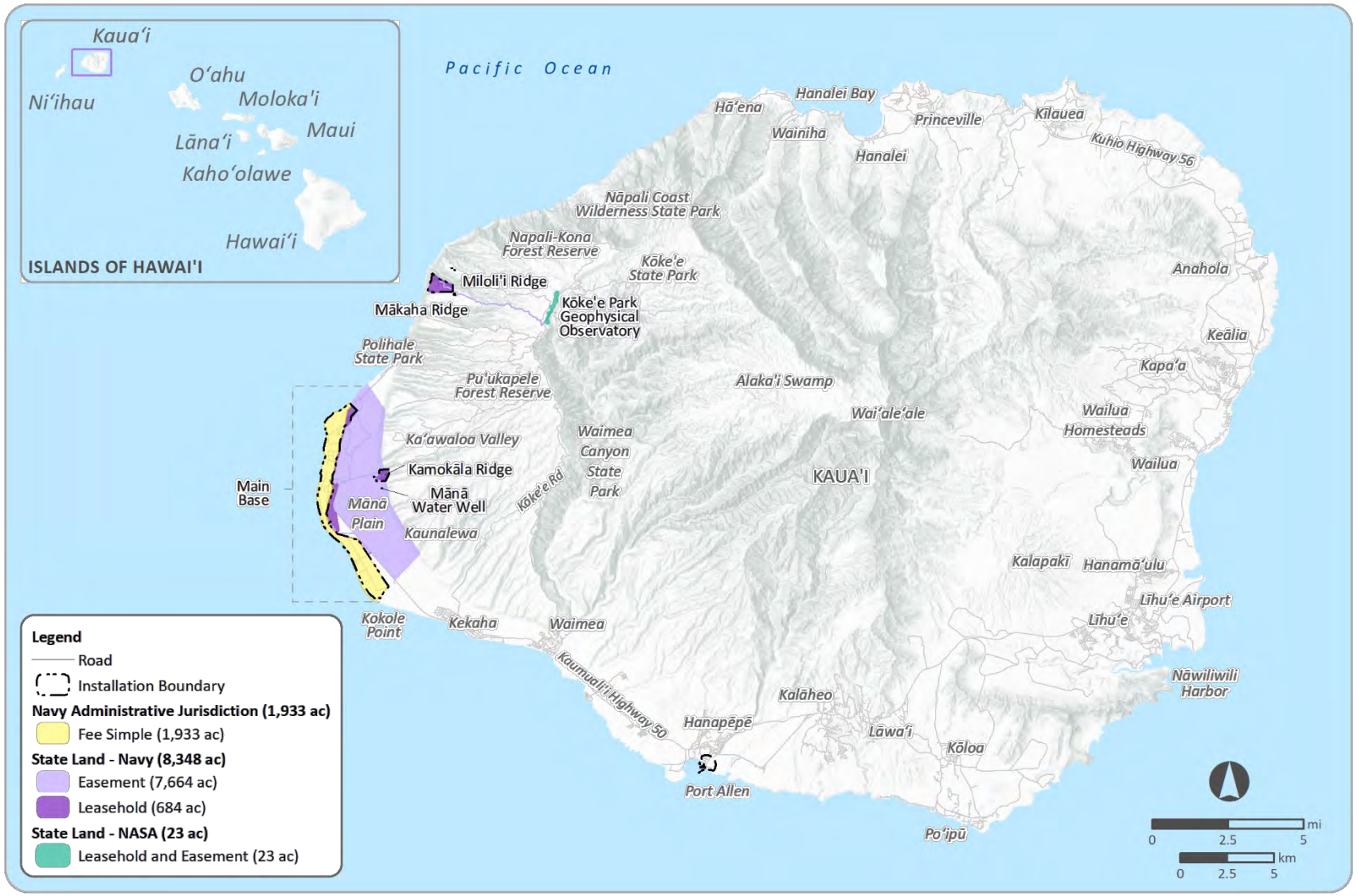


Figure 1-1 General Location

The Navy and NASA have jointly prepared this document and a separate Notice of Intent (NOI) to prepare an EIS in accordance with federal and state law including: the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [U.S.C.] 4321–4370), as amended by the Fiscal Responsibility Act of 2023 (Public Law [P.L.] No. 118-5 , div. C, tit. III, § 321(b), 137 Stat. 10, 40 (amending NEPA § 107) (2023) (codified at 42 U.S.C. § 4336a)); the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] §§ 1500–1508); Navy and NASA regulations and policies for implementing NEPA (32 CFR § 775, 14 CFR § 1216, OPNAVINST 5090.1E, and NPR 8580.1A, 32 CFR); all applicable federal environmental laws and agency guidance listed in Appendix B; Hawai‘i Revised Statutes (HRS) Chapter 343 (the state law governing preparation of an EIS and commonly referred to as “HEPA”); and HAR § 11-200.1 (implementing HRS Chapter 343).

As requested by and in coordination with DLNR, the Navy and NASA identified that an EIS is the appropriate level of environmental review for the Proposed Action (HAR § 11-200.1-23 (a)(5)) (Lauren Yasaka e-mail message to Kerry Wells, email title: Lauren Pacific Missile Range Facility and Kōke‘e Park Geophysical Observatory Real Estate EIS, January 18, 2024). HAR § 11-200.1-14(d)(2) supports this determination, which provides “[if the] proposing agency or approving agency determines, through its judgment and experience that an EIS is likely to be required, then the proposing agency may choose to prepare, or an approving agency may authorize an applicant to prepare, an EIS in accordance with subchapter 10, beginning with preparation of an EISPN.” Additionally, due to the nature of the Proposed Action, the Navy and NASA concur with DLNR’s determination that an EIS is likely to be required. An EIS also helps ensure that input from the public and agencies is integrated into the process of assessing environmental impacts of the Proposed Action and conducting fully informed decision making.

DLNR’s mission is to “[e]nhance, protect, conserve and manage Hawai‘i’s unique and limited natural, cultural and historic resources held in public trust for current and future generations of the people of Hawai‘i nei, and its visitors, in partnership with others from the public and private sectors” (Hawai‘i DLNR, 2024). DLNR is also responsible for issuing and managing leases of State lands (agricultural, pasture, commercial, industrial, governmental, and resort leases). DLNR’s responsibilities include managing and maintaining the state’s coastal lands and waters, water resources, conservation and forestry lands, historic sites, small boat harbors, parks, and recreational facilities. DLNR also performs public safety duties (e.g., flood and rockfall prevention), maintains unencumbered public lands, and enforces the agency’s rules and regulations.

For this Proposed Action, DLNR is responsible for issuing leases and easements to the Navy and NASA. DLNR is the agency with the responsibility for approving the real estate action since the State lands are under the management of DLNR’s Land Division. DLNR is required to conduct an environmental review of this Proposed Action because the Navy and NASA are proposing the continued use of State lands (HRS § 343-5(a)(1), (2), (4)). Pursuant to HRS § 343-5(h): “[w]henever an action is subject to both the National Environmental Policy Act of 1969 (Public Law 91-190) and the requirements of this chapter, [DLNR] shall cooperate with federal agencies to the fullest extent possible to reduce duplication between federal and state requirements. Such cooperation, to the fullest extent possible, shall include joint environmental impact statements with concurrent public review and processing at both levels of government. Where federal law has environmental impact statement requirements in addition to but not in conflict with this chapter, [DLNR] and agencies shall cooperate in fulfilling these requirements so that one document shall comply with all applicable laws.” Under HAR § 11-200.1-28, DLNR, as the accepting authority for HEPA,

evaluates whether the EIS fulfills the intent of HRS Chapter 343. In addition, during review of the EIS, DLNR will consider HRS Title 12, Chapter 171 (Hawai‘i’s land lease law).

1.2 Project Area

PMRF is located approximately 100 miles from O‘ahu on the northwest coast of the Hawaiian island of Kaua‘i (refer to Figure 1-1). KPGO is located within Kōke‘e State Park on the island of Kaua‘i, at an elevation of approximately 3,600 feet above sea level near Waimea Canyon.

The Project Area overview is shown in Figure 1-2. Current real estate details for the Main Base, Kamokalā Ridge, and Mānā Water Well portions of the Project Area are shown in Figure 1-3. Mākaha, Miloli‘i Ridge, and KPGO portions of the Project Area are shown in Figure 1-4.

The Project Area consists of the following:

- Main Base: leaseholds (392 acres) and easement lands (7,267 acres), located adjacent to the fee-simple lands at the installation, used for PMRF operational support, utilities and flood control, and as safety buffers;
- Kamokalā Ridge: leaseholds (89 acres) and easement lands (355 acres) used for ordnance storage, utilities access, and tsunami evacuation;
- Mānā Water Well: leaseholds (0.29 acre) used as the primary potable water source for PMRF;
- Mākaha Ridge: leaseholds (203 acres) and easement lands (42 acres) used for missile tracking and surveillance;
- Miloli‘i Ridge: leaseholds (0.015 acre) used for radar and telemetry activities; and
- KPGO: leaseholds (16 acres) and easement lands (7 acres) used for surveillance and tracking, as well as NASA geodetic data collection and backup power generation.

1.3 Background

1.3.1 Historic Land Use at PMRF

The history of the Mānā Plain is complex, with the earliest known traditional Hawaiian archaeological site at PMRF dating to the eleventh century (NAVFAC Pacific, 2012). Appendix A provides a more detailed summary of land use history at PMRF.

Traditionally, the people of Mānā were noted as fishermen. It is likely that permanent settlements were concentrated at the inland edge of the Mānā Plain, where houses, temples, and agricultural complexes were built in the foothills at the base of the cliffs, on high ground overlooking the wetlands and coastline. Small seasonal fishing communities were scattered along the coast. The people of Mānā developed and maintained brackish water loko pu‘uone fishponds in the wetlands of the Mānā Plain. Inland of the wetlands, they grew sweet potatoes and gourds on the fertile strip of land at the foot of the pali. The coastal dunes of the Mānā Plain, particularly at Nohili, were the burial grounds of ancient Hawaiians. Several important heiau were located at Mānā. These heiau include Polihale, where rites associated with departing souls were conducted, and ‘Elekuna, which King Kalakaua and his priests visited many times in the nineteenth century.

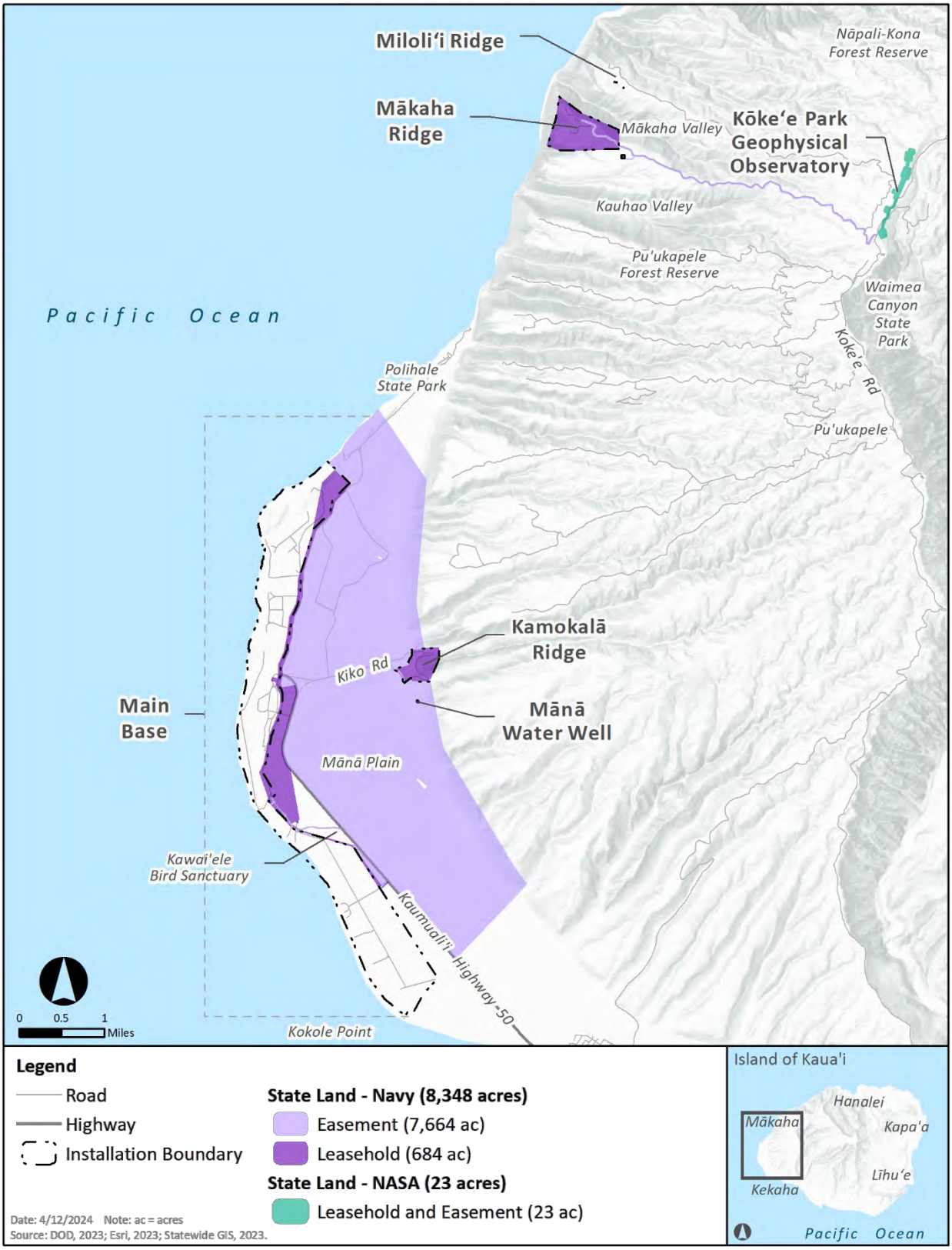


Figure 1-2 Project Area: Overview

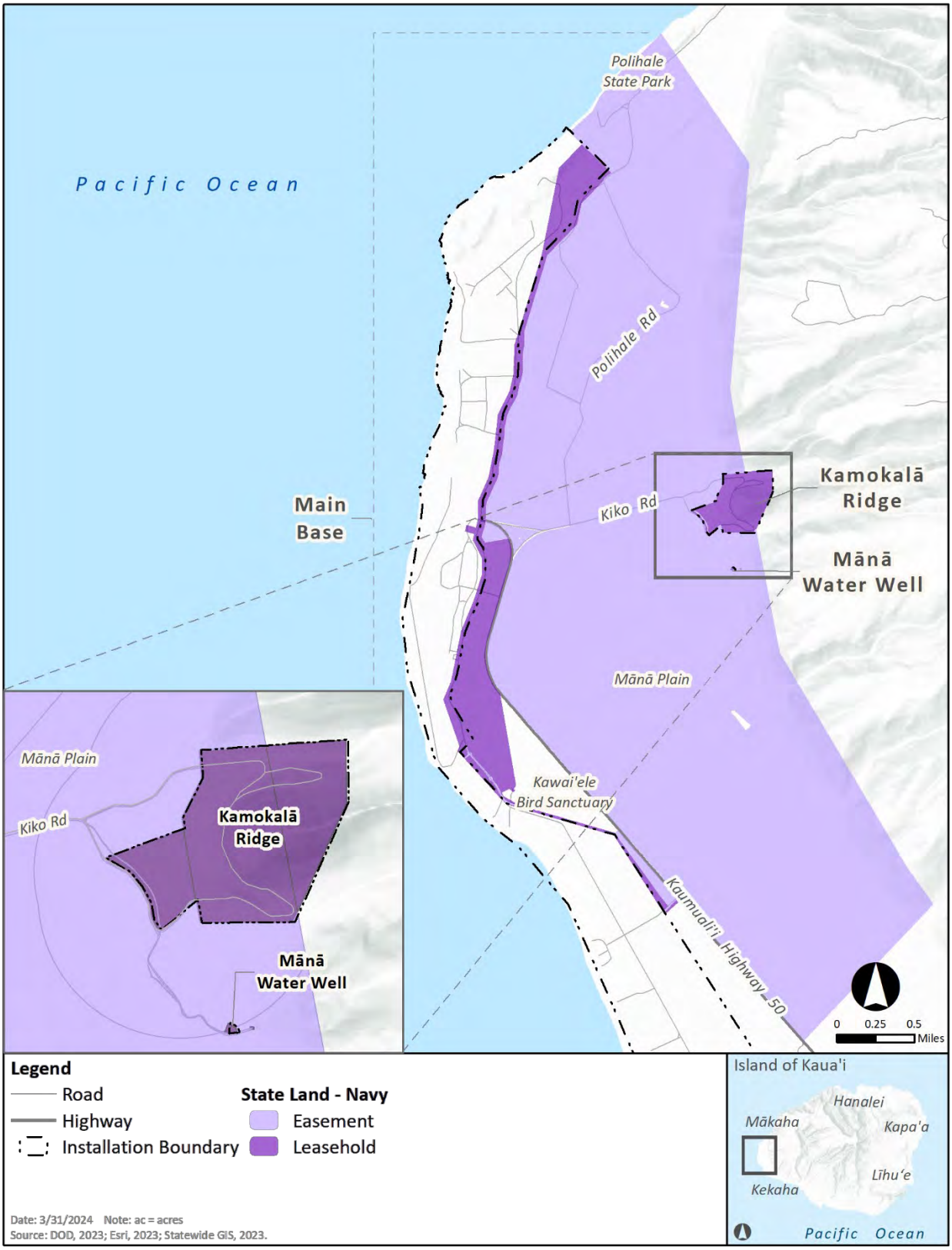


Figure 1-3 Project Area: Main Base, Kamokalā, and Mānā Water Well

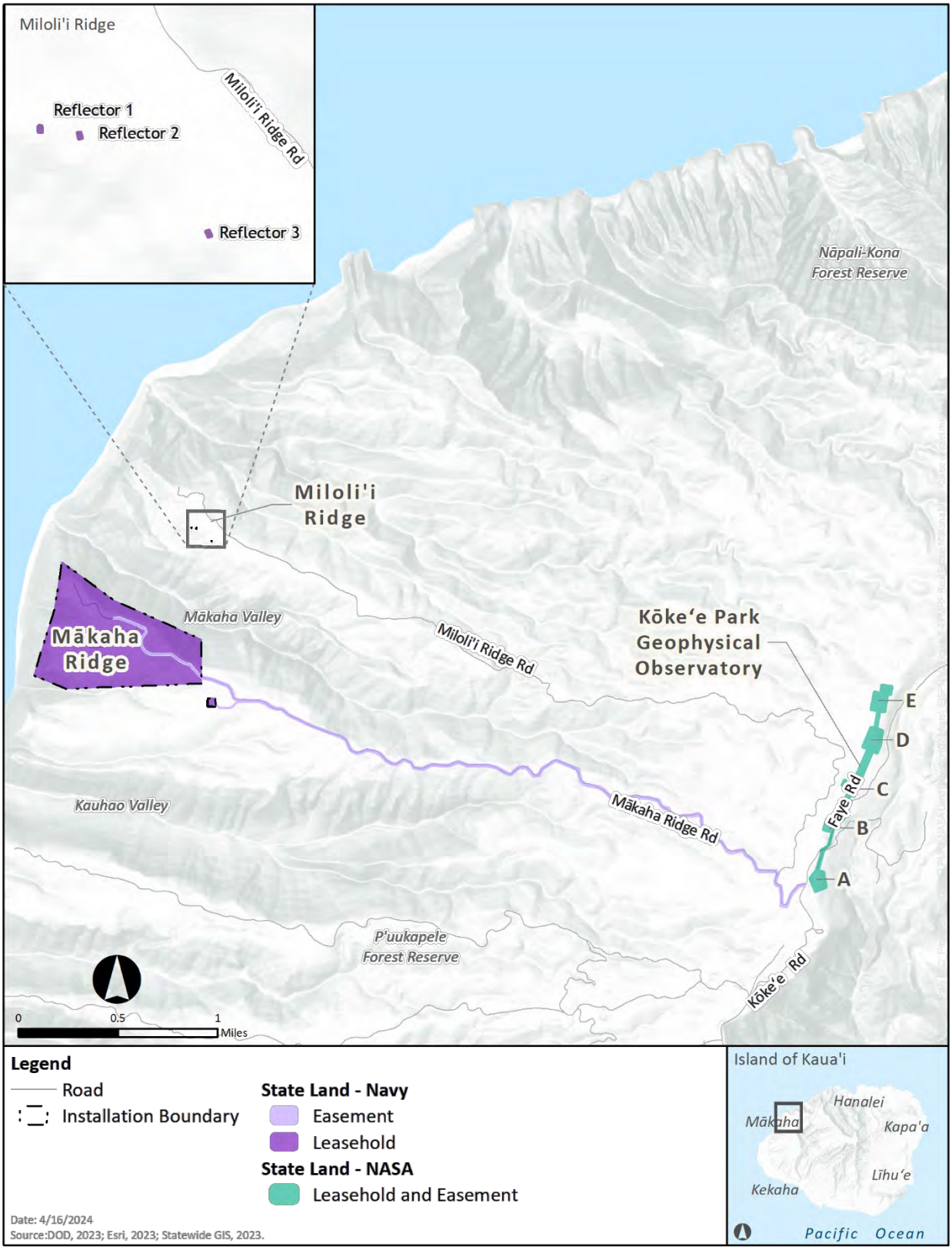


Figure 1-4 Project Area: Mākaha Ridge, Miloli'i Ridge, and KPGO

The Māhele of 1848 placed the ahupua'a of Waimea, including the Mānā Plain, into the possession of the Crown, and shortly afterwards the Crown leased these lands for commercial agriculture, such as livestock grazing, rice production, and sugarcane cultivation. As these agricultural ventures grew over the next three decades, contract laborers from China, then Japan, and finally the Philippines were brought to the area. Plantation camps were built to house the laborers. Mānā Camp eventually included a school, three stores, a company office, and a post office. Much of the wetlands were drained or filled to create more arable land for sugarcane cultivation under the Kekaha Sugar Company, Ltd., which was formed in 1898. Commercial sugarcane cultivation continued through the twentieth century.

In the 1920s, an airstrip was built by the Territory of Hawai'i. Beginning in 1940, the U.S. military acquired the airstrip and surrounding land to develop Barking Sands Army Air Base. During World War II, units from all branches of the armed forces and the Hawai'i National Guard were assigned to the base. The base was transferred to the Air Force in 1948. During the 1950s, the facility was redesignated Bonham Air Force Base, and the Navy, as a tenant of the base, began testing, evaluating, and training sailors on using guided missile systems. In 1958, the Navy's activity was named the Pacific Missile Range Facility as part of a newly designated larger Pacific Missile Range used by the Department of Defense (DoD) and NASA (NAVFAC Pacific, 2012). It was during this period that the Air Force transferred Bonham Air Force Base (which had been redesignated Bonham Auxiliary Landing Field) to the Navy. The transfer was finalized in 1966, at which time the entire installation became PMRF. A more detailed history of land use at PMRF is in Appendix A.

1.3.2 Historic Land Use at KPGO

Desktop and documentary research for historic land use at KPGO is ongoing. The Draft EIS will include additional information on historic land use at KPGO.

1.3.3 Navy Mission at PMRF

PMRF is the world's largest instrumented multi-environment range, capable of simultaneously supporting surface, subsurface, air, and space operations. As a Major Range and Test Facility Base, PMRF is part of the designated core set of DoD Test and Evaluation (T&E) infrastructure and associated workforce components that must be preserved as a national asset to provide T&E capabilities to support the DoD acquisition system. PMRF's unique location includes broad ocean areas to the north, south, and west with a relatively isolated and encroachment-free environment that safely and effectively supports these operations, as well as Navy Fleet training, as analyzed in the NEPA document titled *Hawaii-Southern California Training and Testing Final EIS/OEIS* (Navy, 2018).

The Navy's primary military mission at PMRF is to provide integrated range services in a modern, multi-threat, multi-dimensional environment that ensures the safe evaluation and execution of research, development, test and evaluation (RDT&E) missions. These capabilities are critical for DoD's ability to achieve its statutory Title 10 military readiness requirements[1], to provide commercial entities with the ability to conduct commercial T&E activities (see 10 U.S.C. § 4175 providing for the use of T&E installations by commercial entities), and Title 51 national and commercial space program requirements

[1] The legal basis for the roles, missions, and organization of each of the services are set forth in 10 U.S.C. § 7062 (Army), 10 U.S.C. § 8062 (Navy), 10 U.S.C. § 8063 (Marine Corps), 10 U.S.C. § 9062 (Air Force), and 10 U.S.C. § 9082 (Space Force).

by supporting commercial space activities (see 51 U.S.C. §§ 50504, 50901—50909 authorizing commercial space launch and reentry activities).

Activities at PMRF are monitored with real-time tracking and command/control capabilities located at or connected to the land-based PMRF facilities. This unique facility provides a realistic environment for training and testing in the use of surface, subsurface, air, and space weapons systems as well as land-based weapons systems located at the Main Base. The Navy conducts missile systems tests and has supporting facilities to track and evaluate these tests from the ocean floor to the outer atmosphere.

PMRF's space, air, surface, and subsurface tracking are accomplished from radar sites at multiple elevations. PMRF is linked to other range and data-processing facilities and can transmit real-time training and testing data anywhere in the world. The Navy, Air Force, Army, Marine Corps, allied foreign forces' RDT&E programs, and other non-DoD agencies (including NASA and commercial entities), all utilize PMRF's unique capabilities.

On Kaua'i, the Navy is the largest high-tech employer and third largest overall employer. It employs approximately 900 military and civilian personnel and contributes approximately $150 million annually in salary, contract goods, and services to the local economy. Moreover, as described in Section 1.3.6, *Environmental Management and Stewardship*, the Navy actively manages the natural and cultural resources at PMRF for the leased and easement lands.

1.3.4 NASA KPGO Space Geodesy Mission

Geodesy is the science of the Earth's shape, orientation in space, and gravity, and underpins modern navigation technology such as the Global Positioning System (GPS) that is used every day in a wide variety of devices, from handheld smartphones to satellites. NASA's Space Geodesy Project (SGP) was initiated to develop and maintain a global network of space geodetic observing instruments. The network is composed of core sites around the world that use four primary space-geodetic observation platforms: the Very Long Baseline Interferometry (VLBI), the Satellite Laser Ranging, the Doppler Orbitography by Radiopositioning Integrated on Satellite (DORIS), and the Global Navigation Satellite System (GNSS). The SGP maintains the International Terrestrial Reference Frame (ITRF), which is the foundation for virtually all Earth observations and georeferenced data used by society. Additionally, the SGP is fundamental for spacecraft tracking, as well as terrestrial, airborne, and maritime navigation. The scientific disciplines that rely on these data include sea level change, earthquake early warning systems, volcano deformation, flooding patterns, and glacier dynamics.

One of the core sites for NASA's SGP is KPGO, located within the Kōke'e State Park. The observatory sits at an elevation of approximately 3,600 feet above sea level near Waimea Canyon. KPGO is composed of five sites (Sites A through E), all of which have differing technologies and supportive infrastructure to collectively aid in the observatory's responsibilities. The mission of KPGO is to host three of the four primary geodetic platforms of NASA's SGP: VLBI, DORIS, and GNSS. KPGO collects these geodetic data to support satellites globally, and is a critical component of the SGP as part of its global network of space geodetic observatories.

KPGO consists of 16 acres of State leaseholds and 7 acres of easement lands (see Figure 1-4). The Navy holds a Use Permit and Memorandum of Understanding with NASA for portions of KPGO to utilize

NASA's facilities for the purpose of conducting PMRF mission support with radar, telemetry, and communications services at the NASA facilities.

1.3.5 Navy and NASA Use of State Lands

The Navy and NASA began leasing property on Kaua'i from the State of Hawai'i in 1964 and 1965, respectively. The Navy required the land to develop sophisticated testing, evaluation, and training of military weapons systems at PMRF. Since then, PMRF's mission has expanded in response to new technologies and geopolitical threats. NASA's lease began in 1965 when KPGO was part of the NASA Manned Space Flight Network. Since that time, KPGO has supported many NASA and other projects with a variety of equipment. It is a highly versatile and multifunctional geodetic site.

Navy and NASA uses of the lease and easement areas that will be analyzed in the EIS are summarized in Table 1-1 and depicted in Figures 1-3 and 1-4. Appendix D includes details about Navy and NASA activities at KPGO (see Figure 1-4). A detailed and current list of leases and easement uses is included in Appendix D with a description of current activities and operational elements.

Table 1-1 Navy and NASA Activities on Leaseholds and Easement Lands

Area[1]	*Agency*	*Description of Activities*	*Figure Number*
Main Base	Navy	The Main Base includes the following: 1,933 acres of fee simple land, 392 acres of leaseholds, and 7,267 acres of easement lands. The systems that support activities on the Main Base are integrated across fee simple land, leaseholds, and easements. The Main Base is the principal operations area for PMRF and supports surface, subsurface, air, and space activities. Activities on the leased parcels at the Main Base include ordnance assembly, operation and maintenance of drainage ditches and pumps to protect adjacent land from flooding, travel along roadways, and accessing utilities. Additionally, undeveloped land serves as safety zone buffers for missile/target launch operations and explosives safety. GHA safety arcs have a radius between 6,000 and 10,000 feet from the missile launch location; the public is excluded from being within this area prior to, during, and immediately following a launch. For the portion of the GHA on leased lands adjacent to the Main Base, the Navy works with DLNR Division of State Parks to establish safety controls during missile launches and restricts entry to the southern portion of Polihale Beach Park prior to launches. Explosives storage and munitions assembly locations have ESQD arcs for explosives safety zones based on quantities and types of ammunition stored in magazines, being transported, and staged on ordnance handling pads. ESQD arcs overlay ground areas of restricted non-ammunition-related facilities and activities located on an easement subject to a MOA with DLNR.	1-3
Kamokalā Ridge	Navy	Kamokalā Ridge includes 444 acres consisting of the following: 89 acres of leaseholds and 355 acres of easement lands. Kamokalā Ridge provides ordnance storage for the Navy, Hawai‘i Air National Guard, Department of Energy, and other military commands with requirements for training and storage. The site consists of ordnance storage magazines that have been excavated into the cliff face of Kamokalā Ridge. The magazines provide secure storage for Class 1.1 explosives. Activities on easements at Kamokalā Ridge include roadways to access utilities and ordnance storage. This area also serves as a tsunami evacuation site.	1-3

Area[1]	*Agency*	*Description of Activities*	*Figure Number*
Mānā Water Well	Navy	The Mānā Water Well includes 0.29 acre of leaseholds. Activities on leased land include maintenance and use of the Mānā Water Well, which is the primary source of potable water for PMRF and critical to all activities at the facility.	1-3
Miloliʻi Ridge	Navy	Miloliʻi Ridge includes 0.015 acre of leaseholds. Activities at Miloliʻi Ridge leaseholds include passive use of the frequency shift reflectors (a specific type of antenna system), which work with the radar and telemetry stations on Mākaha Ridge. The reflectors help calibrate and operate the radar systems used at the Main Base.	1-4
Mākaha Ridge	Navy	Mākaha Ridge consists of 245 acres composed of 203 acres of leaseholds and 42 acres of easement lands. The Mākaha Ridge Tracking Station serves as PMRF's secondary missile tracking and surveillance station. The station has tracking and surveillance radars as well as primary telemetry systems for the range. The site is also used by other agencies to test new radar technologies. Due to the sensitivities of the technology and the erosion rate at Mākaha Ridge, public access is restricted at this location. Activities on easement lands at Mākaha Ridge include roadways to and around the features.	1-4
KPGO	Navy and NASA	KPGO consists of 16 acres of leaseholds and 7 acres of easement lands. The Navy has a Use Permit for Sites A through D which support surveillance and tracking. Navy infrastructure at KPGO supports tracking radars as well as command and control systems. Sites A through E support KPGO activities which include collecting and coordinating geodetic data and contributing to daily measurements of the Earth's orientation in space and rotation. The diesel generator at Site B provides backup power to Sites A, C, D, and E.	1-4

Note: [1]See Figures 1-3 and 1-4.

Key: DLNR = Department of Land and Natural Resources; ESQD = Explosive Safety Quantity-Distance; GHA = Ground Hazard Area; KPGO = Kōkeʻe Park Geophysical Observatory; MOA = Memorandum of Agreement; NASA = National Aeronautics and Space Administration; PMRF = Pacific Missile Range Facility.

1.3.6 Environmental Management and Stewardship

The Navy manages natural and cultural resources on PMRF including leased and easement lands. Conservation management of natural and cultural resources is a priority for both stewardship and mission readiness. This includes activities such as protecting the endangered Hawaiian monk seal (*Neomonachus schauinslandi*), green sea turtle (*Chelonia mydas*), wetlands, archaeological sites, iwi kupuna (sensitive human remains), and historic buildings and structures. The Navy also protects natural and cultural resources, including native Hawaiian sacred resources, against encroachment. PMRF's awareness of the importance of Native Hawaiian cultural values is embodied in PMRF's slogan: E Pane Mai Ka Nonoi O Nohili – Answering the Requests of Nohili.

Table 1-2 lists Navy funded and managed natural and cultural programs on State lands.

Table 1-2 Navy Programs on State Lands

Program	*Description*
REPI Projects	Mitigation for the effects of sea level rise on agricultural land on the Mānā Plain by: • creating an open floodable space to reduce the quantity and improve the quality of stormwater runoff discharged from agricultural drainage ditches into the nearshore environment at PMRF; • reducing the threat erosion poses to PMRF infrastructure; and • promoting the regeneration of historic wetland habitat for endemic and endangered Hawaiian waterbirds. https://www.repi.mil/Portals/44/Documents/Buffer_Fact_Sheets/Navy/PMRF_BarkingSands.pdf
PMRF INRMP	Natural resource management that includes erosion management, invasive plant management, native plant management, federally listed plant species management (at Mākaha Ridge), wildland fire management, nuisance and invasive animal management, special-status species management, terrestrial invertebrate and pollinator management, data collection, database and records management, outdoor recreation, and natural resources awareness, education, and training.
PMRF ICRMP	Cultural resource management, including implementation of the cultural resources management program and oversight of all cultural resource operations and activities at the range. Nohili Dunes, at the Main Base, is a spiritual place for Native Hawaiians where their ancestors were buried as an ascending point to lani (heaven). The Navy, in collaboration with Na ʻOhana Papa O Mana, respectfully re-inters exposed remains in the Lua Kupapau O Nohili crypt located on base.
Agricultural Preservation Initiative	Ensures agricultural land areas surrounding the installation remain in agricultural use, which is compatible with PMRF operations.

Key: ICRMP = Integrated Cultural Resources Management Plan; INRMP = Integrated Natural Resources Management Plan; PMRF = Pacific Missile Range Facility; REPI = Readiness and Environmental Protection Integration.

Specific Navy environmental stewardship activities that occur on leased and easement lands at PMRF and KPGO are presented in detail in Section 2.5, *Best Management Practices* (see Table 2-6), and include:

- Responding to requests for public access and for cultural access to individuals and organizations.
- Maintaining ungulate exclusion fencing for erosion control at Mākaha Ridge.
- Out-planting and managing native plants in areas identified as having erosion and soil compaction issues.
- Improving and protecting habitat for the federally endangered Niʻihau panicgrass (*Panicum niihauense*) and Hawaiian picture-wing fly (*Drosophila musaphilia* and *D. sharpi*).
- Continuing predator control to protect Migratory Bird Treaty Act (MBTA)-listed species including Laysan albatross (*Phoebastria immutabilis*).
- Working with the PMRF Archery Club to control ungulate populations at the Kamokalā Ridge site.
- Conducting observations to identify feral cats at Kamokalā Ridge (with possibility of expanding cat trapping if necessary).

- Removing deadfall in high-risk fire areas including near the Main Base missile launch site and the Kamokalā Ridge Magazines and replanting with native, low fire risk species.
- Coordinating with U.S. Fish and Wildlife Service (USFWS), Division of Forestry and Wildlife (DOFAW), PMRF Air Ops, and PMRF Public Works to update and implement nēnē (*Branta sandvicensis*) management procedures.

See Chapter 2, Section 2.5 for a more detailed description of Navy and NASA Best Management Practices (BMPs) and management strategies for natural and cultural resources.

1.4 Purpose of and Need for the Proposed Action

The Navy's purpose of the Proposed Action is to maintain long-term DoD use of 8,348 acres of State lands (including leaseholds and easement lands) on Kauaʻi, Hawaiʻi, for operational continuity and sustainment of the military readiness mission. NASA's purpose of the Proposed Action is to maintain long-term use of 23 acres of State lands (including leaseholds and easement lands) on Kauaʻi for continued operations of KPGO. The Proposed Action is needed because the existing real estate agreements for these State lands are set to expire between 2027 and 2030. Preserving the long-term DoD and NASA use of these State lands is critical for military readiness, continuation of ongoing military training and testing, and maintaining data collection efforts of global significance. It also ensures the continued conservation management by the Navy and NASA of natural and cultural resources on these lands.

For DLNR, in addition to its role as the lessor of State lands, the proposed real estate action presents an opportunity for the agency to secure a revenue source to support its management of public lands and associated environmental and conservation programs. Fees from leases and easements are put into a State fund as required by law.

By ensuring continued Navy and NASA operations on Kauaʻi, the real estate action would also preserve local jobs and income for the residents of Kauaʻi, financially contribute to the overall economic well-being of Kauaʻi, and maintain continued conservation management of natural and cultural resources on State lands at no cost to the State of Hawaiʻi.

1.5 Scope of Environmental Analysis

The EIS will evaluate the potential environmental effects of the Proposed Action and alternatives that includes current activities that occur on leaseholds and easements, including the No Action Alternative. The EIS will satisfy both federal and State of Hawaiʻi requirements and provide the necessary analyses to allow the Navy, NASA, and DLNR to consider the environmental effects of the Proposed Action as part of their decision making.

Consistent with CEQ regulations and HAR § 11-200.1-24(b) the scope of the analysis for the alternatives in the EIS will be proportionate to the potential for environmental impacts.

1.6 Relevant Laws and Regulations

The Navy and NASA are preparing this EIS in accordance with applicable federal and State of Hawaiʻi laws, statutes, regulations, and policies applicable to implementation of the Proposed Action. A

description of the Proposed Action's consistency with these laws, policies, and regulations, as well as the names of regulatory agencies responsible for their implementation, is described in Appendix B.

1.7 Public and Agency Participation and Intergovernmental Coordination

Public participation is a key component of the EIS process (Figure 1-5). Opportunities for public input and participation in the EIS process occur during two stages:

1. During the scoping period, following the joint publication of the NOI (40 CFR 1501.7), and the Environmental Impact Statement Preparation Notice (EISPN) (HAR § 11-200.1-23); and
2. During the comment period following publication of the Draft EIS.

Figure 1-5 illustrates the stages of public involvement in the NEPA and HEPA environmental processes. Table 1-3 provides a summary of public engagement for these processes, and Appendix C provides a list of interested parties who were contacted as part of scoping. The public involvement processes for NEPA and HEPA for this EIS are running concurrently to meet the requirements of both State of Hawai'i and federal laws and regulations.

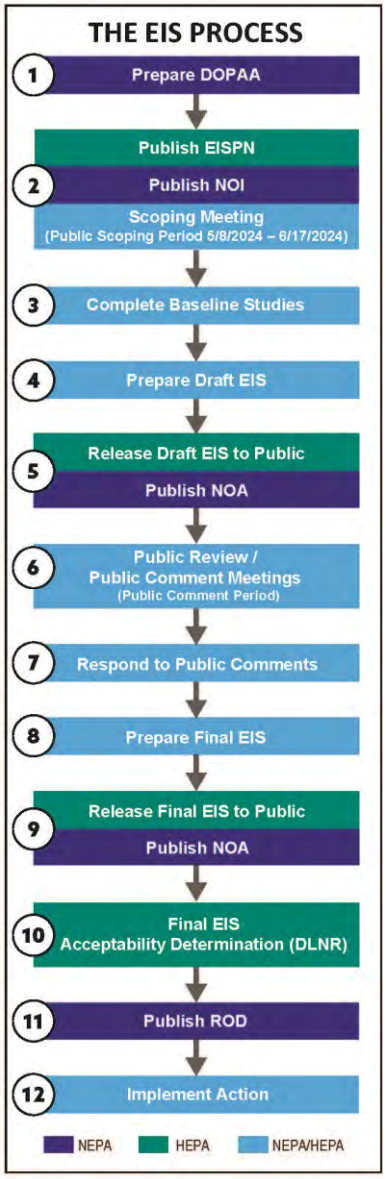


Figure 1-5 EIS Process

1.7.1 Scoping

Public scoping meetings during the scoping period for this EIS will be held on June 4, 5, and 6, 2024, from 5:00–8:00 p.m. at the Kaua'i Veterans Center in Līhu'e (3215 Kaua'i Veterans Memorial Highway, Līhu'e), Kekaha Neighborhood Center (8130 Elepaio Road, Kekaha), and Sheraton Kaua'i Coconut Beach Resort (650 Aleka Loop, Kapa'a), respectively (Table 1-3). Public scoping will serve as an opportunity to obtain input from the community, agencies, and other stakeholders regarding the issues and resources they would like to see addressed and analyzed throughout the EIS process, as well as identify reasonable alternatives. The public is invited to provide oral and written comments at the scoping meetings. The scoping meetings will also serve as an opportunity to obtain public input concerning potential effects to historic properties pursuant to Section 106 of the National Historic Preservation Act (NHPA) and HRS § 6E-42.

Methods to solicit public input during the scoping period for this EIS include notification, publication of project information, and invitations to participate in scoping. Additionally, a joint notice will be published on May 8, 2024, in *The Garden Island*, *MidWeek Kaua'i*, and *The Honolulu Star-Advertiser* announcing the publication of the EISPN and NOI and the date and time of the scoping meetings.

Table 1-3 Public Engagement under NEPA and HEPA

Date	*Description*
May 2024	Notification letters sent to stakeholders (individuals, agencies, and organizations)
May 2024	NOI published in the *Federal Register* (NEPA), EISPN Published in *The Environmental Notice* (HEPA)
May 2024	Public website available: http://www.PMRF-KPGO-EIS.com
June 2024	Public scoping meetings on Kauaʻi: Kekaha, Līhuʻe, and Kapaʻa
Summer 2025	• NOA of Draft EIS for public review • Public meetings for Draft EIS: Kekaha, Līhuʻe, and Kapaʻa • Draft EIS public review period closes
Winter 2025	Publication of NOA for Final EIS in the *Federal Register* (NEPA), Publication of Final EIS (NEPA, HEPA) and DLNR Decision in *The Environmental Notice* (HEPA)
Winter 2025	30-day wait period
Spring 2026	Publication of Record of Decision (NEPA)

Key: DLNR = Department of Land and Natural Resources; EIS = Environmental Impact Statement; EISPN = Environmental Impact Statement Preparation Notice; HEPA = Accepted Term for Hawaiʻi Revised Statutes Chapter 343; NEPA = National Environmental Policy Act; NOA = Notice of Availability; NOI = Notice of Intent.

Letters with similar information will be sent to individual, agency, and organization stakeholders (Appendix C). Stakeholders consist of agencies with a regulatory role, individuals and organizations interested in the project, and elected officials whose jurisdiction includes PMRF and KPGO.

1.7.2 Draft EIS

All comments received during the public scoping period will be considered during EIS preparation. A summary of public comments and responses to substantive scoping comments will be provided in the Draft EIS.

1.7.3 Final EIS

Substantive public comments on the Draft EIS will be considered in the development of the Final EIS. A detailed summary of public comments, revisions made to the Draft EIS in response to comments, and responses to substantive comments will be provided in the Final EIS.

1.7.4 Intergovernmental Coordination

The Navy and NASA are consulting with USFWS and National Marine Fisheries Service (NMFS) in compliance with the Endangered Species Act (ESA) Section 7 for federally listed species. The Navy and NASA are coordinating with DLNR's DOFAW regarding potential impacts to state-listed species pertaining to the leased lands under the Proposed Action. The Navy and NASA are also consulting with the Hawaiʻi State Historic Preservation Officer (SHPO) as part of their NHPA requirements and coordinating with the DLNR, State Historic Preservation Division (SHPD) to satisfy HRS § 6E-42 requirements. The Navy is coordinating with the State of Hawaiʻi Office of Planning and Sustainable Development, Planning Division under the Coastal Zone Management Act (CZMA). The Navy and NASA will coordinate with DLNR, Office of Conservation and Coastal Lands, as applicable, as part of any Conservation District Use Permit application. Applicable State of Hawaiʻi and federal laws, regulations, and policies are described in Appendix B.

2 Proposed Action and Alternatives

This chapter includes a description of the Proposed Action, the screening factors used to determine reasonable alternatives, alternatives carried forward for analysis, alternatives considered but eliminated from detailed analysis, and BMPs included in the Proposed Action.

2.1 Proposed Action

The Navy proposes to retain the use of 8,348 acres of State land on Kaua‘i in support of continued and ongoing military training and testing at PMRF. NASA proposes to retain the use of 23 acres of State land on Kaua‘i in support of maintaining data collection efforts of global significance at KPGO. The Proposed Action includes current operations that occur on leased and easement lands.

2.2 Alternative Screening Process

NEPA’s implementing regulations provide guidance on the consideration of alternatives and require rigorous exploration and objective evaluation of reasonable alternatives. Only those alternatives that meet the purpose and need of the Proposed Action and are deemed reasonable following the application of alternatives screening criteria are carried forward for detailed analysis in the Draft EIS, as is the No Action Alternative.

For NEPA and HEPA, an EIS “shall describe in a separate and distinct section discussion of the alternative of No Action as well as reasonable alternatives that could attain the objectives of the action” (HAR § 11-200.1-24(h) and 40 CFR 1502.14(c), respectively).

The screening factors used to select reasonable alternatives that would allow the Navy and NASA missions to be fulfilled are:

1. Maintain long-term use of State land currently used to support DoD and NASA missions on Kaua‘i;
2. Preserve current DoD and NASA operations on Kaua‘i;
3. Retain existing DoD and NASA infrastructure on Kaua‘i; and
4. Support DLNR management of public lands and associated environmental and conservation programs on Kaua‘i.

All screening factors must be met for an alternative to be considered reasonable. Table 2-1 identifies the five alternatives considered.

Table 2-1 Description of Alternatives Identified

Alternative Name	*Alternative Description*
Alternative 1: Succeeding Current Real Estate Agreements	The Navy and NASA would apply to DLNR for new long-term real estate agreements in the same manner and for the same uses as the current leases and easements.
Alternative 2: Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds	The Navy and NASA would pursue fee simple acquisition of 700 acres (684–Navy, 16–NASA) of leaseholds, and otherwise obtain use of the remaining acreage as described in Alternative 1.
Alternative 3: No Action Alternative	The Navy and NASA would not seek any real estate agreements for the State lands on Kaua‘i after expiration of the leases and easements between 2027 to 2030. The current real estate agreements for 8,348 acres with the Navy and 23 acres with NASA would expire. All existing infrastructure would be removed, or abandoned in place (as determined by the existing real estate agreements), from the Navy and NASA leased and easement lands.
Alternatives Considered but Not Carried Forward for Detailed Analysis	
Succeeding Leases and Easements Except for Current Leases at Mākaha Ridge and KPGO	The Navy and NASA would obtain succeeding leases and easements on leased land not currently located in the State of Hawai‘i’s Conservation District. These would include leases at the Main Base, Kamokalā Ridge, Mānā Water Well, and Miloli‘i Ridge, but would not include succeeding leases or easements at Mākaha Ridge or KPGO.
Succeeding Leases Only with No Easements	The Navy and NASA would only obtain succeeding lease agreements and not succeeding easements. These would include succeeding leases at the Main Base, Kamokalā Ridge, Mānā Water Well, Miloli‘i Ridge, Mākaha Ridge, and KPGO, but not easements at the Main Base, Kamokalā Ridge, or Mākaha Ridge.

Key: DLNR = Department of Land and Natural Resources; KPGO = Kōke‘e Park Geophysical Observatory; NASA = National Aeronautics and Space Administration; PMRF = Pacific Missile Range Facility.

Table 2-2 summarizes the application of the screening factors to these alternatives and the results. Two alternatives met all screening factors: (1) extend succeeding current real estate agreements in their present form, and (2) fee simple acquisition of all leased parcels. Section 2.3 includes a description of alternatives carried forward for detailed analysis and Section 2.4 includes a description of alternatives considered but eliminated from detailed analysis.

Table 2-2 Screening Evaluation Factors and Results

Screening Factors	*Alternatives Carried Forward for Detailed Analysis*			*Alternatives Considered but Not Carried Forward for Detailed Analysis*	
	Alternative 1: Succeeding Current Real Estate Agreements[1]	*Alternative 2: Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds*[2]	*Alternative 3: No Action Alternative*[3]	*Succeeding Leases and Easements Except for Current Leases at Mākaha Ridge and KPGO*[4]	*Succeeding Leases Only (Current Easements are Not Renewed)*[5]
Maintain long-term use of State land currently used to support DoD and NASA missions on Kaua‘i	Yes	Yes	No	No	No
Preserve current DoD and NASA operations on Kaua‘i	Yes	Yes	No	No	No
Retain existing DoD and NASA infrastructure on Kaua‘i	Yes	Yes	No	No	No
Support DLNR management of public lands and associated environmental and conservation programs	Yes	Yes	Yes–with limitations	Yes	Yes–with limitations
Alternative Carried Forward	**Yes**	**Yes**	**Yes**[6]	**No**	**No**

Notes: See Section 2.3 for detailed analysis of alternatives carried forward and Section 2.4 for alternatives considered but eliminated from detailed analysis.

[1]See Section 2.3.1, *Alternative 1: Succeeding Current Real Estate Agreements*.

[2]See Section 2.3.2, *Alternative 2: Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds*.

[3]See Section 2.3.3, *Alternative 3: No Action Alternative*.

[4]See Section 2.4.1, *Succeeding Leases and Easements Except Current Leases at Mākaha Ridge and KPGO are Not Renewed.*

[5]See Section 2.4.2., *Succeeding Leases Only (Current Easements are Not Renewed).*

[6]Carried forward per NEPA and HEPA requirements.

Key: DLNR = Department of Land and Natural Resources; DoD = Department of Defense; KPGO = Kōke‘e Park Geophysical Observatory; NASA = National Aeronautics and Space Administration.

2.3 Alternatives Carried Forward for Detailed Analysis

The screening analysis resulted in two action alternatives (Alternatives 1 and 2), depicted in Figures 2--1 and 2-2. Alternative 3 is the No Action Alternative, which will be carried forward for analysis in the Draft EIS (Section 2.3.3, *No Action Alternative*) as required by NEPA and HEPA. This alternative is depicted in Figure 2-3.

A comparison of these alternatives is provided in Table 2-3, which lists the acres of leaseholds and easements under existing conditions.

2.3.1 Alternative 1: Succeeding Current Real Estate Agreements

Under this alternative, the Navy and NASA would apply to DLNR for new long-term real estate agreements in the same manner, similar duration, and for the same uses as the current leases and easements (see Table 1-1 and Appendix D). The Navy's agreements would include 684 acres of land leased exclusively by the Navy and 7,664 acres of easements (for a total of 8,348 acres). NASA's agreements would include 16 acres of land leased exclusively by NASA, 7 acres of easement lands (for a total of 23 acres) and would continue its Use Permit with the Navy.

Securing the new real estate agreements from DLNR must occur prior to expiration of the current real estate agreements to ensure uninterrupted operation of all federal agency missions. Under this alternative, there are no proposed changes to the type or frequency of current activities occurring on state leased and easement lands. This alternative would not change any use or maintenance of existing infrastructure and would not involve construction, renovation, or demolition of facilities. This alternative would also preserve the Navy and NASA-funded natural and cultural resource management activities on the leased and easement lands.

The leased areas are currently used for safety buffers, Anti-Terrorism (AT) security requirements (Main Base), ordnance storage-related facilities (Kamokalā Ridge), potable water (Mānā Water Well), radar and telemetry related facilities (Miloliʻi and Mākaha Ridges), and data collection and tracking (KPGO). The easement areas are currently used for utilities, roadways, and as encroachment buffers for Navy activities on fee simple lands. Many of these easements also preserve existing land use and prevent incompatible development that would affect the ability of PMRF to meet its mission requirements.

Under this alternative, the Navy and NASA would maintain succeeding agreements for the current real estate agreements, and this alternative meets all screening factors (see Section 2.2, *Alternative Screening Process*).

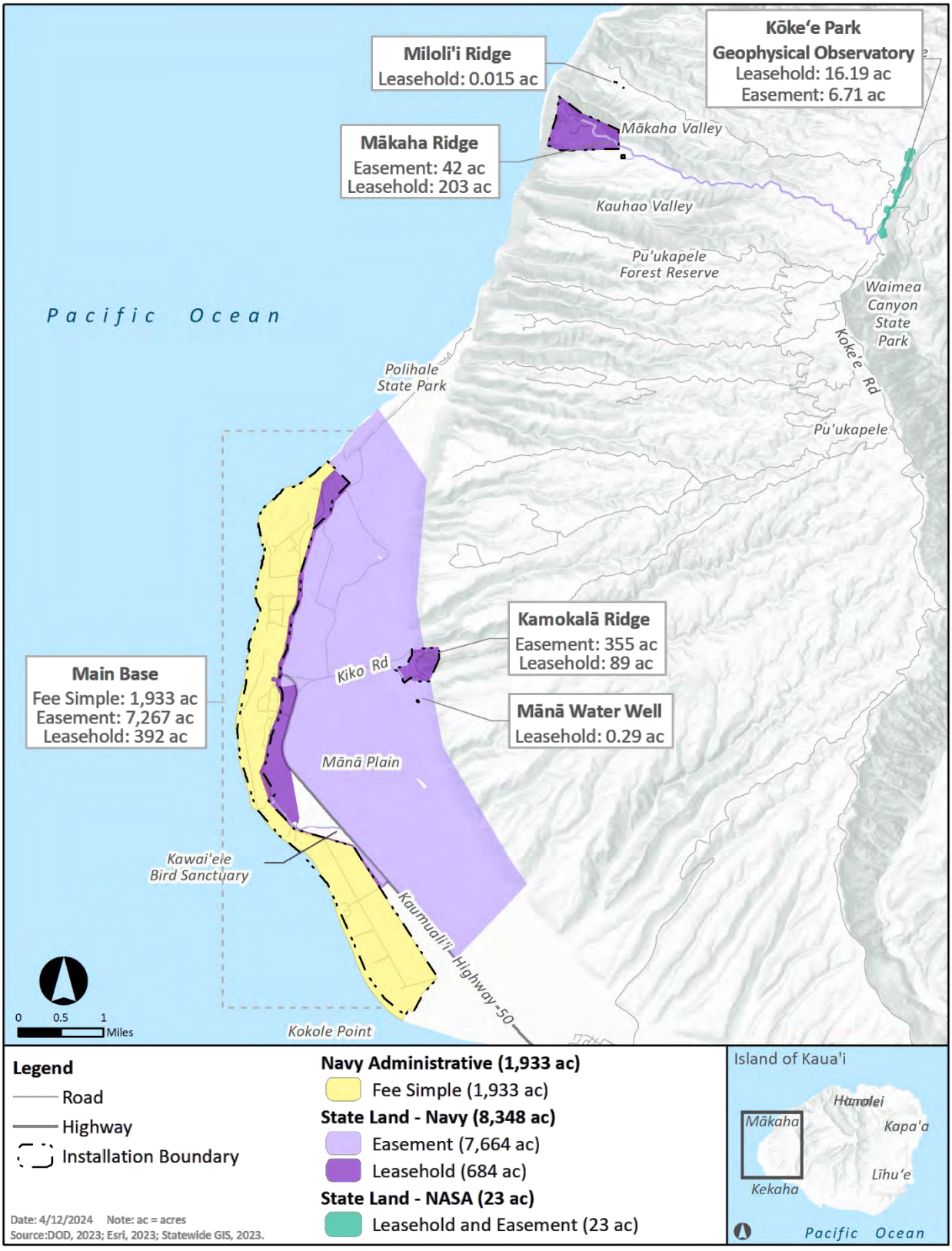


Figure 2-1 Alternative 1: Succeeding Current Real Estate Agreements

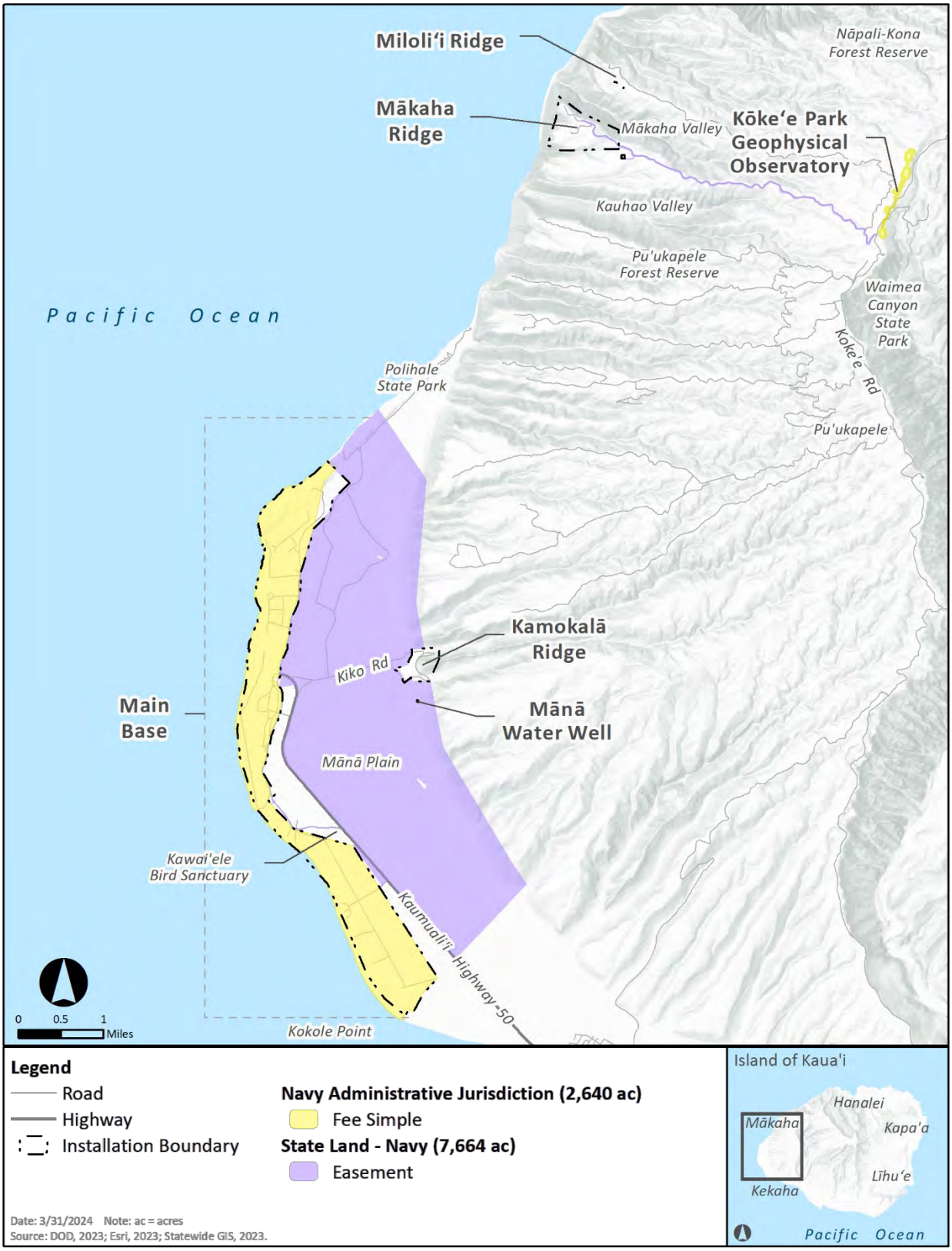


Figure 2-2 Alternative 2: Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds

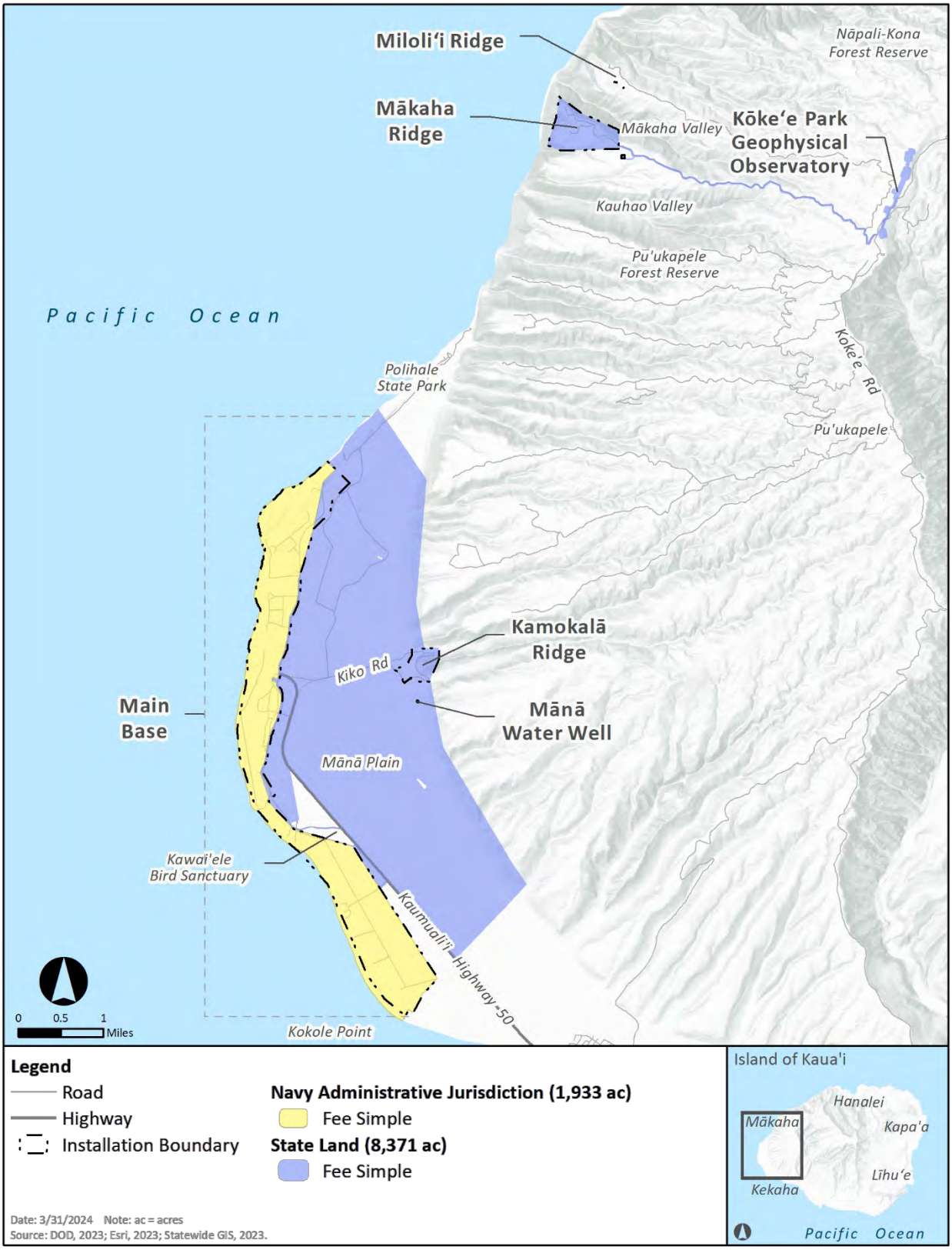


Figure 2-3 Alternative 3: No Action Alternative

Table 2-3 Comparison of Alternatives: Navy and NASA Land Status and Acreages by Location

Location	Existing Conditions/Alternative 1 (acres)				Alternative 2 (acres)				Alternative 3 (acres)			
	Lease-hold	Ease-ment	Fee Simple	Total	Lease-hold	Ease-ment	Fee Simple	Total	Lease-hold	Ease-ment	Fee Simple	Total
Navy												
Main Base	392	7,267	1,933	9,592	NA	7,267	2,325	9,592	NA	NA	1,933	1,933
Kamokalā Ridge	89	355	NA	444	NA	355	89	444	NA	NA	NA	NA
Mānā Water Well	0.29	NA	NA	0.29	NA	NA	0.29	0.29	NA	NA	NA	NA
Miloliʻi Ridge	0.015	NA	NA	0.015	NA	NA	0.015	0.015	NA	NA	NA	NA
Mākaha Ridge	203	42	NA	245	NA	42	203	245	NA	NA	NA	NA
Total	**684**	**7,664[1]**	**1,933**	**10,281**	**NA**	**7,664**	**2,617**	**10,281**	**NA**	**NA**	**1,933**	**1,933**
NASA												
KPGO	16	7	NA	23	NA	NA	23	23	NA	NA	NA	NA
Total	**16**	**7**	**NA**	**23**	**NA**	**NA**	**23**	**23**	**NA**	**NA**	**NA**	**NA**

Note: [1]7,664 acres includes 7,491 acres of Restrictive Use Easements and 173 acres of Utility and Roadway Easements.
Key: KPGO = Kōkeʻe Park Geophysical Observatory; NASA = National Aeronautics and Space Administration; NA = not applicable.

Under Alternative 1, in addition to the operational missions, Navy and NASA natural and cultural resource activities and responsibilities on these lands would continue as currently conducted (see Section 1.3, *Background*). This includes continued Navy funding and managing resource management actions and public use programs (see Section 1.3.6, *Environmental Management and Stewardship*); pursuing Readiness and Environmental Protection Integration (REPI) projects; continuing general natural resource management as identified in the PMRF Integrated Natural Resources Management Plan (INRMP); and continuing cultural resource management as identified in the PMRF Integrated Cultural Resources Management Plan (ICRMP).

Additionally, the Navy and NASA would continue to adhere to applicable federal and state laws as well as policies and regulations applicable to Navy and NASA regarding investigation, removal, and cleanup of hazardous and toxic materials and wastes.

The six locations are shown in Figure 2-4 (Main Base), Figure 2-5 (Kamokalā Ridge and Mānā Water Well), Figure 2-6 (Miloliʻi Ridge), Figure 2-7 (Mākaha Ridge), and Figure 2-8 (KPGO).

2.3.2 Alternative 2: Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds

Under this alternative, the Navy and NASA would pursue fee simple acquisition of 700 acres (684 acres for Navy use and 16 acres for NASA use) of leaseholds, and otherwise obtain use of the remaining acreage as described in Alternative 1. The new Navy fee simple land of 684 acres would include 392 acres of land at the Main Base, 89 acres at Kamokalā Ridge, 0.29 acre at the Mānā Water Well, 0.015 acre at Miloliʻi Ridge, 203 acres at Mākaha Ridge, and the NASA fee simple land would include 16 acres at KPGO. This acreage would be transferred from ownership by the State of Hawaiʻi to the United States.

This alternative would not change any use or maintenance of existing infrastructure and would not involve construction, renovation, or demolition of facilities. The activities at these sites would continue as currently used (see Section 1.3, *Background* and Section 2.3.1, *Alternative 1: Succeeding Current Real Estate Agreements*). The land would be managed in perpetuity by the Navy and NASA according to federal requirements. Under this alternative, Navy and NASA activities and responsibilities on these lands would continue as currently conducted (see Section 1.3, *Background* and the description above for Section 2.3.1, *Alternative 1: Succeeding Current Real Estate Agreements*). Under this alternative, the Navy would continue to operate at KPGO under the Use Permit with NASA.

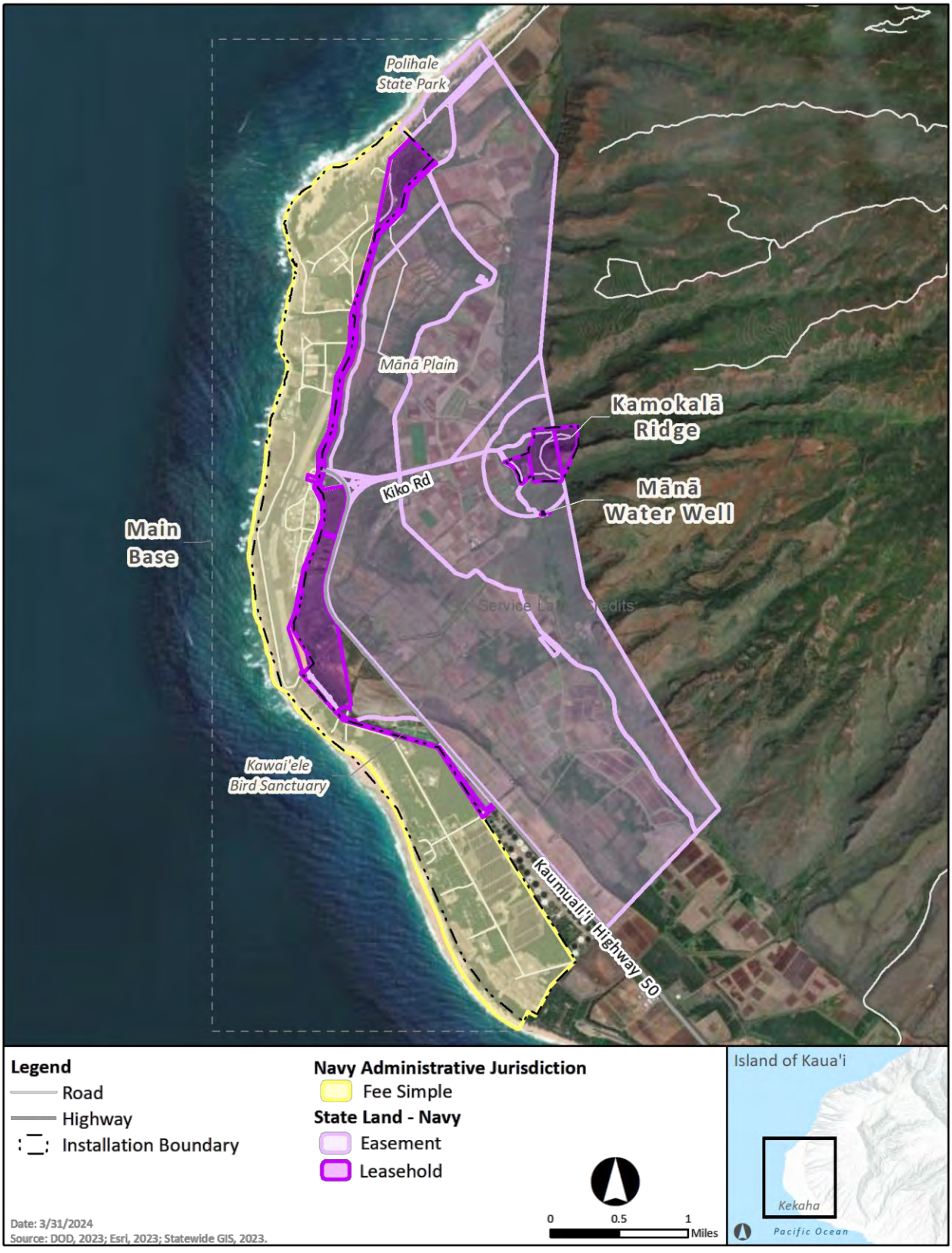


Figure 2-4 Alternative 1: Main Base: Aerial View

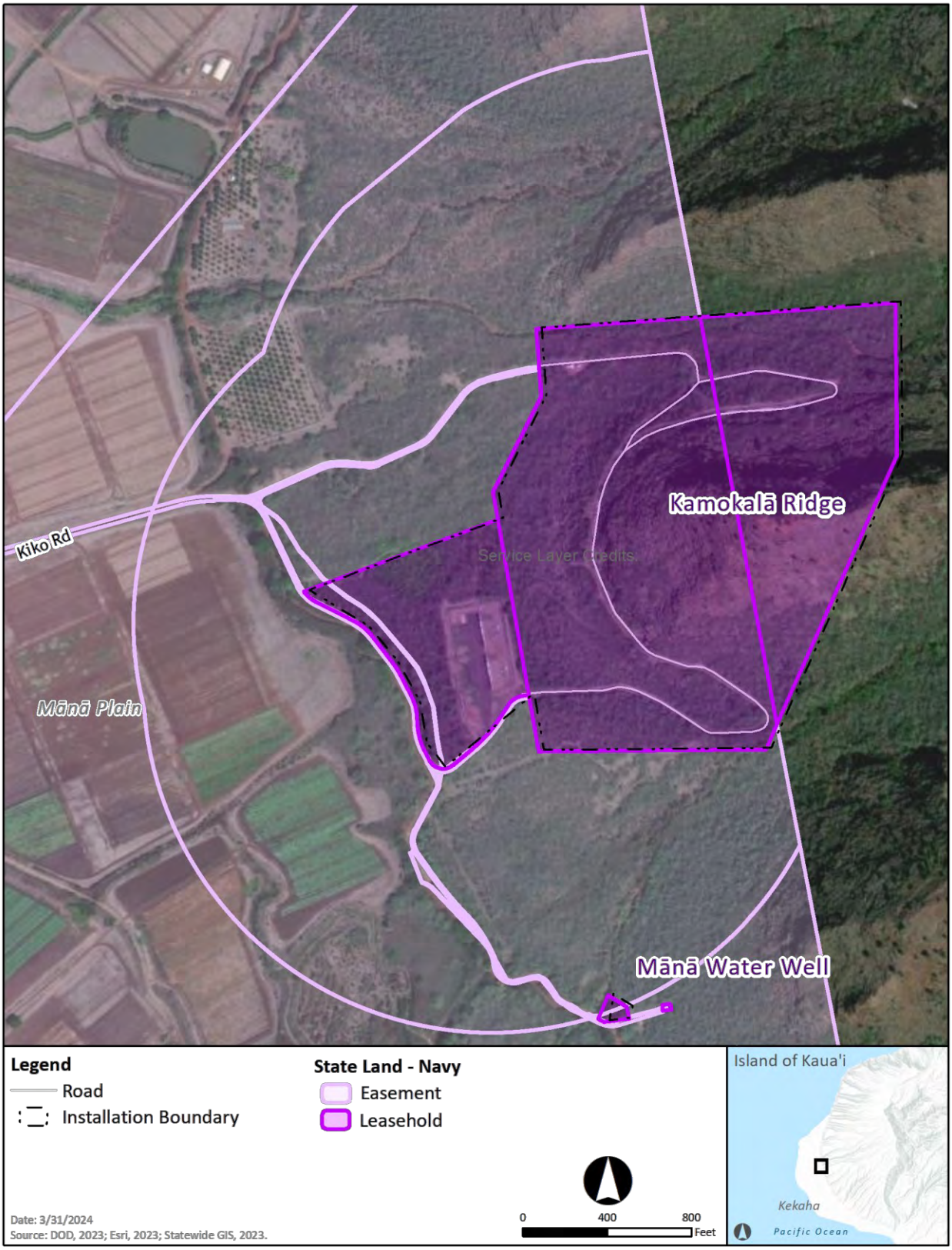


Figure 2-5 Alternative 1: Kamokalā Ridge and Mānā Water Well

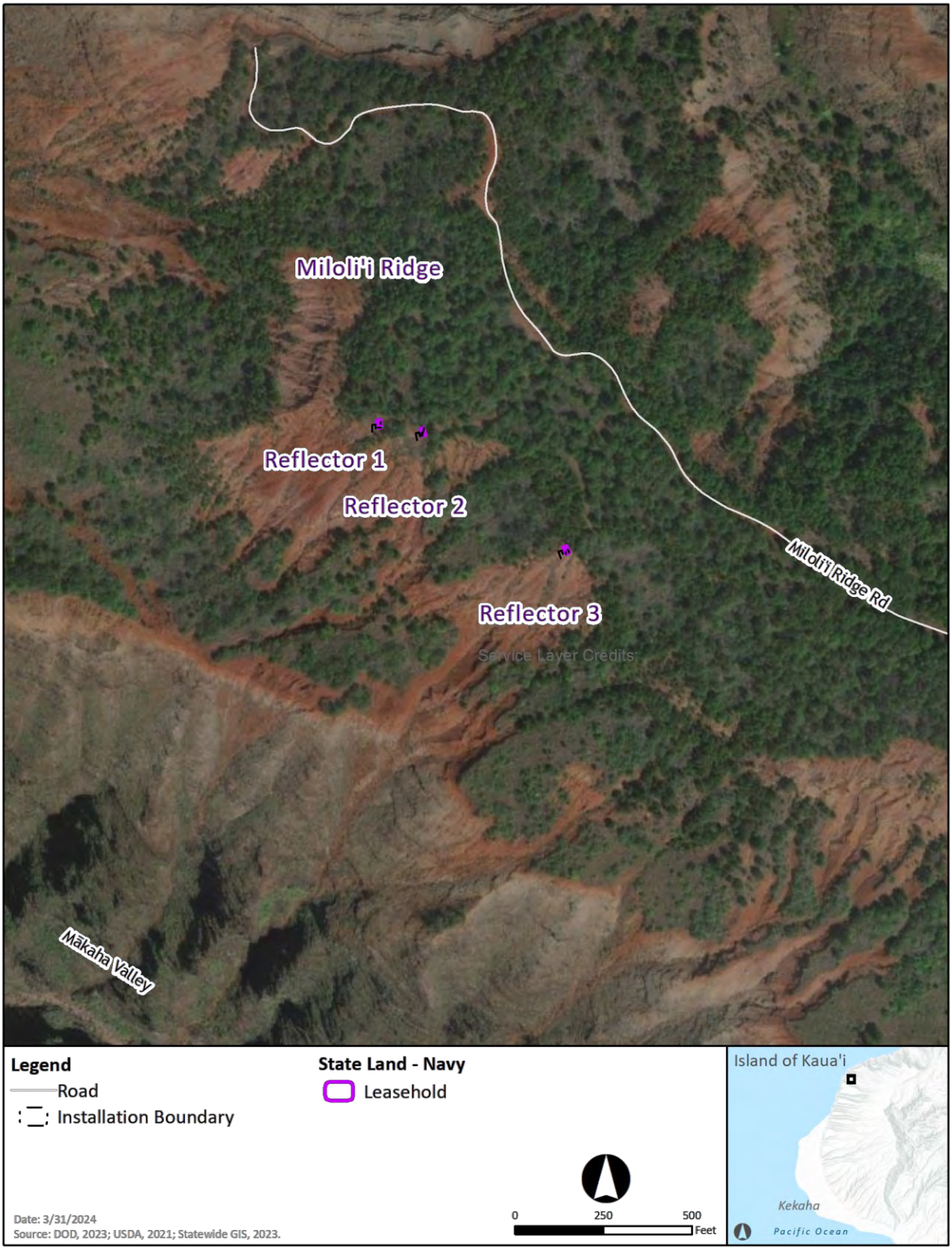


Figure 2-6 Alternative 1: Miloli‘i Ridge

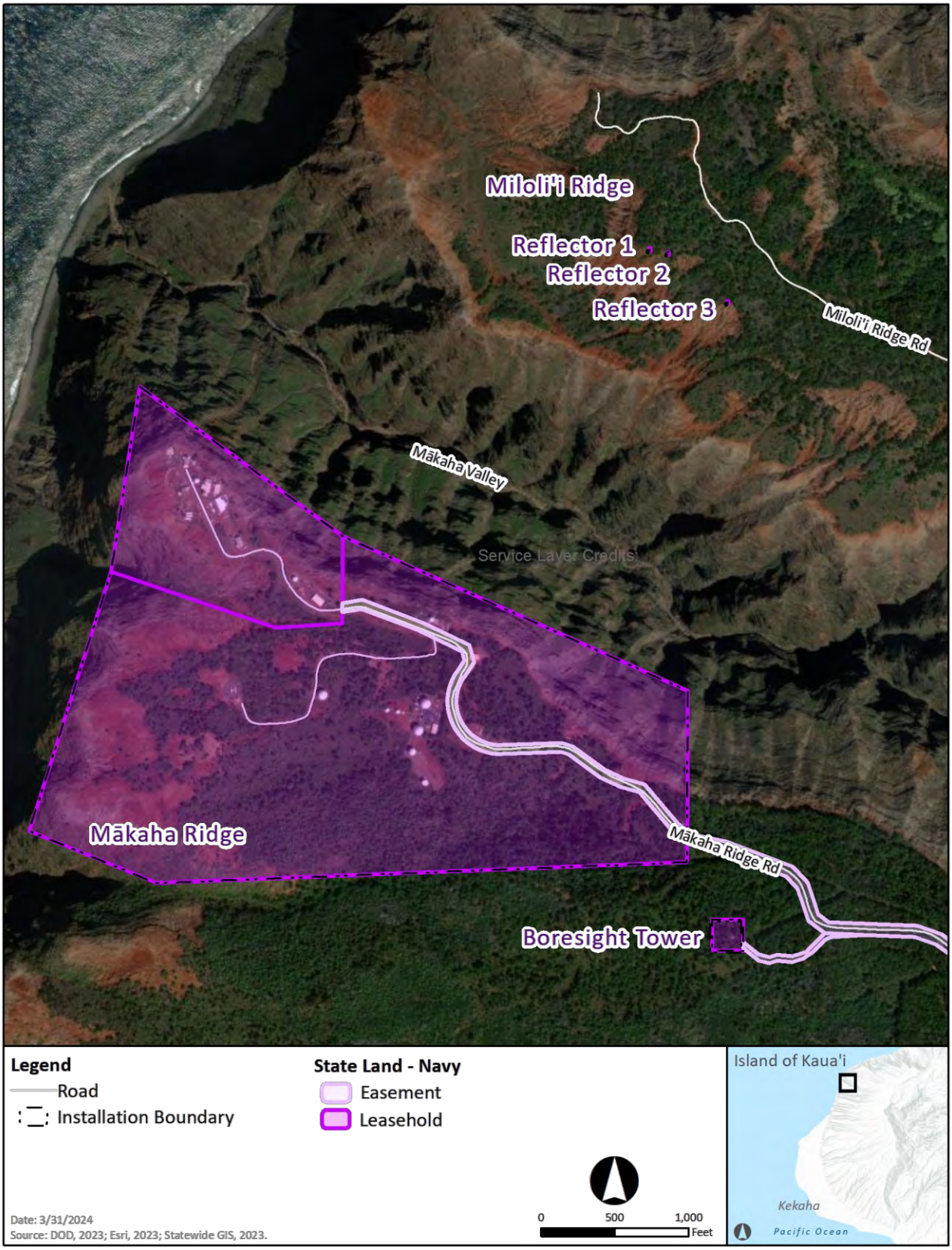


Figure 2-7 Alternative 1: Mākaha Ridge

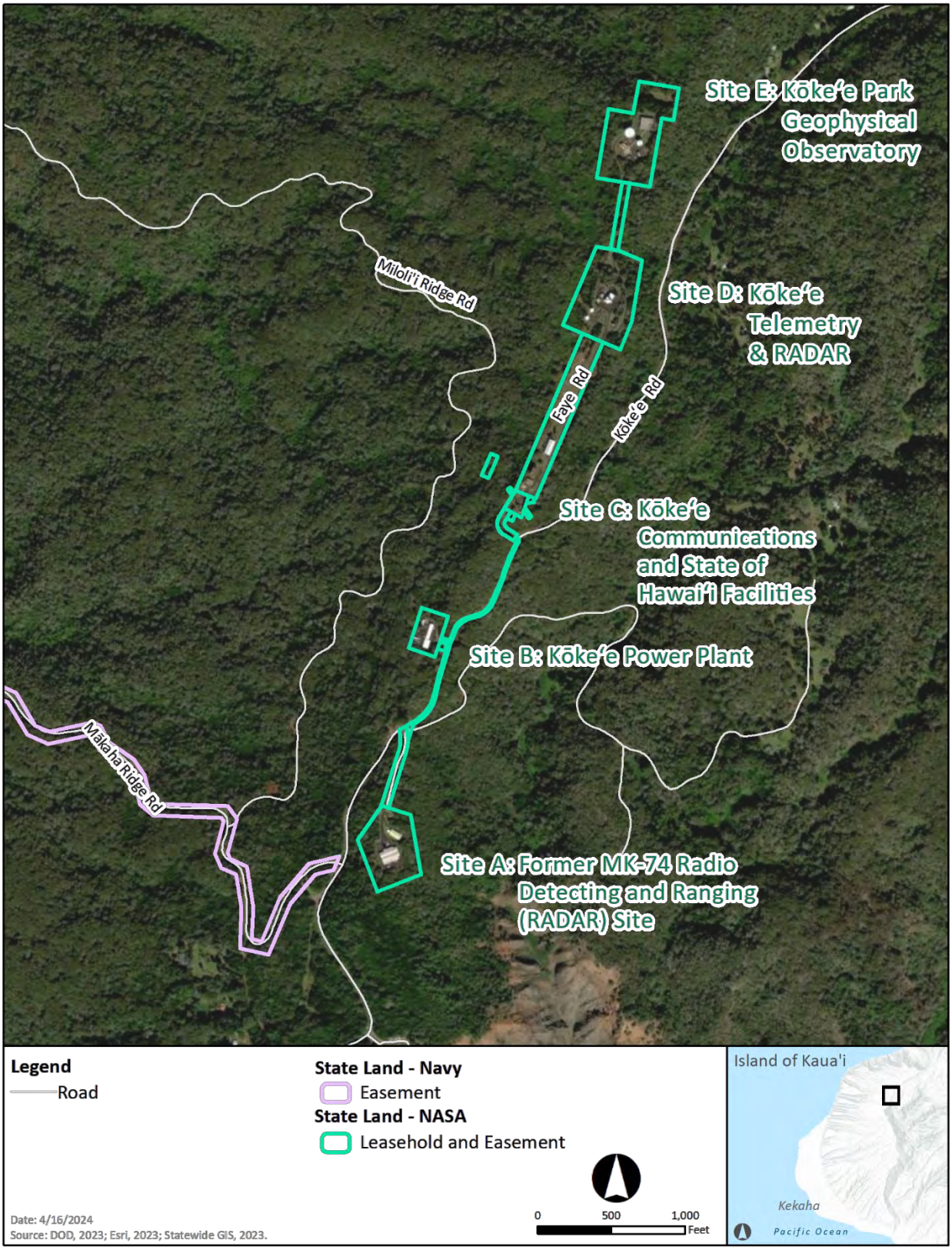


Figure 2-8 Alternative 1: KPGO

By acquiring the leased parcels, this alternative meets the purpose and need of the Proposed Action, secures the long-term Navy and NASA use of State lands near Navy lands on Kaua‘i, and preserves the long-term use of State land for military readiness and continuation of Navy activities, as well as NASA’s current geodetic activities. This alternative also meets all of the screening factors (see Section 2.2, *Alternative Screening Process*). It would result in federal ownership of land that is currently leased from the state, which would allow the Navy to maintain long-term use of DoD land on Kaua‘i, preserve current DoD operations, and retain existing DoD infrastructure. Under this alternative, the Navy and NASA would continue current management of natural and cultural resources on these lands, which are consistent with DLNR’s environmental and conservation programs.

2.3.3 Alternative 3: No Action Alternative

Under the No Action Alternative, the Navy and NASA would not seek any real estate agreements for the State lands on Kaua‘i after expiration of the leases and easements between 2027 to 2030. The current real estate agreements for 8,348 acres with the Navy and 23 acres with NASA would expire. All existing infrastructure would be removed, or abandoned in place, from Navy and NASA leased and easement lands.

Under the No Action Alternative, the Navy would not be able to conduct a substantial portion of training and testing events because of the loss of safety and buffer areas for missile and target launches and access to critical infrastructure necessary to support ongoing operations at PMRF. This includes Mānā Water Well (the primary potable water source for operations at the Main Base), support facilities at Mākaha Ridge, ordnance storage at Kamokalā Ridge, utility infrastructure and roads at the Main Base, secondary and operation access roads to the Main Base and Mākaha Ridge, frequency shift reflectors at Miloli‘i Ridge, utility and drainage easements, and the secondary access gate necessary for ensuring a safe route for ordnance transport to and from the Main Base. The Navy would not be able to calibrate instrumentation and antennas used to ensure safety on the range, resulting in a loss of support to surface, subsurface, air, and space operations. Loss of Navy radar and telemetry systems at KPGO would also limit effectiveness during data collection and could result in safety issues related to tracking on the range. The loss of ordnance storage at Kamokalā Ridge would prohibit the Navy from supporting certain missions at PMRF. The loss at KPGO would impact NASA’s ability to maintain a global network of space geodetic observatories that work together to maintain a stable terrestrial reference system contributing to NASA missions, military and civilian navigation, and the scientific community.

In addition, the environmental management and stewardship currently conducted by Navy and NASA on leased land and by the Navy on easement lands would no longer occur (see Section 1.3.6, *Environmental Management and Stewardship*).

The sections below provide details about the No Action Alternative in relation to state actions and responsibilities, as well as federal actions and responsibilities (DoD and NASA). A more detailed description of impacts by lease and easement from the No Action Alternative are included in Appendix E. The No Action Alternative does not meet the purpose and need (see Section 1.4, *Purpose of and Need for the Proposed Action*). However, the analysis associated with the No Action Alternative is carried forward as required by NEPA and HEPA for comparative purposes.

2.3.3.1 State Actions and Responsibilities

The No Action Alternative would result in the State of Hawai‘i assuming full control and management of the leased and easement lands after expiration of the leases and easements in 2027, 2029, and 2030. This would result in DLNR assuming sole responsibility, including funding, for the natural and cultural resources and public activities that are presently maintained by the Navy on the leased and easement lands.

2.3.3.2 Federal Actions and Responsibilities

Under this alternative, there would be a considerable change in how the Navy uses its fee simple property, and for NASA, its operations at KPGO would cease, severely impacting the SGP. The existing leases and easements impose certain obligations on the Navy and NASA prior to returning the property to the State. These obligations include reforestation, removal of signs, demolition and removal of existing and abandoned structures, and removal of surface weapons used in connection with DoD training activities.

2.3.3.2.1 Navy Actions and Responsibilities

PMRF Training and Testing Mission

Under the No Action Alternative, the Navy would conduct only a portion of its current mission at PMRF. Without succeeding long-term real estate agreements, most of the current training and testing could not occur, resulting in an irreplaceable loss of capabilities that would severely diminish the military value of PMRF and cause severe disruption to the DoD mission and negatively impact national security.

A summary of impacts to the Navy is provided in Table 2-4.

Table 2-4 Impacts to PMRF Training and Testing Mission from the No Action Alternative

Activities	*Impact to Mission from the No Action Alternative*
Missile/Target Launches	The loss of required setback distances and easement areas would substantially reduce essential safety buffer zones required for training and testing missions as well as for preventing incompatible development. Without these setbacks and safety buffer zones, operations at the Main Base could not continue as currently conducted. Only a limited set of aerial targets could potentially be launched without the land needed for safety buffer zones.
Encroachment Planning	The loss of required setback distances and easement areas would eliminate the ability of the Navy to maintain encroachment buffers that help prevent real estate development around the installation incompatible with the PMRF training and testing mission.
Facility Use and Management	The Navy would have no access to critical infrastructure facilities that support operations at Mākaha Ridge (including a guard shack, a Frequency Interference Control Building, Maintenance Facility, Telemetry Building, a boresight tower, telemetry antennas, water tanks, a laboratory, radar sites, communications, a power plant, antennas, and a helicopter pad), ordnance storage at Kamokalā Ridge, 22 buildings with utility infrastructure and roads at the Main Base, secondary and operation access roads to the Main Base, access roads to Mākaha Ridge, and frequency shift reflectors at Miloli‘i Ridge, as well as utility and drainage easements. This alternative would also result in the loss of the Navy’s environmental management and stewardship programs described in Section 1.3.5, *Environmental Management and Stewardship*.

Activities	*Impact to Mission from the No Action Alternative*
Flood Protection	Loss of drainage easements could impact range and daily operations until drainage management is established to prevent flooding of adjacent agricultural lands.
Support Facilities and Utilities Transmission	Buildings at the Main Base located on leased lands are strategically located and cannot be moved; therefore, the loss of these buildings and the utility easements that support them would result in losing the ability to conduct missions at PMRF associated with this infrastructure. Loss of utility easements would impact all range and daily operations unless new utility connections could be established.
Potable Water	Loss of access to the Mānā Water Well would result in severe impacts to daily operations as it is the primary source of all potable water for PMRF. Without access to a steady, reliable source of potable water, there would be effects on overall living conditions and PMRF would not have water for a myriad of operations, such as for supply chillers and fire suppression.
Instrumentation	With the loss of Mākaha Ridge, most of the training and testing operations would cease since there would be an inability to calibrate instrumentation and antennas, which would limit effectiveness during data collection and could result in safety issues related to tracking on the range. This would result in a loss of support to surface, subsurface, air, and space operations. Loss of frequency shift reflectors at Miloli'i Ridge would result in the inability to calibrate instrumentation and antennas, which would limit effectiveness during data collection and could result in safety issues related to tracking on the range. Loss of radar and telemetry systems at KPGO would also limit effectiveness during data collection and could result in safety issues related to tracking on the range.
Ordnance Storage/ Management	With the loss of ordnance storage at Kamokalā Ridge, the base would not be able to meet explosive safety storage requirements and could not support certain missions at PMRF. Without storage, the missile assembly building could not be used since there would be no safe place to store the assembled munitions.
Access	Loss of access roads at the Main Base located on State land would result in impacts to operations, since the secondary access gate is utilized by personnel during peak commute times and is used as a primary access point when the primary access gate is closed. The loss of the ordnance gate would result in shifting of ordnance transport through the primary gate, which could result in impacts to safety and would limit access to and from the base during times when ordnance is being transported.
Power	Loss of Site B, which includes the back-up plant diesel generator for Sites A, C, D, and E, would impact the source of reliable power when systems at KPGO are supporting range operations.

Key: KPGO = Kōke'e Park Geophysical Observatory; PMRF = Pacific Missile Range Facility.

Navy Environmental Management and Stewardship

Under the No Action Alternative, environmental management and stewardship activities conducted by the Navy on lease and easement lands would cease. These activities include, but are not limited to, REPI projects, implementation of the PMRF INRMP and PMRF ICRMP, as well as the Agricultural Preservation Initiative.

2.3.3.2.2 NASA Actions and Responsibilities

Under the No Action Alternative, NASA would lose access to Sites A through E at KPGO. Without succeeding long-term real estate agreements, all of NASA's current activities at KPGO would cease. This would result in a loss of capabilities to the larger SGP which includes a global network of interconnected

instruments that are the foundation for Earth observations and georeferenced data used by virtually all of society. A summary of impacts to the NASA mission from this alternative is provided in Table 2-5.

Table 2-5 Impacts to NASA Activities from the No Action Alternative

NASA Activities	*Impact to NASA Activities from the No Action Alternative*
Space Geodesy Project	Without use of KPGO Sites A through E, NASA would lose its northern Pacific VLBI and DORIS stations, and two GNSS stations, substantially reducing the capability of NASA's global SGP to support the following: spacecraft tracking; as well as military and civilian terrestrial, airborne, and maritime navigation; and the scientific disciplines that rely on the data produced at KPGO.

Key: DORIS = Doppler Orbitography and Radio-positioning Integrated by Satellite; GNSS = Global Navigation Satellite System; KPGO = Kōkeʻe Park Geophysical Observatory; NASA = National Aeronautics and Space Administration; SGP = Space Geodesy Project; VLBI = Very Long Baseline Interferometry.

The loss at KPGO would impact NASA's ability to maintain a global network of space geodetic observatories that work together to maintain a stable terrestrial reference system which provides the foundation for virtually all other Earth observations and georeferenced data used by society. It is fundamental for spacecraft tracking, as well as terrestrial, airborne, and maritime navigation. The scientific disciplines that rely on these data include areas of study such as sea level changes, earthquake early warning systems, volcano deformation, flooding patterns, and glacier dynamics. This loss would impact NASA missions, military and civilian navigation, the scientific community, and society overall.

The No Action Alternative would not meet the purpose of and need for the Proposed Action; however, as required by NEPA and HEPA, this alternative is carried forward for analysis in the Draft EIS. The No Action Alternative will be used to analyze the consequences of not undertaking the Proposed Action and will serve to establish a comparative baseline for analysis.

2.4 Alternatives Considered but Not Carried Forward for Detailed Analysis

As part of the alternative identification process, agencies are required to describe the alternatives considered but eliminated from detailed analysis and to provide a brief discussion of the rationale for not studying the alternative in detail. The following alternatives were considered but not carried forward for detailed analysis because they do not meet the purpose and need for the Proposed Action.

2.4.1 Succeeding Leases and Easements Except Current Leases at Mākaha Ridge and KPGO are Not Renewed

Under this alternative, the Navy would obtain succeeding leases and easements on leased land not currently located in the State of Hawaiʻi's Conservation District, except for leases at Polihale State Park. These would include leases at the Main Base, Kamokalā Ridge, Mānā Water Well, and Miloliʻi Ridge, but would not include succeeding leases or easements at Mākaha Ridge or KPGO. Under this alternative, the Navy would not have access to the secondary missile tracking and surveillance station. Without this secondary operations area, the Navy could not conduct radar tracking, telemetry receiving/recording, frequency monitoring, or target control and would lose access to the land with the buildings and facilities located there. Without leaseholds at KPGO, NASA operations, including support of navigation systems and spacecraft tracking, would cease. This alternative does not meet screening factors (1) maintain long-term use of land currently used to support DoD and NASA missions on Kauaʻi, (2) preserve

current DoD and NASA operations on Kaua‘i, and (3) retain existing DoD and NASA infrastructure on Kaua‘i.

2.4.2 Succeeding Leases Only (Current Easements are Not Renewed)

Under this alternative, the Navy and NASA would only obtain succeeding lease agreements and not succeeding easements. These would include succeeding leases at the Main Base, Kamokalā Ridge, Mānā Water Well, Miloli‘i Ridge, Mākaha Ridge, and KPGO, but not easements at the Main Base, Kamokalā Ridge, Mākaha Ridge, and KPGO. Without succeeding easements, the Navy would lose required setback distances that provide essential safety buffer zones required for training and test missions, access roads, and utility easements. Without access to or use of the roads, the Navy would not be able to access the leaseholds located at Kamokalā Ridge, Mānā Water Well, or Mākaha Ridge. Additionally, the Navy would not be able to continue environmental management or stewardship programs. This alternative does not meet screening factors (1) maintain long-term use of land currently used to support DoD and NASA missions on Kaua‘i, (2) preserve current DoD operations, (3) retain existing DoD infrastructure, and (4) support DLNR management of public lands and associated environmental and conservation programs. Under this alternative, NASA could also not continue its mission.

2.5 Best Management Practices

BMPs are policies, practices, and measures the Navy uses to reduce the environmental impacts of designated activities, functions, or processes. Although these actions mitigate potential impacts by avoiding, minimizing, or reducing/eliminating impacts, they are distinguished from potential mitigation measures because these actions are (1) existing requirements for the Proposed Action; (2) on-going, regularly occurring practices; or (3) not unique to this Proposed Action. More specifically, these conservation measures are inherently part of the Proposed Action and are not potential mitigation measures proposed as a function of the environmental review or approval process for the Proposed Action.

Table 2-6 lists currently used PMRF and KPGO BMPs which include Standard Operating Procedures (SOPs) from the ICRMP and resource management strategies from the INRMP, as well as those established by the applicable regulations, policy, and other installation SOPs. Proposed mitigation measures to minimize the impacts of the Proposed Action will be discussed in the Draft EIS. Under the No Action Alternative, the Navy and NASA would not continue the BMPs and management strategies listed in Table 2-6 on leaseholds and easement lands.

NASA’s contractor operates KPGO (Site E) in accordance with the Environmental Management Plan under the Space Exploration Network Services and Evolution contract. Implementation of the Environmental Management Plan includes the following steps: implementation of the plan; evaluation, checking, and corrective action; environmental planning and impact process (see Table 2-6); water management; air quality management; and waste management.

Table 2-6 PMRF and KPGO Best Management Practices and Resource Management Strategies

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
PMRF – Cultural Resources Management (CRM)[1]			
CRM-1	Impacts to historic properties	ICRMP SOP # 1: NHPA Section 110 Compliance. The Navy has an ongoing management responsibility to identify, preserve, and protect the significant cultural resources at PMRF. Section 110 mandates agencies to assume responsibility for the preservation of historic properties under their jurisdiction and, to the maximum extent feasible, use historic properties available to the agency.	Ongoing and future activities.
CRM-2	Impacts to historic properties	ICRMP SOP #2: Coordination with Natural Resources Management. DoD Instructions 4715.03 and 4715.16 and Office of the Chief of Naval Operations Instruction (OPNAVINST) 5090.1E require that cultural resources management programs be integrated with natural resources programs. This coordination is meant to make certain, to the maximum extent feasible, that the Navy complies with all applicable Executive Orders and federal natural and cultural resources statutory and regulatory requirements. The PMRF CRM is responsible for the coordination of cultural and natural resources at PMRF and conducting NHPA Section 106 reviews in conjunction with NEPA reviews and Section 7 of the ESA. SOP #2 of the ICRMP describes this process at PMRF.	Ongoing and future activities.
CRM-3	Impacts to historic properties	ICRMP SOP #3: Cultural Resources Data Management. The Navy maintains an effective data management system to facilitate compliance with Sections 106 and 110 of the NHPA as well as NEPA and requirements for curating federally owned and administered archaeological collections (36 CFR Part 79). SOP #3 of the ICRMP describes the Cultural Resources Data Management program at PMRF.	Ongoing and future activities.
CRM-4	Impacts to historic properties	ICRMP SOP #4: NHPA Section 106 Compliance. Section 106 of the NHPA is a process designed to ensure that historic properties are taken into account during the planning and execution of federal undertakings. SOP #4 describes the integration of the Section 106 process of the NHPA, implemented by regulations of the ACHP (36 CFR Part 800), as well as ARPA and the provisions of the Commander, Navy Region Hawai‘i (CNRH) PA for Navy undertakings in Hawai‘i that is followed at PMRF.	Ongoing and future activities.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
CRM-5	Impacts to historic properties	ICRMP SOP #5: ARPA Compliance. Per this Act, it is a federal offense to excavate, remove, damage, alter, or otherwise deface archaeological resources on federal lands without authorization. The sale, purchase, exchange, transport, or receipt of archaeological resources obtained in violation of this law also is a federal offense. SOP #5 of the ICRMP describes the enforcement of ARPA at PMRF.	Ongoing and future activities.
CRM-6	Impacts to historic properties and traditional Hawaiian cultural resources	ICRMP SOP #6: Native Hawaiian Consultation. Consultation is mandated by federal laws, including the NHPA, American Indian Religious Freedom Act, NAGPRA, and ARPA. Consultation is also mandated by the MOA among the U.S. Navy, PMRF, Hawai‘i SHPO, and ACHP regarding activities proposed within the 1998 PMRF Enhanced Capacity Final EIS, DoD Directive 4710.03, and CNRH PA. SECNAVINST 4000.35A also specifies that appropriate consultation will be initiated with Native Hawaiians “whenever the [Navy] conducts or supports undertakings that may affect any National Register resource, whether [Navy]-managed or not.” SOP #6 describes this process at PMRF.	Ongoing and future activities.
CRM-7	Cultural resource protection	ICRMP SOP #7: Management of Historic Properties. In cases in which Navy undertakings will have effects or adverse effects on cultural resources, the PMRF CRM will activate the Section 106 consultation process with the Hawai‘i SHPO and the ACHP. If the project, however, meets The Secretary of the Interior’s Standards for the Treatment of Historic Properties, including preserving, rehabilitating, restoring, and reconstructing historic buildings, the undertaking may be determined to be exempt from the full Section 106 consultation process. The PMRF CRM must consult with CNRH, the Hawai‘i SHPO, ACHP, and Native Hawaiian organizations regarding any effects to historic properties as a result of base activities, and shall also refer to, and comply with, existing MOAs, PAs, and The Secretary of the Interior’s Standards for the Treatment of Historic Properties.	Ongoing and future activities.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
CRM-8	Cultural resource protection	ICRMP SOP # 8: Monitoring During Construction and/or Ground-Disturbing Activities. Archaeological monitoring will be conducted during construction and/or ground-disturbing activities within areas of potential effect identified as archaeologically sensitive areas. The primary responsibility for carrying out this BMP lies with on-site managers of the undertaking, professional archaeological monitors, the PMRF CRM, and the Navy Region Hawai'i Historic Preservation Officer. SOP #8 of the ICRMP describes this process, and a copy of the SOP should be provided to all on-site managers and supervisors who are carrying out work in archaeologically sensitive areas.	Ongoing and future activities.
CRM-9	Cultural resource protection	ICRMP SOP# 9: Inadvertent Discovery of Archaeological Remains. Inadvertent discovery refers to the unintentional discovery of archaeological resources during the course of operations at PMRF. On-site managers of undertakings, the PMRF CRM, and the Navy Region Hawai'i Historic Preservation Officer are responsible for planning for subsequent discoveries through PAs pursuant to 36 CFR Part 800, Section 800.14(b) (agency program alternatives) or other agreement documents when a survey indicates that historic properties are likely to be discovered during implementation of an undertaking. PMRF shall make reasonable efforts to avoid, minimize, or mitigate adverse effects to such properties until a mitigation plan is carried out. SOP #9 of the ICRMP describes this process, and a copy of the SOP should be provided to all on-site managers and supervisors who are carrying out work that could result in inadvertent discovery of remains.	Ongoing and future activities.
CRM-10	Cultural resource protection	ICRMP SOP #10: Inadvertent Discovery of Human Remains. Inadvertent discovery refers to the unintentional discovery of human remains during the course of operations at PMRF. In 2011, the Navy and Na Ohana Papa o Mana executed a NAGPRA CA to address all federal agency land management activities that could result on the intentional excavation or inadvertent discovery of NAGPRA items. The CA documents the process for carrying out the requirements of 43 CFR 10, Subpart B for standard consultation procedures, determination of custody, treatment, and disposition of NAGPRA items. SOP #10 of the ICRMP describes this process, and a copy of the SOP should be provided to all on-site managers and supervisors who are carrying out work that could result in inadvertent discovery of human remains.	Ongoing and future activities.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
CRM-11	Cultural resource protection	ICRMP SOP #11: Curation. The Navy's cultural resources responsibilities include providing for the curation of artifact collections and historical documents recovered from agency-owned or -leased property as required under 36 CFR Part 79, 36 CFR Part 1220, and 36 CFR Part 1228, as well as SECNAVINST 4000.35A and OPNAVINST 5090.1E.	Ongoing and future activities.
CRM-12	Cultural resource protection	ICRMP SOP #12: Use of Historic Properties. In accordance with Section 110 of the NHPA and SECNAVIST 4000.35A, the Navy should use available historic buildings to the maximum extent feasible (while preserving their historic character and function) prior to new construction, lease, or the acquisition of buildings used to carry out its responsibilities as long as reuse does not conflict with the mission of the Navy. SOP #12 of the ICRMP provides uniform guidelines for PMRF staff and tenants/users when planning projects that involve demolition, removal, or replacement of a historic building or structure that is listed, or is eligible for listing, in the NRHP, or has not been evaluated for eligibility.	Ongoing and future activities.
CRM-13	Cultural resource protection	ICRMP SOP #13: Historic Asset Management Process. The HAMP is a project planning tool that provides access to information and a standard method to support compliance with the NHPA and NEPA. Once a proponent identifies project requirements, the HAMP tools guide the proponent through steps to identify project alternatives that will have the least effect on built-environment historic properties, including reuse/rehabilitation, new construction, or demolition footprint reduction.	Ongoing and future activities.
CRM-14	Cultural resource protection	ICRMP SOP #14: Emergency Situations. Provides guidelines in the event of (1) emergencies involving imminent threat to national security, to life or property, or a declaration of a natural disaster, and (2) damage to sites from natural actions such as erosion.	Ongoing and future activities.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
CRM-15	Cultural resource protection	ICRMP SOP #15: Public Involvement and Outreach. The PMRF CRM routinely coordinates with CNRH and the Hawai'i SHPO on cultural resources management issues. Additionally, DoD Instruction 4715.16 states, "all installations with cultural resources will have a public outreach program." PMRF has an active and robust public outreach program, ranging from educational programs to facilitating public access to culturally important sites. Outreach visitors and participants have included, and will continue to include, local residents and Hawaiian descendants, plantation, and military community members; Native Hawaiian organizations; congressional delegations; officials from DoD and the Missile Defense Agency, as well as state and county officials; and local school groups and a myriad of nongovernmental organizations.	Ongoing and future activities.
CRM-16	Cultural resource protection	ICRMP SOP #16: Public and Cultural Access. SOP #16 provides guidelines and procedures for responding to requests for public access and for cultural access to individuals and organizations, including any Native Hawaiian organization that attaches cultural significance to historic properties on PMRF.	Ongoing and future activities.
CRM-17	Cultural resource protection	ICRMP SOP #17: Permits, Leases, and Contracts. SOP #17 provides standardized ARPA statements for inclusion in permits, leases, contracts, or other legal agreements between CNRH and other military branches, government agencies, individuals, businesses, or organizations. It is based on ARPA and OPNAVINST 5090.1E. The primary responsibility for implementing this SOP lies with real estate, contracting, and legal staff preparing permits, leases, contracts, or other legal agreements	The Proposed Action and future activities.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
PMRF – Natural Resources[2]			
Soil management	Impacts to soils	• Conduct general monitoring for coastal dune habitat and soil compaction issues annually to prevent and minimize the potential for soil degradation. • Mitigate and prevent soil erosion of coastal dune habitat by outplanting, establishing, and monitoring native dune building plants in areas identified as having erosion issues. • Implement additional security measures such as increased signage and roping off specific areas to alleviate undue pressures from off-road vehicle presence, especially in Nohili Dune areas. • Maintain Mākaha Ridge ungulate exclusion fencing for erosion control. • Outplant native, drought tolerant plants in areas identified as having erosion and soil compaction issues. Ensure that a regular monitoring schedule and a sufficient irrigation system are in place until plants are well established.	Ongoing and future activities.
Designated critical habitat	Impacts to designated critical habitat for panicgrass	• Work to improve protection, habitat, and/or consider outplanting Ni‘ihau panicgrass. • Protections will be aimed at preventing unauthorized off-road vehicle use, and invasive plant removal and to demonstrate benefit to the species. • Outplant native species and remove invasive species in areas with suitable Ni‘ihau panicgrass habitat and ensure an irrigation system is in place until plants become well established. • Consider undergoing the approval process to outplant the endangered *Panicum niihauense* in the effort to remove or reduce amount of PMRF property designated as critical habitat for the species. Coordinate with federal and state partners to secure material for outplanting if pursued.	Ongoing and future activities. Construction.
Hawaiian picture-wing fly management	Impacts to Hawaiian picture-wing flies	• Conduct surveys every 5 years to assess presence/absence of endangered Hawaiian picture-wing fly species at and directly adjacent to KPGO. • Conduct invasive plant removals annually in areas near known Hawaiian picture-wing fly habitat to promote native tree health and propagation and reduce introductions of invasive species into adjacent habitat due to Navy operations.	Ongoing and future activities.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
Marine nearshore management	Impacts to nearshore environments	• Establish a monitoring program for the nearshore environment of PMRF to inform future management decisions and monitor changes over time. • Partner with DLNR Division of Aquatic Resources (DAR) to incorporate regular monitoring site(s) in PMRF's nearshore waters into the state's regular monitoring schedule, as feasible.	Ongoing and future activities.
Monk seal management	Impacts to Hawaiian monk seals	• Continue to ensure that Security reports sightings of monk seals during daily patrols at PMRF beaches and erects signage and barricades if observed where people frequent. • Continue to report observations of hauled-out Hawaiian Monk Seals to NOAA as soon as possible and provide high-quality photos to assess seal health, identification, and aid in population abundance monitoring. • Conduct regular surveys approximately 5 times per week on beaches near the Nohili Ditch outfall and Diver's Landing for monk seal presence, and all other beaches approximately twice per week. • Continue to conduct surveys through partnership with NOAA Fisheries for Hawaiian Monk Seals on Niʻihau.	Ongoing and future operations.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
Sea turtle management	Impacts to sea turtles	• Continue to partner with Security in ensuring daily patrols of PMRF's beaches for sea turtles to collect observational data and check for stranded, injured, or entangled turtles. • Conduct surveys by biologists approximately 5 times per week on beaches near the Nohili Ditch outfall and Diver's Landing for sea turtle presence and ensure that marine surveys in nearshore areas quantify sea turtles and potential foraging or resting habitat. • Continue to survey beaches for sea turtle nesting activity during the nesting season, protect all nests observed with ropes and signage, mitigate light attraction issues on beaches, and coordinate with DAR to excavate nests. • Continue to encourage good communication between Security and natural resources staff regarding sea turtle activity on PMRF beaches to reduce negative impacts to the species from Security beach patrol vehicles. • Develop and use USFWS-approved outreach, educational materials, and signage with the objective to educate and provide information to residents, recreational users, visitors, and staff about proper procedures and acceptable activities within sea turtle habitat and how to act when coming in contact with sea turtles.	Ongoing and future operations.
Marine mammal management	Impacts to marine mammals	• Continue to report all observations of marine mammal strandings or deaths to NMFS and assist in response efforts. • Range users continue to adhere to protective measures for all training and testing per requirements under *Hawaii-Southern California Training and Testing Final EIS/OEIS* authorizations.	Ongoing and future operations.
Ungulate management	Impacts to natural resources habitats ESA terrestrial species	• Maintain efficacy of ungulate-proof fence at Mākaha Ridge. • Conduct regular monitoring for ungulates inside the fence, as well as vulnerable areas along the fence. • Maintain Mākaha Ridge fence for erosion control.	Ongoing and future operations.
Predator management	Impacts to MBTA species and Laysan albatross	• Continue base-wide predator control to protect MBTA-listed species including Laysan albatross; monitor for pigs, dogs, and cats in known breeding areas prior to the albatross breeding season and increase control efforts as needed.	Ongoing and future operations.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
Predator management	Impacts to monk seals	• Continue base-wide predator control to remove feral cats and collaborate with partners on studies regarding toxoplasmosis at PMRF to inform these efforts; conduct outreach about the disease and its effects on wildlife and human health.	Ongoing and future operations.
Predator management	Impacts to natural resources	• Work with the PMRF Archery Club to control ungulate populations at the Kamokalā Ridge site by implementing trapping and baiting stations if the animals become a nuisance to Navy operations or pose a risk to protected species. • Conduct observations to identify feral cats at Kamokalā Ridge and consider expanding cat trapping if use is consistent or becomes a nuisance.	Ongoing and future operations.
Wildland fire management	Impacts to natural resources	• Remove deadfall (woody debris) in high-risk areas including near the Barking Sands missile launch site and the Kamokalā Ridge Magazines and replant with native, low fire risk species.	Ongoing and future operations.
Wildland fire management	Impacts to natural and cultural resources	• Coordinate with the PMRF Fire Department on developing updates to the existing Fire Management Plan.	Ongoing and future operations.
Nēnē management	Impacts to nēnē	• Coordinate with USFWS, DOFAW, PMRF Air Ops, and PMRF Public Works to annually review and update the PMRF Nēnē Management Plan. • Work with PMRF Air Ops and USDA-WS to insure nēnē hazing efforts are increased prior to and during the breeding season with the possibility of including weekends, especially if a nēnē pair has been regularly observed on or near the airfield. • Collaborate with DOFAW to have all nēnē that hatch at PMRF banded and pursue permission and permits for PMRF natural resources staff to band birds if allowable.	Ongoing and future operations.
Nēnē management	Impacts to nēnē	• Continue to conduct regular, standardized surveys for nēnē at PMRF Barking Sands, Mākaha Ridge, and KPGO sites to effectively detect nēnē nests and inform management and determine habitat types that attract the species.	Ongoing and future operations.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
Nēnē management	Impacts to nēnē	• Continue to communicate with facilities maintenance personnel about nēnē nest locations and collaborate to develop effective protective measures for the species and ensure that no vegetation removal or other persistent disturbances occur within 100 feet of nest sites and goslings to reduce risk of take. • Support regular outreach to PMRF visitors and personnel on the importance of not providing food and water to nēnē and develop outreach material aimed at increasing awareness of the species.	Ongoing and future operations.
Nēnē management	Impacts to nēnē	• For all new construction at Barking Sands, including construction for tenant or customer DoD commands or other federal agencies, concrete, asphalt, gravel, xeriscaping, or native vegetation that does not act as a nēnē attractant, rather than lawn, will be installed in open areas surrounding buildings and parking areas to decrease attraction of nēnē.	Construction.
Waterbird risk management	Impacts to waterbirds, public health, and safety	• Continue to coordinate closely with Facilities Maintenance regarding restrictions on vegetation removal practices within a 100-foot radius of waterbirds or their nests. • Discourage waterbird presence and nesting at the oxidation pond complex by maintaining vegetation at a height of less than 6 inches and by funding the installation of exclusionary measures. • Continue to coordinate with Facilities Maintenance to obtain environmental data on the oxidation pond regularly to better inform causes of avian botulism outbreaks and identify high-risk conditions that require management actions. • Coordinate with Public Works to develop oxidation pond flushing protocols in response to avian botulism outbreaks or high-risk conditions. • Coordinate with Facilities Maintenance on all oxidation pond complex construction and restoration plans. • Supplement ongoing water quality testing to detect particulates and soluble chemicals in waters at PMRF. Testing should be conducted at least quarterly.	Ongoing and future operations.
Waterbird risk management	Impacts to waterbirds	• Replace and improve waterbird crossing signage at PMRF as needed to reduce risk of vehicle strikes, evaluate efficacy of signs, and explore new tools to reduce vehicle strikes.	Ongoing and future activities.
Waterbird Risk management	Impacts to waterbirds	• Continue to conduct regular monitoring for Hawaiian waterbird species at Barking Sands to effectively detect and reduce impacts to nests.	Ongoing and future activities.

Best Management Practice	***Impacts Reduced/Avoided***	***Description of Best Management Practices and Management Strategies***	***Applicability***
MBTA management	Impacts to MBTA species	• Continue to incorporate monitoring of shorebirds, cattle egrets (*Bubulcus ibis*), and black-crowned night herons (*Nycticorax nycticorax*) at wetland sites. Record opportunistic observations of barn owls (*Tyto alba*) and pueo (*Asio flammeus sandwichensis*) at all other areas of base to inform control measures for non-native species and protective measures for native species. • Keep track of non-native songbird species at PMRF and their numbers by participating in the annual Audubon Christmas Bird Count.	Ongoing and future activities.
MBTA management	Impacts to MBTA species	• Continue to advise development projects at PMRF that have potential to negatively impact native MBTA species and their habitat on how to avoid impacts. • Advise development projects at PMRF on how to avoid creating habitat and foraging availability for non-native MBTA species at PMRF especially near the PMRF airfield.	Ongoing and future activities.
Laysan albatross management	Impacts to Laysan albatross	• Coordinate with DOFAW on potential new albatross release sites. • Work with partners to ensure that as many albatross eggs as possible stay on Kaua‘i and find new suitable egg relocation locations. • Closely monitor re-sights of translocated albatross by working with partners on the north shore of Kaua‘i to enter data into the Airtable application database.	Ongoing and future activities.
Laysan albatross management	Impacts to Laysan albatross	• Continue the PMRF Laysan Albatross Egg Swap program. • Continue to translocate albatross to the north shore of Kaua‘i from January–April. • Support research on PMRF albatross populations that increases the understanding of their behavior as it relates to the PMRF airfield.	Ongoing and future activities.
Shearwater management	Impacts to shearwater nesting	• Enhance wedge-tailed shearwater (*Ardenna pacifica*) habitat in areas far from the PMRF airfield and human presence and develop deterrent measures for burrows in areas of human traffic and near the airfield. • Research and work with facilities and Morale, Welfare, and Recreation to implement methods for discouraging wedge-tailed shearwater burrowing in the immediate vicinity of the PMRF Beach Cottages. • Continue to implement protective measures that prevent the crushing of burrows in the beach cottages area (e.g., signage, temporary rope fencing, wooden burrow tents, outreach materials in cottages).	Ongoing and future activities.

Best Management Practice	***Impacts Reduced/Avoided***	***Description of Best Management Practices and Management Strategies***	***Applicability***
Shearwater management	Impacts to shearwater populations	• Conduct annual wedge-tailed shearwater population surveys in the Kinikini Ditch, beach cottages, and Nohili Dune areas. • Work with partners to collect additional data that supports adaptive management on PMRF and regional conservation objectives for shearwater species.	Ongoing and future activities.
Bat management	Impacts to Hawaiian hoary bat (pupping season)	• Tree trimming/removal activities shall be conducted outside of the bat pupping season of June 1 to September 15 to the maximum extent practicable to avoid and minimize effects of base infrastructure, operations, and maintenance. • Conduct follow-up acoustic surveys for Hawaiian hoary bats every 5 years. • In situations where trimming or removal of a tree with a known bat roost is determined necessary, the Navy shall work with the USFWS to develop and implement an SOP for bat roosting surveys.	Ongoing and future activities. Construction.
Invasive plant species management	Impacts to natural resources	• Native vegetation shall be used as practicable, and recommended by agencies, for revegetation efforts. • Ensure species identified as invasive in Hawai‘i are not utilized for outplanting, landscaping, or erosion control efforts. Develop a Landscaping Guide to include in all base contracts and integrate into the installation appearance plan.	Ongoing and future activities.
Invasive plant species management	Impacts to natural resources	• Ensure early detection and a rapid response to invasive plant species in sensitive areas. Conduct removal of invasive plant species in sensitive areas, monitor for re-growth, and restore with outplantings, if necessary, with a target of 80% reduction in invasive species within the areas of concern.	Ongoing and future activities.
Invasive animal species management	Impacts to natural resources	• Include biosecurity requirements and provisions in Base Operating Support (BOS) and construction contracts to ensure invasive ants, frogs, and other non-native wildlife are not introduced via equipment or landscaping efforts.	Ongoing and future activities. Construction.

Best Management Practice	***Impacts Reduced/Avoided***	***Description of Best Management Practices and Management Strategies***	***Applicability***
Invasive animal species management	Impacts to natural resources	• Increase outreach to base personnel on reporting and early detection for invasive species not yet established at PMRF. Ensure all observations or reports of high-risk invasive species are communicated to KISC and to all other appropriate agencies. • Increase outreach with all personnel on PMRF about the hazards of feeding feral/invasive species and assist in the enforcement of such policies by practicing good communication with Security.	Ongoing and future activities.
Invasive animal species management	Impacts to natural resources	• Conduct surveys to improve baseline knowledge of populations of invasive animals at PMRF. • Conduct ant surveys to assess presence of invasive ants including the little fire ants (*Wasmannia auropunctata*) at the Nohili Dune's wedge-tailed shearwater colony. If little fire ants are detected, report to KISC and implement active control by using granular bait after fledglings have left the area. • Continue to partner with the Hawai'i Department of Agriculture to ensure Coconut Rhinoceros Beetle (*Oryctes rhinoceros*) traps are checked and maintained at PMRF.	Ongoing and future activities.
Endangered seabird management	Impacts from night lighting (disorientation/ fallout)	• Whenever feasible, exterior night lighting shall include bat- and bird-friendly design features such as shielded lights (to reduce ambient light), use of motion detectors and/or other automatic controls, and lighting design that uses shields to prevent light from shining upward into the sky.	Ongoing and future activities.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
Endangered seabird management	Impacts from exterior facility lighting	• Exterior lighting shall be architecturally integrated with the character of all structures, energy efficient, and shielded or recessed so that direct glare and reflections shall be confined, to the maximum extent feasible, within the boundaries of the site. Shielded lighting directs rays toward the ground, and the light source, whether bulb or tube, shall not be visible from adjacent properties. • Exterior lighting shall be directed downward and away from adjacent properties. • Parking and security lighting shall consist of full-cutoff fixtures, which permit no upward light, unless a different cutoff classification is specifically authorized through the architectural review process. • Obtrusive light shall be minimized by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and light required for the development shall be directed downward to minimize spill over onto adjacent properties and reduce vertical glare or up-lighting.	Ongoing and future activities.
Native plant habitat management	Impacts to native plant communities	• Continue to update baseline floral surveys to improve understanding of plant communities at PMRF. • Ensure post-planting care, including irrigation, invasive plant removal, and long-term monitoring and maintenance is implemented for all native plant restoration projects.	Ongoing and future activities.
Native plant habitat management	Impacts to pollinators	• Identify suitable locations for planting native Hawaiian plants, particularly those that benefit native pollinators in support of national pollinator objectives. • Ensure that plant communities found to support native terrestrial invertebrate species are protected, enhanced, and that construction or removal projects have minimal effects on these populations.	Ongoing and future activities. Construction.
Terrestrial invertebrate management	Impacts to pollinators	• Conduct species inventory at additional PMRF sites and conduct monitoring for native invertebrate species.	Ongoing and future activities.
Terrestrial invertebrate management	Impacts to pollinators	• Coordinate all use of pesticides by natural resources staff with the NAVFAC PAC Pest Management Consultant (PMC) and ensure that all applicators have received appropriate certifications. • Ensure that treatments will not have negative effects on protected species. Prohibit the use of neonicotinoids at PMRF sites.	Ongoing and future activities.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
Endangered seabird management	Impacts to seabirds	• Continue to host a Save Our Shearwaters (SOS) aid station at PMRF and monitor station during business days with SOS monitoring on weekends and holidays. • Advise various tenants on PMRF on appropriate safety lighting that is less attractive to endangered seabirds (i.e., motion sensing lights that go off after a set time period, shielded lights, facing light away from the coast, lower lumen, and lower to the ground). • Provide a 10-year calendar to mission planners with high-risk dates for endangered seabird fall out.	Ongoing and future activities.
Endangered seabird management	Impacts to seabirds	• Continue to fund and implement surveys to assess seabird strikes at KPGO Site C. • Minimize the potential for death or injury of seabirds due to collisions with PMRF communication towers located at KPGO Site C.	Ongoing and future activities.
Endangered sea bird management	Impacts to seabirds from night lighting (disorientation/fallout)	• Continue to promote base-wide awareness and implementation of the PMRF Dark Skies Program through annual trainings. • Continue Dark Skies implementation in areas adjacent to colonial nesting grounds at high elevation nesting sites during critical fledging timeframes. • Conduct systematic ground searches for fallen out seabirds after high-risk night operations.	Ongoing and future activities.
Public health and safety management	Impacts to public health and safety	• Continue to restrict access during missile testing and launches at the restricted easement adjacent to Barking Sands. • Adhere to applicable regulations and policy to limit interaction with vessel traffic when range activities occur.	Ongoing and future operations.
Public health and safety management	Impacts to public health and safety	• PMRF will coordinate with the Agribusiness Development Corporation to ensure compliance with the Clean Water Act and other environmental regulatory requirements where there is a nexus with federal monies or property.	Ongoing and future operations.

Best Management Practice	*Impacts Reduced/Avoided*	*Description of Best Management Practices and Management Strategies*	*Applicability*
KPGO – Environmental Management Plan[3]			
Endangered Species	Impacts to endangered and threatened species	• Space Exploration Network Services and Evolution (SENSE) has surveyed the endangered and threatened species around the area. Any changes to SENSE operations or construction activities are planned with the consideration of endangered and threatened species impacts to minimize or eliminate the effects on wildlife. SENSE leverages local agencies for guidance on current regulatory requirements and reduction of impacts.	Ongoing and future operations.

Key: ACHP = Advisory Council on Historic Preservation; ARPA = Archaeological Resources Protection Act; BMP = Best Management Practice; BOS = Base Operating Support; CA = Comprehensive Agreement; CFR = Code of Federal Regulations; CNRH = Commander, Navy Region Hawaii; COMPACFLT = Commander, U.S. Pacific Fleet; CRM = Cultural Resources Management; DAR = Division of Aquatic Resources; DoD = Department of Defense; DOFAW = Division of Forestry and Wildlife; DOI = Department of the Interior; EIS = Environmental Impact Statement; ESA = Endangered Species Act; HAMP = Historic Asset Management Process; ICRMP = Integrated Cultural Resources Management Plan; KISC = Kaua'i Invasive Species Committee; MBTA = Migratory Bird Treaty Act; MOA = Memorandum of Agreement; NAGPRA = Native American Graves Protection and Repatriation Act; NAVFAC PAC = Naval Facilities Engineering Systems Command Pacific; NEPA = National Environmental Policy Act; NHPA = National Historic Preservation Act; NMFS = National Marine Fisheries Service; NOAA = National Oceanic and Atmospheric Administration; NRHP = National Register of Historic Places; OPNAVINST = Office of the Chief of Naval Operations Instruction; PA = Programmatic Agreement; PMC = Pest Management Consultant; PMRF = Pacific Missile Range Facility; SECNAVINST = Secretary of the Navy Instruction; SENSE = Space Exploration Network Services and Evolution; SHPO = State Historic Preservation Office; SOH = Safety and Occupational Health; SOP = Standard Operating Procedure; SOS = Save our Shearwaters; USDA-WS = United States Department of Agriculture-Wildlife Services; USFWS = United States Fish and Wildlife Service.

Sources: [1]NAVFAC Pacific, 2012.
[2]NAVFAC Pacific, 2023.
[3]Space Exploration Network Services and Evolution, 2023.

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3 Project Setting

This chapter provides a preliminary overview of the project setting, or existing environmental conditions, for the resources within the State land (leaseholds and easement lands) at PMRF and KPGO. The Draft EIS will include further details on the existing conditions and potential effects of the Proposed Action and alternatives, as well as measures to minimize or mitigate these potential environmental effects.

The EISPN provides a preliminary overview of existing conditions relevant to the analysis of the Proposed Action and alternatives. The following 13 resources will be analyzed in the Draft EIS: archaeological and historic resources, cultural practices, biological resources, land use, socioeconomics, environmental justice, water resources, utilities, public health and safety, air quality and greenhouse gases, transportation, hazardous materials and wastes, and visual resources.

3.1 Archaeological and Historic Resources

The term "historic resource" as used in both NEPA and HEPA applies broadly to a variety of resources such as historic buildings, historic districts, archaeological sites, traditional places, and traditional ways of life. Several federal laws and regulations address cultural resources, including the NHPA and the Archaeological Resources Protection Act (ARPA), as well as agency-specific instructions and policies. The NHPA defines a historic property as any "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such a property or resource." Hawai'i State law also regulates historic properties in HRS Chapter 6E. Under HRS Chapter 6E, historic properties include any building, structure, object, district, area, or site, including heiau (a Hawaiian sacred temple) and underwater site, which is over 50 years old; and burial sites, defined as any specific unmarked location where prehistoric or historic human skeletal remains and their associated burial goods are interred, and its immediate surrounding archaeological context. Through the HRS Chapter 6E-42 review process, historic properties are assessed for "significance" as defined in HAR § 13-284-2 before project effects are analyzed.

Under the NHPA, the affected environment for historic properties is called the Area of Potential Effects (APE). The APE is defined in 36 CFR § 800.16(d) as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist." Under HRS Chapter 6E, the affected environment for cultural resources is referred to as a "Project Area," which is defined in HAR § 13-284-2 as "the area the proposed project may potentially affect, either directly or indirectly" and includes "not only the area where the proposed project will take place, but also the proposed project's area of potential effect."

The NEPA/HEPA impact analysis will be conducted within the NHPA APE and the HRS-6E Project Area to determine potential impacts on historic resources. These areas are the same and comprise the leaseholds and easement lands at the Main Base, Kamokalā Ridge, Mānā Well, Miloli'i Ridge, Mākaha Ridge, and KPGO. The APE for the Proposed Action is depicted as the State lands shown in Figure 1-2.

The Draft EIS will characterize the affected environment for cultural resources for Navy and NASA leasehold and easement lands. The document will identify cultural resources and assess the impacts resulting from implementation of the Proposed Action and alternatives to those cultural resources. Surveys are currently being conducted to identify cultural resources. These resources will be evaluated

for NHPA eligibility and HRS Chapter 6E significance. Both the Navy and NASA are responsible for managing historic properties under their control. PMRF's NHPA responsibilities are governed by the Commander, Navy Region (COMNAVREG) Hawai'i Programmatic Agreement (PA) with the SHPO and the Advisory Council on Historic Preservation (ACHP) (NAVFAC Pacific, 2012). Analysis of potential impacts to cultural resources will be conducted in accordance with the PA. The Draft EIS will evaluate potential impacts to archaeological and historic resources from implementation of the Proposed Action and alternatives.

3.2 Cultural Practices

The State of Hawai'i has an affirmative obligation to preserve and protect Native Hawaiians' customary and traditional rights to the extent feasible under the Hawai'i State Constitution, Article XII, Section 7.

Hawaii Session Law H.B. No. 2895, known as "Act 50", provides that "there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawai'i's culture, and traditional and customary rights" (H.B. No. 2895). Act 50 requires state agencies and other developers to assess the effects of proposed land use or shoreline developments on the "cultural practices of the community and State" as part of the HEPA environmental review process. In *Ka Pa'akai O Ka 'Āina v. Land Use Commission*, 94 Hawai'i 31, 7 P.3d 1068 (2000), the Hawai'i Supreme Court provided government agencies an analytical framework to ensure the protection and preservation of traditional and customary Native Hawaiian rights while reasonably accommodating competing interests. HEPA requires including natural or human-made resources of historic, cultural, archaeological, or aesthetic significance in this assessment.

Traditional land uses near the Project Area include habitation, subsistence activities, burial, and travel. It is likely that permanent settlements were concentrated at the inland edge of the Mānā Plain. Small fishing communities, possibly limited to temporary camps, were scattered along the coast. The people of Mānā were noted fishermen, taking advantage of the rich waters of the channel between Kaua'i and Ni'ihau. Fishing was not confined to the ocean and shoreline of Mānā, but also included the swamps and ponds on the coastal plain, where wild resources could be obtained alongside those raised through aquaculture. The coastal plain was a source of natural resources that were collected and used for a variety of purposes, including 'a'ali'i shrubs for firewood, hi'aloa and other plants for medicine, and makaloa and neki for weaving. The coastal dunes of the Mānā Plain were the burial grounds of ancient Hawaiians. Past and present cultural practices have been identified through prior consultation with Native Hawaiian Organizations and other stakeholders.

A Cultural Impact Assessment (CIA) will be prepared for the Proposed Action consistent with HEPA and Act 50 (Session Laws of Hawai'i, H.B. No. 2895), and will follow the State of Hawai'i's 1997 *Guidelines for Assessing Cultural Impacts*. The CIA will collect information relating to the practices and beliefs of Native Hawaiians who have knowledge of the Project Area. The area evaluated for the proposed CIA will be larger than the area associated with implementation of the Proposed Action to account for cultural practices that may be affected but are not included within the boundaries of the Project Area. Consequently, a large portion of the Mānā Plain inland from the Main Base will be included in the CIA. The information used in the CIA will be obtained through ethnographic and oral history interviews with knowledgeable organizations and persons such as traditional cultural practitioners, and through archival research that will include Hawaiian language sources. The assessment will consider cultural practices

and beliefs related to subsistence (e.g., fishing, gathering, and agriculture), habitation, commercial activities, access issues, recreation, religious/spiritual activities, and customs. Previously documented traditional cultural and other historic properties that are essential to these cultural practices and beliefs will be included in the analysis. The analysis conducted in the CIA will be incorporated into the Draft EIS.

3.3 Biological Resources

The Draft EIS will include a description of the biological resources in the Project Area. It will also include a discussion of known occurrences and potential habitat for species that are federally listed as endangered or threatened, habitats with substantial populations of native plants or animals, and designated critical habitats. Currently flora and fauna surveys, as well as wetland delineations, are being conducted in the area of interest.

Undeveloped leased lands at the Main Base comprise scrubland vegetation, sparse wetlands, and rolling sand dunes; easement areas include agricultural plains containing an interconnected system of irrigation ditches (Figure 3.3-1). Elevations at the Main Base range from sea level to 60 feet above sea level. Agricultural fields in the Project Area consist of both fallow and active landscapes with predominantly non-native vegetative scrub in and around the fields. Isolated wetland features support ESA-listed waterbirds, including the Hawaiian coot (*Fulica alai*), Hawaiian duck (*Anas wyvilliana*), Hawaiian gallinule (*Gallinula galeata sandvicensis*), Hawaiian stilt (*Himantopus mexicanus knudseni*), and Hawaiian goose or nēnē (*Branta sandvicensis*). ESA-listed plant species, including lauʻehu (*Panicum niihauense*) and ʻakoko (*Euphorbia celastroides*), occur within coastal vegetation communities. The state-recognized endemic Hawaiian short-eared owl or pueo (*Asio flammeus sandwichensis*) has been observed; however, it is only state-listed as endangered on Oʻahu. The endangered Hawaiian monk seal (*Neomonachus schauinslandi*), threatened green sea turtle (*Chelonia mydas*), and endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) have been observed in the coastal regions of the Main Base. Hawaiian stilts and Hawaiian yellow-faced bees (*Hylaeus* sp.) have also been observed in coastal areas adjacent to the Main Base.

Kamokalā Ridge is above adjacent agricultural lands with limited features that could provide ESA-listed flora or fauna habitat. Elevations at Kamokalā Ridge range from 240 to 320 feet above sea level. Vegetation, though sparse and lacking diversity, is consistent throughout steep cliff areas. Non-native and native trees provide canopy, while non-native scrub provides sparse understory amongst rocky terrain. The Hawaiian hoary bat, the state's only terrestrial ESA-listed mammal, has been observed in the Kamokalā Ridge area.

Mānā Well, located southeast of Kamokalā Ridge, is a small area containing an underground aquifer that provides potable water to the Main Base at an elevation of 120 feet above sea level. Mānā Well is in proximity to unmanaged lands with no known restoration efforts at the location, potential habitat for protected species is minimal.

The reflectors on Miloliʻi Ridge are situated amongst mixed coastal cliff vegetation, containing sparse native species at elevations from 1,760 to 1,790 feet above sea level. Much of the canopy comprises non-native trees with a mixed understory consisting of native and non-native shrubs and grasses.



Figure 3.3-1 Vegetation Types

Mākaha Ridge, with its diverse topography, varies in landscape and vegetation. Elevations at Mākaha Ridge range from 1,400 to 1,850 feet above sea level. Its features include eroded ridges with ruderal vegetation, as well as non-native canopies with dense understory patches. The following five federally listed plants have been documented within the coastal cliff plant communities at Mākaha Ridge: Niʻihau lobelia (*Lobelia niihauensis*), makou (*Peucedanum sandwicense*), Hawaiʻi scaleseed (*Spermolepis hawaiiensis*), dwarf iliau (*Wilkesia hobdyi*), and māʻoliʻoli (*Schiedea apokremnos*). The Hawaiian hoary bat and nēnē are ESA-listed species that have been observed in the region, as well as the state-listed pueo. ESA-listed seabirds including Newell's shearwater (*Puffinus auricularis newelli*), Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*), and the band-rumped storm petrel (*Oceanodroma castro*) have the potential to fly over Mākaha Ridge or utilize the area.

KPGO consists of maintained landscaped grass, planted fruit trees, and non-native shrubs surrounding isolated building structures located along Kaunuohua Ridge, 3,700 feet above sea level. Mixed vegetation is sparse and consists of native and non-native plant communities. The Hawaiian hoary bat, nēnē, Hawaiian petrel, Newell's shearwater, band-rumped storm petrel, Hawaiian picture-wing fly (*Drosophila musaphilia* and *Drosophila sharpi*), and ʻakoko are ESA-listed species present in the montane mesic forest region dominated by native trees. Rare state-recognized endemic forest birds such as scarlet honeycreeper or ʻiʻiwi (*Vestiaria coccinea* syn. *Drepanis coccinea*), ʻapapane (*Himatione sanguinea*), and ʻamakihi (*Chlorodrepanis stejnegeri*) have been observed in the region. Critical habitat for bluegrass (*Poa mannii*), ʻakoko (*Euphorbia halemanui*), ʻaiakeakua (*Solanum sandwicense*), *Xylosma crenatum*, *Dubautia latifolia*, ʻaiea (*Nothocestrum peltatum*), and Hawaiian picture-wing fly (*D. musaphilia*), occur outside of KPGO, along the western region of Kaunuohua Ridge.

The Draft EIS will evaluate potential impacts to biological resources from implementation of the Proposed Action and alternatives.

3.4 Land Use

The State of Hawaiʻi has a unique system of classifying and managing lands in which both state and county agencies hold distinct responsibilities. The State Land Use Law (HRS § 205) classifies all lands in Hawaiʻi into one of four State Land Use Districts (SLUDs): urban, rural, agricultural, and conservation. The land that is leased and in easement by the Navy and NASA is classified as a conservation or agricultural district. The conservation district is further divided into five subzones: limited, resource, general, protected, and special. Navy and NASA leased and easement lands lie within the following conservation subdistricts: limited, resource, and general. In addition, each county has its own classification system of zoning districts that complement the SLUD designations. The County of Kauaʻi Zoning for the Project Area includes agriculture, conservation, open space, and special treatment – ecological. Table 3.4-1 summarizes SLUD and zoning designations in the Project Area.

Table 3.4-1 State Land Use Districts and Zoning Designations in and Surrounding the Project Area

Geographical Area	*Tax Map Key Parcel*[1]	*County of Kaua'i Zoning*	*State Land Use Districts*	*Conservation Subzone*	*Owner*
Main Base	1-2-002:001, 011, 012, 013, 015, 024, 025, 026, 030; 1-2-016:011	Agriculture, Open Space, Conservation, Special Treatment–- Ecological	Agriculture, Conservation	Limited, General Subzone	State of Hawai'i, U.S. Government
Kamokalā Ridge	1-2-002:001, 027, 029	Agriculture, Open Space	Agriculture	None	State of Hawai'i
Mānā Well	1-2-002:028	Open Space	Agriculture	None	State of Hawai'i
Miloli'i Ridge	1-2-001:006	Conservation	Conservation	Resource Subzone	State of Hawai'i
Mākaha Ridge	1-2-001:001, 006, 010; 1-4-001:002, 013, 014, 999	Conservation	Conservation	Resource Subzone	State of Hawai'i
KPGO	1-4-001:013	Conservation	Conservation	Resource Subzone	State of Hawai'i

Note: [1]Some Tax Map Key Parcels may be only portions or included for more than one geographical area.
Legend: KPGO = Kōke'e Park Geophysical Observatory; U.S. = United States.
Source: State Land Use Law (Chapter 205, Hawai'i Revised Statutes).

The Main Base consists of the fee simple lands held by the U.S. Government. Mānā Plain is east of the Main Base and is utilized for agriculture and is bordered by the Kekaha Game Management Area (which encompasses Kamokalā Ridge and Mānā Well). The southern boundary for the Main Base ends at Kokole Point. Miloli'i Ridge and Mākaha Ridge are located within the Pu'u Ka Pele Forest Reserve managed by DLNR, DOFAW. Adjacent to Mākaha Ridge, KPGO is located within Kōke'e State Park, which is managed by DLNR, State Parks Division. Both are accessible by Kōke'e Road (Figure 1-2).

Land uses in the Project Area include public beach access, local and federal government activities, agriculture, hiking, hunting, and other public uses. Highway 50 (also known as Kaumuali'i Highway) is the primary public access route through the Main Base (Figure 1-2).

The Draft EIS will evaluate potential impacts to land use from implementation of the Proposed Action and alternatives.

3.5 Socioeconomics

The area that will be considered for socioeconomic analysis is the County of Kaua'i.

Population Characteristics. In 2021, the population of the County of Kaua'i was 73,247, representing approximately 5 percent of the total population for the state. The population of the County of Kaua'i grew 9.2 percent from 2010 to 2021. This growth rate was faster than for the state (6.9 percent) and U.S. (6.8 percent) over the same period. Table 3.5-1 shows 2010 and 2021 population data.

Table 3.5-1 Population of the County of Kaua‘i, State of Hawai‘i, and United States (2010 and 2021)

Location	*2010*	*2021*	*Percent Change*
United States	308,745,538	329,725,481	6.8
State of Hawai‘i	1,360,301	1,453,498	6.9
County of Kaua‘i	67,091	73,247	9.2

Sources: U.S. Census Bureau, 2010, 2022a.

Employment Characteristics. In 2021, 36,294 individuals in the County of Kaua‘i were employed in the civilian labor force and 239 individuals in the armed forces (U.S. Census Bureau [USCB], 2022b). The three largest civilian-employed industries in the County of Kaua‘i in terms of workforce employed are arts, entertainment, recreation, accommodations, and food services (23.1 percent); educational services, health care, and social assistance (17.8 percent); and retail trade (11.4 percent) (USCB, 2022b). PMRF is currently the largest high-tech and third-largest overall employer on Kaua‘i with nearly 1,000 personnel, including defense personnel and civilian contractors (State of Hawai‘i Department of Business, Economic Development, and Tourism 2023). The median household income for the County of Kaua‘i was $86,287 compared to the statewide median household income of $88,005 (USCB, 2022b). In 2021, the Bureau of Labor Statistics reported an 8.1 percent unemployment rate in the County of Kaua‘i, which is higher than the U.S. (5.3 percent) and the State of Hawai‘i (6.0 percent) (Bureau of Labor Statistics, 2021, 2023).

The Draft EIS will include an analysis of potential socioeconomic impacts from implementation of the Proposed Action and alternatives.

3.6 Environmental Justice

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* directs agencies to address environmental and human health conditions in minority and low-income communities. Environmental justice addresses the disproportionate and adverse impacts of a federal action on low-income or minority populations. The intent of the order and related directives and regulations is to ensure that low-income and minority populations do not bear a disproportionate burden of adverse impacts resulting from federal actions.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, directs each federal agency to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and ensure that its activities and standards address disproportionate risks to children that result from environmental health or safety risks.

Impacts associated with environmental justice would be to disadvantaged communities that could be adversely affected by the Proposed Action. The West Kaua‘i Community Plan was adopted in 2020 and guides the long-term development, growth, and maintenance in the Waimea-Kekaha and Hanapēpē-‘Ele‘ele districts. The West Kaua‘i Community Plan recognizes that challenges, such as a lack of housing to the growing effects of climate change, will negatively impact vulnerable households disproportionately (County of Kaua‘i, 2020). The potential disadvantaged communities would be identified based on the spatial distribution of low-income and minority populations in the Project Area. As defined by the Environmental Justice Guidance under NEPA (CEQ, 1997), minority populations include persons who identify themselves as Asian, Native Hawaiian or other Pacific Islander, Native American or Alaskan Native, Black (not of Hispanic origin), or Hispanic or Latino. A minority population

exists where the percentage of minorities in an affected area either exceeds 50 percent or is meaningfully greater than in the general population. In addition, a minority population also exists if there is more than one minority group present and the minority percentage, when calculated by aggregating all minority persons, meets one of the above thresholds (CEQ, 1997).

The Draft EIS will consider whether there are such disadvantaged communities on West Kaua‘i within the vicinity of PMRF and, if so, assess whether the Proposed Action results in disproportionate and adverse impacts on environmental and human health conditions in minority and low-income communities. Potentially disadvantaged communities will be identified by comparing communities on West Kaua‘i within the vicinity of PMRF to demographic and socioeconomic indicators for the County of Kaua‘i as a whole.

3.7 Water Resources

Water resources include surface water (e.g., streams, lakes, rivers, and wetlands), groundwater, floodplains, and coastal waters, which comprise watershed hydrology.

Mean annual rainfall at the Main Base is approximately 20 inches. The developed water system, consisting of three human-made open irrigation ditches through the agricultural lands on Mānā Coastal Plain draining into the Pacific Ocean, is fed by upland streams, surface waters, and associated sediment. Wetlands, floodplains, mudflats, and shallow ponds are present along the lowlands and coastal regions (Figure 3.7-1). The only natural wetland habitat on the Main Base comprises estuarine and marine systems along the shoreline region. A human-made sewage oxidation pond complex is located on the southern portion of the Main Base.

Mean annual rainfall in the Kamokalā Ridge area is 20 inches. Surface water from Nahomalu Valley (north) and Ka‘awaloa Valley (south) of Kamokalā Ridge drains into the Mānā Plain. A basal unconfined dike aquifer is located in the Waimea Aquifer Sector within the Kekaha Aquifer System (Figure 3.7-2).

Mean annual rainfall in Mānā is approximately 20 inches. Mānā Well, located at the southeastern end of Kamokalā Ridge, pumps water upwards from a below-ground aquifer. The water from the well is properly treated before it is piped into the PMRF drinking water distribution system. Drinking water on the Main Base is provided by Mānā Well, as well as the County of Kaua‘i’s Waimea-Kekaha system.

Mean annual rainfall on Miloli‘i Ridge is 30 inches. Due to the rocky, stony, and volcanic makeup of the terrain on Miloli‘i Ridge, runoff is rapid and erosion is prevalent. There are no perennial water features and no groundwater resources.

Mean annual rainfall at Mākaha Ridge is 30 inches. Due to the rocky, stony, and volcanic makeup of the terrain on Mākaha ridge, runoff is rapid and erosion is prevalent. There are no perennial water features, only intermittent streams in the region. Two aquifers, both part of the Waimea Aquifer Sector of the Kekaha Aquifer System, are beneath this site (Figure 3.7-2).

Mean annual rainfall on the Kaunuohua Ridge at KPGO ranges from 50 to 60 inches. Surface water runoff is medium due to highly-eroded volcanic terrain on the ridgeline, and generally follows a northwesterly/southeasterly course. Numerous streams are located around the base of the mountains. One unconfined dike aquifer, located in the Waimea Aquifer Sector within the Kekaha Aquifer System, lies beneath KPGO.



Figure 3.7-1 NWI Wetlands



Figure 3.7-2 Aquifers

The Draft EIS will evaluate potential impacts to water resources from implementation of the Proposed Action and alternatives.

3.8 Utilities

There are utility leases and easements included as part of the Proposed Action. Utility systems' usage, available supply capacity, and the overall real property condition of the utility systems will be analyzed. The primary utilities that will be assessed in the Draft EIS are potable water, wastewater, electrical, and communications.

Potable water for the Main Base lease areas comes primarily from Mānā Water Well. Potable water resources for Kamokalā Ridge, Mākaha Ridge, and KPGO are supplied by either existing wells or municipal sources from several reservoirs. The Navy treats water from all sources, except water provided by the State of Hawai'i (Navy, 2008).

Wastewater services for PMRF include domestic sewage treatment facilities and a collection system that services PMRF (Navy, 2008). The Kamokalā Ridge, Mākaha Ridge, and KPGO wastewater utility supply and uses will be identified in the Draft EIS.

Primary electric power is supplied to the Main Base, Kamokalā Ridge, and Mānā Water Well by purchase from the Kaua'i Island Utility Cooperative and a 14-megawatt solar facility with a 70 megawatt-hour battery energy storage system on the Main Base (Figure 3.8-1). KPGO power is supplied by a Navy-operated power plant at Mākaha Ridge. Electricity is provided through both overhead and underground transmission lines. Emergency diesel backup generators provide alternate power when needed at KPGO. Communications infrastructure for the Main Base, Kamokalā Ridge, Mākaha Ridge, and KPGO consist of cable, fiber optics, cellular towers, and communications towers.

The Draft EIS will analyze potential impacts to utilities from implementation of the Proposed Action and alternatives.



Photo courtesy of U.S. Navy, November 16, 2021.

Figure 3.8-1 Solar Facility and Battery Energy Storage System

3.9 Public Health and Safety

Public health and safety pertains to activities, occurrences, and training, and RDT&E activities that have the potential to affect the well-being, safety, and health of the public.

NASA operates KPGO in accordance with the Environmental Management Plan under the Space Exploration Network Services and Evolution contract. To ensure operations at KPGO do not result in impacts to public safety or the environment, the Environmental Management Plan describes procedures for the following: environmental planning; risk assessment; spill prevention; operational controls; education, training, awareness, and competency; evaluation, checking, and corrective action; water management; air quality management; and waste management.

Range Safety at PMRF is controlled by Range Control, which is responsible for hazard area surveillance and clearance and control of all operational areas. Range Control maintains real-time surveillance, clearance, and safety at all PMRF areas. The PMRF Range Safety Officer is responsible for establishing Ground Hazard Areas (GHAs) and Launch Hazard Areas over water. The Ground and Launch Hazard Areas for missile launches are determined by size and flight characteristics of the missile, as well as individual flight profiles of each flight test. Data processed by ground-based or onboard missile computer systems may be used to recognize malfunctions and terminate missile flight. Before a launch is allowed to proceed, the Navy uses input from ship sensors, visual surveillance from aircraft and range safety boats, radar data, and acoustic information to ensure the offshore range is clear of vessels and aircraft.

PMRF operates pursuant to Range Commanders Council 321, *Common Risk Criteria for National Test Ranges*. Range Commanders Council 321 sets requirements for minimally acceptable risk criteria to occupational and non-occupational personnel, test facilities, and non-military assets during range operations.

Ordnance safety includes procedures to prevent premature, unintentional, or unauthorized detonation of ordnance. All programs require an Explosive Safety Approval before ordnance is allowed on PMRF or used on a test range. This approval involves a detailed analysis of the explosives and of the proposed training and RDT&E activities. The analysis also covers procedures and facilities for surveillance and control, an adequacy analysis of movement and control procedures, and a design review of the facilities where the ordnance items will be handled.

PMRF transports ordnance by truck from Nāwiliwili Harbor to the Main Base along Highway 50 (Figure 3.9-1). The barges carrying ordnance are met at Nāwiliwili Harbor by trained ordnance personnel and special vehicles for transit and delivery to PMRF. PMRF Instruction 8023.G controls the handling and transportation of ammunition, explosives, and hazardous materials on the facility. All ordnance is transported in accordance with PMRF Instruction 8023.G and U.S. Department of Transportation regulations.

Ambulance and Class II Emergency Medical Technician services are provided by Emergency Medical Technicians assigned to Crash/Fire. These contractor-operated services are available to military, civil service, and non-government personnel at PMRF, 24 hours a day, 7 days a week. More extensive emergency medical services are available from the West Kauaʻi Medical Center in Waimea, 10 miles from PMRF's main gate (Figure 3.9-1).



Figure 3.9-1 Ordnance Transport Route and Emergency Medical Services Route

Fire service at the Main Base includes PMRF Crash/Fire equipment located at the Air Traffic Control Tower. Personnel are trained to respond to activities such as aircraft firefighting and rescue in support of airfield operations, hazardous material incidents, confined space rescue, and hypergolic fuel releases, plus structure and brush firefighting, fire prevention instruction, and fire inspections.

The Draft EIS will evaluate potential impacts to public health and safety from implementation of the Proposed Action and alternatives.

3.10 Air Quality and Greenhouse Gases

3.10.1 Air Quality

The U.S. Environmental Protection Agency (USEPA) has established National Ambient Air Quality Standards (NAAQS) for the criteria pollutants sulfur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO), ozone (O_3), lead, particulate matter (PM) measured less than or equal to 10 microns in diameter (PM_{10}), and PM less than or equal to 2.5 microns in diameter [$PM_{2.5}$]).

The Hawai‘i Department of Health (DOH), Clean Air Branch regulates and monitors air pollutants under HAR Chapter 11-59, *Ambient Air Quality Standards*, and HAR Chapter 11-60.1, *Air Pollution Control*. Based on ambient air monitoring results, the island of Kaua‘i is designated unclassified/attainment for all criteria pollutants (USEPA, 2023). The Clean Air Branch currently operates one monitoring station on the island of Kaua‘i approximately 1.0 mile downwind of Nāwiliwili Harbor to measure SO_2 emissions from cruise ships (DOH, 2023).

The prevailing winds on Kaua‘i (known as trade winds) blow in from east-northeast and prevail approximately 9 months of the year. When there is volcanic activity, trade winds blow volcanic fog (“vog”) from Hawai‘i Island volcanoes. When trade winds are absent for prolonged periods, vog travels up the island chain and can affect air quality by increasing levels of airborne SO_2 and $PM_{2.5}$.

Sources of air emissions from the Navy include vehicle traffic, diesel-fuel powered generators, aircraft, power generation, and rocket launches. Sources of air emissions from NASA include vehicle traffic and the diesel power generator.

The Draft EIS will assess the potential impacts to air quality from implementation of the Proposed Action and alternatives.

3.10.2 Greenhouse Gases

Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). Global climate change is impacting temperature, precipitation, wind, sea level, and other elements of Earth’s climate system. The recent buildup of GHGs in the atmosphere from human activities has changed the earth’s climate and has resulted in adverse effects to human health and welfare, and to ecosystems.

Sea level rise, altered rainfall patterns, and rising ocean and air temperatures result from climate change. These changes impair access to clean water and healthy food, undermine human health, threaten the cultural and built environment, exacerbate inequities, and disrupt economic activity and diversity of ecosystems in Hawai‘i (U.S. Global Change Research Program, 2023).

The Draft EIS will analyze potential impacts from GHGs and climate change from implementation of the Proposed Action and alternatives.

3.11 Transportation

The roadways used to access or in the vicinity of PMRF include Highway 50, Kōkeʻe Road, Kao Road/Kiko Road, Mānā Road, Mākaha Ridge Road, and Miloliʻi Ridge Road.

Highway 50 is a principal arterial roadway providing regional mobility in the western part of Kauaʻi. It begins in Līhuʻe and ends in the vicinity of PMRF, where it is a two-lane, undivided roadway with painted shoulders along both sides of the road. There are median left turn lanes at selected intersections along Highway 50.

Kōkeʻe Road branches north from Highway 50 in Waimea and provides access from Kekaha to Waimea Canyon State Park and Kōkeʻe State Park. It also provides access to the KPGO site. In the vicinity of the KPGO site, it is a two-lane, undivided roadway with grass shoulders along both sides of the road.

The Draft EIS will analyze the potential impacts of the Proposed Action and alternatives on the roadway facilities in the vicinity of the PMRF and KPGO sites along with multi-modal facilities, such as pedestrian, bicycle, and public transit facilities.

3.12 Hazardous Materials and Wastes

Hazardous materials are currently utilized or present on lease and easement lands at KPGO, the Main Base, and Mākaha Ridge.

Hazardous materials present on the Main Base leased area include the following: cleaning agents, solvents, lubricating oils, jet fuel, diesel fuel, propane, gasoline, aqueous film forming foam[2] (AFFF), chlorine, used oil, and paint. No known components within the Main Base leased area contain polychlorinated biphenyls (PCBs). PMRF's management and disposal procedures for used oils and fuels are in its Hazardous Waste Management Plan. Most waste is collected and containerized at the Main Base leased area for direct offsite disposal through the Defense Reutilization and Marketing Office, which also provides for the transportation and disposal of the waste to a final disposal facility.

PMRF uses gasoline and diesel fuel to power trucks and equipment across leasehold areas. Table 3.12-1 includes a summary of fuel storage on PMRF leased lands and KPGO.

Hazardous materials on Mākaha Ridge include diesel storage tanks and oil storage tanks. Used oil is taken to the Main Base to be recycled.

KPGO Site B has multiple diesel fuel tanks used for emergency power generation. Site B also has a hazardous material storage facility which holds paint, oil, mechanical lubricating fluids, and cleaning

[2] Based on guidance from the Assistant Secretary of the Navy, DON has strict firefighting performance requirements for AFFF formulations to protect the safety of our personnel and the public in the event of an emergency. DON amended the MILSPEC in September 2017 setting limits for PFOS and PFOA at the lowest levels of quantitation while maintaining fire-fighting performance requirements. DON is in the process of removing legacy AFFF and replacing it with new MILSPEC compliant AFFF. DON has also implemented system requirements to ensure DON installations and facilities are tested and certified in a manner that does not allow the release of legacy AFFF into the environment. MIL-PRF-32725 limits per- and polyfluoroalkyl substances (PFAS) to 1 part per billion, and Section 322 of the National Defense Authorization Act for Fiscal Year 2020 requires DoD to stop using AFFF containing PFAS on all installations by 1 October 2024.

substances. Used oil is taken to the Main Base to be recycled. NASA's Environmental Management Plan for KPGO describes waste management processes including handling of solid waste, recyclable materials, hazardous waste management, hazardous waste shipment, universal waste management, asbestos management, PCBs, and compliance with the Emergency Planning and Community Right-to-Know Act.

Table 3.12-1 PMRF Leased Area and KPGO Fuel Storage Locations

Fuel Storage Types	*Quantity*	*Capacity (nominal capacity) in gallons*	*Details*
Diesel ASTs	2	8,000	Mākaha Ridge
Diesel AST	3	275	Mākaha Ridge
Diesel USTs	1	25,000	KPGO Site B
Diesel USTs	2	500	KPGO Site B
Diesel ST	2	55	KPGO Site B
Diesel ST	1	244	KPGO Site B
Diesel ST	1	256	KPGO Site B

Key: AST = aboveground storage tank, UST = underground storage tank, ST = Storage Tank.

PMRF has a pollution prevention plan for all sites on Kaua'i, which follows the Navy's Consolidated Hazardous Materials Reutilization and Inventory Management Program for controlling, tracking, and reducing hazardous materials use and waste generation. Current programs involve waste elimination from toner cartridges, mercury from mercury lamps, and acid/lead batteries and asbestos management. Asbestos is managed in accordance with the base asbestos management plan which requires all structures on leased and easement land areas to be surveyed, and any asbestos removed by a certified asbestos contractor prior to disturbance/construction. Lead-based paint waste removal follows Department of Energy protocols, and all facilities on PMRF leased lands follow the lead-based paint management plan.

The Draft EIS will evaluate potential impacts to hazardous materials and wastes from implementation of the Proposed Action and alternatives.

3.13 Visual Resources

The discussion of visual resources includes the natural and built features of the landscape visible from viewpoints that contribute to an area's visual quality. Under NEPA, federal agencies should consider visual impacts of proposed projects on scenic resources, historic properties, and scenic experiences of public who view the landscape. Aesthetics and views of proposed projects at PMRF and the NASA lease area are mainly guided by the Kaua'i County General Plan (County of Kaua'i, 2018) or the West Kaua'i Community Plan (County of Kaua'i, 2020). Both plans include policies to preserve scenic views of ocean, coastline/beach areas, mountains, and other elevated landforms.

The Main Base leaseholds and easements are situated on the west coast of Kaua'i on the Mānā Coastal Plain (refer to Figure 1-2). The leased and easement areas in this area are relatively flat and consist primarily of agricultural and other undeveloped, partially-vegetated lands. The ridges that run east of these areas are the dominant view from the Main Base. The Pacific Ocean and coastlines can be viewed from higher elevation vantage points. Kaumuali'i Highway (Highway 50) is the main paved roadway in this area. Typical views from the highway include mixed vegetation and agricultural areas along both

sides of the road, with the mountains visible in the distance to the east, if travelling northbound on Kaumualiʻi Highway toward Barking Sands Beach and Polihale State Park. The facilities on these leaseholds and fee simple lands are visible to the west for some stretches when travelling northbound on Kaumualiʻi Highway.

The Kamokalā Ridge leaseholds are located upland from the Main Base. The ordnance storage facility and paved access roads are the primary human-made structures in the area. Vegetation of various heights is adjacent to both sides of the access roads. Obscured views of the Pacific Ocean and coastlines occur from certain vantage points along the roadway. Due to its higher elevation and the relatively dense vegetation in this area, the ordnance storage facility is not visible from the Main Base, Kaumualiʻi Highway, or other public roads west of the Kamokalā Ridge lease area.

The Mānā Water Well is approximately a quarter mile south of the Kamokalā Ridge area. The well is located at the point where the topography changes from flat to steep mountain cliffs. The site is reached by an access road from Kiko Road (Figure 1-4). Mountain views are dominant from this location because the nearest cliff line is less than a quarter mile from the well. No ocean or coastline views are available from this location.

Miloliʻi Ridge and Mākaha Ridge are both finger ridges of the Nāpali Coast on the west-northwest side of Kauaʻi within Puʻukapele Forest Reserve areas. The Miloliʻi Ridge lease area is approximately 8 miles north of the Main Base. Views of the Pacific Ocean and coastlines are not available due to dense vegetation coverage at this site. The facilities at Miloliʻi Ridge are not visible from public vantage points because of its secluded location.

The Mākaha Ridge area is located on the cliffs of the Nāpali Coast State Wilderness Park, approximately 1 mile south of Miloliʻi Ridge. Mākaha Ridge is accessed via the Mākaha Ridge Road (refer to Figure 2-7), which can be accessed by the public up to a gate outside of the radar site. Mākaha Ridge Road has forest vegetation lining both sides of the road, obstructing a view of any vista. The radar facilities are only partially visible from the segment of the Mākaha Ridge Road near the radar site gate.

The NASA lease area is located at the Kōkeʻe Park, approximately half a mile northeast of Mākaha Ridge Road. The site can be accessed through Kōkeʻe Road and Faye Road. Site facilities are located on landscaped or paved areas. The site is surrounded by taller forest vegetation. The heavily vegetated setting and mountain views are the main scenic resources from this area. The NASA facilities are partially visible to Kōkeʻe State Park visitors while traveling along Mākaha Ridge Road.

As part of the visual resources impacts evaluation, the Draft EIS will discuss visual resources in detail from the perspectives of dominant landscape features, visual diversity, elements of line, color, form, and texture, historic and cultural importance, as well as overall landscape character. The Draft EIS will evaluate potential impacts to visual resources from implementation of the Proposed Action and alternatives.

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4 Consistency with State and Local Government Plans and Policies

The Draft EIS will evaluate the Proposed Action's conformance with relevant state and local land use plans and policies.

4.1 Land Use Laws

The Draft EIS will include a discussion of the Proposed Action's conformance with relevant federal, state, and County of Kaua'i land use plans, policies, and controls.

4.2 Hawai'i State Plan and Hawai'i State Functional Plans

The Hawai'i State Plan, codified as HRS Chapter 226, establishes a set of themes, goals, objectives, and policies that are meant to guide the state's long-term growth and development activities. The Hawai'i State Plan also provides a basis for determining priorities, allocating limited resources, and improving the coordination between State and County plans, policies, programs, projects, and regulatory activities. These goals seek to promote a strong economy, a desired physical environment, and nourished community life. The State Plan also establishes objectives for each goal. The Proposed Action meets the statewide objectives by encouraging federal expenditures and national defense that is consistent with "Hawai'i's social, environmental, and cultural goals by building upon dual-use and defense applications" (HRS § 226-9). As stewards of the natural and cultural environment, the Navy and NASA work to enhance Hawai'i's scenic assets, natural beauty, and multi-cultural resources pursuant to HRS § 226-12.

The State Plan (HRS § 226-65) also initiated the Hawai'i 2050 Sustainability Plan to serve as long-range planning to achieve sustainability and climate adaptation goals, principles, and policies. Published in 2008, the plan reinforces the goals and objectives of the State Plan (above) in terms of economic, physical, and community sustainability with the objectives of promoting these sectors through renewable energy, water conservation, and increased food security, among others; an approach fully supported by the Proposed Action (Sustainability Task Force, 2008).

The Statewide Planning System identified in HRS Chapter 226 also requires State Functional Plans, which implement state and county actions. There are 13 Functional Plans used to assist with establishing the policies, statewide guidelines, and priorities within a specific field of activity when such an activity or program is proposed, administered, or funded by any state agency. Due to the nature of the leased and easement lands that fall under the Proposed Action, multiple Functional Plans may be applicable for the Draft EIS, including the Agriculture Functional Plan, the Conservation Lands State Functional Plan, the Historic Preservation State Functional Plan, and the Recreation State Functional Plan. All of these applicable Functional Plans were developed in 1991.

4.3 Kaua'i County General Plan, West Kaua'i Community Plan, Kaua'i Island Plan

The Kaua'i County General Plan underwent a comprehensive update in 2018 and serves as the county's guiding policy framework for growth, land use, and development issues. The Project Area falls within the Waimea-Kekaha Planning District and land uses include agriculture, natural preserve, and parks and recreation. The Proposed Action fits within this General Plan's future land use concept and is consistent with applicable goals and policies (County of Kaua'i, 2018). As stated in the Kaua'i County General Plan, Section 3.3 fostering High Tech and Clean Tech Jobs:

> The Pacific Missile Range Facility (PMRF), located on the West Side, is one of the foremost aerospace test sites in the United States. PMRF leverages Kaua'i's location in the center of the Pacific Ocean for the benefit of aerospace and space launch testing .... Historically, PMRF has been the driving force behind the establishment of technology-based business on Kaua'i. PMRF's continued vitality contributes significantly to Kaua'i's high technology industry and provides opportunities for supportive businesses and entrepreneurs (County of Kaua'i, 2018).

Land uses at PMRF are consistent with the 2020 West Kaua'i Community Plan, and include the following three general areas: Hanapēpē, Kekaha, and Waimea uplands (County of Kaua'i, 2020). The project is consistent with the applicable policies regarding heritage resources, resiliency, and shared spaces in the West Kaua'i Community Plan. As stated in the West Kaua'i Community Plan, Part IV: Other Communities and Significant Areas:

> Over the decades, PMRF has increased its connection with Kekaha and the West Kaua'i Community, such as development of the Junior Professional Program for high school students, restoration of the Kawai'ele Bird Sanctuary, establishment of protocols for the care and internment of inadvertently uncovered iwi, and support and partnership with local businesses and nonprofits (County of Kaua'i, 2020).

A separate Kaua'i Island Plan, last updated in 2004 and produced by the State of Hawai'i Department of Hawaiian Home Lands (DHHL), covers lands owned by the DHHL, which includes 15,061 acres adjacent to the Project Area in Waimea (DHHL, 2004) (Figure 4-1). PMRF is located in the coastal plain below the DHHL Mānā Plain property, and just north of State of Hawai'i Department of Hawaiian Home Lands Kekaha tracts. The project is consistent with land use plans for these two areas.

4.4 List of Potentially Required Permits, Consultations, Reviews, and Approvals

The Navy and NASA will prepare the Draft EIS with input, analysis, and review from the public and local, state, and federal agencies. The anticipated permits, consultations, reviews, and approvals required for implementation of the Proposed Action will depend on the features of the selected alternative. The list of anticipated permits and approvals in Table 4-1 will be refined as alternatives are developed. Input on other processes that may be necessary will be requested from government agencies and other participants as part of this environmental review process.

The Draft EIS will list all permits, consultations, reviews, and approvals necessary to implement the Proposed Action, including those overarching requirements listed in Table 4-1. Because the Proposed Action is a land management proposal, the associated permits and approvals are related to land use arrangements and resource management.

Table 4-1 Potential Required Permits, Consultations, Reviews, and Approvals for the Proposed Action

Potential Required Permits and Approvals	*Regulatory Agency*
Approval of request for new real estate agreements (HRS Chapter 171)	**BLNR**
Conservation District Use Application (HAR Title 13, ch. 5)	**DLNR, Office of Conservation and Coastal Lands**
NHPA (54 U.S.C. section 100101)	ACHP and the Hawai'i SHPO
ESA (16 U.S.C. section 1531 et seq.)	USFWS and NMFS[1]
CWA (33 U.S.C. section 1344)	USEPA and Hawai'i State Department of Health
CZMA, Subpart C (16 U.S.C. section 1451, et seq.)	Hawai'i Office of Planning and Sustainable Development
Hawai'i Historic Preservation Review HRS Chapter 6E-42 and HAR Chapter 13-275	DLNR, SHPD

Note: **Bold text** in table indicates approvals necessitating HRS Chapter 343 environmental review.

[1] This is pending review of monk seal haul-out on easement land; additional review of ESA species is covered in the *Hawaii-Southern California Training and Testing Final EIS/OEIS* (Navy, 2018).

Key: ACHP = Advisory Council on Historic Preservation; BLNR = Board of Land and Natural Resources; CWA = Clean Water Act; CZMA = Coastal Zone Management Act; DLNR = Department of Land and Natural Resources; ESA = Endangered Species Act; HAR = Hawai'i Administrative Rules; HRS = Hawai'i Revised Statutes; NHPA = National Historic Preservation Act; NMFS = National Marine Fisheries Service; SHPD = State Historic Preservation Division; SHPO = State Historic Preservation Officer; U.S.C. = United States Code; USEPA = U.S. Environmental Protection Agency; USFWS = United States Fish and Wildlife Service.



Figure 4-1 Terrestrial Land Ownership

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Appendix A
Summary of Land Use at the Pacific Missile Range Facility

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ACRONYMS AND ABBREVIATIONS

ft	foot or feet	mi	mile
ha	hectare	Navy	Department of the Navy, United States
ICRMP	Integrated Cultural Resources Management Plan	PMRF	Pacific Missile Range Facility
		U.S.	United States
km	kilometer	WWII	World War II
m	meter		

GLOSSARY OF HAWAIIAN LANGUAGE WORDS

Hawaiian Spelling [a]	**Definition**
ʻaʻaliʻi	Hawaiian hopseed, *Dodonaea viscosa*; native shrubs and small trees
ahupuaʻa	land division usually extending from the uplands to the sea, so called because the boundary was marked by a heap (*ahu*) of stones surmounted by an image of a pig (*puaʻa*), or because a pig or other tribute was laid on the altar as tax to the chief
heiau	temple, shrine
hiʻaloa	small, downy, American weed, *Waltheria indica* var. *americana*; leaves and inner bark of root are very bitter and are used for tea or chewed to relieve sore throat
koa	the largest of native forest trees (*Acacia koa*), with light gray bark, crescent-shaped leaves, and white flowers in small, round heads
konohiki	headman of an ahupuaʻa land division under the chief
loko	pond, lake, pool
makaloa	a perennial sedge, *Cyperus laevigatus*
mauka	toward the mountain, or inland
neki	great bulrush
puʻuone	pond near the shore connected to the sea by a stream or ditch; sand dune

[a] Adapted from Mary K. Pukui and Samuel H. Elbert, 1986, *Hawaiian Dictionary*, University of Hawaiʻi Press, Honolulu, unless otherwise noted.

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1 Introduction

1.1 Project Scope

The Pacific Missile Range Facility (PMRF) consists of approximately 10,281 acres (ac), of which approximately 1,933 ac are United States (U.S.) fee simple lands under the administrative jurisdiction of the U.S. Department of the Navy (Navy). The balance of 8,348 ac is state land comprised of 684 ac of leaseholds and 7,664 ac of easements.

No active training or testing occurs on state-owned property. Infrastructure that supports PMRF operations is located in the leaseholds. The easement areas provide safety buffer zones for training and testing missions and prevent incompatible development. The existing leases and easements were acquired from the State of Hawai‘i, Department of Land and Natural Resources, and will expire between 2027 and 2030. The Navy is proposing to secure continued long-term Department of Defense use to support continued operational and mission requirements at PMRF. See Figure 1 and Figure 2 for the project areas of this summary.

The project consists of land that PMRF currently leases or has an easement for from the State of Hawai‘i.

1.2 Project Location

The entirety of the project area is on the western edge of Waimea Ahupua‘a, Kona District, Kaua‘i Island. The Controlled Industrial Area encompasses the Mākaha Ridge Tracking Station, Mākaha Ridge Road, boresight tower adjacent to Mākaha Ridge Road, and several large parcels east of PMRF Barking Sands on the Mānā Plain. The three primary study locations include Barking Sands, Mākaha Ridge Road and Kamokalā Ridge and portions of the surrounding area.

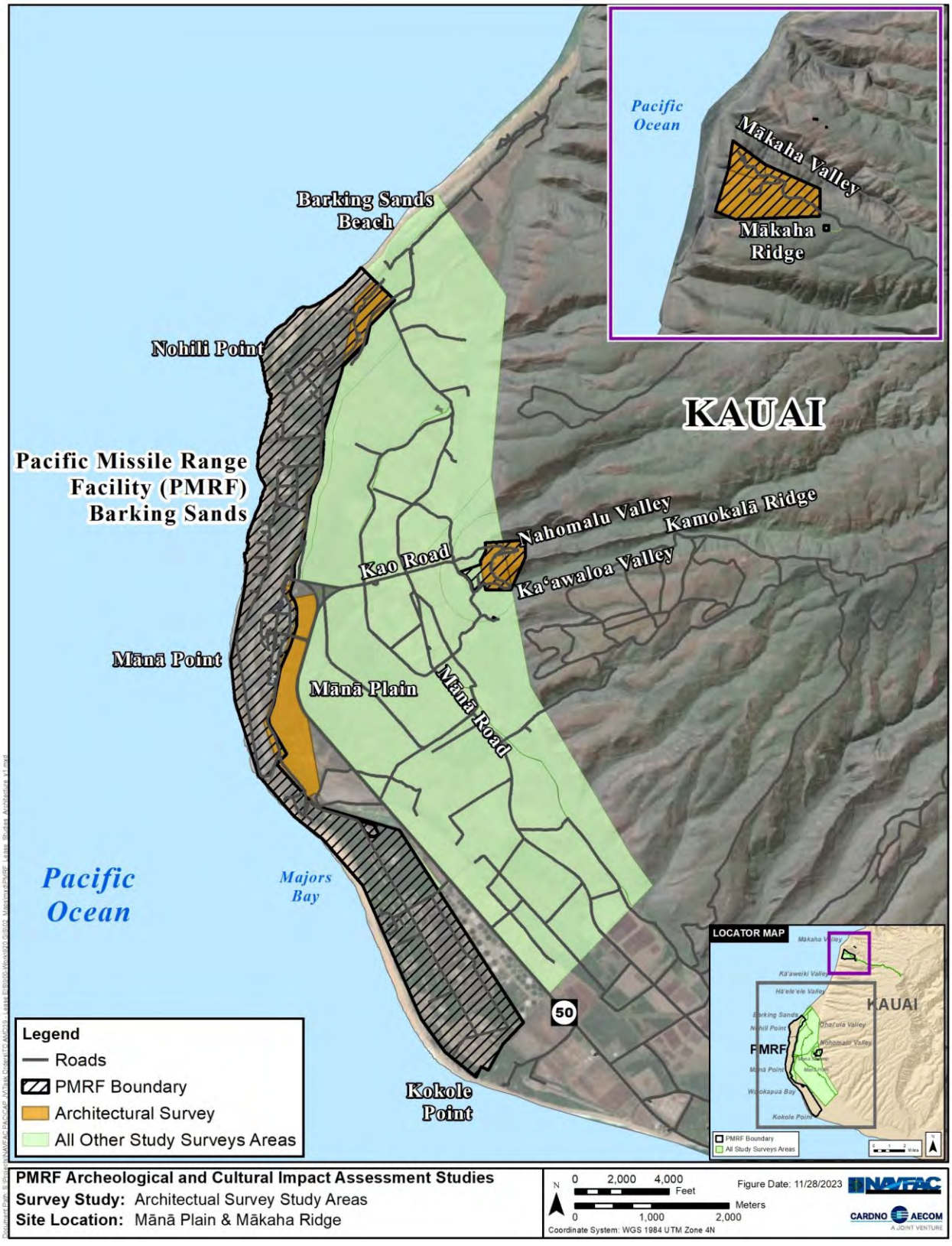


Figure 1 **Architectural survey areas in relation to PMRF Installation boundary and other survey areas.**

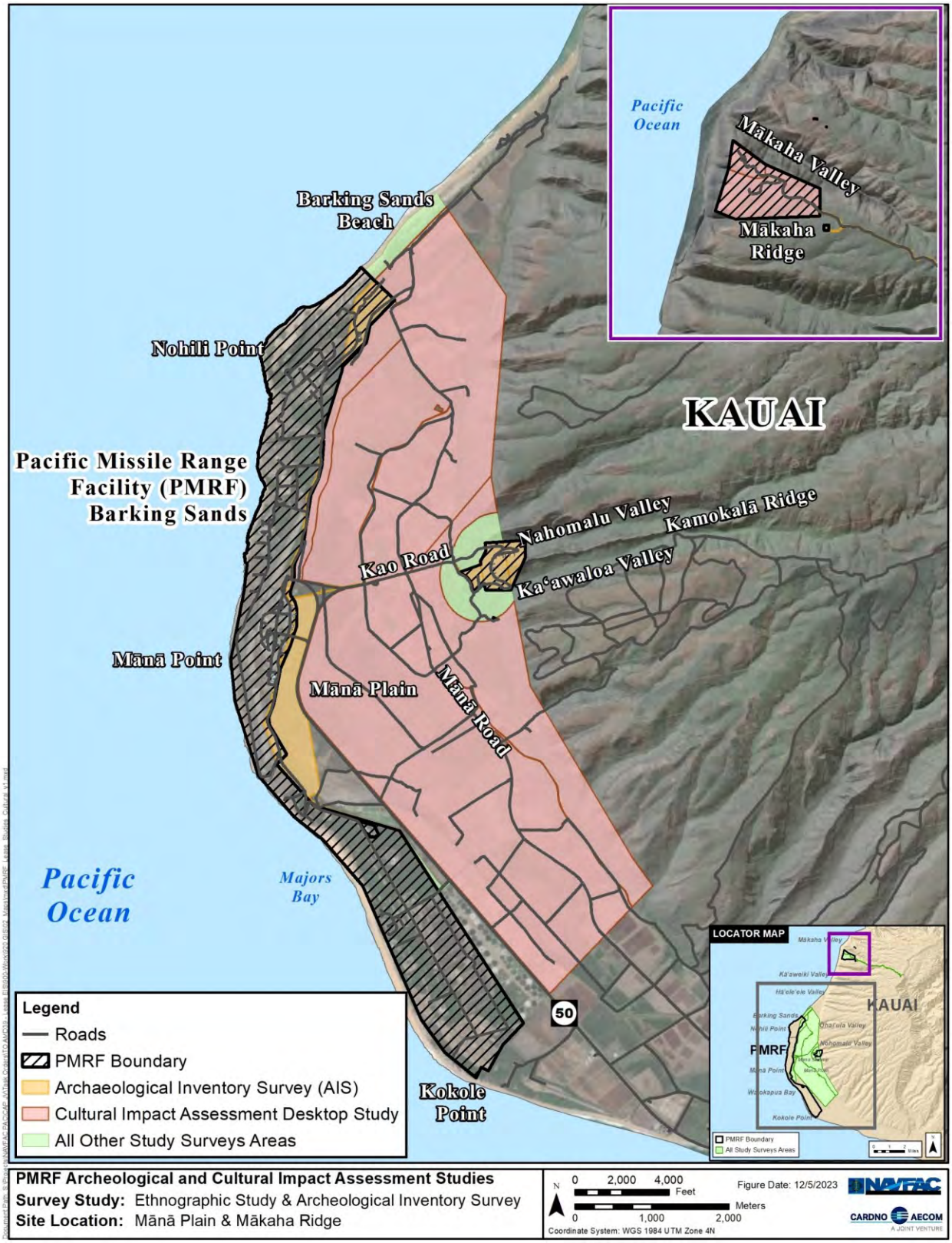


Figure 2 **Archaeology survey and Cultural Impact Assessment study area in relation to PMRF Installation boundary.**

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2 Background

This section presents background information to contextualize the current project and summarizes the physical environment, cultural and historical context, and previous archaeological research. Much of this information has been adapted from the 2005 and 2012 Integrated Cultural Resources Management Plans (ICRMPs) for PMRF (SEARCH 2012; Tomonari-Tuggle and Yoklavich 2005), Bell and Morrison (2009), Knecht and Rieth (2016). Clark et al. (2015) is a synthesized report summarizing information from previous ICRMPs and recent archaeological investigations and is also a common source for this background information. More detailed information about PMRF and the surrounding area can be found in the ICRMPs.

2.1 Physical Environment

PMRF occupies over 2,454 ac (993.5 ha) in five separate areas of the island of Kaua‘i: Barking Sands, Mākaha Ridge, Kōke‘e, Kamokalā Ridge on the west side, and Port Allen on the south shore. Barking Sands and Port Allen are coastal locations. Mākaha Ridge and Kōke‘e are situated on the central mountain mass of the island. Kamokalā Ridge is at the inland edge of the Mānā Plain at the base of the central mountain. The current cultural project is within and around the west side components of PMRF, which is the primary focus of this summary.

PMRF Barking Sands (the installation) covers more than 2,134 ac (864 ha) on the Mānā Plain. The installation occupies most of the coastal fringe of the plain, extending 7.77 miles (mi) (12.5 kilometers [km]) from Kokole Point in the south to Polihale State Park in the north. At its northern and southern boundaries, the installation is slightly over 0.62 mi (1 km) wide, narrowing to less than 0.31 mi (0.5 km) in the central portion. The northern two-thirds of the plain is a complex of three key physiographic features: coastal dune and back beach sands formed by aeolian and wave action, an arc of alluvial/colluvial deposition at the inland edge of the plain, and wetlands in the intermediate area. The southern third of the plain, in contrast, has a low dune, with relatively level soils extending back to the edge of the central mountain.

PMRF Mākaha Ridge Facility encompasses approximately 245 ac (99 ha) of a prominent Nā Pali ridgeline that overlooks the Mānā Plain. The ridge rises from 1,246.72 feet (ft) (380 meters [m]) to 1,853.67 ft (565 m) above sea level with an overall slope from east to west. The terrain surrounding the facility is steep, dropping quickly to the ocean along the west side and into narrow V-shaped drainages along the north and south sides.

PMRF Kamokalā Ridge is just inland from the Mānā Plain, in an area where the ancient 492.13 ft (150 m) to 656.17 ft (200 m) high sea cliffs have been incised by narrow, steep-walled gullies. The more gently sloped foothills at the base of the cliffs and mouths of the gullies have formed alluvial and colluvial arcs that project seaward. Kamokalā Ridge is bound by Nahomalu Valley to the north and Ka‘awaloa Valley to the south.

Rainfall across the survey area is very low, with mean annual precipitation averages of 15 to 20 inches (38–50.8 centimeters), increasing to 36 inches (91.44 centimeters) at Mākaha Ridge Tracking Station and gradually increasing further along Mākaha Ridge to the east with an average of 48 inches (121.92 centimeters) (Giambelluca et al. 2013). Most rain falls between October and April. The aridity of this region is caused by its location in the rain shadow of Mount Kawaikini and Mount Wai‘ale‘ale (Tuggle and Tomonari-Tuggle 1997:37). The average minimum annual temperature occurs in January and is approximately 71°F, and the average maximum temperature occurs in August and is 78°F (Giambelluca et al. 2013).

Numerous soil types are found in the survey area due to the variation in terrain (Figure 3 and Figure 4). The following soil descriptions are adapted from Foote et al. (1972).

Along the coastal survey areas, five primary soil series are present. The Jaucas series, and Jaucas loamy fine sand (JfB), soils are excessively drained, calcareous soils that occur as strips on coastal plains. These soils develop by alluvial and aeolian deposition of sand formed from coral and seashells. Jaucas loamy fine sand (JfB, 0–8 percent slopes) occurs on old beaches and windblown sand deposits in the western and southern areas of Kaua'i. The Kaloko series, and Kaloko clay (Kf) and clay loam (Kfa), are poorly drained soils on coastal plains. These soils developed in alluvium derived from basic igneous rocks; the alluvium has been deposited over marly lagoon deposits. The Mamala series, and Mamala stony silty clay loam (MnC), 0-12% slopes, consist of shallow, well-drained soils along coastal plains. These soils formed in alluvium deposited over coral limestone and consolidated calcareous sand. The Lualualei series, and Lualualei clay (LuA), 0-2% slopes, consist of well-drained soils on coastal plains, alluvial fans, and talus slopes. These nearly level to gently sloping soils developed in alluvium and colluvium. The Nohili series, and Nohili clay (Nh), are poorly drained soils on coastal plains. These soils developed in alluvium that was deposited over marly lagoon deposits. Also present within this area are fill lands, which are low-lying or wetland areas that have been filled with bagasse and slurry from sugarcane processing, and dune lands, which are hills and ridges of sand drifted and piled by wind.

Along Kamokalā Ridge, two primary soil series are present. The Kekaha series, and Kekaha extremely stony silty clay loam (KOYE), 0-35% slopes, consist of well-drained soils on alluvial fans and flood plains that developed in alluvium washed from upland soils. The Waiawa series, and Waiawa extremely rocky clay (WJF), 30-80% slopes, are well-drained, very shallow, extremely rocky upland soils. These soils developed in colluvium and material weathered from basic igneous rock. Also present within this area are rubble lands, where 90 percent or more of the surface is covered by stones and boulders at the base of steep slopes.

Along Mākaha Ridge, five primary soil series are present. The Paaiki series, and Paaiki loam (PGE and PGF) 6-70% slopes, consists of well-drained soils on dissected uplands. These soils developed mainly in material weathered from basic igneous rock but partly in volcanic ash and ejecta. The Oli series, and Oli silt loam (OME and OMF), 10-70% slopes, consists of well-drained, moderately deep to deep soils on uplands. These soils developed in volcanic ash deposited over basic igneous rock. The Mahana series, and Mahana silt loam (MaD and MaE) 12-35% slopes, consists of well-drained soils on uplands. These soils developed in volcanic ash. The Puu Opae series, and Puu Opae silty clay loam (PwC and PwD), 8-40% slopes, consists of well-drained soils on uplands. These soils developed in material weathered from basic igneous rock. The Niu series, and Niu silty clay loam (NcC and NcD), 6-35% slopes, consists of well-drained soils on uplands. These soils developed in material weathered from basic igneous rock, possibly mixed with volcanic ash.

2.2 Traditional Land Use

Traditional land uses near the survey area include habitation, subsistence activities, burial, and travel. These topics are briefly summarized in the following sections.

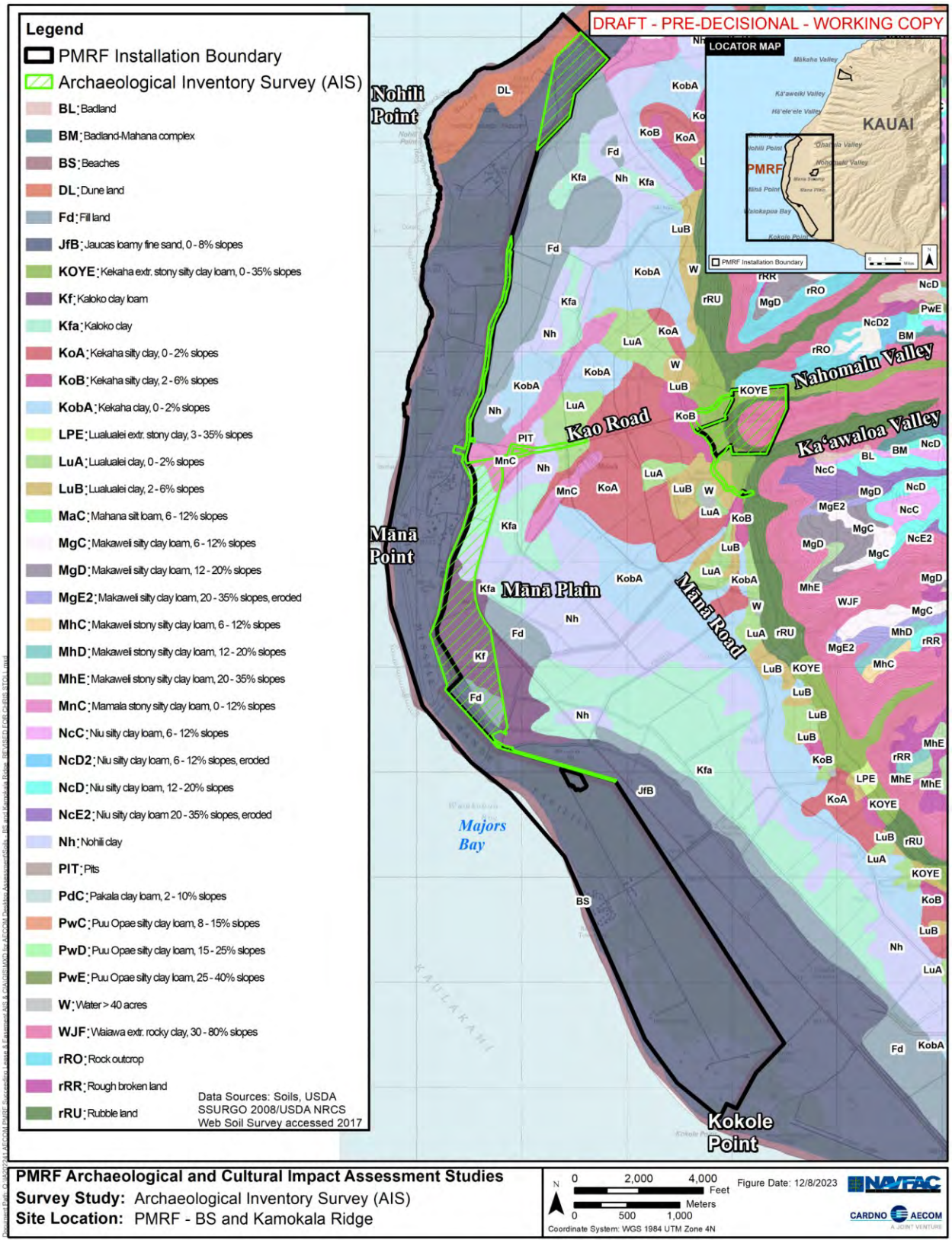


Figure 3 USDA soil classes in the vicinity of the survey area at Barking Sands and Kamokalā Ridge.

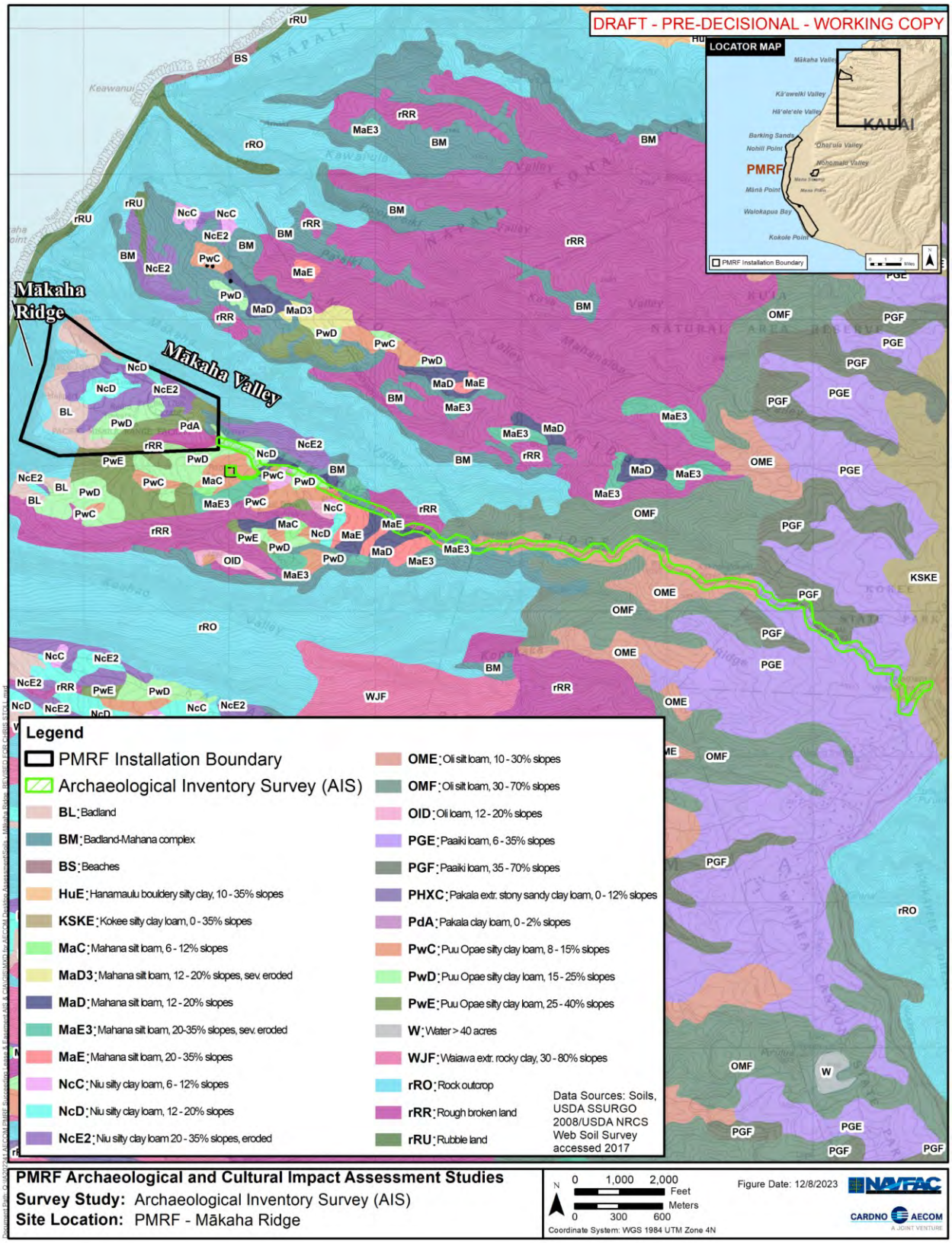


Figure 4 USDA soil classes in the vicinity of the survey area at Mākaha Ridge.

2.2.1 Settlement on the Mānā Plain

Wichman (1991:12), in relaying the story of Polihale, a konohiki (headman of an ahupua'a land division under the chief), describes the Mānā area in pre-Contact times as:

> … a land that stretched from the western cliffs of Na Pali to the eastern boundary shared with Waiawa. Mānā is a land of long white beaches with the ocean on one side and a large swamp that teemed with birds on the other. Inland of the marsh was a fertile strip of land where sweet potatoes and gourds were grown. Above these fields cliffs rose stiff backed, broken wide by valleys down which constantly flowed fresh spring or rain water. The ridges, covered with sandalwood and koa (*Acacia koa*) trees, stretched into the mountains wreathed with cold and misty rain.

It is likely that permanent settlements were concentrated at the inland edge of the Mānā Plain, where houses, temples, and agricultural complexes were built in the foothills at the base of the cliffs, on high ground overlooking the wetlands and coastline.

Small fishing communities, possibly limited to temporary camps, were scattered along the coast, concentrating near optimal localities such as breaks in the reef where canoes could be launched or where reefs provided rich habitat for near-shore marine resources. Some camps were located on the protected, lee sides of the high dunes from Nohili Point to Polihale. Bennett (1931:102) observed house sites marked "by single rows of stones … or by low walls" along the inland side of the dunes. Flores and Kaohi (1992:44) suggest that the sites on the inland side of the high dunes may have been permanent homes for:

> … Those families whose time was mostly occupied with fishing … [The dunes] provided them protection from ocean storm waves, flood waters, and strong on-shore winds—yet, still close enough to easily access the ocean resources. Taro was cultivated in portions of Kolo Swamp that were adjacent and mauka of these house sites.

2.2.2 Resource Collection and Subsistence

The people of Mānā were noted as fishermen, taking advantage of the rich waters of the channel between Kaua'i and Ni'ihau. Fishing was not confined to the ocean and shoreline of Mānā, but also included the swamps and ponds on the coastal plain. The swamp areas of Limaloa, Kawaiele, Nohili, and Kolo were utilized as brackish water loko pu'uone fishponds (Kikuchi 1987:5, 9; Kilauano 1991).

Although their modern forms are clearly related to the plantation era, the Nohili Ditch and the Kawaiele Ditch may have had earlier iterations as traditional Hawaiian ditches related to the functioning of the inland ponds for aquaculture. The Mānā Plain ponds were formed by water accumulating behind the dune berms with the natural ponds enhanced by excavation of channels through the dunes to allow the flow of ocean water into the ponds during high tide (Kikuchi 1987:9). The wetlands were also a place where wild resources could be collected.

Taro, sweet potato, bananas, and other food crops were also grown in and at the mouths of the narrow gulches that fed onto the plain; however, the aridity of the plain limited the amount of farming. Pukui (1983:271) writes of the proverb "Ola i ka 'ai uwahi 'ole o ke kini o Mānā, the inhabitants of Mānā live on food cooked without smoking." She says that in ancient days, the people of Mānā "did very little poi-making, except in a place like Kolo, where taro was grown" (see also Kilauano 1991). Handy (1940:61) notes that "wet taro has been grown at the northern end of the Mānā swamp, near the Barking Sands." However, most Mānā people exchanged fish and dryland products (like gourds) with taro producers from other parts of the island. Thus, because "all the taro cooking and poi-making was done elsewhere, the people of Mānā were said to live on 'smokeless food'" (Pukui 1983:271).

The coastal plain was a source of natural items that were collected and used for a variety of purposes. These included ʻaʻaliʻi shrubs for firewood, hiʻaloa and other plants for medicine, and makaloa and neki for weaving. The neki and makaloa were used in plaiting mats and other articles, the fashioning of which was called moena makaloa.

2.2.3 Burials

Hawaiians share a special connection to birthplace and homeland. As a consequence, burials were often placed close to households and those that have passed away are still considered to be part of the living family system (Flores and Kāohi 1992: 207). According to the Hawaiian tradition, upon death, the spirit travels to a leaping-off place where it is then assisted in its journey to the next realm by its ʻaumakua (Pukuʻi 1972: 40, cited in Flores and Kāohi 1992: 206). Burials form an incredibly important part of the Hawaiian spiritual world and many Hawaiians feel the spirit resides near the physical remains of the bones. When burials are disturbed, the spirit is insulted, resulting in shame and humiliation to the living descendants (Pukuʻi 1972: 109 cited in Flores and Kāohi 1992: 206).

The coastal dunes of the Mānā Plain were the burial grounds of ancient Hawaiians. Human skeletal remains have been found in the sands of PMRF Barking Sands, as well as in mixed sandy soils nearly 1 km inland, from the north end of the installation to Waiokapua Bay and Kokole to the south. References to burials in the Nohili area appear in oral traditions and literature (e.g., Fornander 1917).

In addition to burial locations, the spiritual significance of the Mānā Plain is also evidenced by the presence of several important *heiau*, most notably Polihale and ʻElekuna *heiau.* ʻElekuna was known as a particularly important and special *heiau* that King Kalakaua and his priests visited many times (Flores and Kāohi 1992: 45). Polihale *heiau* was a site of religious observance where rites associated with departing souls would be carried out. A sacred spring in a nearby cliff was used for purification of those souls making their journeys into the next realm (Flores and Kāohi 1992: 45).

2.2.4 Transportation

There were two primary traditional land routes across the Mānā Plain: one along the shoreline and the other along the base of the cliffs and ridges. Other trails ran inland from the coastal plain to the mountains. People also traveled by canoe, particularly going to and from the valleys of the Nā Pali coast, by launching from beaches with unobstructed reefs and passageways such as at Palaiholani, Keanapuka, Poʻoahonu, Keawanaiʻa, and Polihale.

An unusual means of travel in this area is noted in historical accounts that describe the Mānā Plain after heavy flooding from Kona storms. These accounts note that one could travel by canoe from Waimea to Kolo through Mānā swamps and marsh lands. Faye (1981) recalls that “in a low bottomed canoe you could row for miles on this lake.… The canoe would tip over and if you were very short you wouldn’t be able to touch bottom, but if you were taller, you could sort of tread over.”

2.3 Historical Land Use

Historical land uses in this area include agriculture and U.S. military activities.

2.3.1 Agriculture

Early Western explorers were not particularly interested in the Mānā Plain, which was described as a hot and dry place with large sections of marshland (Portlock 1789:170-171; SEARCH 2012). The inhabitants of Mānā largely lived in the traditional ways of their ancestors until the 1848 Māhele, which wrought wide-ranging social changes and provided for private land ownership. Shortly after the Māhele, commercial agricultural practices were brought to the Mānā Plain by leases on crown lands to Archibald Archer and

eventually Valdemar Knudsen, and practices included grazing cattle, harvesting timber, and cultivating crops such as tobacco, coffee, fruit, rice, and sugarcane (Jones 1992:6; Sweeney 1994:10; SEARCH 2012).

As commercial crop cultivation increased, so, too, did the number of agricultural workers. The majority of these agricultural workers came from China, Japan, and the Philippines. With the influx of agricultural workers, the need for workers' housing increased, and according to Smith (1989:4), the first camp for housing agricultural workers dates to 1852. As agricultural production on the Mānā Plain expanded, much of the marshland was filled in or drained to provide more arable land, with increasing amounts of land being converted to sugarcane cultivation. Much of this was operated by the Kekaha Sugar Company, Ltd, which was formed in 1898 by Knudsen and L'Orange and continued operations through the 20th century (SEARCH 2012).

At Kamokalā Ridge, the area developed in the mid-nineteenth century for cattle grazing and ranching as well as commercial sugar and rice plantations. Plantation workers lived in camps throughout Mānā Plain, including between Kamokalā Ridge and PMRF, and railroad lines extended through fields connecting the agricultural goods to the wharf at Waimea. Plantation operations in the area had all closed by 2000 (TEC Inc.–JV 2011a).

2.3.2 U.S. Military

The following section provides a brief historical overview of U.S. Military land use in the three primary survey areas.

2.3.2.1 Barking Sands

One of the first non-agricultural land uses in the study area was an airstrip. This facility was established by the Territory of Hawai'i in 1921 and constructed by 1928 on a portion of the land that would later become PMRF Barking Sands (SEARCH 2012). The landing field at Barking Sands was not intended to be a commercial airport due to its distance from Waimea but was considered a good location as a stopover for transpacific flights. However, the airfield was seldom used and poorly maintained. Figure 5 shows the location of the landing field in 1935.

In 1940, the airfield at Barking Sands was designated for military use by the U.S. Army (SEARCH 2012). The airfield was expanded by 2,058 ac (832.8 ha) in 1941, quadrupling in size. Figure 5 shows the location of the landing field in 1935 and Figure 6 shows the airfield in 1941, before U.S. involvement in World War II (WWII). The massive land acquisition occurred primarily to the north and south of the existing airstrip along the coast. In May 1942, following the Pearl Harbor attack, the airfield became Barking Sands Army Air Base (TEC Inc.–JV 2011a). Figure 7 shows the landing field in 1943 after the expansion and improvements were completed. After its establishment as an Air Base, Barking Sands was used for flight training and aircraft refueling as the U.S. became involved in WWII (SEARCH 2012). In 1943, Kamokalā Ridge underwent construction, and 10 tunnel magazines with monorail transportation were built for bomb storage. As World War II progressed, Barking Sands was designated as a Combat Crew Replacement Center in 1944, establishing the base as an aircraft maintenance center and training grounds for crew prior to deployment to the Pacific Theater (SEARCH 2012). After World War II ended in 1945, base activity gradually decreased.

The late 1940s saw a decline in military activities as Barking Sands was transferred from the Army to the U.S. Air Force, becoming Barking Sands Air Force Base in 1948 (SEARCH 2012). The U.S. Navy established PMRF at the airfield in 1958 after using the area in 1956 for training operations on Regulus guided missiles, the first major Cold War mission at Barking Sands. The Atomic Energy Commission was a major tenant on base and created the Kauai Test Facility in the early 1960s, operated by Sandia

National Laboratories. Mākaha Ridge, a northern outpost near Waimea Canyon, was developed by the Navy in 1966 to aid the new Barking Sands Tactical Underwater Range and to house radar and telemetry facilities (SEARCH 2012).



Figure 5 Barking Sands Landing Field in 1935. Source: National Archives.



Figure 6 Barking Sands Army Air Base in 1941. Source: National Archives.



Figure 7 Barking Sands Army Air Base in 1943. Source: National Archives.

2.3.2.1 Kamokalā Ridge

The naval facilities at Kamokalā Ridge were developed in 1942-43, shortly after the attack on Pearl Harbor (SEARCH 2012). As PMRF Barking Sands was expanded to include strategic offensive facilities to provide service, equipment, and maintenance for B-24 bombers heading into the Pacific, several critical facilities were built underground to provide greater protection from aerial attacks. It was during this initial construction phase that the Kamokalā Ridge magazines were dug out of its basalt cliffs, some with monorails to transport munitions (TEC Inc.–JV 2011a) in 1943 (see Figure 8 and Figure 9). Records also indicate that during the 1960s, the Navy stored High Altitude Sounding Projectile (HASP) boosters in the hard-rock magazines at Kamokalā Ridge as part of Cold War missions at PMRF (SEARCH 2012). Between 1966 and 1992, the Hawaii Air National Guard occupied portions of PMRF and, during this period, acquired one of the 10 hard-rock magazines to use for storage of weapons and ordinance. Two large, earth-covered missile magazines were constructed at Kamokalā Ridge in 2002 (TEC Inc.–JV 2011a).

Known extant historic-era built resources within Kamokalā Ridge include 10 National Register of Historic Places-eligible tunnel magazines (Facilities 1-10) (SEARCH 2012). Kamokalā Ridge is accessed via the Ordnance Gate of Barking Sands and Kamokalā Ridge Road, which follows its original 1942 alignment and includes an extant vehicular bridge (Facility 20) (TEC Inc.–JV 2011a).

2.3.2.2 Mākaha Ridge

Mākaha Ridge was formally developed by the Navy in 1966 to aid the new Barking Sands Tactical Underwater Range and to house radar and telemetry facilities (SEARCH 2012). Construction at Mākaha

Ridge was a large undertaking and required extensive development of the landscape, including the installation of access roads (Weitze 2008). The site is accessed by the Mākaha Ridge Access Road, which is a long, narrow, paved road located in the forested lands stemming from Kōkeʻe Road to the southeast (TEC Inc. 2011a).

Prior to the Cold War, one facility existed at Mākaha Ridge, The Command Control Transmit Van Site (Building 200531) was constructed in 1946. Facilities built during the Cold War on Mākaha Ridge included a communications facility (Building 708), power station (Building 711), tracking radar (Building 713), and surveillance radar (Building 715) (Weitze 2008). A filling station (Building 733) was added in 1960. A helicopter pad was installed on the western portion of the Mākaha Ridge site sometime after 1966.

Several additional facilities were added between 1967 and 1970, including a telemetry facility (Building 725) and three telemetry towers (Buildings 726, 727, and 728) (see Figure 10 and Figure 11) (Weitze 2008, SEARCH 2012). An electric and communication maintenance shop (Building 742) was added to Mākaha Ridge in 1983. Mākaha Ridge, in combination with the Barking Sands Tactical Underwater Range and PMRF launch complex, comprised a National Missile Range and an underwater range (TEC Inc. 2011a). These ranges were used to train personnel in nuclear submarines operations and anti-submarine warfare during the Cold War era, and Mākaha Ridge supported naval weapons tests and evaluations during Navy fleet exercises (SEARCH 2012). Prior historic building surveys conducted at Mākaha Ridge include Dowden and Rosendahl in 1993, Drolet et al. in 1996, and Maly and Wulzen in 1997.



Figure 8 Example of Kamokalā Ridge missile magazine. Source: Tomonari-Tuggle and Yoklavich (2005).

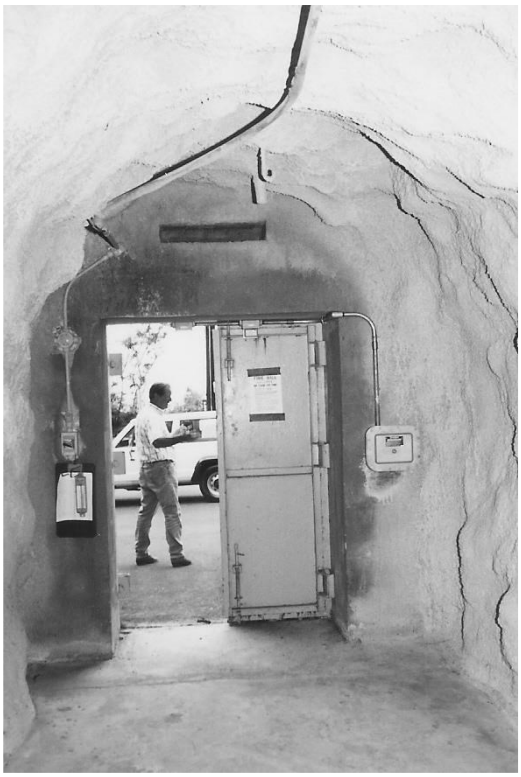


Figure 9 **Example of Kamokalā Ridge missile magazine. Source: Tomonari-Tuggle and Yoklavich (2005).**

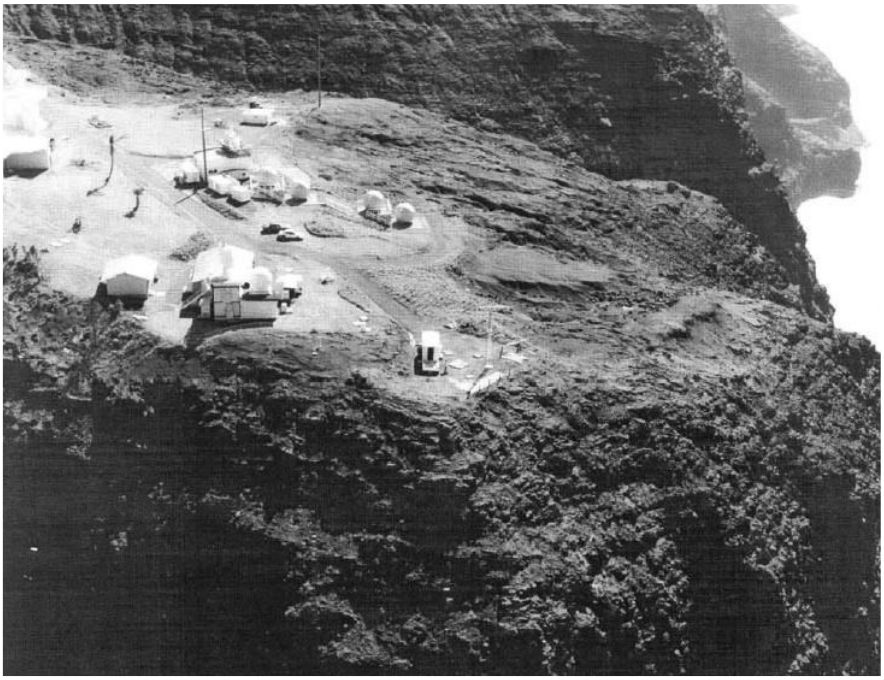


Figure 10 **Mākaha Ridge Tracking Station in the 1960s. Courtesy of PMRF.**



Figure 11 Mākaha Ridge Tracking Station with Mākaha Ridge Road in the background. Courtesy of PMRF.

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Appendix B
Regulatory Setting

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Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
County of Kaua'i	Kaua'i Kakou – Kaua'i County General Plan	The Kaua'i General Plan serves as the county's guiding policy framework concerning growth, land use, and development issues. The plan seeks to enhance and improve Kaua'i's physical and natural environment and overall quality of life. The plan is built upon a countywide vision and goals statement and sets forth key objectives and actions. The General Plan underwent a comprehensive update in 2018. Although the development plan does not apply to projects on federal property, protection of mountain and ocean views that benefit the visual quality of the ROI should be considered.	Visual Resources and Land Use	This EIS was developed in accordance with the guidance in this plan.
County of Kaua'i Transportation Agency – The Kaua'i Bus	County of Kaua'i Transportation Agency standards for public transit operation (physical and operational) and DTS Roadway and Traffic Operations Guidelines	County of Kaua'i Transportation Agency operates the Kaua'i Bus, the public transit system that provides service to PMRF.	Traffic	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
CEQ; Navy	NEPA; CEQ NEPA implementing regulations; Navy procedures for implementing NEPA (42 U.S.C. § 4331; 40 CFR parts 1500-1508; 32 CFR part 775)	Regulations applicable to and binding on all federal agencies for implementing the procedural provisions of NEPA.	All Resources	This EIS has been prepared in accordance with the President's revised CEQ Regulations implementing NEPA and Navy NEPA procedures effective for actions initiated after September 14, 2020. Preparation of this EIS and provisions for its public review are being conducted in compliance with NEPA.
CEQ	NEPA 40 CFR § 1502.16(a)(10)	States that environmental consequences should include "economic and technical considerations, including the economic benefits of the proposed action," where applicable.	Socioeconomics	Following these regulations, the socioeconomic analysis in this EIS evaluates economic benefits of the Proposed Action.
CEQ	NEPA 40 CFR § 1508.1(g)(1)	States that effects include "aesthetic, historic, cultural, economic (such as the effects on employment), social, or health" effects.	Socioeconomics	Following these regulations, the socioeconomic analysis in this EIS evaluates how elements of the human environment such as population, employment, housing, economic activity, and local government revenue might be affected by the Proposed Action.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
CEQ	NEPA 40 CFR § 1508.1(m)	States that the human environment means "comprehensively the natural and physical environment and the relationship of present and future generations of Americans with that environment."	Socioeconomics	Following these regulations, the socioeconomic analysis in this EIS uses this definition for the human environment.
CEQ	Environmental Justice Guidance Under the National Environmental Policy Act	Guidance document to assist federal agencies with their NEPA procedures so that environmental justice concerns are effectively identified and addressed in accordance with EO 12898.	Environmental Justice and Protection of Children	This EIS was developed in accordance with this guidance.
CEQ	Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews	Guidance to assist federal agencies in their consideration of the effects of GHG emissions and climate change when evaluating proposed federal actions in accordance with NEPA.	All Resources	This EIS was developed in accordance with this guidance.
CEQ	Fiscal Responsibility Act of 2023, PL 118-5	Amendments to NEPA	All Resources	This law was used to determine the joint status of NASA and Navy for the preparation of this EIS.
CEQ and Office of Science and Technology Policy	EO 13840 Ocean Policy to Advance the Economic, Security, and Environmental Interest of the U.S.	Ensure protection, maintenance, and restoration of the health of the ocean.	Water Resources; Marine Biological Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order.
CNRH	IAP	The IAP is a guidance document that provides aesthetic and functional direction in site design, architecture, landscape architecture, and signage for new development and renovation efforts. The IAP helps to protect and preserve the installation's natural and historic integrity and ensures a unified appearance for each installation and continuity across the region.	Visual Resources	This EIS was developed in accordance with the guidance in this plan.
DLNR-SHPD	Hawai'i Revised Statutes 6E-42	Project requires compliance with state laws for preservation of historic properties.	Cultural Resources	Compliance with this law will be conducted.
DoD	DoD Inst. 4715.06 – Environmental Compliance in the United States	Establishes policies, assigns responsibilities, and provides procedures for achieving and maintaining environmental compliance in the U.S.	Hazardous Materials and Wastes	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
DoD	DoD Inst. 6050.05 – DoD Hazard Communication Program	Manages hazardous substances to minimize health and environmental risks and operational costs. Provides known hazard information to military personnel and civilian employees using hazardous chemicals, including engineered nanomaterials.	Hazardous Materials and Wastes	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
DoD	NAVSUP Pub. 573 (DLA Instruction 4145.11) – Storage and Handling of Hazardous Materials	Procedures for the receipt, storage, and handling of hazardous materials and wastes by DoD components, installation, and activities.	Hazardous Materials and Wastes	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
DoD	Defense Explosives Safety Regulation 6055.09	Establishes explosives safety standards for the DoD that are designed to manage explosives related risk associated with DoD operations and installations by providing protection criteria.	Hazardous Materials and Wastes	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
DoD	DoD Directive 4710.03, Consultation with Native Hawaiian Organizations (October 25, 2011, incorporating Change 1, August 31, 2018)	Provides policy, prescribes procedures, and assigns responsibilities for the management of archaeological and historic resources located in and on waters and lands under DoD control. It is the policy of DoD to integrate historic preservation requirements with the planning and management of activities under DoD control.	Cultural Resources	Consultation with NHOs, if required for compliance with NHPA according to the Programmatic Agreement, would be conducted in accordance with this directive.
DoD	Danger Zone and Restricted Area Regulations (33 CFR part 334)	Hazardous materials and wastes exposure, including MEC.	Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
DoD	Final Military Munitions Rule (40 CFR part 266, Subpart M)	Hazardous materials and waste exposure, including MEC.	Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
DoD	Naval Ordinance Safety and Security Activity Instruction 8020.15E. Explosives Safety Review, Oversight, and Verification of Munitions Responses	Munition exposure.	Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
EPA; DoD	CWA (33 U.S.C. §§ 1313, 1314, 303(d), 305(b) and most recent 304(a) list)	Mitigates impacts to surface water from construction activities and discharge to navigable waters.	Hazardous Materials and Wastes; Water Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
EPA; HDOH-CWB	CWA section 402, NPDES Program (42 U.S.C. § 7401 et seq.); Hawai'i Water Quality Standards (HAR 11- 55; HRS Chapter 342D) *includes NPDES and SWPPP	Regulates discharges of pollutants from point source to WOTUS and requires compliance with standards, limitations, and regulations. NPDES permits authorized discharges of stormwater associated with construction and industrial activities.	Hazardous Materials and Wastes; Water Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
EPA; HDOH-CWB	CWA section 401 (33 U.S.C. § 1341; 40 CFR §§ 121.2(a)(3), (4), and (5) Water Quality Certification); Hawai'i Water Quality Standards (HAR 11- 54; HRS Chapter 342D)	Any federally authorized activity that may result in any discharge into state waters requires a Water Quality Certification. Water pollutants that enter state waters from all sources, point or non-point, shall comply with applicable requirements as established in HAR, Chapter 11-54.	Marine Biological Resources; Water Resources; Public Health and Safety; Geological Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
EPA	Title 40 CFR et seq.: Protection of the Environment	EPA protects human health and the environment.	Hazardous Materials and Wastes; Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
EPA	40 CFR § 125.94	Compliance with BTA Standards.	Water Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
EPA	National Primary Drinking Water Regulations 40 CFR part 141	Affects management of water sources by way of setting standards for drinking water quality. Groundwater quality and quantity are regulated under several statutes and regulations, including the Safe Drinking Water Act.	Water Resources; Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
EPA	Energy Independence and Security Act; PL 110-140 section 438	Federal agencies are required to reduce stormwater runoff from federal development and redevelopment projects to protect water resources.	Water Resources; Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
EPA	RCRA 42 U.S.C. § 6901 et seq. and 40 CFR parts 260-272 as relates to hazardous waste management	Hazardous materials and wastes exposure. The EPA controls hazardous waste including generation, transportation, treatment, storage, and disposal of hazardous waste.	Hazardous Materials and Wastes; Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in compliance with this Act.
EPA	Toxic Substances and Disease Registry – CERCLA 42 U.S.C. §§ 9601–9675; 40 CFR parts 300–311; 40 CFR part 373	Hazardous materials and waste exposure.	Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in compliance with this Act.
EPA	Pollution Prevention Act of 1990 (42 U.S.C. §§ 13101–13109)	Hazardous materials and waste exposure.	Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
EPA	Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. § 11001 et seq.; 40 CFR parts 350–372)	Hazardous materials and wastes exposure. Helps communities plan for chemical emergencies and requires industry to report on the storage, use, and releases of hazardous substances to federal, state, and local government.	Hazardous Materials and Wastes; Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with this Act.
EPA	EO 13045, Protection of Children from Environmental Health Risks and Safety Risks	Health and safety of children (vulnerable population).	Public Health and Safety; Environmental Justice and Protection of Children	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order. The EIS includes an analysis to determine if federal actions would have disproportionate human health or environmental impacts to children.
EPA	Federal Insecticide, Fungicide, and Rodenticide Act of 1996 (7 U.S.C. § 136 et seq.)	Hazardous materials and waste exposure.	Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
EPA	Federal Environmental Pesticide Control Act of 1972 (7 U.S.C. §§ 136–136y)	Hazardous materials and waste exposure.	Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
EPA	Federal Facilities Compliance Act of 1992 (PL 102–386)	Hazardous materials and waste exposure.	Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
EPA	Noise Control Act of 1972 (PL 92- 574, 42 U.S.C. § 4901 et seq.) and Amendments of 1978 (PL 95-609)	Establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare.	Noise; Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in compliance with this Act.
EPA	40 CFR part 50	NAAQS.	Air Quality	The Proposed Action would not cause a violation of the NAAQS.
EPA	40 CFR part 60	New Source Performance Standards.	Air Quality	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
EPA	40 CFR parts 61-63	NESHAPs.	Air Quality	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.
EPA	40 CFR part 70	State Operating Permits.	Air Quality	The Proposed Action analyzed in this EIS would be implemented in accordance with these requirements.
EPA	Memorandum addressing Children's Health through Reviews Conducted Pursuant to the NEPA and section 309 of the Clean Air Act	Memorandum on addressing the Protection of Children from environmental health risks and safety risks in NEPA and section 309 Clean Air Act Reviews in accordance with EO 13045.	Environmental Justice and Protection of Children	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order. The EIS includes an analysis to determine if federal actions would have disproportionate human health or environmental impacts to children.
Federal Law	National Historic Preservation Act (NHPA), as amended (54 U.S.C. 300101 et seq.).	Establishes national policy for the preservation of historic properties. Section 106 of the NHPA requires federal agencies to consider the effects of proposed undertakings, mitigate adverse effects of projects, and afford the ACHP and interested parties the opportunity to comment.	Cultural Resources	Compliance with the NHPA will be conducted according to the 2012 COMNAVREG Hawaii Programmatic Agreement and any applicable amendments.
Federal Law	Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. §§ 3001-3013).	Provides for the protection and repatriation of Native American and Native Hawaiian human remains and cultural items discovered on federal or tribal lands or currently curated by federal or federally assisted curation facilities.	Cultural Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this law and its implementing regulation.
Federal Law	Archaeological Resources Protection Act of 1979 (16 U.S.C. §§ 470aa-470ll).	Provides for the protection of archaeological resources and sites on public and Indian lands by requiring permits from the federal land manager for excavation or removal of archaeological resources.	Cultural Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this law and its implementing regulation.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
Federal Law	American Indian Religious Freedom Act of 1978 (42 U.S.C. § 1966)	Establishes the policy of the United States to protect and preserve the rights of American Indians, Eskimos, Aleuts, and Native Hawaiians to believe, express, and exercise their traditional religions.	Cultural Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this law and its implementing regulation.
FEMA	Floodplain Management, EO 11988	Requires federal agencies to avoid long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development. Flood potential of a site is usually determined by the 100-year floodplain, which is defined as the area that has a 1 percent chance of inundation by a flood event in a given year.	Water Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order.
HDOH	CWA section 401 (33 U.S.C. § 1341, 40 CFR §§ 121.2(a)(3), (4), and (5) Water Quality Certification); Water Pollution Control Act (33 U.S.C. § 1251 et seq.)	Any federally authorized activity that may result in a discharge into state waters requires a Water Quality Certification. Potential impacts from the Proposed Action through impacts on water quality. The Kawaiʻele Pumping Station as well as Canal discharge may fall under these regulations.	Marine Biological Resources; Hazardous Materials and Wastes	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
HDOH	22 HAR Title 11, Chapter 59	State AAQS.	Air Quality	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
HDOH	22 HAR Title 11, Chapter 60.1	Air Pollution Control.	Air Quality	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
HDOH	Hawaiʻi Underground Storage Tanks Act HAR 19-342L	Regulations pertaining to underground storage tanks, which includes hazardous substances release.	Hazardous Materials and Wastes	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
HDOH	Solid Waste Management Control HAR 11-58	Establishes minimum standards governing design, construction, installation, operation, and maintenance of solid waste disposal, recycling, reclamation, and transfer systems.	Hazardous Materials and Wastes	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
HDOT	HDOT traffic operational and safety standards and HDOT roadway design standards	Regional and sub-regional roadways providing access to PMRF are under the jurisdiction of HDOT, specifically Kuhio Highway.	Traffic	The Proposed Action analyzed in this EIS would be implemented in accordance with these standards.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
NASA	NASA's Procedures for Implementing NEPA, 14 CFR part 1216, et seq.	Regulations governing NASA's compliance with NEPA and CEQ's 40 CFR parts 1500–1508.	All Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
NASA	NASA Environmental Management, NPD 8500.1	NASA's environmental management policy	All Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with these policies.
NASA	NASA National Environmental Policy Act Management Requirements, NPR 8580.1	Establishes procedures and responsibilities for complying with requirements of NEPA, CEQ's implementing regulations, EO 12114 – Environmental Effects Abroad of Major Federal Actions, and NPD 8500.1.	All Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with these requirements.
Navy	PMRF Installation Development Plan	Land use constraints.	Land Use	This EIS was developed in accordance with the guidance in this plan.
Navy	OPNAVINST 11010.40	Establishes an encroachment management program to ensure operational maintenance that has direct bearing on land use planning on installations.	Land Use	The Proposed Action analyzed in this EIS would be implemented in accordance with these guidelines.
Navy	OPNAVINST 11010.36C	Provides guidance administering the AICUZ program, which recommends land uses that are compatible with noise levels, accident potential, and obstruction clearance criteria for military airfield operations.	Land Use	The Proposed Action analyzed in this EIS would be implemented in accordance with these guidelines.
Navy	OPNAVINST 3550.1A	Provides guidance for the RAICUZ program. This program includes range safety and noise analyses and provides land use recommendations that are compatible with Range Compatibility Zones and noise levels associated with military range operations.	Land Use	The Proposed Action analyzed in this EIS would be implemented in accordance with these guidelines.
Navy	OPNAVINST 5090.1 Environmental Readiness	Provides guidance for the management of the environmental, natural, and cultural resources for all Navy ships and shore activities.	Cultural Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with these guidelines.
Navy	Environmental Readiness Program Manual (OPNAV-M 5090.1)	Navy's policy guidance for environmental readiness. It discusses requirements, delineates responsibilities, and issues policy guidance for the management of the environmental, natural and cultural resources for all Navy ships and shore activities.	All Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this manual.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
Navy	SECNAVINST 4000.35B Department of the Navy Cultural Resource Program	Provides clarification on the responsibilities for management of historic buildings, structures, districts, archaeological sites and artifacts, historic ships and aircraft, and other cultural resources.	Cultural Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with these guidelines.
Navy	SECNAVINST 11010.14B Department of the Navy Policy for Consultation with Federally Recognized Indian Tribes, Alaska Native Tribal Entities, and Native Hawaiian Organizations	Provides policy, procedures, and responsibilities when consulting with representatives of federally recognized Indian tribes, including Native Hawaiian Organizations.	Cultural Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with these guidelines.
NAVFAC	PW6 600-01, Public Works Utilities Criteria for Design and Construction of Electrical, Sewer, and Water, April 10, 2006	Utilities design criteria.	Utilities	The Proposed Action analyzed in this EIS would be implemented in accordance with these requirements.
NAVFAC	PW6 600-01 Public Works Utility Criteria for Design and Construction of Water Utilities	Utilities design criteria.	Utilities	The Proposed Action analyzed in this EIS would be implemented in accordance with these requirements.
NOAA; SOH, Office of Planning and Sustainable Development	National Coastal Zone Management Act (16 U.S.C. § 1451, 15 CFR part 930); Coastal Zone Management Act section 307(c)(1), HRS Chapter 205A – Coastal Zone Management	Federal actions or activities that affect any land or water use or natural resource of the coastal zone are to be carried out in a manner consistent to the maximum extent practicable with the enforceable policies of federally approved state coastal management program.	Hazardous Materials and Wastes; Land Use; Water Resources; Geological Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this Act to the extent practicable, consistent with the enforceable policies of Hawai'i's federally approved coastal management program.
NOAA NMFS; USFWS; SOH, DLNR	ESA (16 U.S.C. § 1531 et seq.); State of Hawai'i Endangered Species Laws (HAR 12-124, Exhibit 2 and HRS § 195D)	Potential impacts to federally and state listed species.	Terrestrial Biological Resources; Marine Biological Resources; Land Use	Informal consultation with NMFS and USFWS has been initiated and is ongoing, and the Proposed Action analyzed in this EIS would be implemented in compliance with the ESA. Potential impacts to state-listed species are addressed in this EIS. This is pending review of monk seal haul-out in the leasehold area; additional review of ESA species is covered in the Hawaii-Southern California Training and Testing EIS.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
NOAA NMFS; SOH, DLNR; EPA	EO 13089, Coral Reef Protection	All federal agencies whose actions may affect U.S. coral reef ecosystems shall: (a) identify their actions that may affect U.S. coral reef ecosystems; (b) utilize their programs and authorities to protect and enhance the conditions of such ecosystems; and (c) to the extent permitted by law, ensure that any actions they authorize, fund, or carry out will not degrade the conditions of such ecosystems.	Marine Biological Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order.
NOAA NMFS; HDOH	EO 12088, Federal Compliance with Pollution Control Standards	Ensures federal compliance with applicable pollution control standards. Related to impacts from sediment resuspension and runoff due to operations.	Marine Biological Resources; Water Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order.
NOAA NMFS	Section 305 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq.)	EFH is not expected but could be designated in the study area.	Marine Biological Resources	The project is within areas designated as EFH; therefore, the Navy will provide NMFS with a written assessment of the effects of the Proposed Action on EFH. This analysis is covered in the Hawaii-Southern California Training and Testing EIS.
NOAA NMFS	Marine Mammal Protection Act (16 U.S.C. § 1361-1407)	Presence of one marine mammal, Hawaiian monk seal (*Neomonachus schauinslandi*), which is known to appear in study area.	Marine Biological Resources	Informal consultation with NMFS has been initiated under the ESA.
OSHA	Occupational Safety and Health Act of 1970 (PL 91-596); OSHA Occupational Noise Exposure (29 CFR § 1910.95)	Workforce safety, including occupational noise exposure limits.	Public Health and Safety; Noise	The Proposed Action analyzed in this EIS would be implemented in accordance with these requirements.
Office of the President	EO 11990, Protection of Wetlands (42 FR 26961, May 24, 1977)	Requires federal agencies to adopt a policy to avoid long- and short-term adverse impacts associated with destruction and modification of wetlands and to avoid the direct and indirect support of new construction in wetlands whenever there is a practicable alternative.	Water Resources; Hazardous Materials and Wastes	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
Office of the President	EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations (59 FR 7629; February 16, 1994)	Requires agencies to identify and address any disproportionately high and adverse human health or environmental effects their programs, policies, and activities may have on minority populations and low-income populations.	Environmental Justice and Protection of Children	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order. The EIS includes an analysis to determine if federal actions would have disproportionate human health or environmental impacts on low income populations, minority populations, or the Native Hawaiian population.
Office of the President	EO 13045, Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885; April 23, 1997)	Requires agencies to identify and assess environmental health risks and safety risks that may disproportionately affect children and ensure that their policies, programs, activities, and standards address those disproportionate risks.	Environmental Justice and Protection of Children; Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order.
Office of the President	EO 13112, Invasive Species (64 FR 6183; February 3, 1999)	Requires federal agencies whose actions may affect the status of invasive species to identify those actions and use relevant programs and authorities to prevent and manage the introduction of invasive species in consultation with the Invasive Species Council.	Terrestrial Biological Resources; Marine Biological Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order.
Office of the President	EO 14008, On Tackling the Climate Crisis at Home and Abroad (86 FR 7619; January 27, 2021)	Amends EO 12898 by updating the interagency working group and requiring the working group to report back with recommendations to improve environmental justice.	Environmental Justice and Protection of Children	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order. The EIS includes an analysis to determine if federal actions would have disproportionate human health or environmental impacts on low income populations, minority populations, or the Native Hawaiian population.
State of Hawai'i - Office of Planning and Sustainable Development (OPSD)	Coastal Zone Management Act Section 307/CZM Program	The national Coastal Zone Management Act (CZMA), Section 307, requires federal agency activities and development projects affecting any coastal use or resource to be undertaken in a manner consistent to the maximum extent practicable with the state's CZM program. The CZM area encompasses the entire state because there is no point of land more than 30 miles from the ocean, a definite land-sea connection exists throughout the state. The project exists within the CZM area.	All Resources	A CZM federal consistency review and application will be completed and submitted to the State of Hawai'i CZM program office.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
State of Hawai'i – Department of Land and Natural Resources (DLNR)	Hawai'i Revised Statutes Chapter 343 commonly referred to as The Hawai'i Environmental Policy Act ("HEPA"). The trigger for compliance is the use of state lands.	The State of Hawai'i Department of Land and Natural Resources will be the accepting agency for the EIS document for Hawai'i Revised Statutes Chapter 343.	All Resources	This EIS was developed in accordance with the Hawai'i Revised Statutes Chapter 343
SOH	Hawai'i Administrative Code Title 19, 342F Noise Pollution	Describes environmental noise levels appropriate for noise sensitive land uses.	Noise	The Navy will consider state regulations for noise-sensitive land uses. Sources of noise and the associated sensitive receptors in the human environment are analyzed in this EIS.
USDA, NRCS	Farmland Protection Policy Act (7 U.S.C. §§ 4201-4209 7)	Requires federal agencies to evaluate the adverse effects of their activities on farmland, which includes prime and unique farmland and farmland of statewide or local importance, and to consider alternative actions that could avoid adverse effects.	Geological Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this Act. The EIS includes an analysis to determine if federal actions would have adverse effects on farmland, which includes prime and unique farmland and farmland of statewide or local importance.
USDOT	49 CFR §§ 171.1-172.558	Regulates and ensures the safe and secure movement of hazardous materials to industry and consumers by all modes of transportation, including pipelines.	Hazardous Materials and Wastes	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
USDOT	USDOT Hazardous Materials Ground Transport Regulations/Hazardous Materials Transportation Act (49 CFR parts 100–185)	Transportation safety; hazardous materials and waste exposure.	Public Health and Safety	The Proposed Action analyzed in this EIS would be implemented in accordance with these regulations.
USFWS	Migratory Bird Treaty Act of 1918 (16 U.S.C. §§ 703–712)	Potential impacts to bird species protected by the Act.	Terrestrial Biological Resources; Land Use	The Proposed Action analyzed in this EIS would be implemented in accordance with this Act.

Agency	Federal, State, Local, and Regional Laws; Land Use Plans; Policies; Controls; and Guidance	Relevance to the Proposed Action	Relevant Resources	Status of Compliance
USFWS	EO 13186: Responsibilities of Federal Agencies to Protect Migratory Birds	Potential impacts to migratory birds.	Terrestrial Biological Resources	The Proposed Action analyzed in this EIS would be implemented in accordance with this Order.

Key: § = section(s); AAQS = ambient air quality standards; ACHP = Advisory Council on Historic Preservation; AICUZ = Air Installation Compatible Use Zone; BTA = Best Technology Available; CEQ = Council on Environmental Quality; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; CNRH = Commander Navy Region Hawaii; CWA = Clean Water Act; CWB = Clean Water Branch; DLA = Defense Logistics Agency; DLNR = Department of Land and Natural Resources; DoD = Department of Defense; DTS = Department of Transportation Services; ECF = entry control facility; EFH = Essential Fish Habitat; EIS = Environmental Impact Statement; EO = Executive Order; EPA = U.S. Environmental Protection Agency; ESA = Endangered Species Act; FEMA = Federal Emergency Management Agency; FR = Federal Register; GHG = greenhouse gas; HAR = Hawai'i Administrative Rules; HDOH = Hawai'i Department of Health; HDOT = Hawai'i Department of Transportation; HRS = Hawai'i Revised Statutes; IAP = Installation Appearance Plan; Inst. = Instruction; MEC = munitions and explosives of concern; Navy = U.S. Department of the Navy; NAAQS = National Ambient Air Quality Standards; NAVFAC = Naval Facilities Engineering Systems Command; NAVSUP = Naval Supply Systems Command; NEPA = National Environmental Policy Act; NESHAP = National Emission Standards for Hazardous Air Pollutant; NHPA = National Historic Preservation Act; NMFS = National Marine Fisheries Service; NOAA = National Oceanic and Atmospheric Administration; NPD = NASA Policy Directive; NPDES = National Pollutant Discharge Elimination System; NPR = NASA Procedural Requirement; NRCS = Natural Resources Conservation Service; OPNAVINST = Office of the Chief of Naval Operations Instruction; OSHA = Occupational Safety and Health Administration; PL = Public Law; Pub. = Publication; RAICUZ = Range Air Installation Compatible Use Zone; RCRA = Resource Conservation and Recovery Act; ROI = region of influence; SECNAVINST = Secretary of the Navy Instructions; SHPD = State Historic Preservation Division; SOH = State of Hawai'i; SWPPP = Stormwater Pollution Prevention Plan; U.S.C. = United States Code; USDA = U.S. Department of Agriculture; USCG = U.S. Coast Guard; USDOT = U.S. Department of Transportation; USFWS = U.S. Fish and Wildlife Service; WOTUS = Waters of the U.S.

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Appendix C
List of Interested Parties Contacted During Scoping

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Category	Group

Federal, state, and local elected officials	• Federal Elected Officials
	  ▪ U.S. Senators
	  o Mazie K. Hirono
	  o Brian Schatz
	• U.S. House of Representatives
	  ▪ Congressional District I: Ed Case
	  ▪ Congressional District II: Jill N. Tokuda
	• State Elected Officials
	  ▪ Governor: Josh Green
	  ▪ Lieutenant Governor: Sylvia Luke
	  ▪ Attorney General: Anne E. Lopez
	  ▪ State Senate
	  o District 8: Ronald D. Kouchi
	• State Assembly
	  ▪ House District 15: Nadine K. Nakamura
	  ▪ House District 16: Luke A. Evslin
	  ▪ House District 17: Dee Morikawa
	  ▪ Senate Committees
	  o Public Safety and Intergovernmental Affairs and Military
	  o Water and Land
	  o Ways and Means
	  ▪ House Committees
	  o Corrections, Military and Veterans
	  o Water and Land
	  o Finance
	• Local Elected Officials
	  ▪ County of Kaua‘i
	  o Mayor Derek S.K. Kawakami
	  ▪ County Council
	  o Mel Rapozo (Council Chair)
	  o KipuKai Kuali‘i (Council Vice Chair)
	  o Addison Bulosan (Councilmember)
	  o Bernard P. Carvalho, Jr. (Councilmember)
	  o Felicia Cowden (Councilmember)
	  o Bill DeCosta (Councilmember)
	  o Ross Kagawa (Councilmember)

Federal, state, and local regulatory and non-regulatory government agencies	• Federal Agencies
	  ▪ Advisory Council on Historic Preservation
	  ▪ National Oceanic and Atmospheric Administration Fisheries
	  ▪ U.S. Army Corps of Engineers Honolulu District
	  ▪ U.S. Coast Guard District 14
	  ▪ U.S. Department of the Interior, Office of Hawaiian Relations
	  ▪ U.S. Environmental Protection Agency
	  ▪ USFWS, Kilauea Point National Wildlife Refuge
	  ▪ USFWS, Pacific Islands Fish and Wildlife Office
	  ▪ USDA Forest Service, Institute of Pacific Islands Forestry
	  ▪ USDA, Hawai‘i and Western Pacific State Office
	  ▪ U.S. Geological Survey, Honolulu Field Station
	  ▪ National Park Service

Category	Group
	• State Agencies ▪ Department of Agriculture ▪ Agribusiness Development Corporation ▪ DLNR ▪ DLNR BLNR ▪ DLNR DOFAW ▪ DLNR Land Division (Kaua'i District) ▪ DLNR OCCL (Conservation District) ▪ DLNR-SHPD ▪ DLNR Division of State Parks ▪ DLNR Commission on Water Resource Management ▪ Department of Transportation ▪ OHA ▪ OHA, Kaua'i Burial Council ▪ Department of Health, Clean Water Branch ▪ OPSD ▪ OPSD, Environmental Review Program ▪ OPSD, CZM Program ▪ Department of Business, Economic Development and Tourism ▪ Department of Hawaiian Homelands ▪ Department of the Attorney General ▪ Department of Defense (State of Hawai'i) ▪ Boards and Commissions ▪ Kaua'i Circuit Court ▪ Kaua'i District Office, Division of State Parks ▪ Hawai'i State Parks • Regional/Local Agencies ▪ County of Kaua'i Departments: o Parks and Recreation o Water o Kaua'i Emergency Management Agency o Fire o Police o Economic Development o Planning o Public Works o Transportation o County of Kaua'i Office of Boards and Commissions ▪ University of Hawai'i System o Kaua'i Community College o Kaua'i Agricultural Research Center o Pacific Cooperative Studies Unit ▪ Native Hawaiian Federal Interagency Working Group, current members include: o Advisory Council on Historic Preservation o Office of the Deputy Under Secretary of Defense for Installations and Environment o Small Business Administration o Office of Native Hawaiian Relations

Category	Group
Native Hawaii Organizations	• ʻĀina Momona (State of Hawaiʻi) • Association of Hawaiian Civic Clubs (State of Hawaiʻi) • Hawaiian Native Corporation (supports NHOs – State of Hawaiʻi) • Koʻolau Foundation (State of Hawaiʻi) • Native Hawaiian Hospitality Association (State of Hawaiʻi) • Kawaileo Law A Limited Liability Law Company (State of Hawaiʻi) • Council For Native Hawaiian Advancement (State of Hawaiʻi) • Na Koa Ikaika Ka Lahui Hawaiʻi (Kauaʻi) • Na ʻOhana Papa O Manā (Kauaʻi) • EAO Hawaiʻi Inc. (Kauaʻi) • Nā Kuleana o Kānaka ʻŌiwi (Kauaʻi) • Hanalei River Heritage Foundation (Kauaʻi) • ALU LIKE, Inc. (Kauaʻi) • Kauaʻi Kupuna Council • Kauaʻi Burial Council
Community planning groups, and other community and civic organizations	• Community Planning Groups ▪ Kauaʻi Planning & Action Alliance • Community Organizations ▪ Hui Makaʻāinana O Makana ▪ Waipā Foundation ▪ Waimea Community Association • DON Advocacy Groups ▪ AMVETS Department of Hawaiʻi • Civic Groups ▪ Kauaʻi Planning & Action Alliance ▪ Hawaiʻi Community Foundation ▪ Kilauea Community Agricultural Center - Aina Hoʻokupu O Kilauea ▪ Kauaʻi Philippine Cultural Center ▪ Ke Kumu O Hihinui Cultural Center ▪ Kauaʻi Museum ▪ Kōkeʻe Natural History Museum
Small business associations, economic development/ tourism organization, and recreational and real estate interests	• Economic Development Organizations ▪ Kauaʻi Chamber ▪ Kauaʻi Filipino Chamber of Commerce • Tourism ▪ Camp Sloggett ▪ Waimea Japanese Cemetery ▪ Kauaʻi Visitors Bureau (Sue Kanoho) ▪ Smith Family Garden Luau ▪ Kōkeʻe Lodge ▪ The Cabins at Kōkeʻe
Local environmental organizations and other Non-Governmental Organizations	• Government Programs ▪ DLNR DOFAW Natural Area Reserves System ▪ Kauaʻi Seabird Habitat Conservation Plan • Environmental Organizations – Local ▪ National Tropical Botanical Gardens, Plant Extinction Prevention Program

Category	Group
	▪ Kaua‘i Forest Bird Recovery Project ▪ Kaua‘i Watershed Alliance ▪ Hanalei Watershed Hui ▪ Kaua‘i North Shore Community Foundation ▪ North Shore Community Land Trust ▪ Kaua‘i Invasive Species Committee ▪ Kōke‘e Resource Conservation Program ▪ Keahole Defense Coalition • Environmental Organizations – Regional/National ▪ Earthjustice ▪ Surfrider Foundation ▪ Sierra Club – Kaua‘i Chapter ▪ Reef Guardians ▪ Save our Shearwaters ▪ Conservation Council for Hawai‘i ▪ Kahea – The Hawaiian Environmental Alliance ▪ Hawai‘i Audubon Society ▪ Hawaiian Islands Land Trust ▪ Native Hawaiian Plant Society ▪ Hawai‘i Wildlife Center ▪ Nā Kia‘i Kai ▪ Nature Conservancy - Hawai‘i Chapter ▪ Pesticide Action Network North America • Fishing/Diving ▪ Hawai‘i Big Game Fishing Club ▪ Hawai‘i Freshwater Fishing Association • Boating/Yacht Clubs/Marinas ▪ Nawiliwili Yacht Club ▪ Kaua‘i Sailing Association ▪ West Side Boaters Association ▪ Holo Holo Charters ▪ Catamaran Kahanu ▪ Captain Andy’s ▪ Kauai Sea Tours ▪ Napali Odyssey ▪ Makana Charters ▪ Seasport Divers ▪ Nā Pali Riders ▪ Blue Dolphin Charters
Local media outlets	• Print ▪ Kaua‘i Island News ▪ The Garden Island ▪ MidWeek Kaua‘i ▪ The Honolulu Star-Advertiser ▪ Hawai‘i Tribune-Herald ▪ Ka Wai Ola • TV ▪ KITV 4 (ABC) ▪ KHON2 (Fox and CW)

Category	Group
	▪ Hawai‘i News Now • Radio ▪ Kong Radio 93.5 ▪ KHKU 94.3 FM ▪ KFMN FM 97 ▪ KJMQ Jamz 98.1 ▪ Sunny 101.3 ▪ Hawai‘i Public Radio (HPR) • Online ▪ Honolulu Civil Beat ▪ Kaua‘i Now ▪ Waimea Theater On-Screen Advertising
Individual community members (not associated with groups) interested in cultural and natural resources preservation, military use of the land, public access, etc.	• Dennis Eguchi • Pastor Daryl Kua • Alethea Kaohi • Bob Westerman • Toni Ricci • Lyle Tabata • Charlie Iona • Marissa Faye • Josh Mori • Keiko Napier • Kaua Mata • Tia Korete • Terry Lily • Barbara “Maka‘ala” Ka‘aumoana
Residents, business, agricultural operations, schools, and property owners near PMRF	• Communities of Kekaha, Waimea, Hanapepe, Ele‘ele, Port Allen, Kalaheo, Lawai, Omao, Koloa, Poipu, Kapa‘a, and Līhu‘e • Schools – Kaua‘i District, Waimea Complex ▪ Kekaha Elementary School ▪ Ni‘ihau High and Elementary School ▪ Waimea High School ▪ Waimea Canyon Middle School ▪ Ke Kula Ni‘ihau O Kekaha Public Charter School ▪ Kula Aupuni Ni‘ihau A Kahelelani Aloha Public Charter School ▪ St. Theresa’s School

Legend: AMVETS = American Veterans; BLNR = Board of Land and Natural Resources; CZM = Coastal Zone Management; DLNR = Department of Land and Natural Resources; DOFAW = DLNR Division of Forestry and Wildlife; DON = Department of the Navy; NHO = Native Hawaiian Organization; OHA = Office of Hawaiian Affairs; OPSD = Office of Planning and Sustainable Development; SHPD = State Historic Preservation Division; U.S. = United States; USDA = U.S. Department of Agriculture; USFWS = U.S. Fish and Wildlife Service.

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Appendix D
Detailed List of Activities and Operational Elements Under Current Real Estate Agreements

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D.1 List and Description of Navy Leaseholds and Easements

List and Description of Leases and Easements at the Main Base

Table D.1-1 includes a list of activities or operational elements for leaseholds and easements at the main base.

Table D.1-1 Navy Leases and Easements on State Land at the Main Base

Name	Grant Type	Activity/Operational Element	Size (ac)
Tract E-1	Lease	Contains ordnance related facilities, and lands required to comply with Federal ATFP guidelines regarding setback distances around military bases.	69.562
Tract E-2 Tract E-2-A	Lease	Operations. Includes lands required to comply with Federal ATFP guidelines regarding setback distances around military bases.	45.268 0.777
Lot B	Lease	Encroachment.	32.070
Lot 1	Lease	Drainage.	47.937
Lot 9	Lease	Drainage.	12.422
Lot 3	Lease	Access.	0.232
Lot 10	Lease	Drainage. Includes lands required to facilitate the operation and maintenance of drainage ditches and pumps to protect adjacent lands from flooding.	5.171
Lot 13	Lease	Access. Includes lands required to facilitate access in support of the operation and maintenance of drainage ditches and pumps to protect adjacent lands from flooding.	0.434
Lot 7	Lease	Access. Includes Exclusive Roadway Access Easement.	1.618
Lot A-1	Lease	Encroachment/Drainage. Includes Non-Exclusive Drainage Easement and Roadway Access Easement.	176.16
		Main Base Leases Subtotal	**391.651**
Easement 100 Easement 101 Easement 102 Easement 103 Easement 104 Easement 105	Easement	Includes use of the lands for agricultural purposes to preclude encroachment on operations by development.	122.011 1,841.53 3,150.093 8.691 9.489 17.875
Easement 107 Easement B Easement B-1 Easement B-2 Easement B-3 Easement B-4	Easement	Includes Non-Exclusive Roadway Access Easement.	0.170 3.084 0.069 0.069 0.044 0.067
Easement D	Easement	Electrical.	1.363
Easement E	Easement	Roadway.	0.441
Easement F	Easement	Cable.	0.049
Easement G Part 1	Easement	Water.	0.671
Easement G Part 2	Easement	Water.	0.138
Easement H	Easement	Roadway.	0.028
Easement A Part 1	Easement	Access.	2.141

Name	Grant Type	Activity/Operational Element	Size (ac)
GHA Easement 1 GHA Easement 2	Easement	Ground hazard area.	2,039.167 69.579
		Main Base Easements Subtotal	**7,266.769**
		Main Base Total Leases and Easements	**7,658.42**

Key: ATFP = Antiterrorism and Force Protection; GHA=Ground Hazard Area.

List and Description of Leases and Easements at Kamokalā Ridge

Table D.1-2 includes a list of activities or operational elements for leases and easements at Kamokalā Ridge.

Table D.1-2 Navy Leases and Easements on State Land at Kamokalā Ridge

Name	Grant Type	Activity/Operational Element	Size (ac)
Tract E-3 Parcel 1 Tract E-3 Parcel 2	Lease	Magazines 1-12 are utilized for proper storage of explosives with effective flexibility to separate incompatible explosives.	25.686 48.777
Kamokalā Ridge Add	Lease	Magazines 12-13 are required for proper storage of explosives with effective flexibility to separate incompatible explosives.	14.372
		Kamokalā Ridge Leases Subtotal	**88.835**
Easement 106	Easement	Includes use of the lands for agricultural purposes to preclude encroachment on operations by development.	176.372
Easement A Part 2 Por. A Easement A Part 2 Por. B Easement A Part 2 Por. C Easement A Part 2 Por. D Easement A Part 3	Easement	Includes Non-Exclusive Roadway Access Easement.	0.627 0.558 0.042 0.221 0.455
Easement G Part 3 Easement G Part 4 Easement G Part 5 Easement G Part 6	Easement	Water pipeline.	0.186 0.153 0.006 0.021
ESQD Easement S5604	Easement	Restrictive Use.	176.371
		Kamokalā Ridge Easements Subtotal	**355.012**
		Kamokalā Ridge Total Leases and Easements	**443.847**

Key: ESQD = Explosive Safety Quantity Distance.

List and Description of Leases at the Mānā Water Well

Table D.1-3 includes a list of leases at the Mānā Water Well.

Table D.1-3 Navy Leases on State Land at the Mānā Water Well

Name	Grant Type	Activity/Operational Element	Size
Tract E-4	Lease	Infrastructure associated with well.	0.264
Lot 12	Lease	Location of water well.	0.026
		Water Well Total Leases	**0.29**

List and Description of Leases at Miloliʻi Ridge

Table D.1-4 includes a list of activities or operational elements for leases at Miloliʻi Ridge.

Table D.1-4 Navy Leases on State Land at Miloliʻi Ridge

Name	Grant Type	Activity/Operational Element	Size (ac)
Miloliʻi Ridge No. 1 Miloliʻi Ridge No. 2 Miloliʻi Ridge No. 3	Lease	Location of frequency shift reflector used with radar and telemetry stations.	0.005 0.005 0.005
		Miloliʻi Ridge Total Leases	**0.015**

List and Description of Leases and Easements at Mākaha Ridge

Table D.1-5 includes a list of activities or operational elements for leases and easements at Mākaha Ridge.

Table D.1-5 Navy Leases and Easements on State Land at Mākaha Ridge

Name	Grant Type	Activity/Operational Element	Size
Parcel A – Mākaha Parcel B – Mākaha	Lease	The location has a guarded, secured entrance, a Frequency Interference Control Building, Maintenance Facility, Telemetry Building, a boresight tower, telemetry antennas, water tanks, a laboratory, radar sites, communications, a small power plant, antennas, and a helicopter landing pad. Most of these structures are on the top of the ridgeline and are in the line of sight of the Main Base. Unique location due to geography allowing coverage of both the base and ocean range.	35.04 167.05
Bore Site	Lease	Used to locate bore site targets for use with radar and telemetry stations.	1.012
		Mākaha Ridge Lease Subtotal	**203.102**
Parcel E Road	Easement	Includes Non-exclusive Roadway Access Easement.	4.53
Parcel D Road Parcel C Road	Easement	Includes Non-exclusive Roadway Access Easement.	26.25 10.82
Bore Site Access Road	Easement	Includes Non-exclusive Roadway Access Easement.	0.613
		Mākaha Ridge Easement Subtotal	**42.213**
		Mākaha Ridge Total Leases and Easements	**245.315**

D.2 List and Description of NASA Leaseholds

Table D.2-1 includes a list of activities or operational elements for leaseholds and easements at Kōkeʻe Park Geophysical Observatory (KPGO).

Table D.2-1 Navy Leases and Easements on DLNR Land at KPGO

Name	Grant Type	Activity/Operational Element	Size
Sites A – E (6 parcels)	Lease	Facility housing radar antenna. Unique location due to geography allowing coverage of both the base and ocean range.	22.900

D.3 General Description of Navy and NASA Real Estate Agreements with DLNR

Tables D.3-1 and **D.3-2** provide the location, number, size, type, expiration, and general type of associated actions for the existing leaseholds and easements. *Note to reviewer: This table, including acreages, will be updated when the Report to Congress is updated.*

Table D.3-1 Navy Leases on Kauaʻi with State of Hawaiʻi

Site Name	City	Size (acres)	Type	Lessor	Expiration Fiscal Year	Renewal Fiscal Year
PMRF Lease S-3852	Kekaha	480.78	LEASE	State of HI	2029	2029
PMRF Lease S-3852	Kekaha	10.18	EASEMENT	State of HI	2029	2029
PMRF Mākaha Ridge Lease S-3952	Kekaha	203.10	LEASE	State of HI	2030	2030
PMRF Mākaha Ridge Lease S-3952	Kekaha	7722.21	EASEMENT	State of HI	2030	2030
PMRF Miloliʻi Ridge Easement S-5352	Kekaha	2108.75	EASEMENT	State of HI	2030	2030
PMRF Miloliʻi Ridge Easement S-5804	Kekaha	5326.23	EASEMENT	State of HI	2029	2029
PMRF Easement S-5604	Kekaha	176.37	EASEMENT	State of HI	2029	2029

Source: Draft Report to Congress on the Department's Efforts to Renew Department of Defense Leases and Easements in Hawaiʻi, September 2023.

Table D.3-2 NASA Leases on Kauaʻi with State of Hawaiʻi

Site Name	City	Size (acres)	Type	Lessor	Expiration Fiscal Year	Purpose and Associated Actions
Kōkeʻe Park Geophysical Observatory (6 parcels)	Waimea	23	LEASE, EASEMENT	State of HI	2030	Collect geodetic data, contribute to daily measurements of the Earth's orientation in space and rotation.

Appendix E
No Action Alternative: Detailed List of Activities/Operations

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Table E-1 lists the operational impacts by lease and easement if succeeding agreements are not secured.

Table E-1 No Action Alternative: Operational Impacts

Name of Parcel	Grant Type (Lease/ Easement)	Activity/Operational Element	Operational Impact if Agreement Not Renewed
Main Base			
Tract E-1	L	Contains ordnance related facilities, and lands required to comply with Federal ATFP guidelines regarding setback distances around military bases.	Leased area contains ordnance related facilities critical to the support of the PMRF mission. Inability to perform launch operations would result in lack of ability to support various Navy missions. Also, reduction in security posture and increased costs to meet ATFP requirements. Due to land limitations, there is nowhere else to relocate the buildings on Navy fee simple lands.
Tract E-2 Tract E-2-A	L	Operations. Includes lands required to comply with Federal ATFP guidelines regarding setback distances around military bases.	Reduction in security posture and increased costs to meet ATFP requirements.
Lot B	L	Encroachment.	Reduction in security posture and increased costs to meet ATFP requirements.
Lot 1	L	Drainage.	If existing agricultural lands were to flood, PMRF would experience increased vulnerability to encroachment and BASH hazards. Without PMRF management of that land, State of Hawai'i would take over management of the drainage.
Lot 9	L	Drainage.	If existing agricultural lands were to flood, PMRF would experience increased vulnerability to encroachment and BASH hazards. Without PMRF management of that land, State of Hawai'i would take over management of the drainage.
Lot 3	L	Access.	Used as secondary entrance to the base and is the ordnance gate (for transport of ordnance from main base to Kamokalā Ridge). There would be impacts to public safety if ordnance transport went through the main gate.
Lot 10	L	Drainage. Includes lands required to facilitate the operation and maintenance of drainage ditches and pumps to protect adjacent lands from flooding.	If existing agricultural lands were to flood, PMRF would experience increased vulnerability to encroachment and BASH hazards. Without PMRF management of that land, State would take over management of the drainage.
Lot 13	L	Access. Includes lands required to facilitate access in support of the operation and maintenance of drainage ditches and pumps to protect adjacent lands from flooding.	If existing agricultural lands were to flood, PMRF would experience increased vulnerability to encroachment and BASH hazards. Without PMRF management of that land, State would take over management of the drainage.

Name of Parcel	Grant Type (Lease/ Easement)	Activity/Operational Element	Operational Impact if Agreement Not Renewed
Lot 7	L	Access. Includes Exclusive Roadway Access Easement.	Operations gate, which is open in the morning and afternoon, and provides secondary entrance to the base. Without this access, there would be no other entrance if the primary entrance were to be temporarily shut down, and this would impact access to critical PMRF facilities.
Lot A-1	L	Encroachment/Drainage. Includes Non-Exclusive Drainage Easement and Roadway Access Easement.	If existing agricultural lands were to flood, PMRF would experience increased vulnerability to encroachment and BASH hazards. Without PMRF management of that land, State would take over management of the drainage. Also, would impact access to critical PMRF facilities.
Easement 100 Easement 101 Easement 102 Easement 103 Easement 104 Easement 105	E	Includes use of the lands for agricultural purposes to preclude encroachment on operations by development.	If existing agricultural lands were to flood, PMRF would experience increased vulnerability to encroachment and BASH events. 100-103 within GHA and ESQD arcs, 104-105 to prevent encroachment.
Easement 107 Easement B Easement B-1 Easement B-2 Easement B-3 Easement B-4	E	Includes Non-Exclusive Roadway Access Easement.	This would impact access to critical PMRF facilities, and impact access to the base's main source of potable water.
Easement D	E	Electrical.	Lack of access to critical PMRF facilities.
Easement E	E	Roadway.	Lack of access to critical PMRF facilities.
Easement F	E	Cable.	Lack of electrical service to critical PMRF facilities.
Easement G Part 1	E	Water.	Lack of communication service to critical PMRF facilities.
Easement G Part 2	E	Water.	Lack of water service to critical PMRF facilities.
Easement H	E	Roadway.	Lack of access to critical PMRF facilities.
Easement A Part 1	E	Access.	Lack of access to critical PMRF facilities.
GHA Easement 1 GHA Easement 2	E	The GHA for many of the ballistic and hypersonic missiles launched from PMRF extends into the Mānā Plain.	Restriction of the GHA to only federal property will mean no ballistic or hypersonic missiles can be safely launched from PMRF.
Kamokalā Ridge			
Tract E-3 Parcel 1 Tract E-3 Parcel 2	L	Magazines 1-12 are utilized for proper storage of explosives with effective flexibility to separate incompatible explosives.	Inability to meet ordnance safety storage requirements would result in lack of ability to support aerial target and ballistic and hypersonic missile missions.
Kamokalā Ridge Add	L	Magazines 12-13 are required for proper storage of explosives with effective flexibility to separate incompatible explosives.	Inability to meet explosive safety storage requirements resulting in lack of ability to support various missions at PMRF.
Easement 106	E	Includes use of the lands for agricultural purposes to preclude encroachment on operations by development.	Potential for encroachment due to development and incompatible uses to current Navy operations to include RF spectrum interference, lighting that may impact NVG training, AICUZ concerns, etc.

Name of Parcel	Grant Type (Lease/ Easement)	Activity/Operational Element	Operational Impact if Agreement Not Renewed
Easement A Part 2 Por. A Easement A Part 2 Por. B Easement A Part 2 Por. C Easement A Part 2 Por. D Easement A Part 3	E	Includes Non-Exclusive Roadway Access Easement.	Lack of access to critical PMRF facilities.
Easement G Part 3 Easement G Part 4 Easement G Part 5 Easement G Part 6	E	Water pipeline.	Lack of access to critical PMRF facilities.
ESQD Easement S5604	E	Restrictive Use.	Lack of access to critical PMRF facilities.
Mānā Water Well			
Tract E-4	L	Infrastructure associated with well.	Reduced reliability of potable water source and increased cost of water. Impacts to range operations from loss of water source.
Lot 12	L	Location of water well.	Reduced reliability of potable water source and increased cost of water.
Miloli'i Ridge			
Miloli'i Ridge No. 1 Miloli'i Ridge No. 2 Miloli'i Ridge No. 3	L	Location of frequency shift reflector used with radar and telemetry stations.	Inability to calibrate instrumentation and antennas which would limit effectiveness during data collection and could result in safety issues related to tracking of vehicles on the range.
Mākaha Ridge			
Parcel A – Mākaha Parcel B – Mākaha	L	Facility housing radar antenna. Unique location due to geography allowing coverage of both the base and ocean range. The vast majority of PMRF instrumentation exists at Mākaha Ridge to include radar systems, telemetry, communications, electronic warfare assets, etc.	Without the instrumentation located at Mākaha Ridge, almost all of PMRF's training and testing missions will be unsupportable since loss of the data provided by that instrumentation will make it impossible to provide range safety oversight, management and coordination of air and sea space under the control of PMRF, execution of exercises/tests and collection of customer required data.
Bore Site	L	Used to locate bore site targets for use with radar and telemetry stations.	Loss of this facility would limit PMRF support of Pacific Fleet training operations and national test initiatives. Inability to calibrate instrumentation and antennas which would limit effectiveness during data collection and could result in safety issues related to tracking of vehicles on the range.
Parcel E Road	E	Includes Non-exclusive Roadway Access Easement.	Lack of access to critical PMRF facilities.
Parcel D Road Parcel C Road	E	Includes Non-exclusive Roadway Access Easement.	Lack of access to critical PMRF facilities.
Bore Site Access Road	E	Includes Non-exclusive Roadway Access Easement.	Lack of access to critical PMRF facilities.

Name of Parcel	Grant Type (Lease/ Easement)	Activity/Operational Element	Operational Impact if Agreement Not Renewed
Kōkeʻe Park Geophysical Observatory			
S-3917 6 parcels	L	Includes facilities (buildings, RADAR, antenna, transmitters) that support Navy and NASA operations.	Loss of Navy radar and telemetry systems at KPGO would also limit effectiveness during data collection and could result in safety issues related to tracking on the range. Loss of Site B which includes the back-up plant diesel generator for Sites A, C, D, and E would impact the source of reliable power when systems at KPGO are supporting Navy range operations and NASA SGP activities. Without use of Sites A through E at KPGO, NASA would lose its northern Pacific VLBI and DORIS stations, and two GNSS stations, substantially reducing the capability of NASA's global Space Geodesy Project to support the following: spacecraft tracking; as well as military and civilian terrestrial, airborne, and maritime navigation; and the scientific disciplines that rely on the data produced at KPGO.

Key: AICUZ = Air Installation Compatible Use Zone; ATFP = Antiterrorism and Force Protection; BASH = Bird/Wildlife Aircraft Strike Hazard; DORIS = Doppler Orbitography and Radio-positioning Integrated by Satellite; ESQD = Explosive Safety Quantity Distance; GHA = Ground Hazard Area; GNSS = Global Navigation Satellite System; KPGO = Kōkeʻe Park Geophysical Observatory; NASA = National Aeronautics and Space Administration; NVG = Night Vision Goggles; PMRF = Pacific Missile Range Facility; RADAR=Radio Detecting and Ranging; RF=Radio Frequency; SGP = Space Geodesy Project; VLBI=Very Long Baseline Interferometry.

Draft EIS Notifications

Notice of Public Meetings

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whether the information would have practical utility;

- whether the estimated burden of the proposed collection of information is accurate;
- whether the quality, utility, and clarity of the information to be collected could be enhanced; and
- whether the burden imposed by the collection of information could be minimized by use of automated, electronic or other technological collection techniques, or other forms of information technology.

Alberta E. Mills,

Secretary, Consumer Product Safety Commission.

[FR Doc. 2025–11447 Filed 6–20–25; 8:45 am]

BILLING CODE 6355–01–P

DEPARTMENT OF DEFENSE

Department of the Navy

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Notice of Public Meetings for Pacific Missile Range Facility and Kōkeʻe Park Geophysical Observatory Environmental Impact Statement (ID# EISX–007–17–USN–1749043386)

AGENCY: Department of the Navy (DoN), Department of Defense (DoD); National Aeronautics and Space Administration (NASA).

ACTION: Notice.

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA) and regulations implemented by the DoN and NASA, as joint lead agencies, DoN and NASA have prepared and filed with the United States (U.S.) Environmental Protection Agency a Draft Environmental Impact Statement(EIS) for retaining the use of state lands on Kauaʻi, Hawaiʻi (HI) in support current operations that occur on these lands. The Draft EIS includes an analysis of the potential environmental effects associated with the continued long-term DoD use of 8,172 acres of State lands on Kauaʻi for operational continuity and sustainment (in support of continued military training, testing, and facility operations) at the Pacific Missile Range Facility (PMRF), and the continued long-term NASA use of 23 acres of State lands on Kauaʻi in support of continued operations (including measurements of the Earthʻs rotation and local land motion) at the Kōkeʻe Park Geophysical Observatory (KPGO). As the Proposed Action involves State lands, the EIS is a joint NEPA and Hawaiʻi Environmental Policy Act (HEPA) (as governed by Hawaiʻi Revised Statutes (HRS) Chapter 343), and Hawaiʻi Administrative Rules (HAR) (implementing HRS Chapter 343) document; therefore, the public review processes will run concurrently and will jointly meet NEPA and HEPA requirements.

DATES: The 48-day public comment period begins June 20, 2025, and ends August 7, 2025. In support of NEPA and HEPA requirements, in-person public meetings (with some of the meetings live-broadcasted) will be held in Kauaʻi, HI from July 15 through 17, 2025, to provide an overview of the Draft EIS, answer questions from the public, and provide the public an opportunity to provide oral comments. Each meeting will also provide an opportunity to learn how the DoN and NASA are complying with the Section 106 process of the National Historic Preservation Act (NHPA) and to comment on potential effects on historic properties. The public can submit comments during the Draft EIS public review and comment period at one of the public meetings, electronically via the project website (*https://pmrf-kpgo-eis.com/*), or via U.S. mail. Public comments on the Draft EIS must be postmarked or received online by 11:59 p.m. HI Standard Time (HST) Thursday, August 7, 2025, for consideration in the Final EIS.

Three in-person public meetings with a virtual component will be held as follows:

1. July 15, 2025, from 5 p.m. to 8 p.m. HST at Kauaʻi Veterans Center, 3215 Kauaʻi Veterans Memorial Highway, Līhuʻe, HI 96766;
2. July 16, 2025, from 5 p.m. to 8 p.m. HST at Kekaha Neighborhood Center, 8130 Elepaio Road, Kekaha, HI 96752;
3. July 17, 2025, from 5 p.m. to 8 p.m. HST at Sheraton Coconut Beach Resort, 650 Aleka Loop, Kapaʻa, HI 96746.

ADDRESSES: Comments on the Draft EIS may be provided at the public meetings, electronically through the project website at: *https://pmrf-kpgo-eis.com/,* or by U.S. mail to: Naval Facilities Engineering Systems Command, Hawaiʻi; Attention: PMRF and KPGO Real Estate EIS Project Manager, Ms. Kerry Ling; 400 Marshall Road, Building X–11; Pearl Harbor, HI 96860.

FOR FURTHER INFORMATION CONTACT: DoN: Commander, Navy Region Hawaiʻi, Attn: Mr. Daniel Sanford, Outreach Public Affairs Specialist, by telephone (808–473–2890) or email (*Daniel.f.sanford.civ@us.navy.mil* and *chrh.pao@us.navy.mil*).

NASA: Shari A. Miller, NASA; EIS Project Manager, by telephone (757–824–2327) or email (*Shari.A.Miller@nasa.gov*), or visit the project website: *https://pmrf-kpgo-eis.com/.*

SUPPLEMENTARY INFORMATION: The DoN's purpose for the Proposed Action is to maintain long-term DoD use of 8,172 acres of State lands (including leaseholds and easement lands) on Kauaʻi, HI for operational continuity and sustainment of the military readiness mission. NASA's purpose for the Proposed Action is to maintain long-term use of 23 acres of State land (including leaseholds and easement lands) on Kauaʻi, HI for continued operations of KPGO. The Proposed Action is needed because the existing real estate agreements for these state lands are set to expire between 2027 and 2030. The Navy use of these state lands is required to maintain technological and safety capabilities supporting PMRF training and testing. For NASA, these state lands are critical to maintain data collection efforts of global significance.

It also ensures the continued conservation management by the DoN and NASA of natural and cultural resources on these lands.

For the State of HI Board of Land and Natural Resources (BLNR), in addition to its role as the lessor of state lands, the proposed real estate action presents an opportunity for the agency to secure a revenue source to support its management of public lands and associated environmental and conservation programs. Fees from leases and easements would be put into a state fund, as required by law. Twenty percent of ceded land revenue (fees from the leaseholds and easement lands) would go to the Office of Hawaiian Affairs, and the rest to the Special Land Development Fund, as required by law.

By ensuring continued DoN and NASA operations on Kauaʻi, the real estate action would also preserve local jobs and income for the residents of Kauaʻi, financially contribute to the overall economic well-being of Kauaʻi, and maintain continued conservation management of natural and cultural resources on state lands at no cost to the State of HI.

The DoN and NASA are considering two Action Alternatives that are carried forward for analysis in the EIS, along with the No Action Alternative. The type of real estate agreement differentiates the alternatives.

Alternative 1 (Succeeding Current Real Estate Agreements): The DoN and NASA would secure new real estate agreements with the State of HI for the same areas they currently hold in leaseholds and easements with no change to current footprint or use of state lands.

Alternative 2 (Fee Simple Acquisition of Current Real Estate Agreements for Leaseholds): The DoN and NASA would aquire the land currently held in leaseholds with no change to current footprint or use and obtain use of the same easements. This alternative would result in the aquisition of up to 700 acres (684–DoN, 16–NASA) of previously leased land.

Alternative 3 (No Action Alternative): The State of HI would not grant the DoN and NASA any new real estate agreements after expiration of the leases and easements between 2027 to 2030.

Consistent with NEPA and HAR section 11–200.1–24(b), the scope of the analysis for the alternatives in this EIS is proportionate to the potential for environmental impacts. The following resources may be impacted and and are analyzed in this EIS: archaeological and architectural resources, cultural practices, biological resources, land use and access, socioeconomics, water resources, utilities, public health and safety, air quality and greenhouse gases, transportation, hazardous materials and wastes, and visual resources. Direct, indirect, and reasonably foreseeable effects on these resource areas are analyzed in the Draft EIS. There are no potential effects to airspace, marine navigation, and marine biological resources; therefore, these resources were not analyzed in the Draft EIS.

The leaseholds and easement lands located in the Project Area are entirely land-based. The Proposed Action does not pertain to activities occurring in airspace or affecting the designation, management, or use of airspace over Kauaʻi or surrounding waters.

The Proposed Action is associated with the effects of securing additional real estate arrangement to continue the activities on the lease lands. Use of Main Base PMRF for land-based training and testing has been evaluated previously in the 1999 PMRF EIS, 2008 HI Range Complex (HRC) EIS, and most recently in the Draft PMRF Land Based Training and Testing Environmental Assessment (EA) covering proposed additional activities across Army, Navy, Air Force, and Marines.

The lands associated with the Proposed Action do not extend into nearshore waters, and they do not affect marine navigation. Leaseholds and easement lands associated with the Proposed Action would not affect marine navigation, marine biological resources, and Navy at-sea activities or other in-water standard operating procedures associated with PMRF land-based activities. The types of offshore designations, marine navigation procedures, and public notifications (*e.g.,* Local Notices to Mariners) would remain unchanged for PMRF.

Activities in the leaseholds and easement areas do not involve stressors that could affect marine resources, such as airborne and underwater noise, underwater energy activities (*e.g.,* explosives or electromagnetic devices), placement of materials or structures in the ocean environment, expended materials in the ocean environment (involving the potential for contamination or for ingestion by marine fauna), or physical disturbance in the ocean environment (such as entanglement and physical strikes).

Impacts to airspace, marine navigation, and marine resources from existing training and testing are analyzed in the Hawaiʻi-Southern California Training and Testing Final EIS/OEIS (DoN, 2018), the 2019 PMRF Department of Energy Finding of No Significant Impact for Continued Operation of the Kauaʻi Test Facility Sandia National Laboratories, and the Hawaiʻi-California Training and Testing Draft EIS/OEIS (DoN, 2024). Any additional environmental planning that addresses future on-land training and testing at PMRF completed after the PMRF and KPGO Real Estate Draft EIS will be incorporated by reference into the Final EIS.

In addition to Best Management Practices and community coordination, actions the DoN and NASA are currently taking to mitigate, avoid, and minimize impacts on the state lands would continue to be implemented under the Action Alternatives. Additionally, the DoN and NASA have identified Enhanced Management Measures to provide additional protections for the ʻāina.

Under the No Action Alternative and pursuant to the existing real estate agreements, environmental and cultural responsibilities would revert to the State of HI. Following complex negotiations with the State of HI, actions related to these transfers could include the removal of existing buildings, structures, and infrastructure, resulting in potential adverse impacts to environmental and cultural resources.

The DoN and NASA are coordinating and consulting as required by the NHPA, the Endangered Species Act, the Clean Water Act, and the Coastal Zone Management Act, including with BLNR under HRS chapter 183C and HAR chapter 13–5, HAR chapter 6E, and other laws and regulations determined to be applicable to the project.

This EIS satisfies both Federal and State of HI requirements and provides the necessary analyses to allow the DoN, NASA, and BLNR to consider the environmental effects of the Proposed Action and alternatives as part of their decision-making. The DoN and NASA distributed the Draft EIS to government agencies they are consulting with and to other stakeholders.

The Draft EIS is available for public review on the project website at *https://pmrf-kpgo-eis.com/*and at these public libraries:

1. Hawaiʻi State Library, 478 S King St., Honolulu, HI 96813.
2. Līhuʻe Public Library, 4344 Hardy St., Līhuʻe, HI 96766.
3. Waimea Public Library, 9750 Kaumualiʻi Hwy, Waimea, HI 96796.

The public involvement process is helpful in identifying public concerns and local issues to be considered during the development of the EIS and encouraging comments on the environmental analysis. Federal, State, and local agencies; Native Hawaiian Organizations; nongovernmental organizations; and interested persons are encouraged to provide substantive comments on the Proposed Action and the environmental analysis, as well as the project's potential to affect historic properties as it relates to section 106 of the NHPA. All comments provided at the in-person public meetings, electronically via the project website, or mailed to the address provided in the **ADDRESSES** section will be considered during the development of the Final EIS.

In-person public meetings with a virtual component will include an open-house information session, a short presentation by DoN and NASA representatives, and a public oral comment session. The presentation will begin at approximately 6 p.m. HST. DoN and NASA representatives will be available during the open-house information sessions to answer questions and clarify information related to the Draft EIS. Attendees will be able to submit oral and written comments during the in-person public meetings. Oral comments from the public will be recorded by a court reporter and each speaker's comments will be limited to three (3) minutes. Equal weight will be given to oral and written statements.

A live-broadcast will commence during the presentation portion of the public meetings. The virtual attendees will have the ability and opportunity to provide comments orally after the in-person oral comment session. An audio-only option will be available during the virtual component of the public meeting. The project website has more information on attending the in-person/virtual public meetings.

Dated: June 9, 2025.

Emily A. Pellegrino,

Program Analyst, Office of the Executive Secretariat, National Aeronautics and Space Administration, Federal Register Liaison Officer.

A.R. DeMaio,

Lieutenant Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2025–10684 Filed 6–20–25; 8:45 am]

BILLING CODE 3810–FF–P 7510–13–P

DEPARTMENT OF EDUCATION

Applications for New Awards; American History and Civics Education National Activities—Seminars for America's Semiquincentennial

AGENCY: Office of Elementary and Secondary Education, Department of Education.

ACTION: Notice.

SUMMARY: The Department of Education (Department) is issuing a notice inviting applications for new awards for fiscal year (FY) 2025 for the American History and Civics Education National Activities-Seminars for America's Semiquincentennial (AHC-Seminars) program.

DATES:

Applications Available: June 23, 2025.

Deadline for Notice of Intent To Apply: July 8, 2025.

Deadline for Transmittal of Applications: July 23, 2025.

Deadline for Intergovernmental Review: August 22, 2025.

Pre-Application Webinar Information: The Office of Elementary and Secondary Education intends to conduct informational webinars designed to provide technical assistance to interested applicants for grants under the AHC-Seminars program. These informational webinars will occur approximately two weeks after this notice is published in the **Federal Register**, with information available at *https://www.ed.gov/grants-and-programs/grants-birth-grade-12/well-rounded-education-grants/american-history-and-civics-national-activities-grants.*

Note: For new potential grantees unfamiliar with grantmaking at the Department, please consult our ''Getting Started with Discretionary Grant Applications'' web page at *www.ed.gov/grants-and-programs/apply-grant/getting-started-discretionary-grant-applications.*

ADDRESSES: For the addresses for obtaining and submitting an application, please refer to our Common Instructions for Applicants to Department of Education Discretionary Grant Programs, published in the **Federal Register** on December 23, 2024 (89 FR 104528) and available at *www.federalregister.gov/documents/2024/12/23/2024-30488/common-instructions-for-applicants-to-department-of-education-discretionary-grant-programs.*

FOR FURTHER INFORMATION CONTACT: Orman Feres, U.S. Department of Education, 400 Maryland Avenue SW, Room 4B114, Washington, DC 20202. Telephone: (202) 453–6921. Email: *Orman.Feres@ed.gov.*

If you are deaf, hard of hearing, or have a speech disability and wish to access telecommunications relay services, please dial 7–1–1.

SUPPLEMENTARY INFORMATION:

Full Text of Announcement

I. Funding Opportunity Description

Assistance Listing Number: 84.422C.

OMB Control Number: 1894–0006.

Purpose of Program: The purpose of the AHC-Seminars program is to promote new and existing evidence-based strategies to encourage innovative American history, civics and government, and geography instruction.

Background: As the Semiquincentennial of the American experiment in self-government approaches, it provides an exceptional opportunity to reflect on the principles that have shaped the nation's foundation. This program will support seminars for educators or students in honor of the 250th anniversary of America's founding.

The success of the American experiment in self-government requires the cultivation of both citizen competency and informed patriotism among the American People. Citizens must understand why our free-market democracy is a highly evolved system of cooperation made robust by our constitutional republic, and how it functions to secure the blessings of liberty for all Americans. This understanding can only be acquired and prove to be lasting when rooted in a recognition of the nobility of America's foundational principles, and an accurate and honest account of American history that shows how the United States has worked through profound challenges to its ideals, including the evils of slavery and segregation, in its ongoing battle to live up to them.

The upcoming Semiquincentennial of America's founding is more than a commemorative milestone—it is a call to reinvest in the education and cultivation of a citizenry capable of sustaining the American experiment in self-government. By supporting seminars that encourage a deeper understanding of our constitutional republic, this new program aims to equip educators or students with the knowledge and character needed to uphold the freedoms we enjoy. Through an honest engagement with our history and an appreciation of the institutions that make our civil society flourish, we can prepare the next generation to carry forward the principles of liberty, limited government, and dedication to the doctrine of equality that define our nation.

Priorities: This notice contains one absolute priority and one competitive preference priority. We are establishing these priorities for the FY 2025 grant competition in which we make awards from the list of unfunded applications from this competition in accordance with section 437(d)(1) of the General Education Provisions Act (GEPA), 20 U.S.C. 1232(d)(1).

Absolute Priority: For FY 2025 in which we make awards from the list of unfunded applications from this competition, this priority is an absolute priority. Under 34 CFR 75.105(c)(3), we consider only applications that meet this priority.

This priority is:

Seminars for educators or students on American History and Civics in honor of the Semiquincentennial of the United States of America.

Applicants must design and implement innovative or new and existing evidence-based approaches to seminars for educators or students specifically focused on American history and civics that directly commemorate the 250th anniversary of the founding of the United States. Seminars must study the American political tradition (ideas, traditions, institutions, and texts essential to American constitutional government and the American heritage) with a focus on the first principles of the Founding, their inclusion in the Declaration of Independence, Constitution, and the Bill of Rights, and their development over time.

Competitive Preference Priority: For FY 2025 in which we make awards from the list of unfunded applications from this competition, this priority is a competitive preference priority. Under 34 CFR 75.105(c)(2)(i), we award up to an additional 10 points to an application, depending on how well the application meets this priority.

Competitive Preference Priority: Civic Institutes at Institutions of Higher Education (0 or 10 points).

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Draft EIS Notifications

Notice of Availability

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Biological Diversity (CBD) dated October 21, 2024, requesting that the EPA object to the issuance of operating permit no. P030–R5, issued by NMED to Harvest Four Corners, LLC, 32–9 CDP in San Juan County, New Mexico. On May 30, 2025, the EPA Administrator issued an order granting in part and denying in part the petition. The order explains the basis for the EPA's decision.

Sections 307(b) and 505(b)(2) of the CAA provide that a petitioner may request judicial review of those portions of an order that deny issues in a petition. Any petition for review shall be filed in the United States Court of Appeals for the appropriate circuity no later than August 19, 2025.

Dated: June 10, 2025.

James McDonald,

Director, Air and Radiation Division, Region 6.

[FR Doc. 2025–11368 Filed 6–18–25; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL OP–OFA–183]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information 202–564–5632 or *https://www.epa.gov/nepa.*

Weekly receipt of Environmental Impact Statements (EIS)

Filed June 9, 2025 10 a.m. EST Through June 13, 2025 10 a.m. EST

Pursuant to CEQ Guidance on 42 U.S.C. 4332.

Notice: Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: *https://cdxapps.epa.gov/cdx-enepa-II/public/action/eis/search.*

EIS No. 20250082, Final, OSM, MT, Bull Mountains Mine No. 1 Amendment 3, Contact: Marcelo Calle 303–236–2929.

Pursuant to E.O. 14156 and approved alternative arrangements issued by CEQ on April 23, 2025, OSMRE has issued a single document that consists of a final environmental impact statement (FEIS) and record of decision (ROD). Therefore, the 30-day wait/review period under NEPA does not apply to this action.

EIS No. 20250083, Draft, NASA, USN, HI, Pacific Missile Range Facility and Koke'e Park Geophysical Observatory Real Estate Kaua'i, HI, Comment Period Ends: 08/07/2025, Contact: William Manley 808–425–8642.

EIS No. 20250084, Final Supplement, GSA, AZ, Expansion and Modernization of the Raul Hector Castro Land Port of Entry and Proposed Commercial Land Port of Entry in Douglas, Arizona, Review Period Ends: 07/21/2025, Contact: Osmahn Kadri 415–522–3617.

EIS No. 20250085, Final, USFS, AZ, Resolution Copper Project & Land Exchange, Review Period Ends: 07/21/2025, Contact: Michelle Tom 602–225–5200.

EIS No. 20250086, Draft, NRC, WY, Environmental Impact Statement for the Construction Permit Application for Kemmerer Power Station Unit 1: Draft Report for Comment, Comment Period Ends: 08/04/2025, Contact: Patricia Vokoun 301–415–3470.

Dated: June 13, 2025.

Nancy Abrams,

Associate Director, Office of Federal Activities.

[FR Doc. 2025–11217 Filed 6–18–25; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–12553–01–R9]

Clean Air Act Operating Permit Program; Order on Petition for Objection to State Operating Permit for Torrance Refining Company, LLC

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of final order on petition.

SUMMARY: The Environmental Protection Agency (EPA) Acting Administrator signed an order dated January 7, 2025, granting in part and denying in part a petition dated July 10, 2024, from Del Amo Action Committee. The petition requested that the EPA object to a Clean Air Act (CAA) title V operating permit renewal issued by the South Coast Air Quality Management District (SCAQMD) to Torrance Refining Company, LLC, located in Los Angeles County, California.

FOR FURTHER INFORMATION CONTACT: Nidia K. Trejo, EPA Region 9, (415) 972–3968, *trejo.nidia@epa.gov*. The final order and petition are available electronically at: *https://www.epa.gov/title-v-operating-permits/title-v-petition-database.*

SUPPLEMENTARY INFORMATION:

The EPA received a petition from Del Amo Action Committee dated July 10, 2024, requesting that the EPA object to the issuance of operating permit renewal for Facility ID 181667, issued by SCAQMD to Torrance Refining Company, LLC, in Los Angeles County, California. On January 7, 2025, the EPA Acting Administrator issued an order granting in part and denying in part the petition. The order itself explains the basis for the EPA's decision.

Sections 307(b) and 505(b)(2) of the CAA provide that a petitioner may request judicial review of those portions of an order that deny issues in a petition. Any petition for review shall be filed in the United States Court of Appeals for the appropriate circuit no later than August 19, 2025.

Dated: June 11, 2025.

Matthew Lakin,

Director, Air and Radiation Division, Region IX.

[FR Doc. 2025–11275 Filed 6–18–25; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OAR–2020–0654; FRL–12846–01–OMS]

Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Comment Request; NSPS for Beverage Can Surface Coating (Renewal)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Environmental Protection Agency (EPA) has submitted an information collection request (ICR), NSPS for Beverage Can Surface Coating (EPA ICR Number 0663.15, OMB Control Number 2060–0001) to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act. This is a proposed extension of the ICR, which is currently approved through June 30, 2025. Public comments were previously requested via the **Federal Register** on August 6, 2024 during a 60-day comment period. This notice allows for an additional 30 days for public comments.

DATES: Comments may be submitted on or before July 21, 2025.

ADDRESSES: Submit your comments, referencing Docket ID Number EPA–HQ–OAR–2020–0654, to EPA online using *www.regulations.gov* (our preferred method), by email to *a-and-r-docket@epa.gov,* or by mail to: EPA Docket Center, Environmental Protection Agency, Mail Code 28221T, 1200 Pennsylvania Ave. NW, Washington, DC 20460.

EPA's policy is that all comments received will be included in the public docket without change including any

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Draft EIS Notifications

Publication of Draft EIS in The Environmental Notice

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KAUAʻI EAS/EISS

Pacific Missile Range Facility and Kōkeʻe Park Geophysical Observatory Real Estate Action – Draft EIS Vol 1, Appendices Vol 2, Appendices Vol 3, Appendices Vol 4, and Public Scoping Meetings Audio Recording

HRS §343-5(a) Trigger	(1) Propose the use of state or county lands or the use of state or county funds (2) Propose any use within any land classified as a conservation district
District(s)	Waimea
TMK(s)	(4) 1-2-001:006 (por.), (4) 1-2-001:010, (4) 1-2-002:001 (por.), (4) 1-2-002:010 (por.), (4) 1-2-002:024 (por.), (4) 1-2-002:025, (4) 1-2-002:026, (4) 1-2-002:027, (4) 1-2-002:028, (4) 1-2-002:029, (4) 1-2-016:011 (por.), (4) 1-4-001:002 (por.), (4) 1-4-001:013 (por.), (4) 1-4-001:014 (por.)
Permit(s)	Numerous
Approving Agency	State of Hawaiʻi, Department of Land and Natural Resources, Land Division Ian Hirokawa, (808) 587-0419, ian.c.hirokawa@hawaii.gov 1151 Punchbowl Street, Room 220, Honolulu, HI 96813
Accepting Authority	State of Hawaii Board of Land and Natural Resources
Applicants	Commander, Navy Region Hawaii Naval Facilities Engineering Systems Command 400 Marshall Road, Building X-11, Pearl Harbor, HI 96860 Kerry Ling , (808) 473-0662, info@PMRF-KPGO-EIS.com National Aeronautics and Space Administration Shari Miller, (757) 824-2327, gsfc-nepa@nasa.gov Goddard Space Flight Center; 34200 Fulton Street, Wallops Island, VA 23337
Consultant	Cardno GS-AECOM Pacific Joint Venture; 737 Bishop Street, Suite 3050, Honolulu, HI 96813 Michele Lefebvre, (808) 791-9872, info@PMRF-KPGO-EIS.com
Status	Statutory 45-day public review and comment period starts. Comments are due by August 7, 2025. Please send comments to info@PMRF-KPGO-EIS.com.

The Navy proposes to retain the use of 8,172 acres of state lands on Kauaʻi, Hawaiʻi, for operational continuity and sustainment, in support of continued military training, testing, and facility operations at the Pacific Missile Range Facility (PMRF). The National Aeronautics and Space Administration (NASA) proposes to retain the use of 23 acres of state lands on Kauaʻi, Hawaiʻi, in support of continued operations including measurements of the Earth's rotation and local land motion at Kōkeʻe Park Geophysical Observatory (KPGO).

The Navy and NASA will host public meetings at 3 locations on Kauaʻi in July 2025. Each meeting will include a live online broadcast and public comment opportunity. Meetings will be held from 5 to 8 p.m. HST. To participate online, register at PMRF-KPGO-EIS.com. PUBLIC MEETINGS: (1) July 15, Kauaʻi Veterans Center (3215 Kauaʻi Veterans Memorial Hwy, Līhuʻe), (2) July 16, Kekaha Neighborhood Center (8130 Elepaio Road, Kekaha), and (3) July 17, Sheraton Kauaʻi Coconut Beach Resort, Makai Ballroom (650 Aleka Loop, Kapaʻa). AGENDA: Information stations from 5 to 6 p.m. Presentation from 6 to 6:30 p.m. Public oral comments from 6:30 to 8 p.m.

If you are experiencing any ADA compliance issues with the above project, please contact the Navy Region Hawaii Naval Facilities Engineering Systems Command consultant, Michele Lefebvre, at michele.lefebvre@stantecgs.com.

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