BELLES GRAHAM LLP

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Attorney for Petitioner
MOLOAA LOT 10A LLC,
a Hawaii limited liability company

BEFORE THE BOARD OF LAND AND NATURAL RESOURCES

OF THE STATE OF HAWAII

In The Matter Of The Application Of MOLOAA LOT 10A LLC, a Hawaii limited liability company, for a Petition to amend a portion of Unit 4 of The Estates At Moloaa Bay from the limited conservation district subzone to the general conservation district subzone identified as Tax Map Key No. (4) 4-9-009-002-0004.	)	**AMENDED PETITION TO AMEND A PORTION OF UNIT 4 OF THE ESTATES AT MOLOAA BAY FROM THE LIMITED CONSERVATION DISTRICT SUBZONE TO THE GENERAL CONSERVATION DISTRICT SUBZONE; EXHIBITS "A" THROUGH "K"**

AMENDED PETITION TO AMEND A PORTION OF UNIT 4 OF THE ESTATES AT MOLOAA BAY FROM THE LIMITED CONSERVATION DISTRICT SUBZONE TO THE GENERAL CONSERVATION DISTRICT SUBZONE

I. PETITIONER AND PROPERTY INFORMATION.

The Petitioner in this matter is MOLOAA LOT 10A LLC, a Hawaii limited liability company (hereinafter referred to as "Petitioner"). The Petitioner is a manager-managed limited liability company and the designated manager for Petitioner is William Campbell. Pursuant to

HRS Section 428-301(b) and (c) and 428-404(b) the manager of a manager-managed limited liability company has the authority to bind the limited liability company. Attached hereto as Exhibit "A" is an authorization executed by Petitioner authorizing Jonathan J. Chun of Belles Graham LLP to file this Amended Petition to Amend ("Petition").

This Amended Petition is being filed pursuant to Hawaii Administrative Rules Section 13-5-5 and 13-5-16 (" Rules").

Petitioner is the owner of Unit 4 of The Estates At Moloaa Bay (hereinafter referred to as "Unit 4") identified as Tax Map Key No. (4) 4-9-009-002-0004. A copy of the Quitclaim Deed conveying TMK (4) 4-9-009-002 to the Petitioner is attached hereto as Exhibit "B" and by reference incorporated herein. This Petition seeks to amend a portion of Unit 4 from the limited conservation district subzone to the general conservation district subzone. Unit 4 is entirely within the Limited Conservation District subzone. According to the Department of Land and Natural Resources' (hereinafter "DLNR") interpretation of HAR Section 13-5-24, single family dwellings in the limited subzone can only be constructed within the "flood zone or coastal high hazard area." While the Petitioner understands how this interpretation could be reached, this interpretation of HAR Section 13-5-24 encourages, rather than discourages, development in a flood zone or coastal high hazard area. The Petitioner believes this result is inconsistent with the policy of discouraging construction in flood zones or coastal high hazard areas. The Petitioner believes a more consistent interpretation of HAR Section 13-5-24 would be to allow single family dwellings within the limited subzone and, if it is in a flood zone or coastal high hazard, the structure would need to comply with all flood zone requirements as set forth in the rule. In the absence of the Board of Land and Natural Resources adopting this interpretation of its rule, the Petitioner is seeking to

amend a portion of Unit 4 from the limited conservation district subzone to the general conservation district subzone.

A map showing the portion of Unit B that is to be amended from the limited conservation subzone to the general conservation subzone (labeled "Redesignated Zone") is attached hereto as Exhibit "C". A metes and bounds description of the area to be amended is attached hereto as Exhibit "D". The area Petitioner is proposing to amend that is the subject of this Petition will be referred to herein as "Petition Area". The Petition Area is approximately 24,168 square feet as described in Exhibit "D". The Petition Area was revised by deleting areas that had slopes greater than 40%. This change in the size of the Petition Area was one reason the Petition was amended.

II. DRAFT PROPOSAL.

The Petitioner proposes that the area shown on Exhibit "C" and described in Exhibit "D" be amended from being in the limited conservation district subzone to the general conservation district subzone.

The Petitioner proposes that Exhibit "1" Item No. 122 "K-9, Anahola" in HAR Chapter 13-5 be amended to show the proposed area in the Petition Area as being within the general conservation district subzone.

III. STANDARD OF REVIEW.

Pursuant to HAR Section 13-5-14(b) property within the general conservation subzone would include:

> (b) The (G) subzone shall encompass:
>
> (1) **Lands with topography, soils, climate, or other related environmental factors that may not be normally adaptable or presently needed for urban, rural, or agricultural use**; and

(2) **Lands suitable for farming, flower gardening, operation of nurseries or orchards, grazing**; including facilities accessory to these uses when the facilities are compatible with the natural physical environment.

(emphasis added).

IV. STATEMENT OF INTEREST.

The Petitioner is the owner Unit 4 located at Moloa'a, Kauai, Hawaii, which includes the Petition Area.

The Petitioner's interest in filing this Amended Petition is to construct a single-family dwelling within the Petition Area that would be in compliance with DLNR's single family residential standards adopted on August 12, 2011 attached as Exhibit 4 to HAR Chapter 13-5. As the owner of Unit 4, Petitioner has an interest that is directly impacted by the subject matter of this Petition.

V. STATEMENT OF REASON.

HAR Section 13-5-16 provides:

(a) A landowner or government agency whose property is directly affected by this chapter may apply to the department to establish a new subzone, rezone an existing subzone, or change a boundary or identified land uses of a subzone. The board can initiate action under this section.

(b) The application shall include the following:

(1) Name of applicant;
(2) Name of landowner(s), if different from applicant, or any person or entity with the landowner's written consent;
(3) Property description of land being affected by tax map key parcel (metes and bounds may be required when the department deems necessary);
(4) Map of area drawn to scale;
(5) Background of applicable land use commission petition, including a final decision and order (for new subzone designations);
(6) Existing subzone classification or land use zoning designations of subject property and surrounding properties;
(7) Geographic characteristics:

(A) General topography, geologic conditions, and slope; and

(B) Soils types and productivity rating (e.g., Agricultural Lands of Importance to the State of Hawaii (ALISH) and proposed Land Evaluation and Site Assessment (LESA));

(8) Climatic characteristics (e.g., rainfall, predominant wind direction annually);

(9) Hydrological characteristics (e.g., surface water, groundwater, drainage patterns) and applicable water area classification, if applicable, (e.g., restricted watershed, groundwater recharge area);

(10) Biological (flora and fauna) characteristics (e.g., vegetation, wildlife, specific identified species, or habitat of identified threatened or endangered species);

(11) A list of historic properties in the project area;

(12) Scenic or visual resources (e.g., significant view planes and geological features);

(13) Infrastructure evaluations (e.g., roads and access, water systems, sewage systems, drainage systems, recreational facilities, community population, income and household characteristics, and utilities availability);

(14) Review of property characteristics in relation to subzone objectives;

(15) Evaluation and recommendation of appropriate subzone designation and boundary characteristics; and

(16) Application fee of $500 and public hearing fee of $250 plus publication costs.

The Amended Petition submitted by the Petitioner contains the Petitioner's name, the tax map key of the property being affected, as well as a metes and bounds description of the particular area for which a redesignation is being requested. There are no applicable land use commission petitions that apply to this Petition. The following sets forth the other information required by HAR Section 13-5-16.

A. Existing Subzone Classification or Land Use Zoning Designations. Unit 4 is within the Limited Conservation Subzone District. The other units of The Estates At Moloa'a Bay condominium project (Units 1- 3 and 5 - 8) are within the State Land Use Agricultural District. TMK (4) 4-9-009-003 (hereinafter "Parcel 3"), which is immediately to the east of Unit 4, is owned

by the State of Hawaii and a majority of Parcel 3 is within the Limited Conservation Subzone District and the remaining portions are within the State Land Use Agricultural District.

B. Geographic Characteristics Of Unit 4.

1. General topography, geologic conditions, and slope. The Petition Area consists of land that slightly slopes north, towards the ocean. Scattered boulders, iron wood trees and vegetation are located within the Petition Area. Pictures of the Petition Area are attached hereto as Exhibit "E". A topographical survey for the Petition Area was done by Pattison Land Surveying and the engineer calculates that average slope in the Partition Area is 1:5 or 20%. Thus, the general slope of the Petition Area does not exceed forty percent as set forth in HAR Section 13-5-12(b)(2). Exhibit "C" shows the topographical contours Unit 4 as well as the entire TMK (4) 4-9-009-002.

2. Soils types and productivity rating. The Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii prepared by the United States Department of Agriculture, Soil Conservation Service and issued in August 1972 (hereinafter "Soils Survey") shows the soils in this area as "Lihue Silty Clay" (LhB). See Sheet No. 26 of the Soils Survey attached hereto as Exhibit "F." As defined in the Soils Survey, Lihue silty clay (LhB) is found "on the tops of broad interfluves in the uplands ... In a representative profile the surface layer is dusky, red silt clay about 12 inches thick. The subsoil, more than 48 inches thick, is dark-red and dark reddish brown, compact silty clay that has subangular blocky structure. The substratum is soft, weathered rock. The surface layer is strongly acid. The subsoil is slightly acid to neutral. Permeability is moderately rapid. Runoff is slow, and the erosion hazard is about 1.5 inches per foot of soil." Soils Survey at page 82. According to the Soil Survey, "[t]his soil is used for sugar

cane, pineapple, pasture, truck crops, orchards, wildlife habitat, and woodland. (Capability classification IIe, irrigated or nonirrigated ….). Soils Survey at page 83.

The location and identification of the soils in the Petition Area was confirmed in a Report of Subsurface Investigation dated February 4, 2025 prepared by Meta Engineering. A copy of Meta Engineering's Report is attached hereto as Exhibit "G". Three (3) test borings were done within the Petition Area. Based on an analysis of the soil samples that were obtained, the Report concluded that "[t]he soils located in this area are designated as Lihue silty clay, 0 to 8 percent slopes (LhB). The Lihue series consists of well-drained soils on uplands on the island of Kauai …." See Exhibit "G" at page 8.

The Detailed Land Classification - Island of Kauai published in 1967 by the Land Study Bureau of the University of Hawaii (hereinafter referred to as "Detailed Land Classification") shows the land in the Petition Area as being within the C42 classification with a possibility that some portion is within the B41i classification. See Map No. 96 of the Detailed Land Classification. A copy of Map No. 96 from the Detailed Land Classification is attached hereto as Exhibit "H". Petitioner's belief is that most of the Petition Area is within the C42 classification. See Exhibits "F" and "G" discussed above.

According to the Detailed Land Classification, land that is within the C42 classification has an overall productive rating of C, contains soils within the Lihue and Kamilo series, is well drained and has slopes between 0-10%. Prior existing uses include sugar cane (irrigated), pineapple, and grazing. See Table 2, Detailed Land Classification at page 13L.

For those portions of the Petition Area that might be within the B41i classification, this classification contains lands that have an overall productive rating of B, also contains soils

within the Lihue and Kamilo series, is well drained and have slopes between 0-10%. Lands within the B41i classification were also used for sugar cane (irrigated), pineapple and grazing. See Table 2, Detailed Land Classification at page 13.

In 1986, the State of Hawaii Land Evaluation and Site Assessment ("LESA") Commission published its report regarding the classification of agricultural lands in Hawaii. The Petition Area was included within the LESA boundaries as delineated by the 1986 LESA Commission report. One of the primary criteria utilized by the LESA Commission was the soil type as shown in the 1972 Soils Report. According to the LESA Commission, LhB soils were given a preliminary rating of 79. The estimated LESA threshold scores for Kauai are 76 for intensive crops, 73 for diversified agriculture and orchards and 53 for grazing.

In 1977, the Hawaii Department of Agriculture adopted a classification system to identify prime agricultural lands within the State of Hawaii. See Agricultural Lands of Importance to the State of Hawaii ("ALISH"), Revised, November 1977. This classification system was based primarily, but not exclusively, on the characteristics of the soils. The ALISH map of prime agriculture lands for the area surrounding the Petition Area generally follows the outlines of the LhB soils type. See ALISH Map for Kauai attached hereto as Exhibit "I". Compare the Soils Survey Sheet No. 26 (Exhibit "F") with the ALISH map for Kauai (Exhibit "I"). The scale of the maps used by ALISH, as well as the Soils Survey, makes it is difficult to determine the exact boundaries of the prime agricultural lands. Again, if we were to utilize the soils type that was actually found within the Petition Area it would be clear that land within the Petition Area is suitable for farming.

3. Climate characteristics. The Petition Area is located on the north windward side of the Kauai. According to the Detailed Land Classification study, the area has an average rainfall of 40-60 inches. The average temperature for the north shore of Kauai is between 67°F and 85° F.

4. Hydrological characteristics. There are no streams within the Petition Area. According to the Soils Survey the permeability of the soil is moderately rapid and runoff is slow. The erosion hazard is about 1.5 inches per foot of soil. If the Petition Area is within the C42 classification of the Detailed Land Classification, the soil in that area is listed as well drained. Rainfall drains toward the ocean. There are no listed streams within or near the Petition Area. The nearest stream is Moloa'a Stream approximately half a mile to the north of the Petition Area. The Petition Area is below (makai) of the State Department of Health UIC line. The Cultural Impact Assessment attached hereto as Exhibit "J" shows that there is a small spring west of the Petition Area. See discussion in Section 6 below.

5. Biological (flora and fauna) characteristics. Attached as Exhibit "K" is a Natural Resource Assessment prepared by LeGrande Biological Surveys Inc. for TMK (4) 4-9-009-002, which includes the Petition Area (hereinafter "NRA"). The Petition Area is located along the northern boundary of TMK (4) 4-9-009-002. As noted on page 7 of the NRA, the "headland or most northern section of the PA (Project Area) is dominated by a monotypic stand of ironwood trees with an understory of Guinea grass. Other species noted sparsely in the area were natal redtop (Melinis repens), smooth rattlepod (Crotalaria pallida), yellow grandadilla, and white shrimp plant." Exhibit "K" at page 7.

As to the fauna in the area, the consultants reported that three terrestrial mammalian species were recorded during the survey; one cat and several house mice were seen, and several dogs were heard barking from outside the PA, tracks and scat from the dogs were also encountered on the site. See Exhibit "K" at page 15. As to birds in the area, only 5 Nene were recorded during the survey flying over the site to the North. As to the possible nesting sites for Nene, the NRA indicated "Nene are not water obligate but require relatively low stature grass and other shrubs as suitable habitat, currently no such habitat is present on the site." Exhibit "K" at page 18. For other seabirds, the NRA noted that it "is possible that the endangered Hawaiian Petrel, Band-rumped Storm Petrel ..., and the threatened Newell's Shearwater ... overfly the Project Area between April and the middle of December each year in small numbers ... No suitable nesting habitat exists within or close to the Project Area for any of these three seabird species." Exhibit "K" at page 18-19.

Finally, the NRA noted the possibility of other rodent species using resources within the PA on a seasonal basis. Exhibit "K" at page 19. Although the Hawaiian hoary bat was not seen during the survey, the NRA stated it "is probable that the Hawaiian hoary bat currently recognized as an endemic species ... overflies the Project Area on a seasonal basis as they are regularly recorded in the greater Moloa'a area .... It was recommended that if trees were to be removed, the potential impact to the Hawaiian hoary bat could be avoided or minimized by not clearing woody vegetation taller than 4.6 m (15 ft) between June 1 and September 15, the period in which bats may have pups." See Exhibit "K" at page 20.

6. A list of historic properties in the project area. According to the County of Kauai East Kauai Heritage Resources Map which shows the location of registered historic sites

and other important heritage resources, there are no historic sites or heritage resources within the Petition Area. The closest historic resource is the traditional agricultural areas immediately to the south and east of the Petition Area that were used for sugar and pineapple cultivation. The Applicant also had a cultural impact assessment done for TMK (4) 4-9-009-002 by Cultural Resource Consultants. A copy of the Cultural Impact Assessment is attached hereto as Exhibit "J" (hereinafter "CIA"). The CIA indicated that there are four historic properties within the Project Area (defined as TMK (4) 4-9-009-002) and six sites within .5 miles of the Project Area. See Figure 21 of Exhibit "J". None of these sites are within the Petition Area. The closest sites to the Petition Area are identified as Sites 02292, 20093 and 02294. Site 02292 is a terrace whose function is undtermined, Site 02293 is a ditch whose function was water diversion and Site 02294 is a modified outcrop with alignments whose function was either planting or undetermined. See Table 3 of Exhibit "J". The CIA concludes that it supports the previous recommendations of the NRA which includes "dark sky compliant lighting, seasonal limitations on woody vegetation clearance, intensive erosion control measures and prioritization of appropriate native plant species." Exhibit "J" at page 75. The CIA had additional recommendations to ensure the project does not further restrict public access to Moloa'a Bay or parcels adjacent to the Project Area, avoid further impacts to Maliu Stream and maintaining the stream to ensure continued flow, keeping unnecessary light and noise to a minimum during construction activities and implementing archaeological monitoring for ground disturbing activities associated with project construction near known burial locations. Exhibit "J" at page 75.

7. Scenic or visual resources. The East Kauai Heritage Resources Map does not list or show any scenic or visual resources within the Petition Area. The views from the Petition Area looking north and east are of the Pacific Ocean.

8. Infrastructure evaluations. There are no public roads that currently serve the Petition Area. The Developer of The Estates At Moloaa Bay, who also owns Unit 4, plans on constructing a road from Moloaa Road, a government owned road, to Unit 4. There is also no government owned water system that serves Unit 4. The Developer also will be drilling and installing water wells with The Estates At Moloaa Bay that will serve all units with the condominium project. Wastewater from Unit 4 will be processed through a DOH approved individual wastewater system. Electric power can be provided by Kauai Island Utility Cooperative, but the Developer will be required to provide easements and conduit for the electrical lines. The proposed roadway will include conduits for electrical and other utilities. A drainage and grading plan for The Estates At Moloaa Bay are being prepared. The closest census tract to Moloaa is Anahola. The 2020 median income for Anahola was $61,250 and the poverty rate for that area was 12.7%. The 2020 median age for Anahola is 40.9 years and the median property value for 2020 is $440,100. In the 2021 American Community Survey, the median income for Anahola is listed as $87,563. According to the 2021 American Community Survey, the average household size in Anahola is 3.72 and total households are 750.

9. Review of property characteristics in relation to subzone objectives.

As described in HAR Section 13-5-12(b), lands within the limited (L) conservation subzone are intended to encompass:

(1) **Land susceptible to floods and soil erosion, lands undergoing major erosion damage and requiring**

corrective attention, as determined by the county, state, or federal government; and

(2) Lands necessary for the protection of the health, safety, and welfare of the public **by reason of the land's susceptibility to inundation by tsunami, flooding, volcanic activity, or landslides, or which have a general slope of forty per cent or more**.

(emphasis added).

In comparison as described in HAR Section 13-5-14(b), lands within the general (G) conservation subzone are intended to encompass:

(1) **Lands with topography, soils, climate, or other related environmental factors that may not be normally adaptable or presently needed for urban, rural, or agricultural use**; and

(2) **Lands suitable for farming, flower gardening, operation of nurseries or orchards, grazing**; including facilities accessory to these uses when the facilities are compatible with the natural physical environment.

(emphasis added).

In reviewing these land characteristics, the Petition Area does not match the description of land that is encompassed by the limited subzone, but instead is more closely aligned to the description of lands within the general subzone. For example, the area surrounding the Petition Area is not susceptible to floods since it sits at an elevation between 180' and 208' above sea level. Also, due to this elevation, it is not susceptible to tsunami action. There are no nearby rivers or streams that could flood the area, nor does the proposed site sit in the middle of a gully or drainage area where runoff could collect.

As stated in the Subsurface Investigation Report, the soil within the Petition Area is Lihue Silty Clay (LhB). See Exhibit "G". According to the Soil Survey, "[r]unoff is slow, and the erosion hazard is no more than slight" for LhB soil. Soil Survey at page 82 (emphasis added).

The Capability Classification for LhB soil is IIe which, according to the Soil Survey means the "soils are subject to moderate erosion if they are cultivated and not protected." Soil Survey at page 153 (emphasis added). There are no active volcanos in the Petition Area or on the entire island of Kauai so this criteria for a limited subzone is not met. Finally, as shown on the topographical map attached hereto as Exhibit "C" the average slope for the Partition Area is 20%, which supports the fact that the Petition Area does not have a "general slope" of 40% or more. Pattison Land Surveying has reported that there are no areas within the Petition Area that have slopes of 40% or more. Thus, the Petition Area does not meet the criteria for being in the limited subzone as set forth in the last sentence of HAR Section 13-5-12(b)(2).

In contrast, the Petition Area is not presently needed for agricultural use and is suitable for farming, flower gardening, operation of nurseries or orchards, grazing. See criteria for the general conservation zone listed in HAR Section 13-5-14(b). According to both the Soils Survey and the Detailed Land Survey the soil within the Petition Area has been historically used "for sugar cane, pineapple, pasture, truck crops, orchards, wildlife habitat, and woodland." Soils Survey at page 83(emphasis added).

The Petitioner believes a redesignation of the Petition Area from the limited to the general subzone is consistent with the current subzone designations in the area. For example, the area on the northwest side of Moloaa Bay adjacent to the limited subzone is classified as being within the general subzone. In fact, the general subzones are typically located immediately adjacent to limited subzones within Kauai's coastal areas such as Hanalei Bay, Papaa Bay, Hanamaulu Bay, the south side of Nawiliwili Harbor and Nohili Point.

The Soil Survey showed the soil in the areas designated within the limited conservation subzone usually contain soils that are classified as "Badlands" (BL). As defined in the Soils Survey, Badlands "occurs on the island of Kauai. It is steep to very steep and nearly barren. Runoff is very rapid, and geological erosion is active." Areas, however, that were outside of the "Badlands" designation and classified as being within a well-drained soils type (such as LhB on the west side of Moloaa Bay) have generally been placed within the general conservation subzone. The designation of the proposed Petition Area containing LhB soil as being within the general conservation subzone is consistent with the current designations within the County of Kauai.

VI. CONCLUSION.

Pursuant to HAR Rule 13-5-5 and 13-5-16, the Petitioner respectfully requests that the Board of Land and Natural Resource grant its Amended Petition to amend the Conservation District Use map for the Petition Area from being in the Limited (L) Conservation Subzone to the General (G) Conservation Subzone.

DATED: Lihue, Kauai, Hawaii, JUN - 3 2025.

BELLES GRAHAM LLP

By _____
JONATHAN J .CHUN
Attorney for Petitioner
MOLOAA LOT 10A, a Hawaii limited liability company

LIST OF EXHIBITS

Exhibit "A"	Authorization
Exhibit "B"	Quitclaim Deed
Exhibit "C"	Map of the Proposed Petition Area With Topography
Exhibit "D"	Metes and Bounds Description of the Petition Area
Exhibit "E"	Pictures of the Petition Area
Exhibit "F"	Sheet No. 26 of the Soils Survey
Exhibit "G"	Report of Subsurface Investigation dated February 4, 2025
Exhibit "H"	Map No. 96 from the Detailed Land Classification
Exhibit "I"	ALISH Map for Kauai
Exhibit "J"	Cultural Impact Assessment done for TMK (4) 4-9-009-002 by Cultural Resource Consultants
Exhibit "K"	Natural Resource Assessment prepared by LeGrande Biological Surveys Inc

EXHIBIT "A"

AUTHORIZATION

MOLOAA LOT 10A LLC, a Hawaii limited liability company, whose mailing address is 2443 Fillmore Street #368, San Francisco, California 94115 ("Petitioner"), hereby authorizes JONATHAN J. CHUN of Belles Graham LLP to file its **PETITION TO AMEND A PORTION OF UNIT 4 OF THE ESTATES AT MOLOAA BAY FROM THE LIMITED CONSERVATION DISTRICT SUBZONE TO THE GENERAL CONSERVATION DISTRICT SUBZONE** on behalf of the Petitioner, with the Board of Land and Natural Resources, State of Hawaii.

DATED: October 10, 2023.

PETITIONER:

MOLOAA LOT 10A LLC,
a Hawaii limited liability company

By _____
William Campbell
Its Manager

EXHIBIT "A"

EXHIBIT "B"

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
June 08, 2015 8:01 AM
Doc No(s) A-56370560

/s/ NICKI ANN THOMPSON
REGISTRAR

1 2/2 KEO
B-32640794

Conveyance Tax: $1,800.00

LAND COURT SYSTEM | P REGULAR SYSTEM

AFTER RECORDATION: RETURN BY MAIL (XX) PICK UP ( )

MOLOA'A LOT 10A L.L.C.
2443 FILLMORE STREET
PMB 368
SAN FRANCISCO CA 94115

TGOH 201519266-S
TGES 210-15058994
BARBARA PAULO

2
RS

Pages: 13

Tax Map Key Nos.: (4) 4-9-009-002

QUITCLAIM DEED

KNOW ALL PERSONS BY THESE PRESENTS, that **REGIONS BANK**, an Alabama banking corporation, and **MOLOAA BAY LAND COMPANY, L.L.C.**, an administratively dissolved Georgia limited liability company (together, the "Grantor"), for and in consideration of Ten and No/100 Dollars ($10.00) and other good and valuable consideration, to Grantor paid by **MOLOA'A LOT 10A L.L.C.**, a Hawaii limited liability company ("Grantee"), the receipt and sufficiency of which are hereby acknowledged, do hereby remise, release, quit claim and convey to Grantee all of Grantor's rights, title, interest, and claim, if any, in or to the following described real estate to-wit:

See Exhibit A attached hereto and incorporated herein by this reference (the "Property").

Together with all the rights, tenements, hereditaments and appurtenances thereto belonging or in any way appertaining, if any.

This conveyance is further subject to:

1. Ad valorem property taxes for the 2015 tax year and all subsequent years.

EXHIBIT "B"

2. All rights of redemption.

3. All easements, restrictions, reservations, encumbrances and other matters appearing of record.

4. Zoning and building laws, rules, regulations and ordinances.

5. Matters that would be disclosed by an accurate survey of the Property.

6. Warranty Deed dated May 21, 2010, by Moloaa Bay Land Company, L.L.C. to Campbell-Murphy Investments, LLC, as recorded as Document No. 2010-078946, with the Bureau of Conveyances of the State of Hawaii.

TO HAVE AND TO HOLD unto Grantee and its successors and assigns forever.

THE SALE AND CONVEYANCE OF THE PROPERTY IS "AS-IS," "WHERE-IS" "WITH ALL FAULTS" AND WITHOUT REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE BEING EXPRESSLY DISCLAIMED. GRANTOR DOES NOT MAKE ANY REPRESENTATIONS OR WARRANTIES WITH RESPECT TO COMPLIANCE WITH LAWS, RULES, REGULATIONS, AGREEMENTS OR SPECIFICATIONS, NOR WITH RESPECT TO CONDITION, QUALITY, CAPACITY, DESIGN, OPERATION, ABSENCE OR ANY LATENT DEFECTS OR ANY OTHER WARRANTY OR REPRESENTATION WHATSOEVER WITH RESPECT TO THE PROPERTY, ALL OF WHICH ARE EXPRESSLY HEREBY WAIVED BY GRANTEE.

This Quitclaim Deed may be executed in counterparts which together shall be deemed to constitute one instrument.

[The Remainder of This Page Have Been Intentionally Left Blank]

IN WITNESS WHEREOF, Grantor and Grantee have caused this conveyance to be duly executed this 30th day of May, 2015.

REGIONS BANK, an Alabama banking corporation

By: _____
Name: Wade Parker
Its: Senior VP

Grantor

STATE OF ALABAMA)
:
COUNTY OF JEFFERSON)

I, the undersigned, a Notary Public, in and for said County in said State, hereby certify that Wade Parker, whose name as Senior Vice President of Regions Bank, an Alabama banking corporation, is signed to the foregoing conveyance and who is known to me, acknowledged before me on this day that, being informed of the contents of the conveyance, he, as such officer and with full authority, executed the same voluntarily for and as the act of said banking corporation.

Given under my hand and official seal of office this 28th day of May, 2015.

Linda R Maxwell
Notary Public

[NOTARIAL SEAL]

LINDA R MAXWELL
NOTARY PUBLIC
STATE OF ALABAMA
MY COMMISSION EXPIRES
October 24, 2018

My commission expires 10-24-18

[Signature page continues]

MOLOAA BAY LAND COMPANY, L.L.C.,
an administratively dissolved Georgia limited liability company

By: Brenda a Hughes
Name: Brenda Abney Hughes
Its: Manager

By: Wesley E Hughes
Name: Wesley E. Hughes
Its: Manager

By: Hughes Investment Partners, L.P., a Georgia limited partnership.
Its: Sole Member

By: Brenda a Hughes
Name: Brenda Abney Hughes
Its: General Partner and Limited Partner

By: Wesley E Hughes
Name: Wesley E. Hughes
Its: General Partner and Limited Partner

Grantor

STATE OF Georgia)
) ss.
COUNTY OF Bartow)

On this 26th day of May, 2015, before me appeared BRENDA ABNEY HUGHES and WESLEY E. HUGHES, to me personally known or satisfactorily proven, who being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

Signature: M. Maritza Jasso
Name: Maritza Jasso
Notary Public, State of Georgia

My commission expires: 7/16/17

MARITZA JASSO NOTARY PUBLIC GORDON COUNTY, GEORGIA MY COMMISSION EXPIRES JULY 16, 2017

1/3807[illegible]

WEH
BAH

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of SAN FRANCISCO)

On 5/23/15 before me, JOHN MINJIRAS- NOTARY PUBLIC
Date *Here Insert Name and Title of the Officer*

personally appeared WILLIAM CAMPBELL
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JOHN MINJIRAS
Commission # 2099043
Notary Public - California
San Francisco County
My Comm. Expires Mar 5, 2019

Signature _____
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document
Title or Type of Document: QUIT CLAIM DEED Document Date: 5/23/2015
Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____	Signer's Name: _____
☐ Corporate Officer — Title(s): _____	☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General	☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
☐ Other: _____	☐ Other: _____
Signer Is Representing: _____	Signer Is Representing: _____

MOLOA'A LOT 10A L.L.C., a Hawaii limited liability company

By: _____
Name: _____
Its: _____

Grantee

Exhibit A
Property

All of that certain parcel of land (portion of the Ahupuaa of Moloaa conveyed by Richard Armstrong, President of the Board of Education to the Trustees of Oahu College, by Deed dated January 30, 1860, recorded in Liber 12, Page 400), situate, lying and being at Moloaa, Island and County of Kauai, State of Hawaii, being ALLOTMENT NUMBER 10-A, of the PARTITION OF THE "HUI LANDS OF MOLOAA", and thus bounded and described:

Beginning at a pipe at the west corner of this allotment, being also the north corner of Allotment Number 23, and on the east side of Government Road thirty (30) feet wide, the coordinates of said point of beginning referred to Government Survey Triangulation Station "Moloaa" being 1,192.00 feet north and 4,486.55 feet west, and running by true azimuths from the above described initial point:

1. 195° 45' 286.92 feet along the east side of Government Road thirty (30) feet wide, to a pipe;

Thence on a curve to the left with a radius of 415.00 feet, along the East side of Government Road (30) feet wide, the direct azimuth and distance being:

2. 194° 10' 20" 22.87 feet to a pipe;

3. 353° 50' 164.98 feet along L. C. Aw. Number 2668, Apana 2 to R. A. Walsh for Roman Catholic Mission, to a pipe;

4. 261° 50' 678.48 feet along L. C. Aw. Number 2668, Apana 2 to R. A. Walsh for Roman Catholic Mission, to a pipe;

5. 124° 50' 66.00 feet along L. C. Aw. Number 2668,

Apana 2 to R. A. Walsh for Roman Catholic Mission, to a pipe;

6. 219° 52' 314.10 feet along L. C. Aw. Number 2668, Apana 2 to R. A. Walsh for Roman Catholic Mission, to the middle of the Maliu Stream, passing over a pipe at 298.10 feet;

Thence following down along the middle of the Maliu Stream, the direct azimuth and distance being:

7. 135° 32' 122.23 feet;

8. 62° 50' 44.40 feet along L. C. Aw. Number 2668, Apana 2 to R. A. Walsh for Roman Catholic Mission, to a pipe and passing over a pipe at 19.00 feet;

9. 149° 50' 118.68 feet along L. C. Aw. Number 2668, Apana 1 to Kanakaiki to a pipe;

10. 54° 50' 285.12 feet along L. C. Aw. Number 238-L, Apana 1 to Kanakaiki, L. C. Aw. Number 240-G, Apana 1 to Lilihae, and L. C. Aw. Number 238-N, Apana 1 to Kauwika, to a pipe;

11. 69° 20' 10.00 feet along end of Hui Road "C" to a pipe;

12. 160° 30' 145.70 feet along Allotment Number 9-A to a pipe;

13. 194° 49' 102.16 feet along Allotment Number 9-A to highwater mark at seashore, passing over a pipe at 42.00 feet;

Thence following along highwater mark at seashore for the next nine (9) courses, the direct azimuths and distances being:

14. 286° 50' 142.15 feet;

15. 266° 10' 160.00 feet;

16. 247° 10' 420.00 feet;

17. 235° 50' 110.00 feet;

18. 227° 17' 111.00 feet;

19. 217° 00' 120.00 feet;

20. 225° 00' 58.00 feet;

21. 250° 30' 50.00 feet;

22. 261° 30' 100.00 feet;

23. 316° 55' 757.00 feet along remainder of the Land of Moloaa to a pipe in concrete, and passing over a pipe in concrete at 142.60 feet;

24. 13° 53' 660.50 feet along Allotment Number 24-A to a pipe;

25. 77° 16' 407.50 feet along Allotment Number 24-A to a pipe;

26.	52°	12'	379.20 feet along Allotment Number 24-A to a pipe;
27.	113°	00'	164.60 feet along Allotment Number 24-A to a pipe;
28.	94°	05'	248.25 feet along Allotment Number 24-A to a pipe;
29.	16°	34'	592.10 feet along Allotment Number 24-A to a pipe;
30.	32°	35'	55.00 feet along Allotment Number 24-A to a pipe;
31.	59°	10'	349.55 feet along Allotment Number 24-A to a pipe;
32.	128°	50'	394.70 feet along Allotment Number 24-A to a pipe;
33.	211°	37'	356.40 feet along Grant Number 1725 to Constance Fortin to a pipe;
34.	110°	50'	118.57 feet along Grant Number 1725 to Constance Fortin to a pipe;
35.	201°	36'	192.80 feet along Allotment Number 23 to a pipe;
36.	165°	49'	148.00 feet along Allotment Number 23 to a pipe;
37.	129°	43'	197.35 feet along Allotment Number 23 to the point of

beginning, having an area of 49.178 acres, more or less.

Excepting and excluding, however, the following parcels of land:

All of that certain parcel of land (being Royal Patent Number 6288, Land Commission Award Number 238-R, Apana Number 1 to Kaukini), situate, lying and being at Moloaa, Island and County of Kauai, State of Hawaii, and thus bounded and described:

Beginning at pipe at the north corner of this piece of land, the coordinates of said pipe referred to Government Survey Triangulation Station "Moloaa" being 1,944.80 feet north and 3,534.05 feet west, and running by true azimuths from the above described initial point:

1.	327° 00'	52.80	feet to a pipe;
2.	52° 40'	172.40	feet to a pipe;
3.	185° 00'	66.00	feet to a pipe;
4.	231° 00'	132.00	feet to the point of beginning and containing an area of 0.176 acre, more or less.

Excepting and excluding from the above described Allotment Number Ten-A (10-A), all that portion thereof heretofore conveyed by JOSEPH L. HUDDY and MAGGIE HUDDY, husband and wife, to PHILIP BOISER and JULIET BOISER, husband and wife, as Tenants by the Entirety, by Deed dated September 15, 1951, recorded in the Bureau of Conveyances of the State of Hawaii in Liber 2508 at Pages 1-2, described as follows:

All of that certain parcel of land (being portion of the land that was conveyed by the Board of Education of the Trustees of Oahu College by Deed dated January 30, 1860, recorded in Liber 12 at Page 400) situate, lying and being at Moloaa, District of Kawaihau, Island and County of Kauai, State of Hawaii, being LOT NUMBER TEN A-ONE (10A-1), of a PORTION OF ALLOTMENT NUMBER TEN-A (10-A), of the PARTITION OF THE "HUI LANDS OF MOLOAA", and thus bound described:

Beginning at a pipe on the most southwesterly corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation Station "Moloaa" being 1,716.34 feet north and 3,587.51 feet west and running by azimuths measured clockwise from true South:

1.	186° 47'	54.90	feet to a pipe;
2.	229° 30'	209.23	feet to a pipe;
3.	276° 47'	58.42	feet to a pipe;
4.	6° 47'	208.64	feet to a pipe;
5.	96° 47'	200.34	feet to the point of beginning, containing an area of 30,894 square feet, more or less.

Excepting and reserving further from the above described ALLOTMENT NUMBER TEN-A (10-A), all that portion thereof having been acquired by JULIETTE LAHELA JOHNSON, by Judgment Quieting Title and Amended Judgment Quieting Title dated and filed in the Circuit Court, Fifth Circuit, Civil No. 1408, on February 4, 1974 and recorded in Liber 9729 at Pages 172 and 174, respectively, on February 7, 1974, described as follows:

All of that certain parcel of land situate, lying and being at Moloaa, District of Kawaihau, Island and County of Kauai, State of Hawaii, being LOT NUMBER TEN-A-2 (10-A-2), of a PORTION OF LOT NUMBER TEN-A (10-A), of the "MOLOAA HUI LAND" (Moloaa Section), and thus bounded and described as per survey dated September 30, 1973, to wit:

Beginning at a 1" pipe at the west corner of this lot, and along the south boundary of Lot 13 of Moloaa Hui Land, the coordinates of said point of beginning referred to Government Survey Triangulation Station "Moloaa" being 1,540.75 feet north and 3,835.05 feet east, thence running by azimuths measured clockwise from true South:

1.	219° 52'	209.35	feet along Lot 13 of Moloaa Hui Land to the middle of Maliu Stream, and passing

over a 1" pipe at 193.35 feet;

2. Thence along the middle of Maliu Stream, the direct azimuth and distance being:

323° 09' 30" 205.00 feet;

3. 83° 55' 145.50 feet along the remainder of Lot 10-A of Moloaa Hui Land, and passing over a 1" pipe at 10.00 feet;

4. 99° 30' 114.00 feet along same to the point of beginning and containing an area of 23,113 square feet or 0.53 acre, more or less.

BEING THE PREMISES ACQUIRED BY WARRANTY DEED

GRANTOR	:	HERBERT F. BOECKMANN, II and JANE F. BOECKMANN, also known as F. Jane Boeckmann, husband and wife, WILLIAM MILLER and MARY LOU PAULSON, both unmarried
GRANTEE	:	MOLOAA BAY LAND COMPANY, L.L.C., a Georgia limited liability company
DATED	:	July 17, 2001
RECORDED	:	Document No. 2001-111874

EXHIBIT "C"

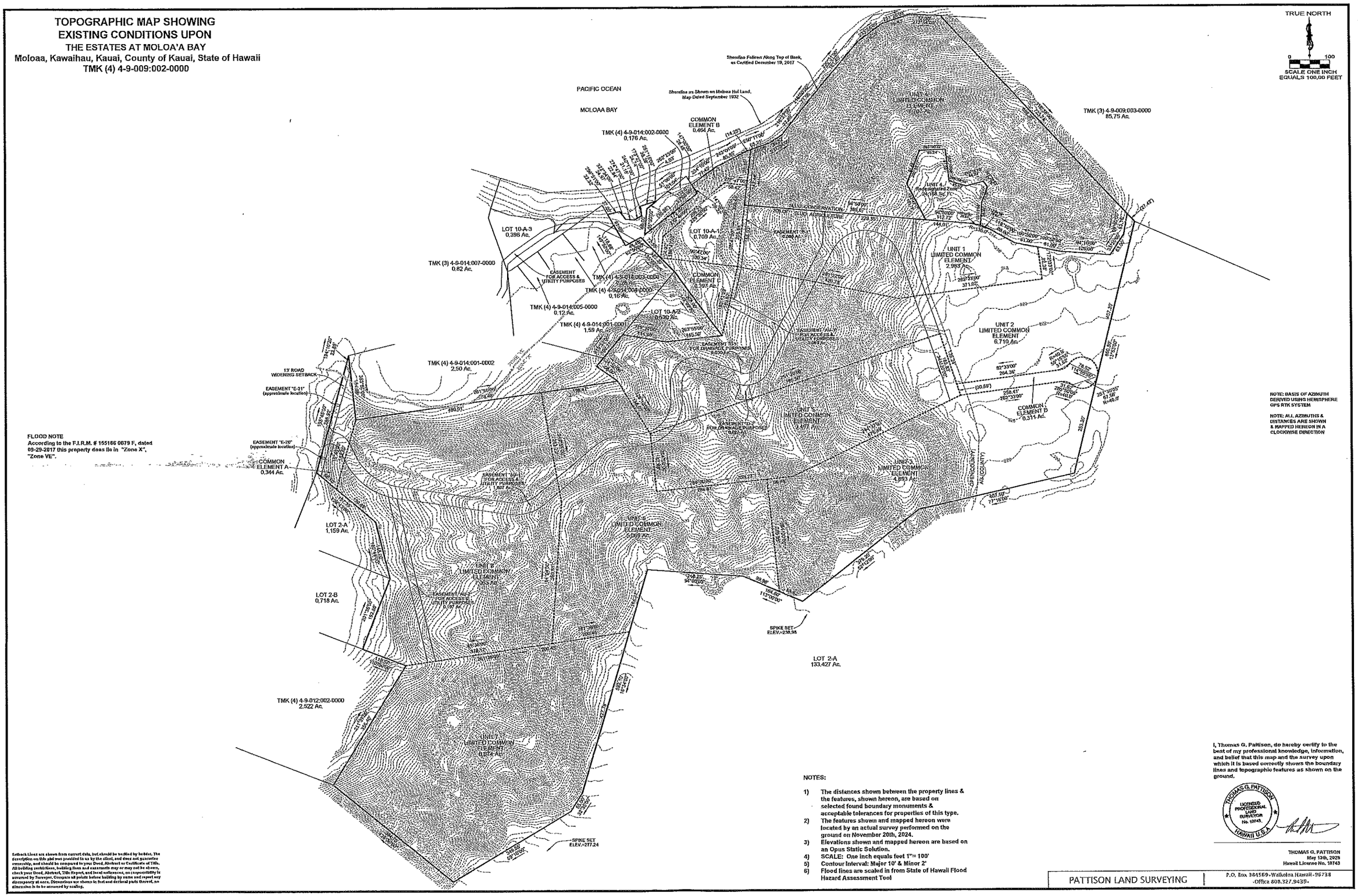
EXHIBIT "C"

TOPOGRAPHIC MAP SHOWING EXISTING CONDITIONS UPON

THE ESTATES AT MOLOA'A BAY

Moloaa, Kawaihau, Kauai, County of Kauai, State of Hawaii

TMK (4) 4-9-009:002-0000



FLOOD NOTE
According to the F.I.R.M. # 155166 0079 F, dated 09-29-2017 this property does lie in "Zone X", "Zone VE".

NOTE: BASIS OF AZIMUTH DERIVED USING HEMISPHERE GPS RTK SYSTEM

NOTE: ALL AZIMUTHS & DISTANCES ARE SHOWN & MAPPED HEREON IN A CLOCKWISE DIRECTION

NOTES:

1) The distances shown between the property lines & the features, shown hereon, are based on selected found boundary monuments & acceptable tolerances for properties of this type.
2) The features shown and mapped hereon were located by an actual survey performed on the ground on November 20th, 2024.
3) Elevations shown and mapped hereon are based on an Opus Static Solution.
4) SCALE: One inch equals feet 1"= 100'
5) Contour Interval: Major 10' & Minor 2'
6) Flood lines are scaled in from State of Hawaii Flood Hazard Assessment Tool

I, Thomas G. Pattison, do hereby certify to the best of my professional knowledge, information, and belief that this map and the survey upon which it is based correctly shows the boundary lines and topographic features as shown on the ground.

THOMAS G. PATTISON LICENSED PROFESSIONAL LAND SURVEYOR No. 10743, HAWAII U.S.A.

THOMAS G. PATTISON
May 13th, 2025
Hawaii License No. 10743

Setback Lines are shown from current data, but should be verified by holder. The description on this plat was provided to us by the client, and does not guarantee ownership, and should be compared to your Deed, Abstract or Certificate of Title. All building restrictions, building lines and easements may or may not be shown, check your Deed, Abstract, Title Report, and local ordinances, no responsibility is assumed by Surveyor. Compare all points before building by same and report any discrepancy at once. Dimensions are shown in feet and decimal parts thereof, no dimension is to be assumed by scaling.

PATTISON LAND SURVEYING
P.O. Box 384569 • Waikoloa Hawaii • 96738
• Office 808.327.9459 •

EXHIBIT "D"

DESCRIPTION OF UNIT 4 REDESIGNATED ZONE

Within the "THE ESTATES AT MOLOA'A BAY"

Being a portion of that certain parcel of land (portion of the Ahupuaa of Moloaa conveyed by Richard Armstrong, President of the Board of Education to the Trustees of Oahu College, by Deed dated January 30, 1860, recorded in Liber 12, Page 400), situate, lying and being at Moloaa, Island and County of Kauai, State of Hawaii, being a portion of ALLOTMENT NUMBER 10-A, of the PARTITION OF THE "HUI LANDS OF MOLOAA"

Beginning at the Southwest corner of this described unit, being also along the north line of Unit 1, and on the conservation – agriculture line, the coordinates of said point of beginning referred to Government Survey Triangulation Station "Moloaa" being 1,830.84 feet north and 2,919.58 feet west, and thence running by azimuths measured clockwise from true south:

Thence along the remainder of the ALLOTMENT NUMBER 10-A, of the PARTITION OF THE "HUI LANDS OF MOLOAA" with the following eleven (11) courses:

1. **152° 42' 17"** **103.76** **feet** to a point;
2. **200° 59' 17"** **91.45** **feet** to a point;
3. **267° 50' 22"** **65.24** **feet** to a point;
4. **353° 10' 08"** **81.39** **feet** to a point;
5. **286° 58' 54"** **45.33** **feet** to a point;
6. **255° 16' 25"** **46.22** **feet** to a point;
7. **323° 20' 52"** **17.75** **feet** to a point;
8. **20° 55' 47"** **42.38** **feet** to a point;
9. **03° 03' 58"** **58.92** **feet** to a point;

Thence along the north side of Unit 1 on a 135.0 foot radius curve to the left, the chord azimuth and distance being:

10. **100° 55' 02"** **28.61** **feet** to a point;

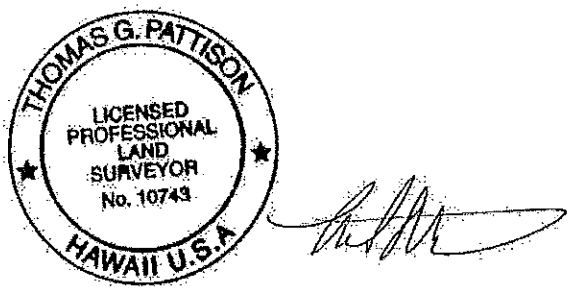
EXHIBIT "D"

DESCRIPTION OF UNIT 4 REDESIGNATED ZONE

11. 94° 50' 00" **112.72** **feet** continuing along the north side of Unit 1 to the point of beginning and containing an area of 24,168 square feet more or less.

Prepared by:
PATTISON LAND SURVEYING INC.
KAMUELA, HAWAII

DATED: May 21st, 2025



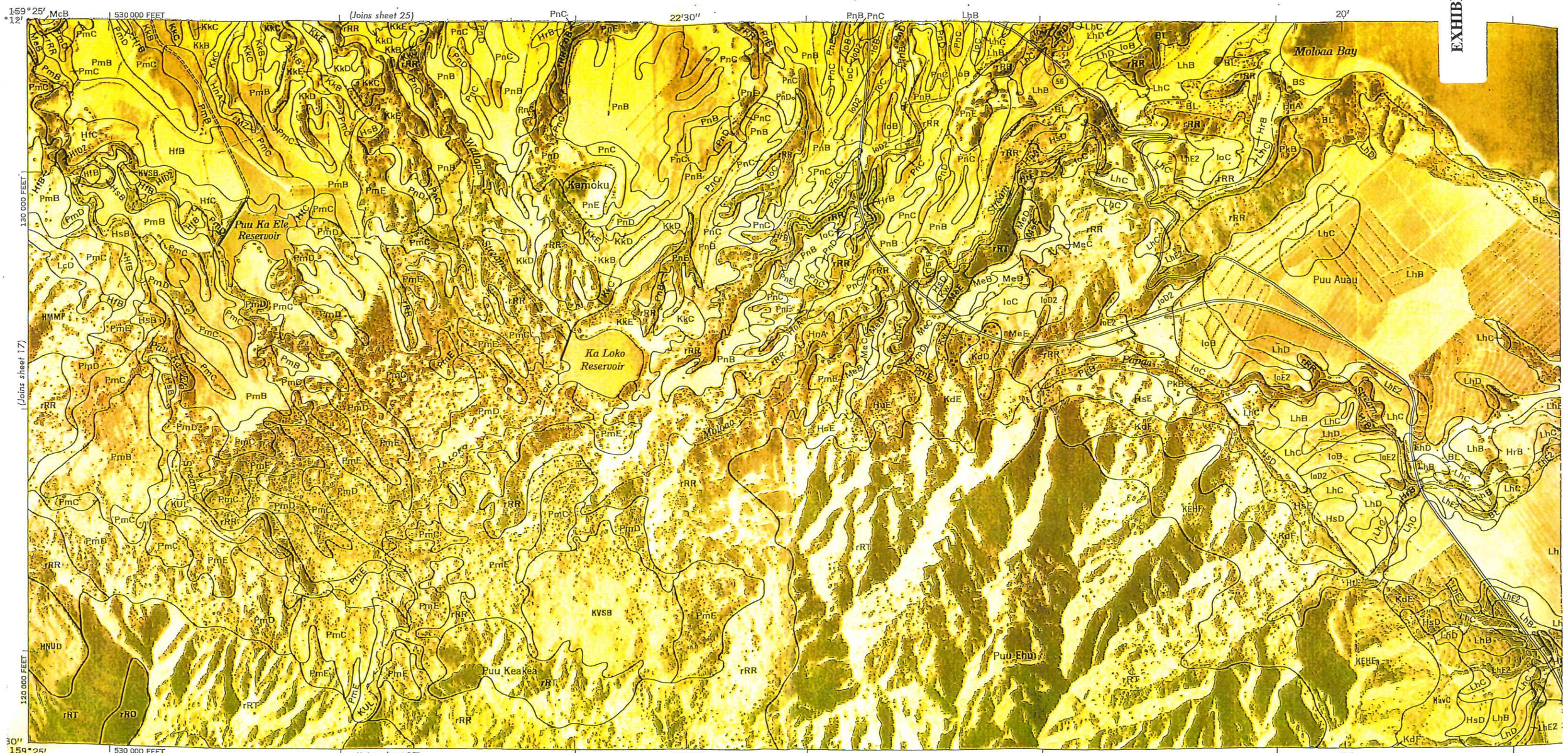
THOMAS G. PATTISON
Licensed Professional Land Surveyor
Certificate Number 10743, expires 4/30/2026

EXHIBIT "E"

EXHIBIT "E"

EXHIBIT "F"

EXHIBIT "F"



Scale 1:24 000

1 ¾ ½ ¼ 0 1 2 Miles

5 000 4 000 3 000 2 000 1 000 0 5 000 10 000 Feet

EXHIBIT "G"

META ENGINEERING
PO Box 4606 Honolulu, HI 96812
Tel: 808-372-8887 E-mail: paul.metaeng@gmail.com

REPORT OF SUBSURFACE INVESTIGATION

Project:

Unit 4 – Estates at Moloa'a Bay
TMK: 49009002004
Unit 4, Moloa'a Rd.,
Anahola, HI 96703

Attention:

Moloa'a Lot 10A LLC
Unit 4, Moloa'a Rd.,
Anahola, HI 96703
Att: Bill Campbell – bcmpbll@aol.com

Owner:

Moloa'a Lot 10A LLC
2443 Fillmore St., PMB 368
San Francisco, CA 94115

PAUL R. WEBER
LICENSED
PROFESSIONAL
ENGINEER
NO. 9595-C

4/30/2026
License Expiration Date

This work has been prepared by me or under my supervision and construction of this project will be under my supervision

EXHIBIT "G"

META ENGINEERING
PO Box 4606 Honolulu, HI 96812
Tel: 808-372-8887 E-mail: paul.metaeng@gmail.com

February 4, 2025

Unit 4 – Estates at Moloa'a Bay
TMK: 49009002004
Unit 4, Moloa'a Rd.,
Anahola, HI 96703

RE: Report of Subsurface Investigation
Unit 4, Moloa'a Rd., Anahola, HI 96703

To Whom it May Concern,

Following the completion of field and lab work, this presents our report of the soil conditions at the lot of a planned structure on Kaua'i. Three (3) test borings were completed on December 18, 2024. Our findings and recommendations are presented in the attached report.

The property lot occupies a generally grassy and bouldered site on a natural level terrain of a conservation lot in Moloa'a on Kaua'i. The surface soil is red dirt overlying residual soil. The depth and character of the soils were the focus of our investigation work.

The scope of our work was defined in your geotechnical report request and this soils investigation has generally conformed to the scope described therein. Selected soil samples were used in the laboratory testing. The remaining samples will be kept for a period of time for possible inspection and examination. Unless requested otherwise, the samples will be discarded three months from the date of this report.

It has been a pleasure to perform this assignment for you. If you have any questions, please feel free to contact us for clarification.

Sincerely,

Paul R. Weber, P.E.
Meta Engineering

META ENGINEERING
PO Box 4606 Honolulu, HI 96812
Tel: 808-372-8887 E-mail: paul.metaeng@gmail.com

TABLE OF CONTENTS

META ENGINEERING
PO Box 4606 Honolulu, HI 96812
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INTRODUCTION

This presents the results of our soils investigation at the site of an existing conservation property in the Moloa'a lots in Anahola on the Island of Kaua'i. The purpose of our exploration was to determine engineering properties of the soil on the site to prepare recommendations for foundation design.

The subject lot is in an area on which we have performed several other investigations. The lot has distant views of a small creek beds and ocean and is deeply sloped on the backside of the lot.

The general location of the site is shown on the Vicinity Map, Figure 1.

PROJECT DESCRIPTION

No plot plan or a planned building was provided for our use. Further details of design development may alter or add to the recommendations of this report. The project site is shown on Site Plan, Figure 2.

SCOPE OF WORK

The scope of work for this project included subsurface investigations and laboratory testing to determine soils classifications.

FIELD EXPLORATION

To obtain the subsurface information, three exploratory borings B-1 thru B-3 were drilled on December 18, 2024. The boring depths were approximately 2 - 12 feet and probably have ended on hard material, probably lava rock. Soil samples were obtained at various depths from each boring. The borings were logged, and the soils classified by field personnel. The boring locations are shown on the Site Plan, Figure 2. A more detailed description of the field exploration program and the Logs of Borings are presented in the appendix. The retrieved soil samples were packaged and transported to the Meta Engineering soil mechanics laboratory in Honolulu for further examination and testing.

LABORATORY TESTING

A laboratory testing program was performed to verify visual field classifications and to determine pertinent soil engineering properties of the earth materials encountered in the borings. The tests performed included in-situ moisture determinations and plasticity tests. A description of the laboratory test procedures and the results of the laboratory testing are available upon request.

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NATURAL HISTORY of THE HAWAIIAN ISLANDS

General Geology

The Hawaiian chain of islands stretches back in time on a line toward the Aleutian Islands of Alaska, starting with the most recent outflow of Kilauea. This 40-million-year march is the result of the movement of one of the earth's crustal plates over a stationary magma hot spot. The Mid Pacific hot spot is but one of several places around the earth where magma is close to the surface, Yellowstone being another.

A new Hawaiian island appears to be forming in the sea south of the Big Island.
The Hawaiian Islands are shield volcanoes. That is, they are formed by molten lava surging out and flowing over the adjacent terrain. Successive flows build up a high shield that resembles a cone shaped layer cake. This quiet and ponderous building process is interrupted from time to time by explosive lava fountains, cinder, ash, and tuff cones. A high ash cloud was ejected in 1924. Kilauea started its recent continuous activity with lava fountain explosions in 1983.

As soon as the new lava hardens, a process of weathering and decomposition begins that also can be traced back in time over the 40-million-year span. The oldest islands are barely discernable, being but submerged mounds in the Pacific waters. On an oceanic map one sees a straight line of islands stretching back from the present to a kink at about 24 million years ago. Another straight line of remnant islands makes a bee line for the Aleutians. This engineer detected a new kink at Maui starting about one million years ago. The new kink, whose portent is totally unknown to science, was confirmed by geologists at UH Manoa.

President Obama designated part of the older islands a national monument to be preserved and protected.

The inhabited islands, starting with Kaua'i and progressing to Oahu, Maui, and the Big Island, show decreasing weathering, until on the Big Island there is fresh, intact lava for all to see. Kaua'i was formed roughly five million years ago, Oahu about three million, and Maui about one million years ago.

The weathering process is of great interest to engineers who must design building projects in the islands. Curiously, volcanic rocks – the newest "earth" on earth – weather quickly. Lava rock cracks, crumbles, and then rusts as the iron minerals are oxidized in the warm, humid, tropical atmosphere. Weathering varies greatly in areal distribution and with depth below the ground surface making it quite interesting for builders. As with the laterite soils in all tropical zones, the Hawaiian red dirt weathers in another way by varying from highly plastic expansive soil to almost inert low plastic soil. The difference cannot be detected by the eye; soil lab tests are required to determine just how plastic and expansive a particular local deposit might be. cannot be detected by the eye; soil lab tests are required to determine just how plastic and expansive a particular local deposit might be.

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Tectonic Plates

As noted above, the islands are formed as the crustal plate rides over a Mid-Pacific hot spot. The crustal plates have a life cycle; the plates spread apart in mid ocean, and this allows magma to well up from below the crust. The pressure pushes against the continents forming coastal mountains. The continents are more rigid than the plates, so the plates bend downward and are forced back into the molten rock where they melt.

The pressure of the plates grinding at the continental boundaries causes earthquakes and the chain of volcanoes that in the Pacific are called the "Ring of Fire". Hawaii is not at a plate boundary and none of this activity occurs here.
Hawaii seismic activity can be related to the movement of magma under the Big Island. As a result, seismic activity is highest on the Big Island and lowest on Kaua'i.

Water

Hawaii is located in the middle of the Pacific in an area of low rainfall. Trade winds blow across the islands and what moisture there is gets pushed up to the higher elevations near the tops of the volcanoes. It is cooler up there, the moisture precipitates, and rain falls on the windward sides of the islands. The leeward sides stay dry and would be termed 'desert' if not for our irrigation systems.

Water is stored on the islands in two ways. Volcanic rocks are fractured and full of holes. Subsequent underground magma flows have inserted hard barriers into the fractured rock called dykes. These dykes act like dams and hold the water in storage in the volcanic rocks. When a waterfall is seen issuing from a point below the crest of the mountain, it is overflow above a dyke.

Fresh water floats on salt water. This allows the rainfall to build up on top of the seawater. Groundwater wells that tap this freshwater lens are a major source of island water.

Flora

There is an abundance of tropical plants in Hawaii – especially on the windward side and higher in the mountains. Before Polynesian voyagers brought their familiar crops, the plants evolved in isolation; many are found here and nowhere else on earth. Those introduced crops (many quintessentially Hawaiian) include coconut, mango, breadfruit, bananas, yams, taro, and sugarcane.

Fauna

Similarly, to the plants that evolved in the Hawaiian Islands, many unusual and endemic animal species make their home here. Certain species of snails, birds, and sea life – including coral – are unique to these islands. Before human settlement, there were no land mammals except the Hawaiian Hoary bat.

The Polynesians brought with them useful domesticates such as dogs, pigs, and the red jungle fowl, some of which have established wild populations. Other, less useful creatures have entered Hawaii on incoming boats and planes, including the mongoose and centipede. Great efforts are made, though not always successfully, to protect this delicate ecosystem from other invasive snakes, rodents, and insects, as trade and travel increase in Hawaii.

The Hawaiian Islands abound in birds of all kinds, some of which are found only in Hawaii. The Hawaiian Nene, a protected goose, is found here also. The Nene is a smaller version of the Canadian variety. Unfortunately, Nene's nest on exposed surfaces making their eggs subject to predation such as the introduced mongoose.

THE NATURAL HISTORY OF KILAUEA/ANAHOLA

Kilauea is situated in the northeast quadrant of the Island of Kauai, one of the main inhabited islands of Hawaii. Like the newer islands, Kauai was formed of a shield volcano as it occupied the seabed over a magmatic hot spot. The magma hot spot is relatively fixed; the Pacific crustal plate moves generally to the northeast toward the Aleutian Islands of Alaska. The now extinct original Kauai shield volcano (Napili Member) is about 5 million years old and has greatly weathered and eroded from its original condition. In fact, Kauai cracked in half about 3 1/2 million years ago and the eastern portion fell into the sea. Lava welled up again in the eastern portion to rebuild the island with much younger volcanic on the east side (Koloa Volcanoes). Waimea Canyon is the trace of the big fissure where the island broke in half. This project sits on the Koloa Volcanic series.

More than ½ million years ago the island cracked again (minor cracking this time around) and cinder cones erupted from the fissures. Kilauea Crater and other craters west of Anahola Mountains discharged cinders at that time. Erosion and weathering are the most pronounced on this island. Virtually all the buildable surface is red clay derived from weathering of the original shield lava.

Near Kilauea is one of the wettest places on the planet. One of the highest swamps in the world is located above Princeville in the Alakai Swamp at elevation 4,000 feet. Much of this high rainfall drains out of the mountains and on to the sea by way of Hanalei, Kalihiwai and Kilauea Streams. Drainage above the site meanders and forms a variety of channels that eventually merge to form Kalihiwai Stream. Elevation of the site surroundings is generally at sea level.

The original vegetation includes a wide variety of tropical plants, hardwoods, and flowers. Mammals and other land animals were not found on the Hawaiian Islands, but birds and marine life was plentiful.

The site is in the northern area of Kauai above sea level.

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CULTURAL HISTORY OF KILAUEA/ANAHOLA

Occupation of the Hawaiian Islands in general and Kauai in particular dates from about 1,500 years earlier than present. Specific historical sites are sparse in the Kilauea area, but Kalihiwai Stream and its tributaries would provide suitable resources for human habitation.

European and American explorers opened the islands to occupation in the eighteenth century (Captain Cook landed in 1778) and initiated whaling and hardwood extraction. Later settlers established cash crops such as sugar cane and pineapple that soon covered large tracts of land. The first sugar cane mill in the islands was established in Koloa in 1835.

In 1969 Howard Taylor, a brother of Elizabeth Taylor, established Taylor Camp on seven acres he owned on North Kauai. Taylor Camp was a hippie commune; clothes optional, pot smoking, free love, live-off-the -land commune. The 100 or so residents assembled natural and scrap lumber tree houses for habitation.

In 1977 the State condemned the Camp and burned the structures to the ground. The remnants of Taylor Camp presently occupy Na Pili Park.

SURFACE CONDITIONS

The site is a steep, terraced section on a native lot on a graded hillside. The local landscape is vegetated with tropical plants.

SUBSURFACE CONDITIONS

The subsoil in this area of Kaua'i is characterized by deeply weathered red clays. Three (3) borings may have exposed red clay underlain by weathered rock. The soils located in this area are designated as Lihue silty clay, 0 to 8 percent slopes (LhB). The Lihue series consists of well-drained soils on uplands on the island of Kauai. These soils developed in material weathered from basic igneous rock.

The soils encountered varied from medium to hard depending on the location on the site.

Groundwater was not encountered in the borings.

DISCUSSIONS AND RECOMMENDATIONS

N/A

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FOUNDATIONS

N/A

RETAINING WALLS

N/A

EARTHWORK

N/A

GRADING

N/A

REVIEW OF PLANS AND SERVICES DURING CONSTRUCTION

N/A

LIMITATIONS

This report has been prepared for the Moloa'a Lot 10A LLC property and their designated professionals for the purpose of collecting and sampling soils on the subject property on Kaua'i, Hawaii. No other warranty, expressed or implied, is made as to the professional advice contained in this report. This report has not been prepared for other parties and may not contain sufficient information for their purposes or other uses.

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This report is written based on subsurface information obtained from borings drilled for the subject property. It does not reflect variations that may occur in the subsurface conditions between borings. The nature and extent of the variations of the subsurface conditions may not become evident until construction. Should subsurface conditions differ materially from those encountered during this study, Meta Engineering shall be notified immediately so that the appropriate construction modifications can be developed and implemented, if necessary.

The following figures and appendix are attached to complete this report:

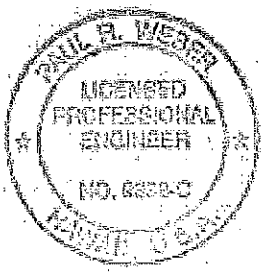
Figure 1	Vicinity Map
Figure 2	Site Plan
Appendix A -	Field Exploration and Laboratory Testing

Respectfully Submitted,

Paul R. Weber, P.E.
Meta Engineering

Report Distribution:

Moloa'a Lot 10A LLC (1)
File (1)



4/30/2026
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APPENDIX A

FIELD INVESTIGATION AND LABORATORY TEST RESULTS

FIELD INVESTIGATION

To obtain the subsurface information reported herein, a total of three (3) borings, B-1 thru B-3 were drilled on December 18, 2024. The boring was drilled to depths of 2 to 12 feet below the existing ground surface and all terminated on hard material, probably lava rock. The boring locations are shown on the Site Plan, Figure 2. Soils Maps, Figure 3 and 4.

The exploratory borings were drilled by META using portable drilling equipment. One of our field engineers observed the drilling operation and logged each boring. Soil samples were obtained at regular intervals of depth. The retrieved soil samples were packaged and transported to our Honolulu laboratory for testing.

The Logs of Borings are presented in the Appendix on Figures A-1. The soils encountered were classified according to the Unified Soil Classification System, Figure A-7.

LABORATORY TEST RESULTS

Selected soil samples were tested to evaluate classification and pertinent engineering properties. The tests included moisture content determinations and plasticity tests. All testing procedures were performed in accordance to the American Society for Testing Materials (ASTM) standards, unless otherwise noted. The results of the laboratory tests are to be presented upon request.

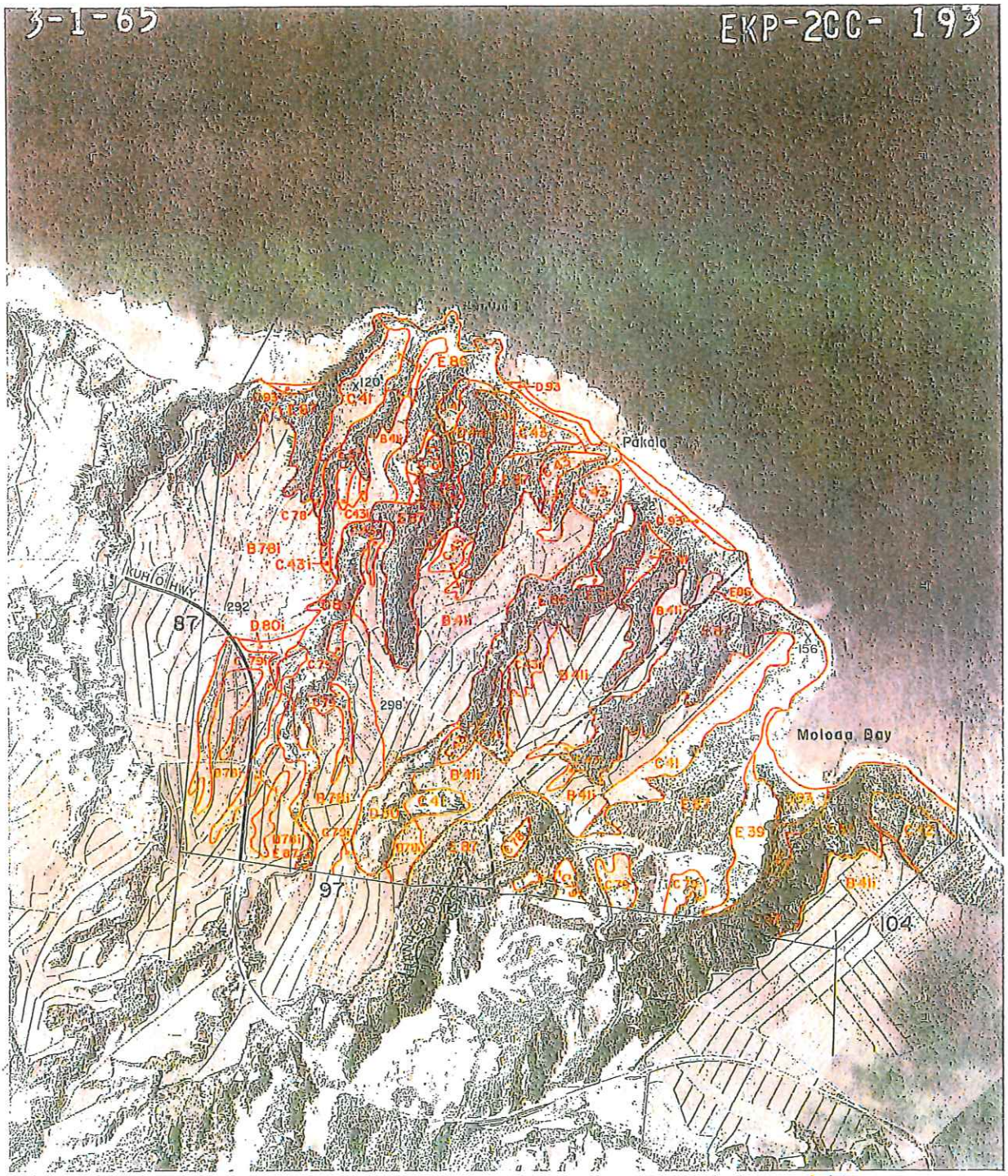
The following Figures and Exhibits are attached to complete this Appendix:

Figures A-1 through A-3	Logs of Borings
Figure A-4 through A-8	Liquid, Plastic Limits, Sieve Test Reports
Figure A-9	Unified Soil Classification System

EXHIBIT "H"

DETAILED LAND CLASSIFICATION - ISLAND OF KAUAI

Map No. 96



Land classification data field mapped 1967.

LAND CLASSIFICATION SYMBOL:

B 78i
- Master Productivity Rating
- Land Type. Number and letter "i" if irrigated; number only if unirrigated. (See sections of text where Land Types are defined and rated by selected uses.)

Approx. North

U.S.G.S. Quad References: Anahola

Approximate Scale (ft./in.) = $\frac{12,800 - \text{Ground Elevation}}{6}$

Aerial Photographs: U.S. Dept. of Agriculture, A.S.C.S.

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EXHIBIT "H"

EXHIBIT "I"

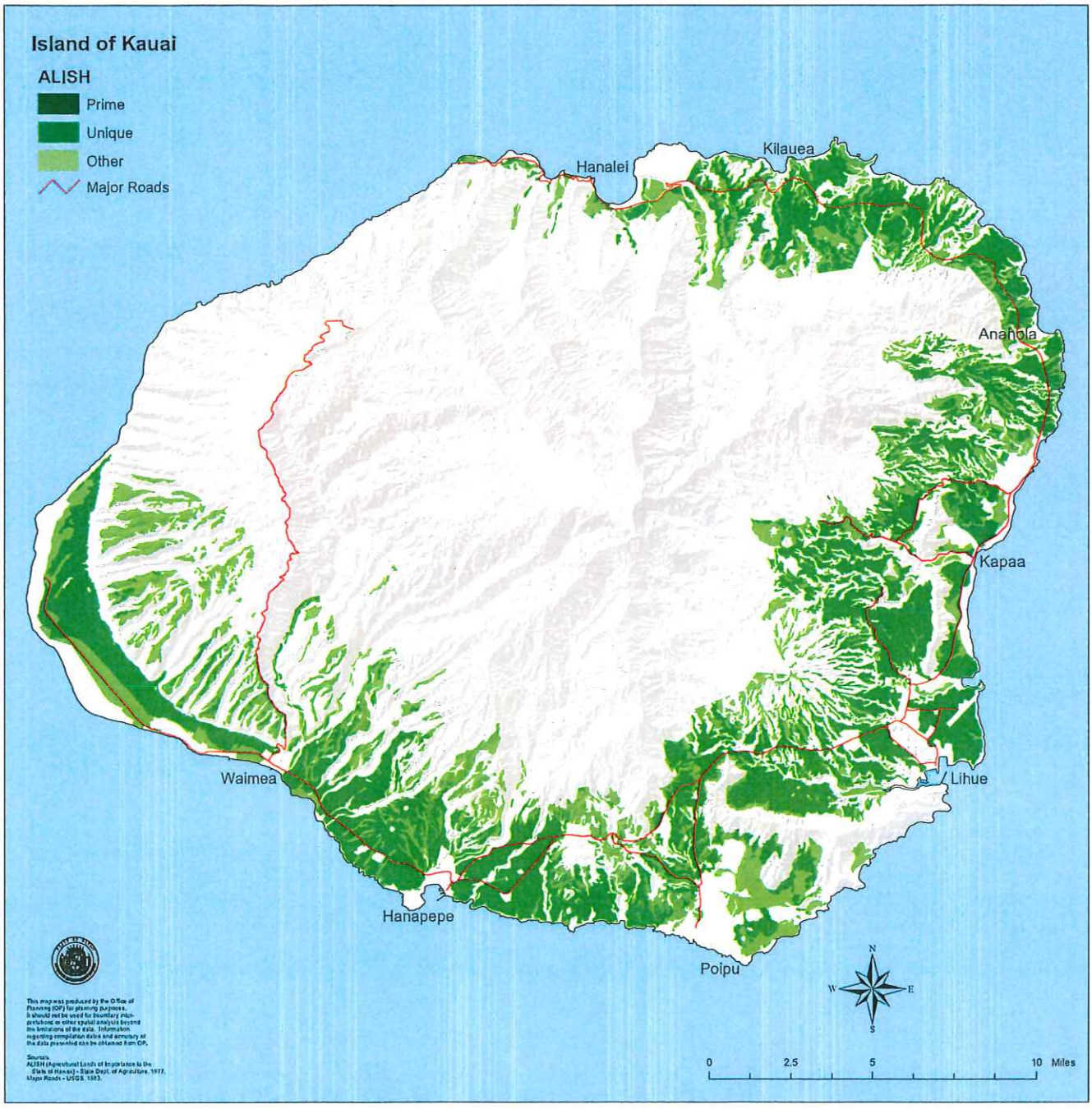

Island of Kauai
ALISH
Prime
Unique
Other
Major Roads
Hanalei
Kilauea
Anahola
Kapaa
Lihue
Waimea
Hanapepe
Poipu
N
W
E
S
0
2.5
5
10 Miles

EXHIBIT "I"

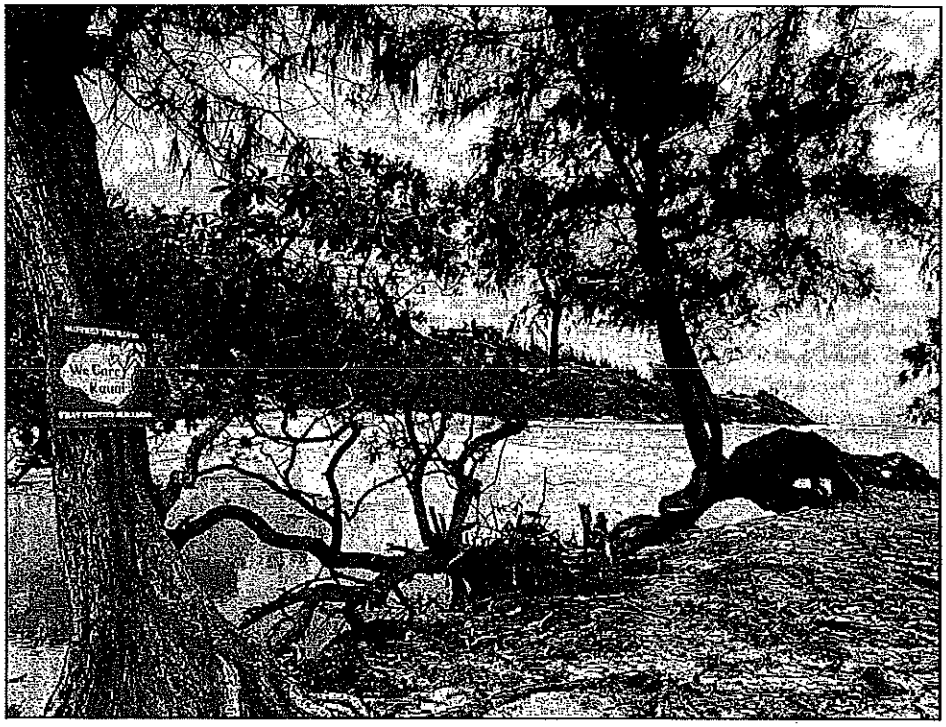
EXHIBIT "J"

Pacific Legacy

Historic Preservation

CULTURAL IMPACT ASSESSMENT FOR THE ESTATES AT MOLOAʻA BAY PROJECT, MOLOAʻA AHUPUAʻA, KOʻOLAU MOKU (MODERN TAX DISTRICT OF KAWAIHAU), ISLAND OF KAUAʻI

[TMK: (4) 4-9-009:002 (por.)]



Pacific Legacy: Exploring the past, informing the present, enriching the future.

CULTURAL RESOURCES CONSULTANTS

Hawai'i Offices:
Kailua, O'ahu

California Offices:
Business Office
Bay Area
Sierra/Central Valley

EXHIBIT "J"

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CULTURAL IMPACT ASSESSMENT FOR THE ESTATES AT MOLOAʻA BAY PROJECT, MOLOAʻA AHUPUAʻA, KOʻOLAU MOKU (MODERN TAX DISTRICT OF KOʻOLAU, ISLAND OF KAUAʻI

[TMK: (4) 4-9-009:002 (por.)]

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San Francisco, CA 94115

April 2024

ABSTRACT

At the request of Moloaʻa Lot 10A LLC, Pacific Legacy, Inc. has prepared this Cultural Impact Assessment (CIA) for the proposed Estates at Moloaʻa Bay Project, Moloaʻa Ahupuaʻa, Koʻolau Moku (modern tax district of Kawaihau), Island of Kauaʻi [TMK: (4) 4-9-009:002 (por.)]. The Estates at Moloaʻa Bay Project is proposing to develop residential properties within an approximately 45-acre parcel at Moloaʻa Bay. The parcel has been divided by a condominium property regime (CPR) comprising eight individual parcels. To complete this CIA, Pacific Legacy conducted archival research and consultation with cultural practitioners, lineal and cultural descendants, and organizational and state agency representatives.

The results of background and archival research indicate an abundance of resources in Moloaʻa Ahupuaʻa, including permanent freshwater sources from Moloaʻa and Maliu Streams, productive agricultural lands which used to be terraced for growing a range of traditional cultivars, and plentiful marine resources from the bay and its fringing reef. In particular, the area was known as an important source for the highly prized *limu kohu*, which was cultivated in *limu* "gardens." Although private land ownership was introduced in the mid-nineteenth century via the Mahele, a more traditional form of land tenure continued on in the form of the Moloaa Hui Lands, until around 1932. The project area lies within the former Moloaa Hui Lands, and was re-parceled into the 49.002-acre Allotment 10-A, which was owned by Joseph L. Huddy and Maggie Huddy. Few of the original families of Moloaʻa still live in the area, due in part to the destruction of the 1946 tidal wave, as well as other pressures which include the burdens of increasing property taxes, large-scale investment developments, and issues surrounding public access to *kuleana* and former Hui lands. Today, only a small number of these original families remain in Moloaʻa, having been largely supplanted by timeshares, bed and breakfasts, and new arrivals.

An Archaeological Inventory Survey conducted for the project (Lyman and Dega 2016) identified four historic properties within the project area: an alignment (SIHP -02291), a terrace (SIHP -02292), a water diversion ditch (SIHP -02293), and a modified outcrop and alignments in Maliu Gulch (SIHP -02294). All four historic properties were assessed as significant under criterion d and recommended for no further work. A burial (SIHP -02455) is located in close proximity to the northwest corner of the project area (on file, SHPD).

Eight individuals responded to our solicitations for consultation and provided feedback via phone or email, and an additional eight people reached out to us near the end of our consultation window after having heard about the project from neighbors. Four knowledgeable individuals with ties to Moloaʻa were interviewed, including interviews with descendants of the previous owners of Allotment 10-A, Joseph and Maggie Huddy. Results of this community outreach largely augmented and verified the information provided by background and archival research. The assessment identified a range of traditional cultural practices and culturally important resources, many of which center on Moloaʻa Bay and continued access to its shores, reef, and marine resources; the significance of Maliu Stream ("the stream"); native avifaunal species; and garden-scale agricultural practices. Potential impacts to these practices include loss of access to Moloaʻa Bay; threats to native avifaunal species and the Hawaiian hoary bat; accelerated erosion and sediment runoff into the bay; impacts to Maliu Stream; and harmful effects of noise and light pollution.

This report agrees with the previous recommendations made by the project's Natural Resources Assessment (LeGrande and David 2023), which includes: dark sky compliant lighting; avoiding clearing woody vegetation over 4.6 m from June 1 through September 15; implementation of

erosion control measures during grading or land moving; and prioritizing native plant species currently within the project area. Additional recommendations include: ensuring planned development does not restrict access to Moloa'a Bay; plan development activities in such a way to not further impact Maliu Stream and develop a plan for any necessary ongoing maintenance to the stream; keep unnecessary light and noise to a minimum during construction activities; and implement an archaeological monitoring program for the project.

ACKNOWLEDGEMENTS

The success of a Cultural Impact Assessment is reliant on the contributions of *kūpuna*, cultural practitioners, and other knowledge bearers who give so generously not just their time but their *ʻike* and *manaʻo* to this process. The information shared in this document reflects generations of understandings about Moloaʻa, its environment, and past practices. We recognize that those who have contributed to this report have done so without compensation, and perhaps with some trepidation about how their knowledge will be applied, here and in the future. Pacific Legacy is grateful to those who have taken part in this process, and we have tried our best to honor what they have shared. We apologize for any errors in names, content, or presentation. We would also like to thank those who have facilitated in other ways, particularly through helping us broaden our reach to additional community members. We are especially grateful to those whose knowledge, memories, and history enrich and inform this report: Damon Boiser, Mikkel Boiser, Debra Boiser, and the three contributors who have requested to have their names withheld from this document. We would also like to thank Kai Markell and the Office of Hawaiian Affairs (OHA) for providing referrals, offering space, and facilitating meetings with *ʻohana* from Moloaʻa Ahupuaʻa. Kaʻāhiki Solis (SHPD), Nancy McPherson (DHHL), Kamakana Ferreira (OHA) and D. Kaliko Santos (OHA) also provided information and referrals, all of which helped us expand our consultation network and improve the quality of this document.

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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: View of Moloaʻa Bay from a public entrance to the beach, taken during a site visit in January 2024.

1.0 INTRODUCTION

At the request of Moloaʻa Lot 10A LLC, Pacific Legacy, Inc. has prepared this Cultural Impact Assessment (CIA) for the proposed Estates at Moloaʻa Bay Project, Moloaʻa Ahupuaʻa, Koʻolau Moku (modern tax district of Kawaihau), Island of Kauaʻi [TMK: (4) 4-9-009:002 (por.)].

The Estates at Moloaʻa Bay Project is proposing to develop residential properties within an approximately 45-acre parcel at Moloaʻa Bay. The parcel has been divided by a condominium property regime (CPR) comprising eight individual parcels.

1.1 PURPOSE AND LEGAL CONTEXT

The CIA is a requirement of Act 50 (Haw. 2000), which amended Chapter 343 of the Hawaiʻi Revised Statutes (HRS) to require that environmental assessments (EA) or Environmental Impact Statements (EIS) consider potential effects on native Hawaiian cultural practices, and amends the definition of "significant effect" to include adverse effects on cultural practices. It explicitly acknowledges that Articles IX and XII of the Hawaiʻi State Constitution requires government agencies to "promote and preserve cultural beliefs, practices, and resources of native Hawaiians and other ethnic groups" (OEQC 1997). These articles empower the state to conserve and develop objects and places of historic or cultural interest (Article IX, Section 7), and confers the power to preserve and develop the cultural, creative, and traditional arts of its various ethnic groups (Article IX, Section 9). In addition, Article XII, Section 7 of the State Constitution reaffirms the State's obligations to "protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupuaʻa 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 Office of Environmental Quality Control (OEQC)'s Guidelines for Assessing Cultural Impacts, which were adopted by the State of Hawaiʻi Environmental Council in 1997, provide a structure for CIA methodology and reporting. They specify that the scope of the assessment should in most cases extend beyond the boundaries of the project area in order to account for cultural practices which may not necessarily take place within the project area but may still be impacted by development activities. In general, the *ahupuaʻa* is recommended as the appropriate scale of assessment, though in some cases, potential impacts of project activities may extend beyond the boundaries of a single *ahupuaʻa* and the scope should be widened accordingly (e.g., projects that pose potential impacts to watersheds or offshore resources). The OEQC offers the following guidance for the historical period and cultural resources subject to assessment:

> The historical period studied in a cultural impact assessment should commence with the initial presence in the area of the particular group whose cultural practices and features are being assessed. The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs.
>
> The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural, including submerged cultural resources, which support cultural practices and beliefs. (OEQC 1997:1)

They also stress that the presence of development, including urban infrastructure, does not preclude the existence of ongoing cultural practices, beliefs, and culturally-important resources.

The following protocol is recommended by the Environmental Council for preparing Cultural Impact Assessments:

> (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, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.
>
> (OEQC 1997)

A series of decisions by the Supreme Court of Hawai'i have further reaffirmed and clarified protections for native Hawaiian customary and traditional gathering rights.

Kalipi v. Hawaiian Trust Co., Ltd., 66 Haw. 1, 656 P.2d 745 (Haw. 1982) asserted that the right to enter "undeveloped lands to gather, without unnecessarily disturbing the surrounding environment, natural products necessary for certain traditional native Hawaiian practices" did not extend to individuals who do not actually reside within the land division in which they seek to exercise such rights. However, it also asserted that "any argument for the extinguishing of traditional rights based simply upon the possible inconsistency of purported native rights within our modern system of land tenure must fail" based on the constitutional obligations of the court to preserve and enforce traditional rights under Article XII of the Hawai'i State Constitution. This is the first case in which the Hawai'i Supreme Court recognized the modern legal bases of traditional customary rights.

In *Pele Defense Fund v. Paty*, 73 Haw. 578, 837 P.2d 1247 (Haw. 1992), members of the Pele Defense Fund asserted native Hawaiian gathering rights in an *ahupua'a* other than the ones in which they reside. Although this assertion is similar to that made by Kalipi in 1982, in this instance the court ruled in favor of the Pele Defense Fund's gathering rights. They argued that where Kalipi assertion was based entirely on land ownership, the Pele Defense Fund's assertion was based on access and gathering patterns that have been held traditionally by native Hawaiians in the Puna region. Therefore, the court determined that "native Hawaiian rights protected by article XII § 7 may extend beyond the ahupua'a in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner."

Public Access Shoreline v. Cty. Planning Comm, 79 Haw. 425, 903 P.2d 1246 (Haw. 1995), commonly known as PASH, held that the Hawai'i Planning Commission is obligated to "preserve and protect" native Hawaiian rights to the extent feasible when issuing Special Management Area (SMA) Permits. The case clarified that native Hawaiian gathering rights extended to land that is less than fully developed, stating: "Although access is only *guaranteed* in connection with

undeveloped lands, and article XII, section 7 does not *require* the preservation of such lands, the State does not have the unfettered discretion to regulate the rights of ahupua'a tenants out of existence." It further stated that although the reasonable exercise of native Hawaiian usage is entitled to protection under article XII, section 7, "the balance of interests and harms clearly favors a right of exclusion for private property owners as against persons pursuing *non-traditional* practices or exercising otherwise valid customary rights in an *unreasonable* manner."

Ka Pa'akai O Ka 'Aina v. Land Use Comm'n, 94 Haw. 31, 7 P.3d 1068 (Haw. 2000) found that the Land Use Commission (LUC) failed to fulfill its obligation to preserve and protect traditional and customary rights of native Hawaiians when it made the decision to reclassify nearly 1,010 acres of land in Ka'ūpūlehu Ahupua'a from conservation to urban use. The court found that the LUC improperly delegated these responsibilities to the developer:

> The power and responsibility to determine the effects on customary and traditional native Hawaiian practices and the means to protect such practices may not validly be delegated by the LUC to a private petitioner who, unlike a public body, is not subject to public accountability. Allowing a petitioner to make such after-the-fact determinations may leave practitioners of customary and traditional uses unprotected from possible arbitrary and self-serving actions on the petitioner's part. After all, once a project begins, the pre-project cultural resources and practices become a thing of the past. (Haw. 2000)

The court remanded the case to the LUC on a limited basis to enter specific findings of fact and conclusions of the law regarding:

> 1.) The identity and scope of "valued cultural, historical, or natural resources" in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;
>
> 2.) The extent to which those resources – including traditional and customary native Hawaiian rights – will be affected or impaired by the proposed action; and
>
> 3.) The feasible action, if any, to be taken by the LUC to reasonably protect native Hawaiian rights if they are found to exist. (Haw. 2000)

Notably, in requiring these three specifications for findings of fact and conclusions, the court provided an analytical framework to help guide the state and its agencies in considering land use decisions and to "help ensure the enforcement of traditional and customary native Hawaiian rights while reasonably accommodating competing private development interests." This analytical framework has become commonly known as the "Ka Pa'akai Analysis."

1.2 CIA Study Area, Background, and Environment

In keeping with the OEQC's Guidelines for Assessing Cultural Impacts, and in consideration of the Hawai'I Supreme Court rulings on the aforementioned court cases, the study area for this CIA includes the entire *ahupua'a* (land division) of Moloa'a. This CIA includes descriptions of the environment, traditional accounts, and post-Contact records concerning the activities conducted throughout Moloa'a Ahupua'a, with particular attention given to the vicinity of the Estates at Moloa'a Bay Project Area (Figure 1).

Moloa'a Lot 10A, LLC is proposing to develop residential properties within an approximately 45-acre parcel at Moloa'a Bay. The parcel has been divided by a CPR comprising eight individual parcels. The project area is located on the northeast shore of Kaua'i Island, on the southern side of Moloa'a Bay in Moloa'a Ahupua'a, Kawaihau District (Figure 2, Figure 3).

Most of the soils within the project area are classified as Badland (BL) soils:

> Badland consists of steep or very steep, nearly barren land, ordinarily not stony. The soil-forming material is generally soft or hard saprolite. The annual rainfall amounts to 22 to 60 inches. Elevations range from nearly sea level to about 3,000 feet. This land type is mapped on the island of Kauai and, in addition, as part of soil complexes on Lanai, Molokai, and Oahu.
>
> **Badland (BL).** –This land type occurs on the island of Kauai. It is steep to very steep and nearly barren. Runoff is very rapid, and geological erosion is active. Included in mapping were areas of Kalapa, Lihue, and Makaweli soils.
>
> This land type is used for water supply and wildlife habitat. Ironwood trees have been planted in small areas. (Foote et al. 1972:28)

Large portions of the surrounding area, particularly within and to the southeast of the project area, are composed of the Lihue series of soils. These consist of well-drained soils and are found in the uplands of Kaua'i:

> These soils developed in material weathered from basic igneous rock. They are gently sloping to steep. Elevations range from nearly sea level to 800 feet. The annual rainfall amounts to 40 to 60 inches. The mean annual soil temperature is 73° F. Lihue soils are geographically associated with Ioleau and Puhi soils.
>
> These soils are used for irrigated sugarcane, pineapple, pasture, truck crops, orchards, wildlife habitat, woodland, and homesites. The natural vegetation consists of lantana, guava, koa haole, joee, kikuyugrass, molassesgrass, guineagrass, bermudagrass, and Java plum.
>
> **Lihue silty clay, 0 to 8 percent slopes (LhB).** –This soil is on the tops of broad interfluves in the uplands. Included in mapping were small areas of a soil that has a very dark grayish-brown surface layer and a mottled subsoil. (Foote et al. 1972:82)

A small area in the southwest portion of the project area is composed of rough broken land (rRR):

> Rough broken land (rRR) consists of very steep land broken by numerous intermittent drainage channels. In most places it is not stony. It occurs in gulches and on mountainsides on all the islands except Oahu. The slope is 40 to 70 percent. Elevations range from nearly sea level to about 8,000 feet. The local relief is generally between 25 and 500 feet. Runoff is rapid, and geologic erosion is active. The annual rainfall amounts to 25 to more than 200 inches.
>
> These soils are variable. They are 20 to more than 60 inches deep over soft, weathered rock. In most places some weathered rock fragments are mixed with the soil material. Small areas of rock outcrop, stones, and soil slips are common. Included in mapping were areas of colluvium and alluvium along gulch bottoms.
>
> This land type is used primarily for watershed and wildlife habitat. In places it is used also for pasture and woodland. The dominant natural vegetation in the drier areas consists of guava, lantana, Natal redtop, bermudagrass, koa haole, and molassesgrass. Ohia, kukui, koa, and ferns are dominant in wetter areas. Puakeawe, aalii, and sweet vernalgrass are common at the higher elevations. (Foote et al. 1972:119)

A very small amount of the northwest corner of the project area extends into Hanalei silty clay (HnA) soils at 0-2% slopes:

> This series consists of somewhat poorly drained to poorly drained soils on bottom lands on the islands of Kauai and Oahu. These soils develop in alluvium derived from basic igneous rock. They are level to gently sloping. Elevations range from nearly sea level to 300 feet. The annual rainfall amounts to 20 to 120 inches. The mean annual soil temperature is 74° F. Hanalei soils are geographically associated with Haleiwa, Hihimanu, Mokuleia, and Pearl Harbor Soils.
>
> Thse soils are used for taro, pasture, sugarcane, and vegetables. The natural vegetation consists of paragrass, sensitiveplant, honohono, Java plum, and guava.
>
> **Hanalei silty clay, 0 to 2% slopes (HnA).** –This soil is on stream bottoms and flood plains. Included in the areas mapped on Kauai along the Waimea River and in Waipaoiki Valley are small areas where the surface layer is 8 to 10 inches of reddish-brown silty clay. (Foote et al. 1972:38)

Finally, a small portion of the *makai* (seaward), or north side, of the project area is composed of beaches (BS):

> Beaches (BS) occur as sandy, gravelly, or cobbly areas on all the islands in the survey area. They are washed and rewashed by the ocean waves. The beaches consist mainly of light-colored sands derived from coral and seashells. A few of the beaches, however, are dark colored because their sands are from basalt and andesite.
>
> Beaches have no value for farming. Where accessible and free of cobblestones and stones, they are highly suitable for recreational uses and resort development. (Foote 1972:28)

A Natural Resources Assessment of the parcel was completed by LeGrande Biological Surveys Inc. in 2023 (LeGrande and David 2023). The survey found that the vegetation was dominated by introduced plant species. A total of 93 plant species were documented, 10 of which were indigenous, one endemic, and five Polynesian-introduced species. Indigenous plants found within the project area were *pāla'a* (*Odontosoria chinensis*), *moa* (*Psilotum nudum*), *mānienie*

ʻula (*Chrysopogon aciculatus*), *ʻakiʻaki* (*Sporobolos virginicus*), *hala* (*Pandanus tectorius*), *nanea* (beach pea; *Vigna marina*), *naupaka kahakai* (*Scaevola sericea*); *milo* (*Thespesia populnea*), *ʻuhaloa* (*Waltheria indica*), and *ʻūlei* (*Osteomeles anthyllidifolia*). The five Polynesian-introduced species were *kalo* (taro; *Colocasia esculenta*), *niu* (coconut; *Cocos nucifera*), *kī* (ti; *Cordyline fruticosa*); *maiʻa* (banana; *Musa xparadisiaca*), and *noni* (*Morinda citrifolia*). The single endemic plant identified within the project area was *ʻākia* (*Wikstroemia uva-ursi*). The survey also identified 17 bird species, one of which is an endangered endemic species (*nēnē, Branta sandvicensis*) and two indigenous breeding seabird species which are present on many of the Hawaiian Islands (the white-tailed tropicbird, *Phaethon lepturus dorotheae* and the great frigatebird, *Fregata minor*). The report noted that although they were not observed during the survey, green sea turtles (*honu; Chelonia mydas*) and the Hawaiian hoary bat (*Aeorestes semotus*) may also be present in or around the project area at various times. The survey also observed wetland indicators in the lower portion of Maliu Gulch, and that water was evident in the spring area and downslope in various locations along the gulch bottom, though no surface water was observed flowing into the ocean.

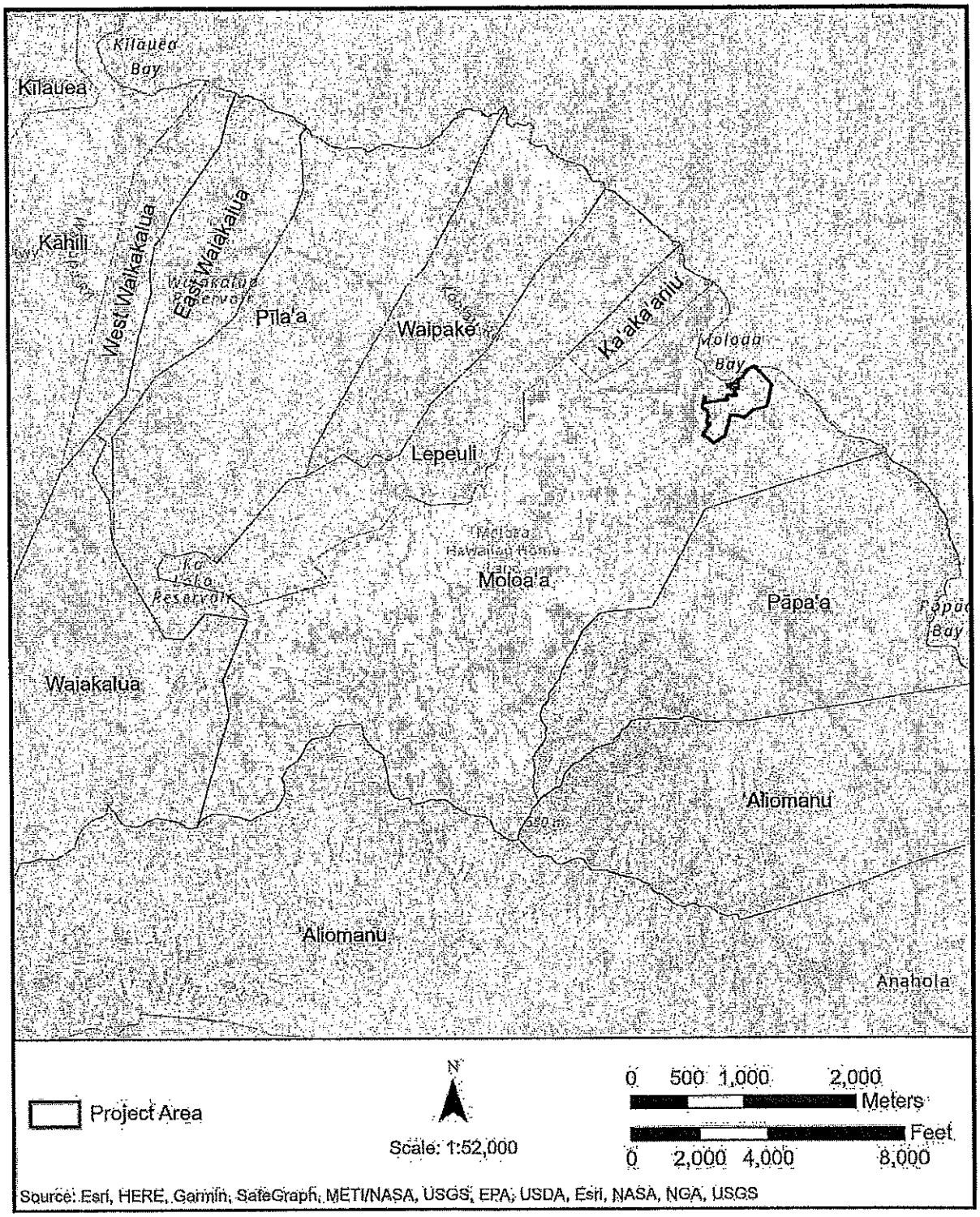

Figure 1. Location of the proposed Estates at Moloa'a Bay Project Area with surrounding *ahupua'a* labeled.

Figure 2. Location of the proposed Estates at Moloa'a Bay Project Area.

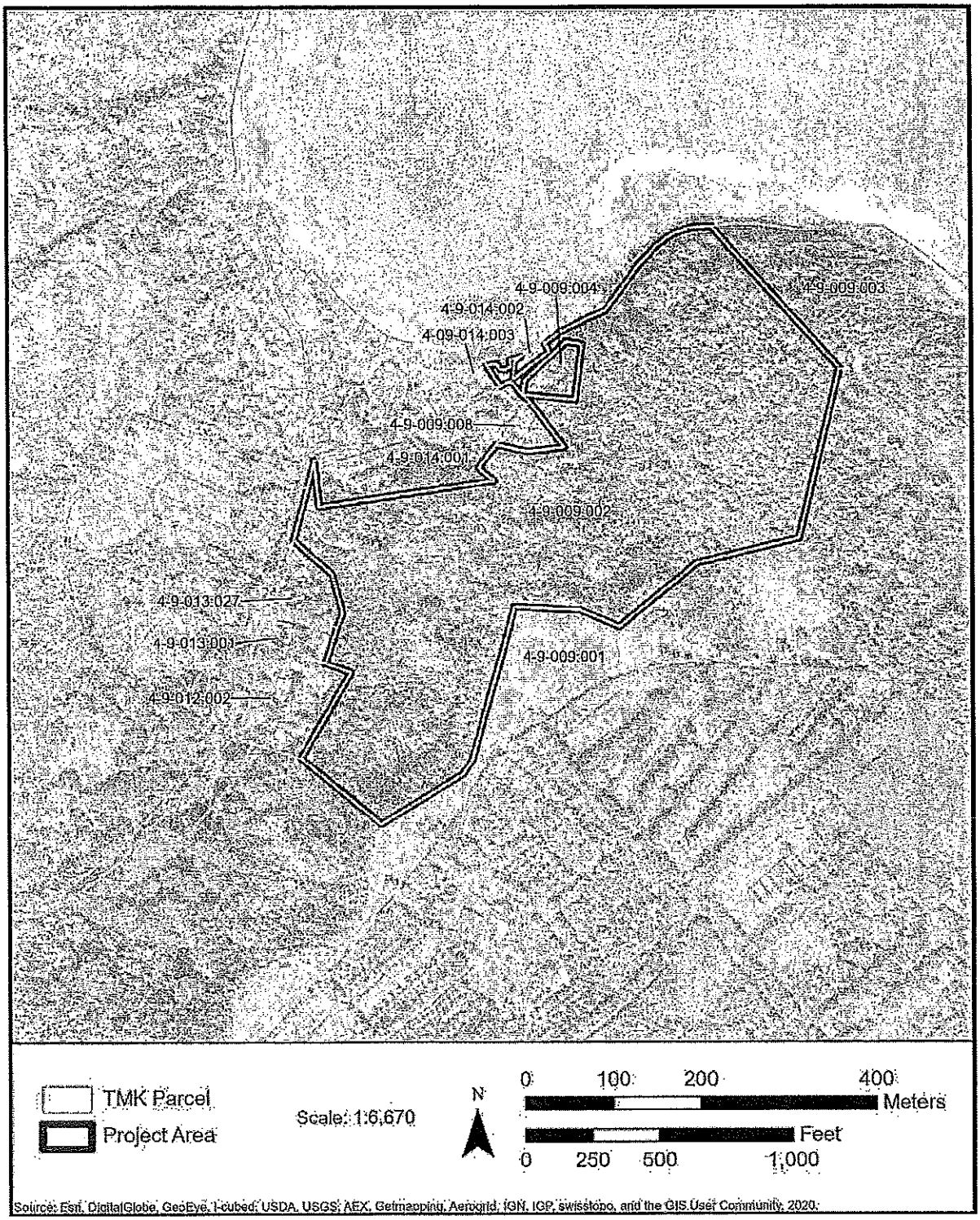

Figure 3. Location of the proposed Estates at Moloa'a Bay Project Area with adjacent TMKs labeled.

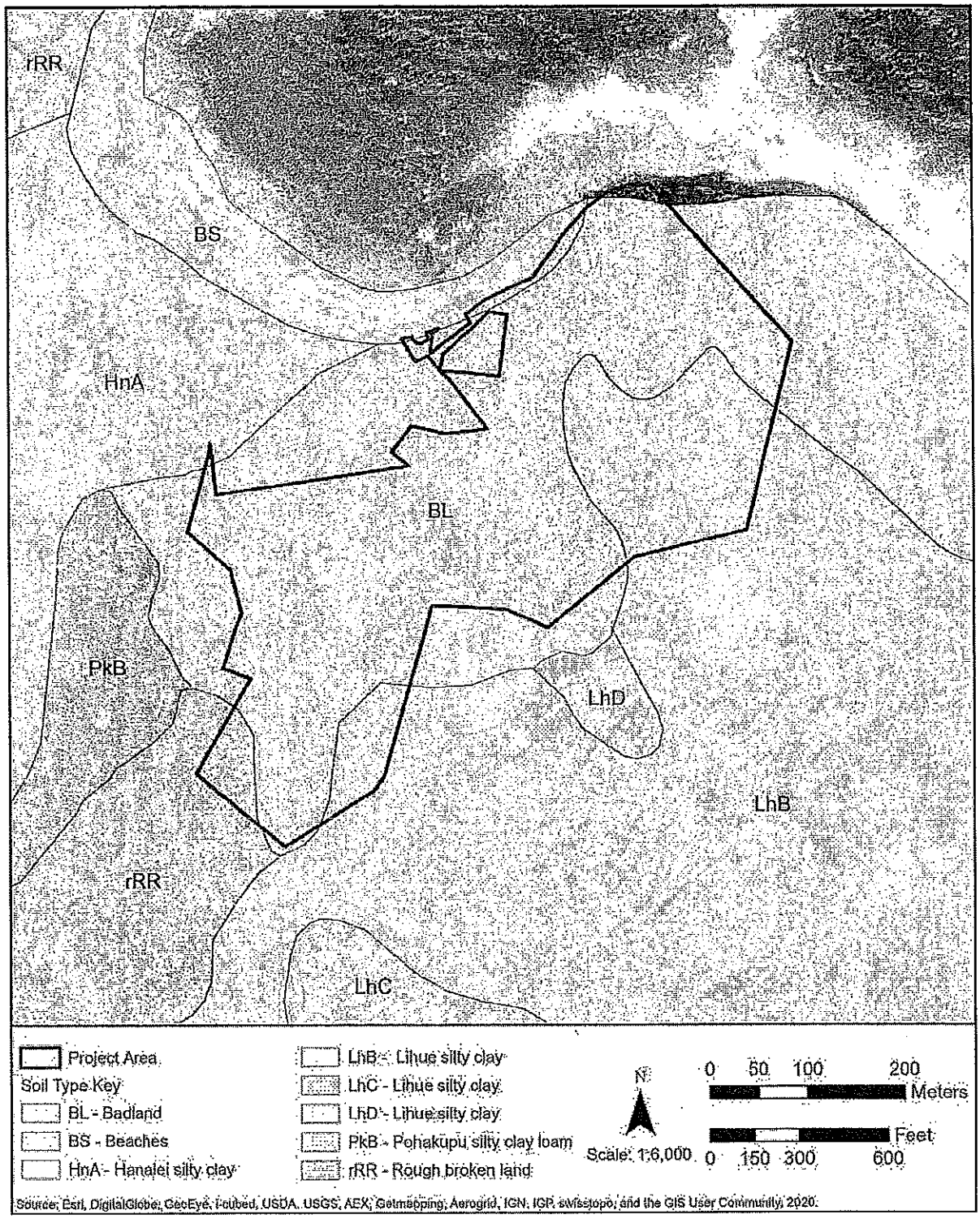

Figure 4. Map of soil types within and around the proposed Estates at Moloa'a Bay Project Area.

2.0 METHODS

The methodology used in the preparation of this CIA followed the Office of Environmental Quality Control's (OEQC's) Guidelines for Assessing Cultural Impacts (OEQC 1997).

2.1 ARCHIVAL AND BACKGROUND RESEARCH

To compile historic background information for this CIA, Pacific Legacy, Inc. consulted previous archaeological studies made available through the Hawai'i State Historic Preservation Division (SHPD) Office, relevant cultural impact studies from the OEQC online library, and 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 Legends Index housed at the University of Hawai'i at Mānoa (https://manoa.hawaii.edu/hawaiiancollection/legends/), and the Hawaiian Electronic Library, Ulukau (https://ulukau.org/index.php?l=en), and the Digital Archives of Hawai'i (https://digitalarchives.hawaii.gov/). Information on Land Commission Awards (LCAs) was obtained from from Waihona 'Āina (https://waihona.com/) and accessed through the Ulukau Māhele Database (https://ulukau.org/cgi-bin/vicki?a=p&p=intro).

2.2 CONSULTATION

Initial letters soliciting participation in the CIA for the proposed Estates at Moloa'a Bay Project were sent via email to individuals, cultural groups, and government entities. Subsequent letters to additional potential CIA participants were mailed throughout the consultation phase as referrals were provided by some of the contacted agencies and individuals. A public notice was also posted to *Ka Wai Ola* for the month of December 2023. A total of 15 individuals provided feedback via email, and four individuals were interviewed either in person or via Zoom. One individual provided feedback via telephone. Section 4.0 includes a list of these recipients, their affiliation with the proposed project area, and participation, if any, in the current CIA. Individuals who requested to have their name or other identifying information withheld are not listed.

3.0 ARCHIVAL AND BACKGROUND RESEARCH

3.1 TRADITIONAL HISTORY

The project area lies in the *ahupua'a* of Moloa'a, which falls within the traditional *moku* (district) of Ko'olau, and the current political district of Kawaihau. According to Mary Kawena Pukui, the name "Moloa'a" comes from the matted roots of the overgrown *wauke* (paper mulberry; *Broussonetia papyrifera*) in the area:

> Keahi [a native of Kauai] and I went over to Kauai and when she was asked [the meaning of Moloa'a] she didn't know...In passing Moloa'a, Keahi pointed to some low hills *mauka* and *makai* of the highway and said "When I was a small girl, I used to come here with my *tutu-wahine* for *wauke*. These hills, now barren, were once so thickly overgrown that the *a'a* (roots) of the *wauke* were *molo* (matted) together, weaving into each other like the meshes of a mat...This was once a great *wauke* growing place...Molo-a'a, Matted-roots. (Pukui as quoted in Handy et al. 1972:422)

A possible alternate spelling of the *ahupua'a* comes from Rice's (1923) *Hawaiian Legends*, which mentions the place name "Molowaa," and translates this to "the Dry-Canoe" (Rice 1923:37). Taylor (1954) also indicates that Moloaa used to be known as Molowaa.

3.1.1 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 Moloa'a Ahupua'a are listed in Table 1, and have been identified through Boundary Commission Testimonies, historic maps, and information received from interviewees. 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 Project Area

Place Name	Description/Significance	Source
Amu	Pu'u	USGS 1963
Big Reef	The larger fringing reef on the Anahola side of the bay, with a good shore break for surfing and home to resources like *limu kohu*, *'opihi*, and lobsters	Information received from interviewees (Damon and Mikkel Boiser)
Ka Lae Amana	Point of land	USGS 1963
Ka'aka'aniu	"Rolling of the coconut"; beach and land section on the plains to the west of the valley, where the highest quality *limu* (seaweed) could be found. Term applied both to the *ahupua'a* and a specific beach to the north of Moloa'a Bay. Also referred to as "Kakaniu."	Wichman 1998:95; Information received from interviewees (Damon and Mikkel Boiser)
Ka'apuna	Appears in Native Testimony for LCA 5109 by Kuihe: "There are 1 large loi, 23 small lois and a house lot in Kaapuna, the moo," and "I have two land claims: one pond or lo'i, very scattered kuakua, named Kaapuna." Translates literally as "wipe pumice [as in cleaning gourd containers]"	NT Vol 12:147; Pukui et al. 1976:61
Kalalea (Ridge)	Ridge along *mauka* boundary of Moloa'a; Hill inland of Anahola, Ka-wai-hau, Kaua'i, which has a conspicuous hole near the top said to have been pecked open by Hulu, a supernatural bird, who wanted to see Anahola on the other side. Hulu could also change himself into man and *mo'o*. Another version, perhaps later, is that the Kaua'i hero, Ka-welo, threw his spear through this hole." (Pukui et al. 1976: 74). According to Beckwith (1970), Kapūnohu cast the spear: "Kemamo makes a good cast, but Kapunohu's spear clears the coconuts at Niumalu, enters the water at Wailua (hence the name Kawelowai) and, dashing up its spray (hence Waiehu), pierces the cliff at Kalalea and goes on to Hanalei" (Beckwith 1970:419). Translated literally as "prominent".	Beckwith 1970:419; Pukui et al. 1976:74
Kaho'opulu	Boundary point; translated literally as "the wetting"	USGS 1963; Pukui et al. 1976:66
Kalaemanu	Point of land	JW March 1954
Kalaeoulu'oma/Uluoma	"Cape of the baked breadfruit"; headland on east side of Moloa'a Bay	Wichman 1998:95
Kalaina	Boundary Point, *pu'u*	SD Tay 1913
Kiala	Royal Patent Grant (RPG) 380 to Joseph Gardner labels this land "Moloaa Kiala"	RPG380
Little Reef	A smaller reef adjacent to "Big Reef," and a prime spot for swimming and spearfishing	Information received from interviewees (Damon and Mikkel Boiser)
Maliu Spring 1	Location plotted as shown on RM 2982, and cited in Lyman and Dega (2016)	RM Towill 1932

Place Name	Description/Significance	Source
Maliu Spring 2	Second possible location for Maliu Spring; "at the foot of Ka-lae-o-ulu-'oma...there is a spring of fresh water in the reef."	Wichman 1998:95-96
Maliu Stream	Stream that runs through the project area.	RM Towill 1932
Moloaʻa	Survey point	USGS 1910
Puʻu ʻAuʻau	Puʻu in northeast Kauaʻi. Translates literally to "bathe."	Pukui et al. 1976: 14; historic and current USGS
Pu'u Ehu	Translated literally as "dust hill"	Pukui et al. 1976:196; historic and current USGS
Puʻu Kauihia	*Pu'u* located on the coast	JW March 1954

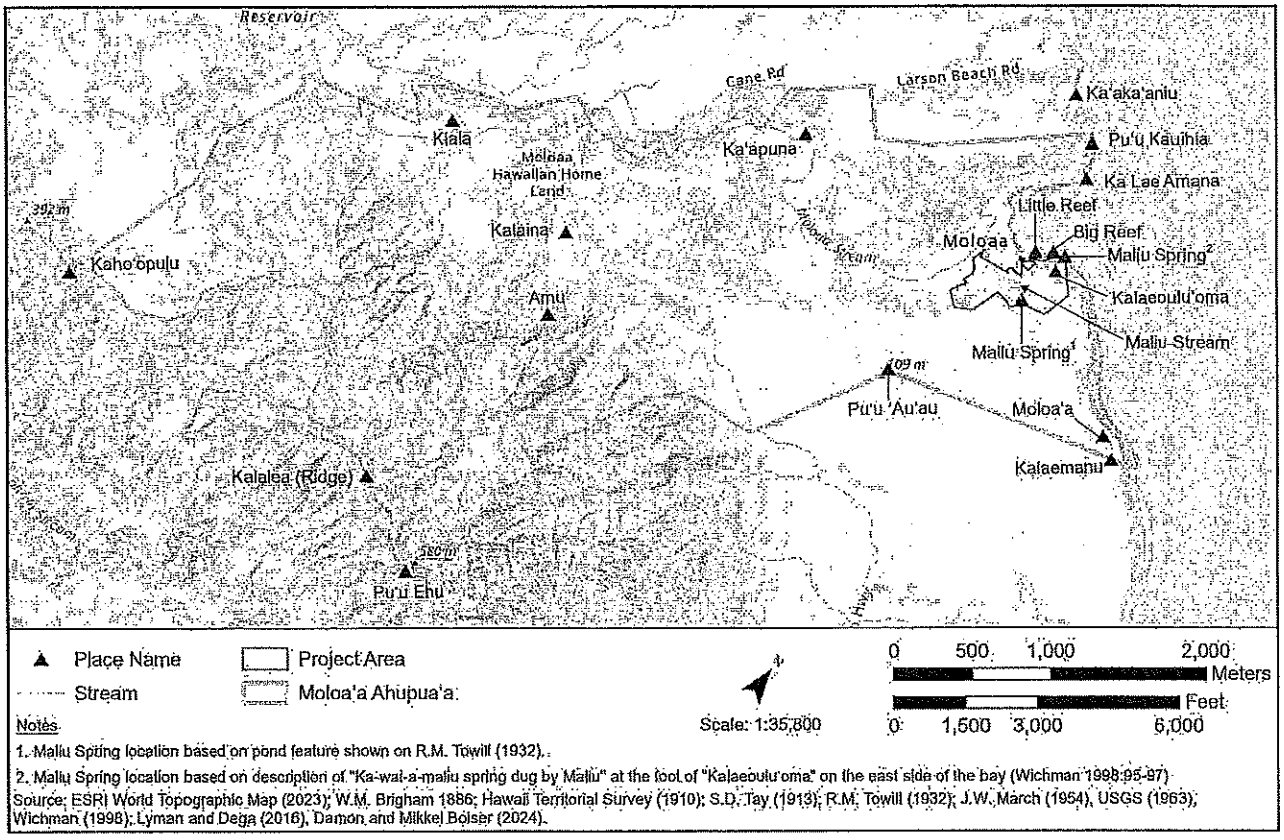

Figure 5. Traditional place names located in Moloa'a Ahupua'a.

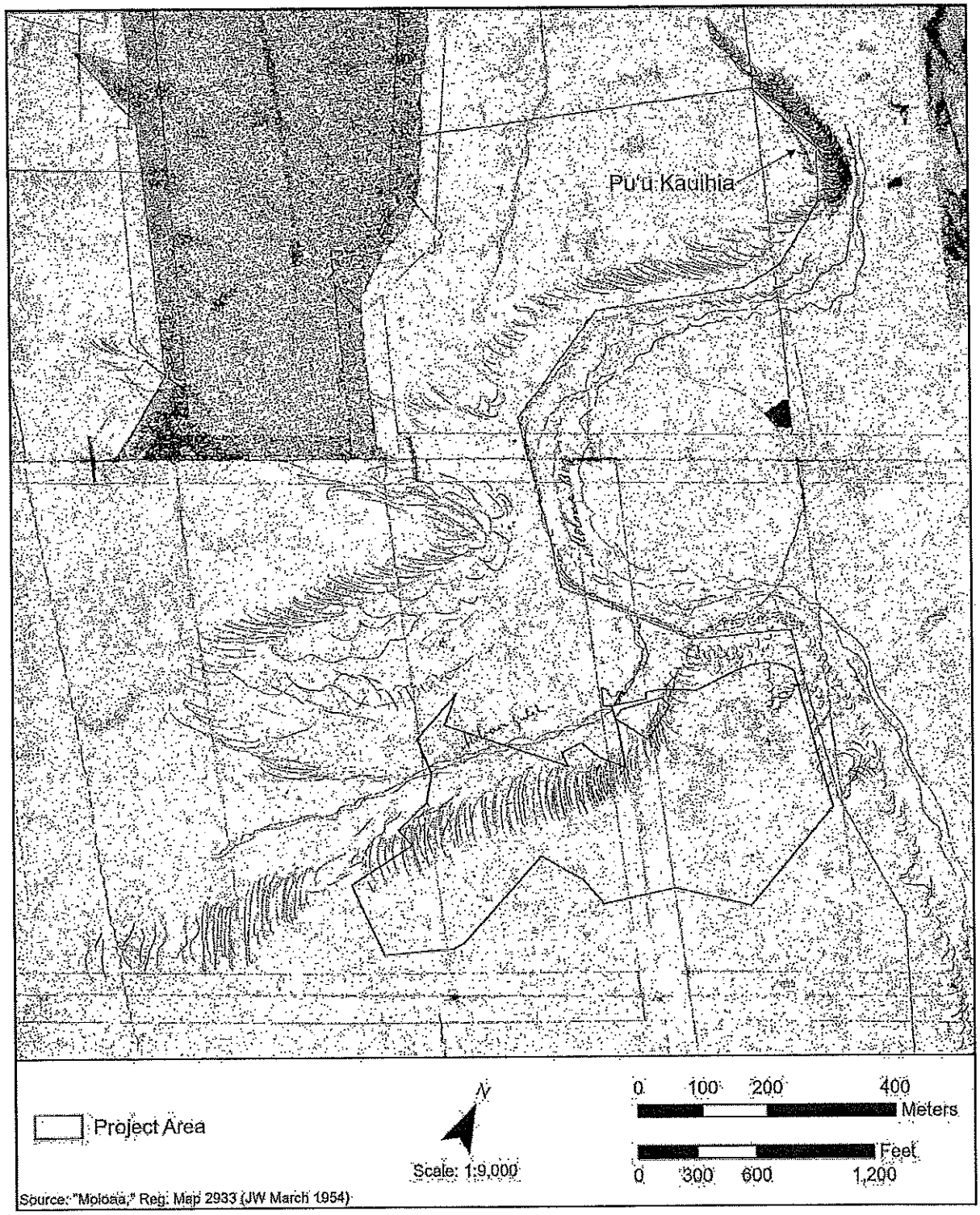

Figure 6. A 1954 map by J.W. March with the proposed Estates at Moloa'a Bay Project Area overlaid, with Pu'u Kauihia, Moloa'a Gulch, and Moloa'a Bay labeled.

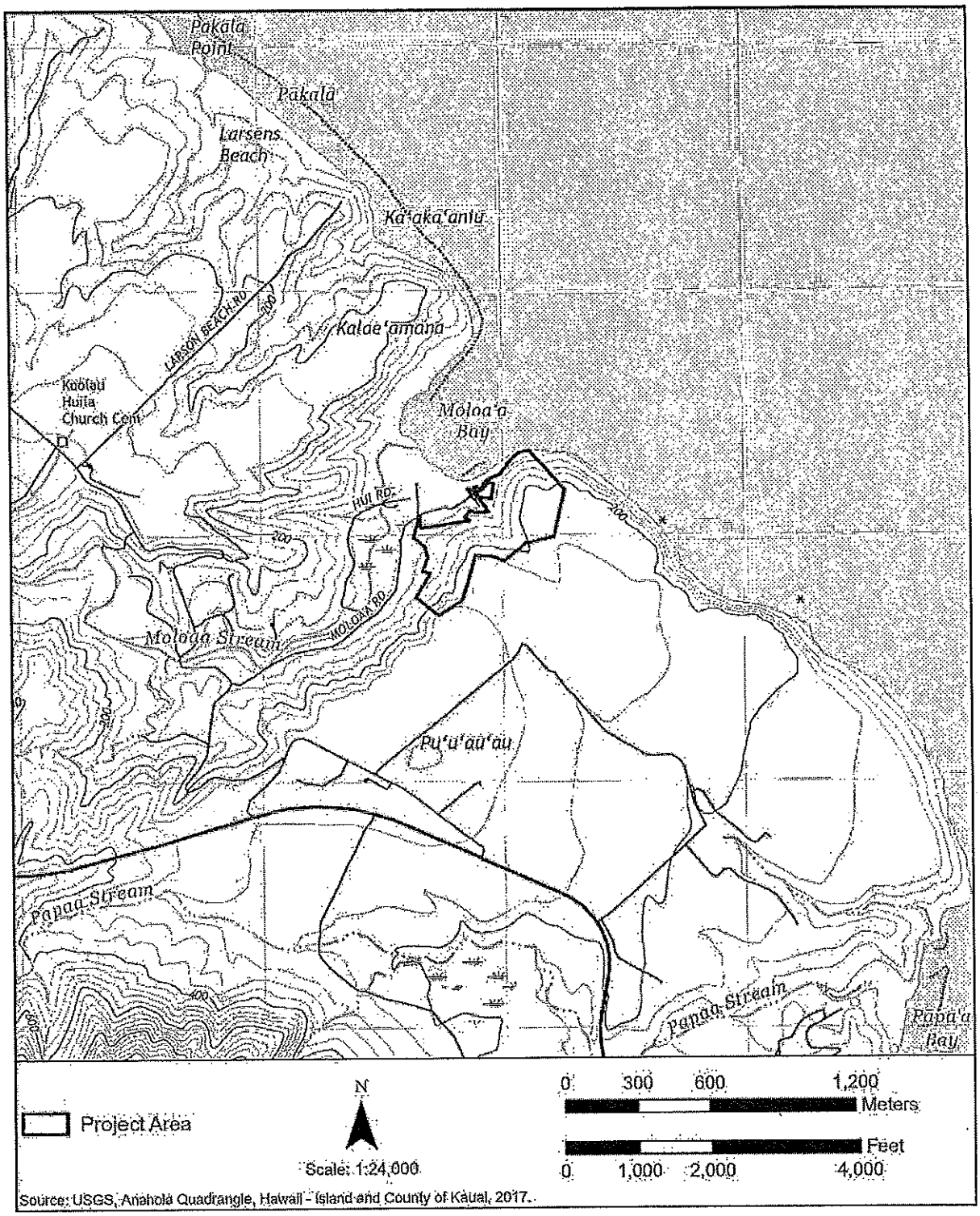

Figure 7. A 2017 USGS map showing the proposed Estates at Moloaʻa Bay Project Area with place names, including Puʻu ʻAuʻau, Kaʻakaʻaniu, and Kalaeʻāmana, labeled.

3.1.2 Mo'olelo

Moloa'a is mentioned in several of the stories recorded by Fornander (1918-1919), including the Legend of Palila, the Legend of Kapunohu, and the Legend of Kuapakaa.

In the Legend of Palila as recounted by Fornander (1918:136), Palila was born in Koloa, Kaua'i, the son of Kaluaopalena and Mahinui, who was the daughter of Hina. Palila was raised by his grandmother Hina, as he had been born in the form of a piece of cord, and was therefore unknown to his parents. However, Hina was able to recognize his birth through supernatural means, and brought him to the temple of Alanapo in Humuula to be raised with the spirits. During this time, Hina would watch the battles between Palila's father, Kaluaopalena, and Namakaokalani over control of Kaua'i. During one of these battles, Hina could sense that Palila was coming down to watch the battle. Moloa'a is mentioned in Hina's instructions to Kaluaopalena:

> You must be on the watch this day. The first warrior who will come to you will be Namakaokalani from Moloaa; don't call him. The second will be Lupeakawaiowainiha, who is a warrior; Don't call him. But, when a warrior comes twirling his war club on the left, that will be Palila, your own son, who comes from the temple of Alanapo. He will be the warrior by whose aid you conquer the whole of Kauai. Call him to you; if perchance he will be pleased with you, you will live; but if he gets angry you will be slain together with your men. (Fornander 1918:136-138)

Fornander went on to relate Kaluaopalena's response when the warrior Namakaokalani first came to him:

> While Palila was on his way to meet Kaluaopalena, Namaokalani the warrior from Moloaa, with his war club, came to meet Kaluaopalena. This war club was so large that it required eighty men to carry it, forty at one end and forty at the other. When Namaokalani arrived in the presence of Kaluaopalena, he stood up his war club, called Kawalowai, in the presence of the people; but Kaluaopalena would not call him to come on his side; he was so ashamed that he thereupon returned to Moloaa. (Fornander 1918:138)

The second warrior to meet Kaluaopalena, Lupeakawaiowainiha, called his war club Kalalea, which shares its name with a storied place in Moloa'a (see Table 1).

The Legend of Kapunohu (Fornander 1918:214-225) details a confrontation between two great warriors, Kapunohu and Kemamo. While Kapunohu dwelled in Lawai, he was told of the fearsome warrior Kemamo and his skill with the sling. Kapunohu insulted Kemamo by saying that the sling was considered to be only a plaything for small boys, and not of any consequence. The two warriors bet their lives on a competition of who could throw the farthest, with Kemamo using his sling and Kapunohu using his spear: "The course over which we shall compete in throwing the stone with the sling, shall be from Koloa to Moloaa in Koolau. We must make our throws over these points and toward Moloaa; whoever throws the greatest distance beyond Moloaa wins" (Fornander 1918:224). Kemamo's sling stone traveled over six miles and stopped at Anahola. Kapunohu's spear traveled past Moloa'a, continuing on through Waiakalua, then Kalihikai, finally stopping at Hanalei. After beating Kemamo, Kapunohu became king of Kaua'i.

Moloa'a is also mentioned briefly in the Legend of Kuapakaa, when he calls the winds of Kaua'i and Niihau: "the kololio is of Moloaa" (Fornander 1918:96). Pukui and Elbert (1986) define *kololio* to mean the same as *kokololio*, which is defined as "sharp, swift wind gust; rapid flowing water; drafty; to blow in gusts, move fast" (Pukui and Elbert 1986:161). They note that *kololio* is a wind associated with Moloa'a, Kaua'i as well as Kīpahulu, Maui (Pukui and Elbert 1986:164).

Ka Ike Hou Ana o ke Kamahele I ka Mokupuni o Kauai, or "The Traveller Sees the Island of Kauai Once More," published in *Ka Nupepa Kuokoa* in December 1913 and translated by Mary Kawena Pukui (HEN Newspapers: December 5, 1913) mentions Moloa'a in reference to Kalalea:

Ke paku makani Kalalea no ke Koolau	A windbreak is Kalalea for Koolau
Moi Aliamanu a Papaaku;	From Aliamanu to Papaa-ku,
Noho ana Uluoma I ka pali o Moloaa	Uluoma dwells on the cliff of Moloaa,
Nahelehele ke kai o ke Koolau	Weedy are the shores of Koolau

(HEN Newspapers: December 5, 1913:1)

Uluoma is mentioned again in the legend of the *menehune* collected by Rice (1923), though here it is said to reside in "Molowaa," translated to mean "Dry-Canoe":

> At Molowaa, the Dry-Canoe, stones were piled up, and a bathing place called Uluoma was made. While the men were bathing there, the *luna,* or head man, saw that one Menehune, named Maliu, was missing. He quickly sent out a searching party. In the meantime the missing one, who had been visiting at some Hawaiian home, saw the searchers, and began digging at the spot where a spring came out from a coral rock. There he was found, and he explained that he had discovered this spring, where they could all drink good water. So his life was spared. The spring was called Ka-wai-a-Maliu, the Water-of-Maliu, and is still to be seen. (Rice 1923:38)

Two newspaper articles from the 1950s also tell of the Menehune beach known as Uluoma, and the missing Menehune Maliu. The name Maliu is also used for the gulch, stream, and spring that cross through the project area (though interviewees generally did not recall using the name "Maliu" for these features). Clarice B. Taylor's "Tales about Hawai'i" series in the *Honolulu Star-Bulletin* notes: "One of the Menehune-made beaches is at Molowaa (Moloaa on today's map) on the northeast shore of the Island. This beach is called Uluoma" (Taylor 1954). Barlow Hardy's "Menehune Who Went AWOL" in the *Honolulu Advertiser* tells a similar version of Maliu's tale, though with more storytelling elaboration:

> And there was one little AWOL Menehune—Maliu was his name—whose life was saved by an unplanned and unexpected accomplishment.
>
> It happened like this. The Menehunes had made a fine swimming beach, called Uluoma, at Moloaa on Kauai's lovely northeast shore.
>
> As the Menehune swam and frolicked one day, the luna noticed that Maliu was missing, and suspected that he was off visiting his Hawaiian friends. The luna ordered a search party to go out and find him.

> When Maliu caught sight of the search party, he knew he'd have to make himself scarce, wikiwiki.
>
> Maliu started digging himself a hole in the soft coral rock in which to hide.
>
> Thanks to the small size of the Menehune, this wasn't too big a project for the limited time available. But as he dug, fresh water spurted up out of the rock.
>
> When the search party came up, there was Maliu industriously digging in the rock with fresh water bubbling up in the excavation.
>
> "See," he said proudly, "I've found a spring!" Well, obviously, he had.
>
> And who was to say whether he had been off visiting Hawaiian friends or selflessly hunting up a fresh water source while his fellow Menehune disported themselves at the beach?
>
> Because of Maliu's fortunate find, his life was spared. And the Menehune luna named the spring Ka-Wai-a-Malu [sic] (the Water of Maliu) as it is known to this day. (Hardy 1957)

Wichman (1998) identifies Ka-lae-o-ulu-ʻoma, the "cape of the baked breadfruit," as a headland on the eastern side of the bay, where there was a spring of fresh water in the reef. He noted that only those who knew the location of Ka-lae-o-ulu-ʻoma could find the "pure sweet water of Ka-wai-a-Maliu, 'spring dug by Maliu'" (Wichman 1998:96). Wichman's version of Maliu's story also adds further elaboration:

> Maliu was a Menehune who had asthma and so did not enjoy the sport of leaping feet first into the ocean after a pebble to catch it before it disappeared in the ocean depths. While his friends played, Maliu wandered the countryside and met a young Hawaiian woman. They fell in love and had a child. It was many months before Maliu was missed, but one day his chief realized he had not seen Maliu for some time. The chief sent all the other Menehune to find Maliu, but with the aid of his wife, Maliu got to the beach undetected and onto the reef where he began digging in a sand-filled hole. Curious, the chief asked what he was doing. "Digging for fresh water," Maliu said. "If there is fresh water, you will live," said the chief. "If not, you will die." Maliu kept digging and soon a gush of fresh, sweet water flowed up. Maliu was saved. (Wichman 1998:96)

A number of Pele sightings in the Moloaʻa area have also been reported, and are recounted by Soboleski (2019). One such story comes from a truck driver by the name of Gilacio Pascual, who was transporting taro from Hanalei to Kapaʻa shortly after Christmas in 1945, and was hailed by "a schoolgirl wearing a black dress with white trim near the old Koʻolau Store on Koʻolau Road." The girl asked Pascual to drive her to the baseball park *makai* of Moloaʻa Camp. Just as he passed the hairpin turn into Moloaʻa Gulch, Pascual noticed that the girl had vanished. He stopped at the baseball park and waited for her, but she never re-appeared. When he shared the story with others, many suggested the girl could be none other than Pele (Soboleski 2019:51-52). According to CIA participants, this same area has also been associated with Kamapuaʻa (see Section 4.3.6).

According to an unpublished series of Pele sightings that occurred in Moloaʻa during the mid-1960s, Pele would also appear as an old, long-haired Hawaiian woman who would walk along

the side of the road and hitchhike between Anahola and Moloaʻa. When drivers offered her a ride, she would vanish after exiting their vehicles (Soboleski 2019:18).

3.1.3 Settlement and Land Use

Bennett's (1931) island-wide archaeological survey did not identify any archaeological sites within the *ahupuaʻa* of Moloaʻa, though three *heiau* were located nearby in the neighboring *ahupuaʻa* of Pāpaʻa and Lepeuli. All three were also described in Thrum's (1907) list of *heiau* for the island of Kauaʻi. Pāpaʻa Heiau was described by Thrum as "A walled heiau 60x80 feet in size; Kamohoalii its deity. Now used as a cattle pen" (Thrum 1907:42). Bennett further added that the *heiau* had been fully converted into a cattle pen, with the original internal divisions destroyed. It was described as being of irregular shape with an entryway cut in the wall facing inland, square corners, and walls measuring roughly 4 feet high and 5 feet wide (Bennett 1931:131). Puwouwou, also in Pāpaʻa, was located on the top of a hill mapped as "Puu Auau," and had been known to some as a place of refuge. However, Bennett (1931) noted that the *heiau* had been completely destroyed and the land cleared for pineapple agriculture. Kapuaa Heiau in Lepeuli likewise appears to have been destroyed by the early 1900s. Thrum describes Kapuaa as "A round heiau 50 feet in diameter, paved, walls 4 feet high; still to be seen. Class unknown" (Thrum 1907:42). Bennett (1931) added that the *heiau* was said to have been located on a small knoll, a few hundred feet behind the Japanese school that was active at the time. Bennett speculated that the *heiau* may have been round in form, in order to follow the contour of the knoll.

Handy et al. (1972) observed that Moloaʻa had a three-mile long stream, which watered the agricultural terraces along the valley, particularly within the inland flat of the bay. Breadfruit and sweet potatoes were grown in the sandy humus near the shore. They noted that breadfruit was still growing in this area by 1935, though the *loʻi* that used to lie further upstream had all dried out due to post-Contact deforestation and cattle ranching (Handy et al., 1972:422).

Handy (1940) described the Moloaʻa landscape as follows:

> Moloaa Stream watered a considerable area of small terraces along its 3-mile course. The half mile of flatlands along the stream inland from the bay is now planted in rice. Near the seashore the soil is composed of sand mixed with humus and is especially suited to sweet potatoes. Several terraces under cultivation in taro were observed below the highway about a mile upstream from the little bay. The rest of the old *kuleana* are abandoned to scrub and wild plum. A few breadfruit grow in an abandoned *kuleana* near the highway. The whole upper valley, which used to be famous for its taro, appears to be very dry now. (Handy 1940:70)

Handy (1940) also cites a *kukui* (candlenut; *Aleurites moluccana*) grove in Moloaʻa called Kauhakake, "where grand old trees are still standing, survivors of a once great forest" (Handy 1940:195). Elsewhere, Kauhakake has been identified as a sacred kukui grove and meeting place for chiefs on Kauaʻi (Hughes 2014:26). Handy (1940) relates a memory from Keahi Luahine of going with her grandmother to Moloaa to collect *wauke* (paper mulberry; *Broussonetia papyrifera*) for tapa making, and the dense *wauke* growing on the valley slope.

Marine resources were plentiful in Moloaʻa Bay, which held rich nearshore and reef ecosystems, and was renowned for the high quality of its *limu* (seaweed), particularly the *limu kohu* (a red algae; *Asparagopsis taxiformis*):

> Moloa'a is still famous for the quality of its edible *limu* (seaweed). The *limu kohu* was brought here from South Kohala, on the island of Hawai'i by a chief of that place. The *limu* was placed under *kapu* and strictly reserved for the use of the *ali'i nui*. A beach and land section on the plains to the west of the valley is Ka'aka'a-niu, "rolling of the coconut," where the quality of seaweed was considered the finest on the island. (Wichman 1998:95)

According to Abbott (1992) *limu kohu* is especially associated with Kaua'i, and is also referred to as *limu līpehe* or *limu koko*. It is generally found on basalt or limestone reefs which have moderate to considerable surf, and was rarely harvested during the winter. Given its seasonal availability, *limu kohu* was sometimes heavily salted to extend its preservation (Abbott 1992:46-48).

Reed (1907) discusses the practice of not just gathering, but actively cultivating, *limu kohu* "gardens" in Moloa'a, particularly through the weeding out of other algae. Cultivation and export of *limu kohu* to Honolulu became a source of income for Hawaiians in Moloa'a into the early twentieth century:

> Here limu kohu grows very luxuriantly over the entire reef, and is the finest in color and flavor found on this group of islands.
>
> There is a small cove just beyond Moloaa Bay to the northward, which is partly protected from the heavy trade winds and southerly storms by bold, rocky bluffs or headlands. The coral reef extends from the shore out perhaps a half mile and beyond the headlands, so that the whole cove has rather shallow water. The coral rock, the usual haunt of the limu kohu, is in this place somewhat protected from storms, so the natives can gather this limu almost any time of the year, when the tide is low, without danger from heavy breakers.
>
> The Hawaiians living at Moloaa gather limu kohu for the Honolulu market regularly, making a nice little income from its sale, as they furnish the larger share of the supply. It is here that these limu gatherers have attempted to increase their sales by caring for their seaweed to the extent of weeding out all the other algae, and thus, no doubt, increasing the quality and quantity of limu kohu, which here is so much finer and more luxuriant than in any other place. This is the only place of which the writer has heard where the limu is actually weeded and cared for as a garden.
>
> (Reed 1907:73)

The relatively calm, protected bay in Moloa'a would have been an especially cherished location, since elsewhere *limu kohu* tends to grow in more exposed rock or coral reef locations that are challenging to access, particularly during the more stormy winter months.

Reed reported an annual sale of 4,800 pounds of *limu* valued at around $2,500, of which 2,000 pounds was *limu kohu*, itself worth roughly $1,000. The *limu kohu* was pounded finely and pressed into balls around the size of a large baseball, which weighed roughly one pound. The balls of *limu* were packed with salt for shipment to Honolulu, and sold—largely to other Hawaiians—for $.25 each (Reed 1907:74).

Those interviewed for a previous CIA in Moloa'a (Mann et al. 2005) also highlighted the significance of *limu kohu* in Moloa'a Bay. Mark Boiser discussed visiting Moloa'a Bay and Moloa'a Stream with his grandmother to fish and gather marine resources. He noted the importance of *limu kohu* and observed a recent decline in marine resources caused by

mechanical clearing activities (Boiser in Mann et al. 2005:27). Herbert Silva, Jr. recalled his father casting fishing lines and picking *limu kohu* during his childhood, and noted that Moloaʻa Bay was a rich source for *limu kohu* (Silva in Mann et al. 2005:27). Isabella Ai Ida recalled that during the summer she would gather *limu kohu* in Moloaʻa Bay with her grandfather and sell it to local markets in gallon jars. The money she made from this endeavor helped pay her tuition to Kamehameha Schools (Ida in Mann et al. 2005:29).

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. The subsequent centuries are often referred to as the 'post-Contact', 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 The Catholic Mission

Extracts from the journal of an unnamed early merchant official from 1842 describe Moloaʻa as a beautiful valley and "the very place for one who might wish to turn hermit" (Thrum 1905:100).

In 1841, Catholic missionaries began efforts to expand Catholicism into Kauaʻi Island. Father Walsh, an Irish Catholic priest who had previously been on Hawaiʻi Island, traveled to Koloa in December 1841 with the aim of first establishing a small Catholic school. Shortly thereafter, he made a trip to Hanalei and on his return, stayed the night in Moloaʻa at the house of the *konohiki*, Luapele. During his time in Moloaʻa, he recorded the names of 34 Hawaiian people who were interested in learning more about the Catholic faith. Soon after, Walsh moved to Moloaʻa and began a Catholic school, which met with some opposition. According to Yzendoorn:

> This Father Walsh promised to do, but on his return to Koloa he found there a number of persons from Moloaa, who so strongly insisted that the young priest should establish himself in their village, that Father Walsh thought best to yield to their entreaties. As a guarantee they took along part of the luggage of their newly appointed pastor, who joined them on the 8th of February, and having neither church, nor school, nor dwelling place, took up his residence in the house of the friendly konohiki. A school, however, was soon started, and with it began the opposition. On the 18th of February, Father Barnabé reported to his superior that the school inspector, who also was tax collector and judge, had tabooed the sea and the mountain for those parents who were about to send their children to the Catholic school; they were not even allowed to take from their land the taro they themselves had planted. (Yzendoorn 1927:176)

When Father Walsh next traveled to Moloaʻa, he found that some of the Catholic converts had been subject to harassment, including a policeman and a work overseer who had been removed

from their jobs for attending Catholic services. Yzendoorn (1927) describes frequent tension and "petty annoyances" between the converted Catholics and the island's authorities, for example in refusing to grant marriage licenses or refusing land for the construction of Catholic mission buildings. Despite this, in April of 1842, Father Walsh administered the sacrament to 112 adults in Moloaʻa. In September, a visit from the general school inspector to the school at Moloaʻa provides some insight into education and activities for the children at the Catholic school:

> Four days later he similarly inspected the Catholic school at Moloaa. There the children were examined in reading and arithmetic, in both of which branches they showed efficiency. Their writing was not found to be of the best. Particular care had been taken at this school to instruct the girls in spinning, and during the examination they spun whilst singing. The inspector applauded the teacher and pupils, and dwelt particularly on the advantages they might derive from their knowledge of spinning. There also he appointed three school trustees and took occasion to inform Father Walsh that he might select a piece of land at Koloa whereupon to build his school. (Yzendoorn 1927:178)

St. Stephen's Catholic Church was constructed in Moloaʻa "as early as 1854" (Damon 1931:340). The footprint of the church was reported to measure 62 by 21 feet, and it was presided over by Father Denis (Damon 1931).

William DeWitt Alexander made mention in his journal of the Catholic presence in Moloaʻa during his 1849 tour:

> About five miles from Anahola we crossed Molowa [Moloaa] valley a most beautiful spot. There is a village here, in which a Catholic priest resides, the inhabitants of which are mostly Catholics. The country near this place has been lately burnt over, but the vegetation is springing up anew. A ride of five miles from this valley over hill, and dale, brought us to a grove of venerable kukui trees. Their spreading branches, interwoven, and interlaced with each other, form a fine natural canopy overhead, & the grass a carpet under our feet, making this a pleasant place for holding meetings. Mr. Johnson pointed out the place where my father used to stand when preaching. The natives call the place Kauhakuku. Here we stopped to rest our horses, & had a fine bath in the adjoining valley beneath a cascade which answered the purpose of a shower bath. There are several large orange trees in this valley. An old man living near by, made us a present of a water melon which was very refreshing. A little farther on we entered groves of hala, through which we continued to ride during the rest of our journey. (Alexander 1849 as printed in Kauai Historical Society 1991:124)

It is possible that the place Alexander refers to as 'Kauhakuku' may be the same as the sacred *kukui* grove, Kauhakake, which is described by Handy (1940).

3.2.2 The Mahele

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 which 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 (*mahele*) of the kingdom's lands; this became known as the Mahele. The initial *mahele*, which transpired between January 27 and March 7 of 1848, involved the division of the lands between the king and approximately 250 *ali'i* and *konohiki*, wherein the king selected lands he would personally retain and quitclaimed all rights to the remaining land, and the *ali'i* did the same. The 1848 Mahele 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" (i.e., the *Buke Mahele*, or Mahele Book). These land claims only involved the larger land divisions consisting of *ahupua'a* and *'ili kūpono* (*'ili* situated within an *ahupua'a* but independent from it).

After the 1848 Mahele, 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 *ali'i* ended up with between 56-74% of their original holdings, and these lands became known as "Konohiki Lands" (Kame'eleihiwa 1992:219). Notably, during the initial *mahele*, land surveys defining the boundaries of the *ahupua'a* and *'ili 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 *ahupua'a* and *'ili kūpono* award recipients were required to present land surveys for confirmation.

Soon after the 1848 Mahele, 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 *maka'āinana* 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 Hawai'i, 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 'Ōlelo Hawai'i (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 *maka'āinana* were not awarded or claimed, resulting in only 28,658 acres being distributed

to the *maka'āinana* (Kame'eleihiwa 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 *ali'i nui* and *ali'i* participated in the Mahele (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 (Kame'eleihiwa 1992).

3.2.3 Moloa'a in the Late Nineteenth Century and Onward

Most of Moloa'a Ahupua'a was retained and designated as Crown Land. Information on LCAs was found from Waihona 'Āina, whose records were accessed through the Ulukau Māhele Database. A total of 22 LCA claims were found for Moloa'a Ahupua'a, though full claim documents could not be located for most database entries. A brief summary of all claims can be found in Table 2. The original LCA texts, as transliterated by AVA Konohiki, are listed in Appendix A along with English translations by Waihona 'Āina when available.

A number of LCA claims are located near, or share a border with, the project area (Figure 8 through Figure 10).

One of the claims (LCA 2668) was awarded to R.A. Walsh on behalf of the Roman Catholic Mission, which maintained an active presence in Moloa'a since the first arrival of Catholic missionaries to Kaua'i Island. An excerpt from this LCA, which also included some lands in East Koloa, describes the location of the Catholic Mission in Moloa'a:

> I got another spot of land from Amelia Keaweamahi when Governess of this island, in the village of Moloaa by near the sea, whereon Revd Mr. Maudet resides at present and has his chapel. This spot contains something less than two acres, and is situated north and east of the Hanalei road through Moloaa and is fenced by [a] hau fence. May I request you to present the Board with a petition to confirm a right to this also.
>
> Should you require further explanations I refer you to Kalama, who is perfectly acquainted with these spots of land, and will give any necessary information.
> Kauai Koloa 27 Dec. 1847
> Signed &c &c
> R.A. WALSH
>
> P.S. it is immaterial whether the right is confirmed personally to Mr. Maudet and me or to the Catholic Mission, in the event of the right being granted to these lands.
>
> (LCA No. 2668, [Roman Catholic Mission], R.A. Walsh, Foreign Register Volume 3, Page 157)

There are no LCAs within the current project area. However, this parcel formed a portion of the later established Moloaa Hui Lands, which combined a number of LCA parcels and privately owned lands, and was later subdivided again into individual parcels (see Figure 13).

Table 2. Land Claim Awards associated with Moloa'a Ahupua'a. (Brief descriptions provided for testimonies that have been translated to English. See Appendix A for available award testimonies in Hawaiian and English)

Claimant Name	Helu / Claim No.	Description	Source
Fortin, Constance	Grant 1725	Granted a total of 3.3 acres in 1855.	Kipuka Database
Gardner, Joseph	Grant 380	33.47 acres granted in 1850. Labelled "Moloaa Kiala."	Kipuka Database
Hohe/Hoopi	9800, 9800-B	Not awarded. Land claim documents state that Hohe/Hoopi died and his land was returned to the Konohiki to be given to another tenant.	Waihona 'Āina
Hoolili	239-B, R.P. 6736	-	Waihona 'Āina
Inoa	238-Z	-	Waihona 'Āina
Kaaa	238-Q, R.P. 6737	-	Waihona 'Āina
Kahele	Grant 1890:1	A portion of 0.42 acres granted in 1855.	Kipuka Database
Kahele	Grant 1890:2	A portion of 0.42 acres granted in 1855.	Kipuka Database
Kahelahaole/ Kahilahaole	238-K, R.P. 7130	-	Waihona 'Āina
Kalawa	9149	-	RM Towill 1931
Kalamanu	Grant 2014:1	A portion of 1.59 acres granted in 1856.	Kipuka Database
Kalamanu	Grant 2014:2	A portion of 1.59 acres granted in 1856.	Kipuka Database
Kalamanu	Grant 2014:3	A portion of 1.59 acres granted in 1856.	Kipuka Database
Kamakapu	Grant 2016:3	Granted a total of 1.26 acres in 1856.	Kipuka Database
Kanakaiki	238-L, R.P. 7422	-	Waihona 'Āina
Kane, Achi, Armstrong, Alapai (Own.)	239-?	-	RM Towill 1931
Kaneiki	238-O, R.P. 8658	-	Waihona 'Āina
Kauakahi/Keaukahi	238-M, R.P. 3842	Five sections in Moloaa, three containing taro land with *lo'i*, one a house lot containing two houses, and one a planting area.	Waihona 'Āina
Kaukini	238-R, R.P. 6288	-	Waihona 'Āina
Kauwai	3578	-	Waihona 'Āina
Kauwika	238-N	-	Waihona 'Āina
Konohia/Hohe	9799, R.P. 7423	Three sections of land, including a house lot, 15 *lo'i*, and pasture lands.	Waihona 'Āina
Kowalo	9073	-	Lydgate 1916

Claimant Name	Helu / Claim No.	Description	Source
Kuihe	5109, R.P. 7424	A single parcel consisting of a house lot, 1 large and 23 small *lo'i*, and *kula* lands where *wauke*, *noni*, and other plants were cultivated.	Waihona 'Āina
Luuloa	10020	A *kula* for cultivating *wauke*.	Waihona 'Āina
Maudet, D.	Grant 1430	Granted in 1854.	Kipuka Database
Moopuna	238-Y, R.P. 3758	-	Waihona 'Āina
Onioni	238-X	-	Waihona 'Āina
Pihe	240-H, R.P. 6626	-	RM Towill 1931; Waihona 'Āina
Puhiu	5337-B	-	Waihona 'Āina
Roman Catholic Mission/Denis Maudet and Robert A. Walsh	2668, R.P. 7642	Less than two acres of land located northeast of the Hanalei Road through Moloa'a, lined with hau fencing.	Waihona 'Āina
Rouxel, Edward B.	Grant 549	Granted 33.25 acres in 1851.	Kipuka Database
Smith, James W.	Grant 535	567.7 acres granted in 1851. According to Kipuka, "Both RM2978 & 2980 show that kuleana 9073:1 & 2 to Kowelo remain unlocated w/n this parcel." The former location of Pu'u 'Au'au (SIHP 50-30-04-00125) is also within this parcel.	Kipuka Database

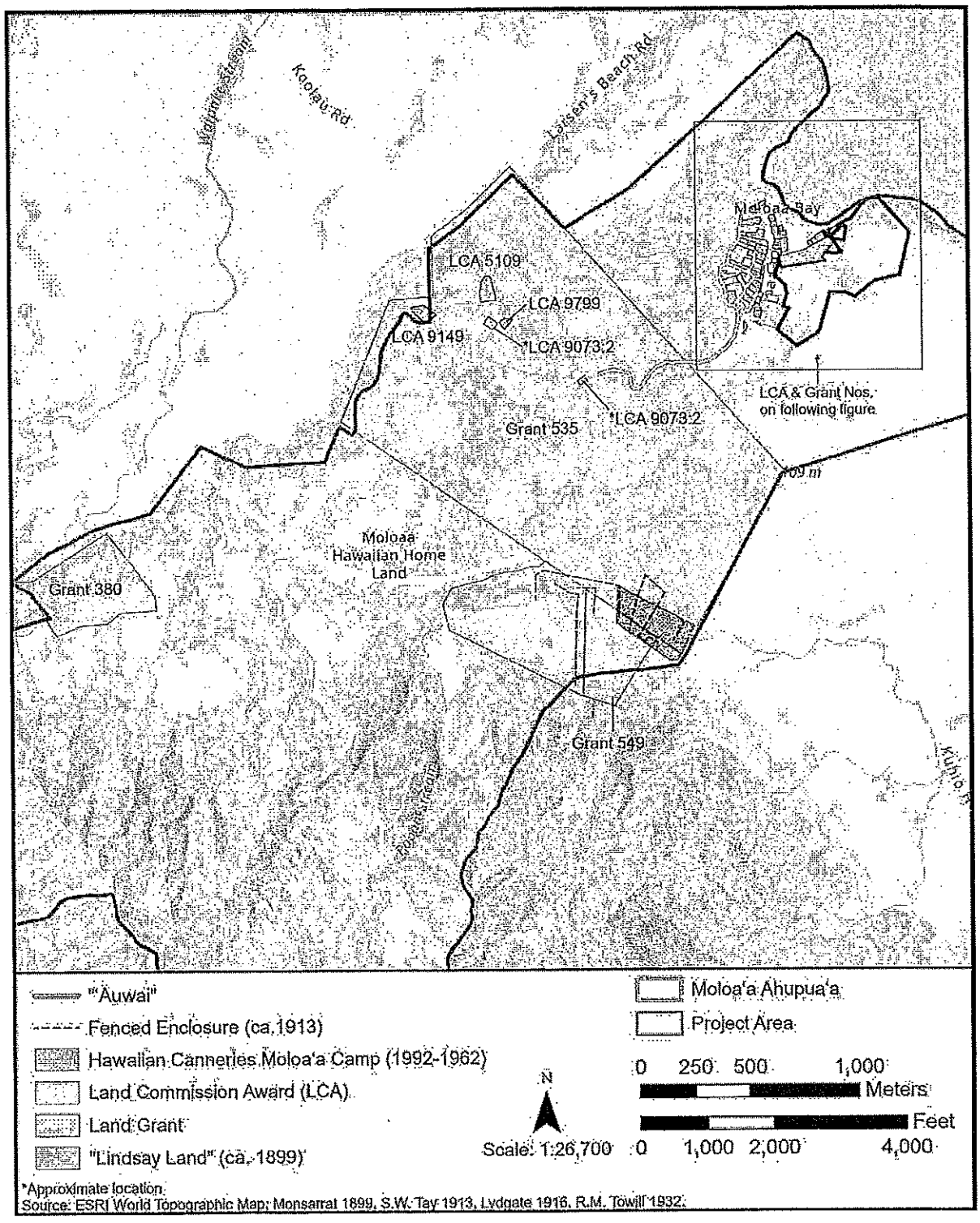

Figure 8. Map of LCAs, Land Grants, and other post-Contact features identified through archival research.

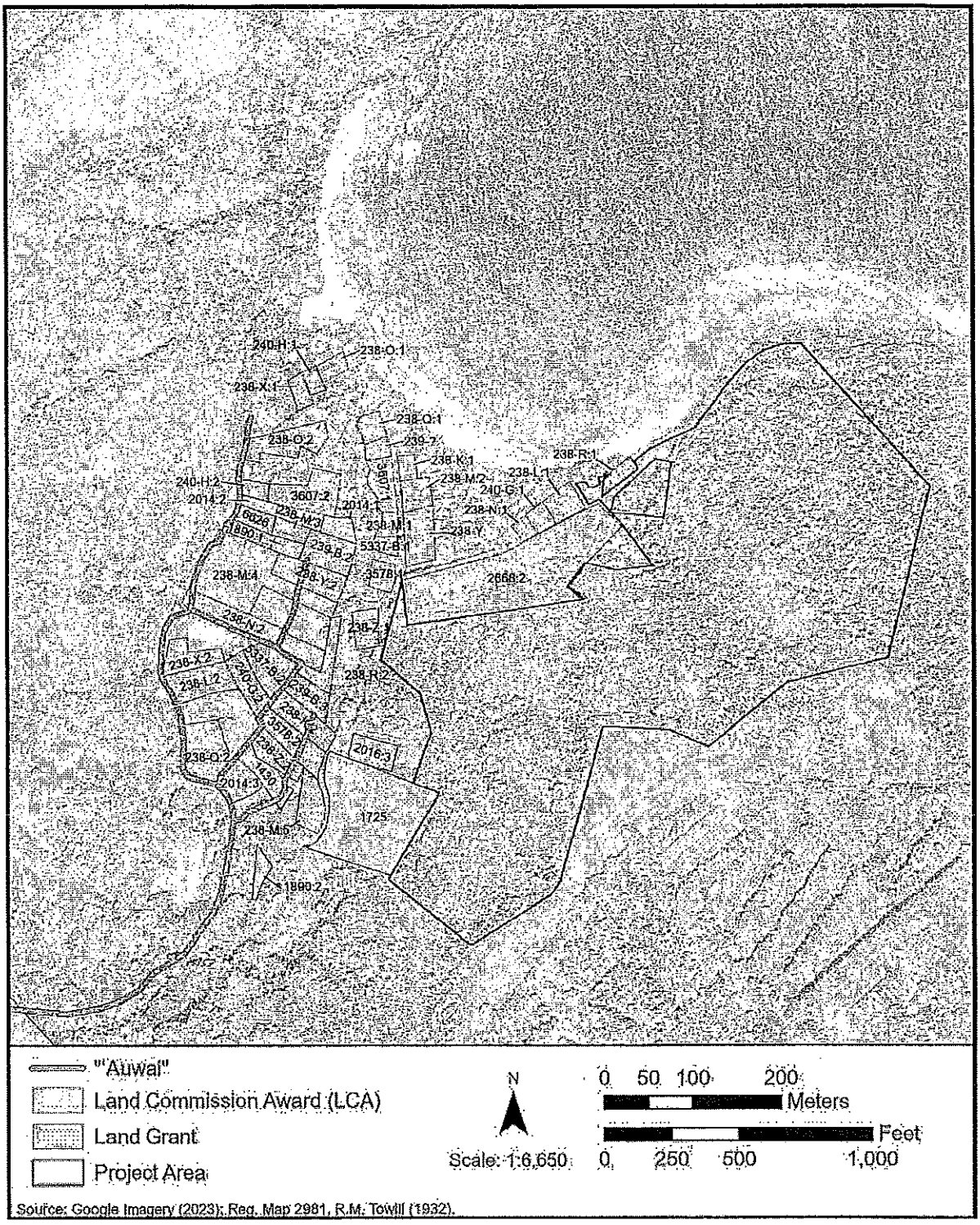

Figure 9. Map of LCAs and Land Grants identified in the nearby vicinity of the project area.

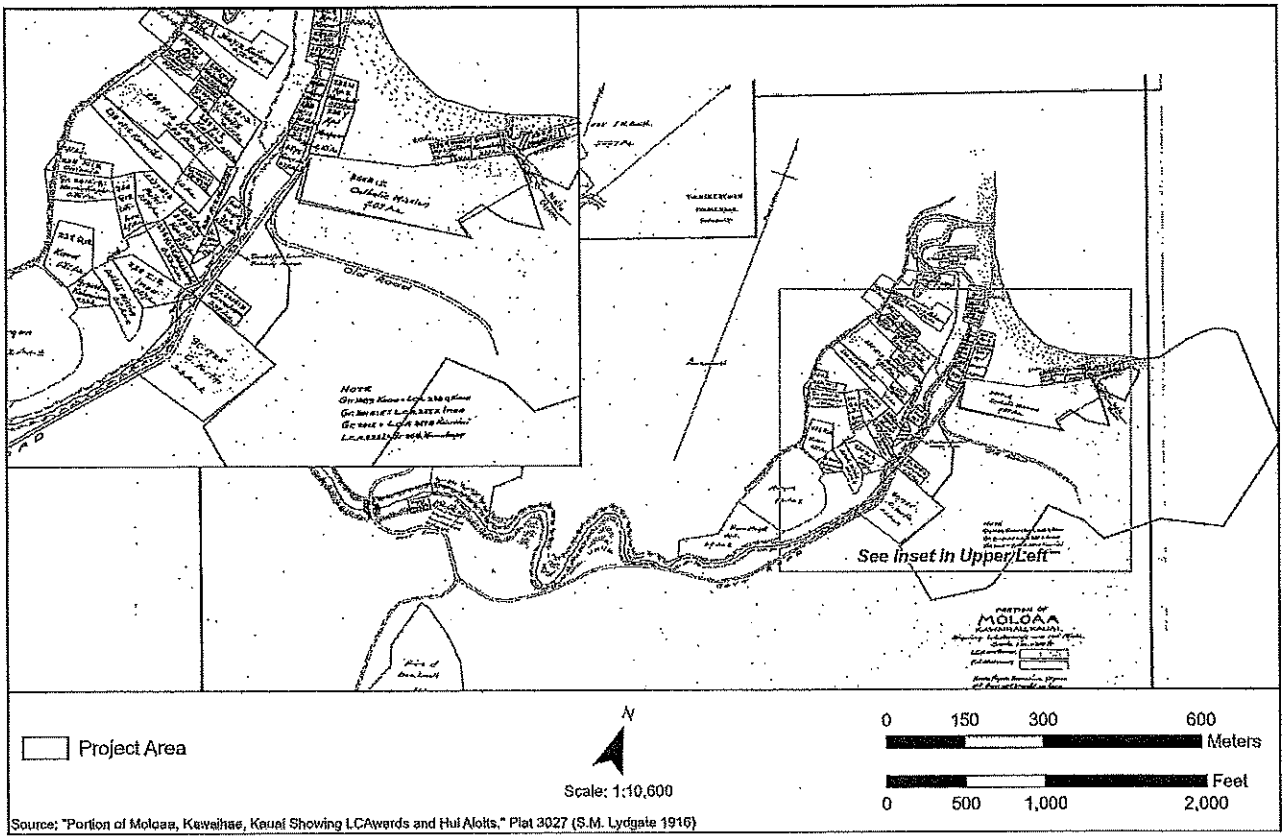

Figure 10. 1916 map by S.M. Lydgate showing LCAs and *hui* allotments.

3.2.4 The Moloaa Hui Lands

Reference is frequently made to a tract of land known as the Moloaa Hui Lands, or the old Moloaa Hui Lands. According to Damon (1931), the impetus for organizing the Moloaa Hui was brought about by Judge Widemann's desire to sell a large parcel of land in Moloa'a. Shortly after the Mahele, the king's Privy Council determined to set aside some of the government lands in support of higher education. In 1860, the government endowed "more than 2,000 acres in the valleys of Papaa and Moloa'a on East Kauai" to Punahou School (Damon 1931:590). Shortly thereafter, "In 1861 Mr. Widemann of Lihue bought practically the entire Kauai land grant of 2,262 acres for $1833.33 from the trustees of Punahou, perhaps with the intention of using it as a cattle and sheep ranch, according to Mr. Lydgate's surmise" (Damon 1931:590). Widemann's ranch apparently proved unsuccessful. He organized the Moloaa Hui to divide the land into smaller shares, in order to sell it to Hawaiians in the region for $100 per share (Damon 1931:590).

In 1914, George Hamlin Fitch, the literary editor for the San Francisco Chronicle, visited Kaua'i and described the Moloaa Hui Lands and surroundings as such:

> Then we came to the Kapaa flats, with a curious village of several nationalities, and with the deep emerald green of rice fields, with the lighter green of the sugar cane patches on the highlands above. Beyond are the lands of the Moloaa hui, a native Hawaiian community which obtained possession of a large tract of good farming land but has done little to develop it. Near by are groves of splendid kukui trees, which are of great age and beauty. (*Honolulu Star-Bulletin* April 15, 1914)

Despite Fitch's observation that "little" had been done to develop this area, other contemporary writings discuss the agricultural and other homesteading activities on these lands. For instance, a 1918 homesteading bulletin reported the successful growing of corn on several plots of land in Moloa'a, including by Joseph Kapule in Moloa'a Hui lands:

> Joseph Kapule of Moloaa, has just completed a planting of corn on his clearing in the Moloaa Hui lands. Although he has fenced about 12 acres of land here, he has been able to plant only about a third of it so far. Kapule is anxious to go ahead, with the intention of getting the entire enclosure under cultivation this winter, but lack of equipment and labor is holding him back. (Sahr 1918)

The Moloaa Hui Lands is mentioned briefly in an entry from Thrum's *Hawaiian Annual* (1924) that summarizes the efforts of the Wainiha Electric Power Plant to secure water rights in an arrangement with the Wainiha Hui. This brief discussion provides some insight into the challenges faced by the members of the Moloaa Hui with the incursion of large business interests:

> He sat down midst such a murmur of approval that Willie saw was hopelessly against him, so he determined on a change of base. "Yes, yes, what the father from Haena says is right! Let the haole have what he wants, but get a decent price for it! I move, Mr. President, that we hold out for $15,000 and take not a cent less. The Moloaa Hui was to get $10,000 for their lands, and only ordinary land, with no water and no mana of any kind."

> "And why didn't they get the $10,000?" broke in Kakina, "because you and others like you hung back for more, until the chance went by, and Moloaa is now a worthless jungle of lantana." (Thrum 1924:110)

A five-part series by Leslie Watson, Civil Engineer and Superintendent of Lands for Alexander & Baldwin, which ran in the *Honolulu Star-Bulletin* in December of 1932 attempted to provide an overview of the complicated history of land law in Hawai'i as it related to Hawaiian *hui* lands (Watson 1932a-e). Watson describes the Hawaiian land hui as an ownership structure designed to continue pre-Mahele structures of communal land tenure and traditional practices, as Hawaiian tenants were able to maintain group stewardship of a large tract of land rather than divvy these areas up into small, individually-owned parcels. These parcels could range anywhere from 30 to 2,500+ acres, depending on the number of members. The larger-scale, organized *hui* lands were managed by an association, which represented all tenants in common under a single deed. These associations had by-laws which would govern such things as acreage allotments, house lots and garden plots, rules governing shared resources like pasturage, forest lands, and fisheries (Watson 1932b). A 1901 public notice regarding a special meeting for the Hui Land of Moloaa posted in *The Honolulu Advertiser* identifies C. B. Makee as the manager and Jas H.H. Kaiwi as the secretary for the Hui Lands, and that the Hui had begun considering leasing its lands during this time (Figure 11).

The desire to lease *hui* lands for pineapple or sugarcane agriculture precipitated the dissolution of many of these collectively-stewarded parcels. In the early 1920s, a lawsuit between the board of directors and a member of Peahi Hui over the leasing of *hui* lands for pineapple agriculture led to a supreme court decision which Watson referred to as "the death knell of Hawaiian hui lands." This decision ruled that the *hui* itself and its board of directors were not legal entities, and therefore in a suit against any member, all other members must appear as plaintiffs. By this time, land *hui* memberships had grown and increased in complexity due to the number of descendants inheriting ownership of *hui* lands, sometimes without their knowledge. As such, the Supreme Court decision rendered any form of legal proceeding involving a land *hui* nearly impossible. A partition statute passed in 1923 enabled and encouraged the subdivision of communally-managed *hui* lands into small, individually-owned parcels of equivalent appraised value to the number of shares owned by a member of the *hui* (Watson 1932c).

The Moloaa Hui Lands were one of the first three to be partitioned in this way, along with Peahi Hui and Mailepai Hui. Watson (1932c) estimated these *hui* to each encompass an area of roughly 1,500 to 2,500 acres. In 1932, it was announced that R.M. Towill had been selected to survey and subdivide the Moloaa Hui Lands among its roughly 100 owners (Figure 12, Figure 13). The lands were observed to contain pineapple, rice, pasture, and beach lands (*Honolulu Star-Bulletin* February 5, 1932). R.M. Towill's 1932 survey map (RM 2982) designated the land into the following classifications: beach; house lots (near beach); house lots; rice and taro land; Class 1 through 4 pineapple lands; undeveloped agriculture; pasture; forest reserve; rocky, windblown, and other waste lands; and *hui* roads. The majority of land was designated Class 1 and 2 pineapple and pasturage, though the highest value lands were beach (valued at $650/per acre) and house lots near the beach (valued at $260/acre). At the other end were Pasture, Forest Reserve, and "Rocky, Windblown & other Waste" lands, valued at $10, $10, and $1 per acre respectively (R.M. Towill 1932).

The current project area appears to lie in a portion of the former Moloaa Hui Lands, which was partitioned into Allotment 10-A, a 49.002 acre parcel then owned by Joseph L. Huddy and Maggie Huddy. In an ethnographic interview with Lyman and Dega (2016), Pi'ikalama Boiser

recounted that Joseph Huddy had been the sheriff for the district of Kauaʻi in the 1930s (Lyman and Dega 2016:19). The original 49 acres of Allotment 10-A included roughly three acres of beachfront land. Over time, coastal erosion caused the beachfront piece to become physically separated from the rest of the allotment, and this three-acre parcel was eventually given a new TMK and sold separately. In 2018, Allotment 10-A was legally separated. The three-acre beachfront segment became 10-A-3, while 10-A-4 includes the remaining 46 acres which encompass the current project area.

Moloaa Hui Land Meeting.

NOTICE IS HEREBY GIVEN THAT a special meeting of the Hui Land of Moloaa will be held on

Saturday, Nov. 2, at 11 a. m.

AT ANAHOLA CHURCH

To consider the leasing of the Hui Land of Moloaa, levying of taxes, and other very important matters for the benefit of the hui.

All members and shareholders of the Hui Land or their proxies are cordially invited to attend.

Dated Lihue, Kauai, October 9, 1901.

C. B. MAKEE,
Manager Moloaa Hui Land.

JAS. H. H. KAIWI,
Secretary Moloaa Hui Land.

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Figure 11. Public notice regarding a special meting of the Hui Land of Moloaa (*Honolulu Advertiser* 1901).

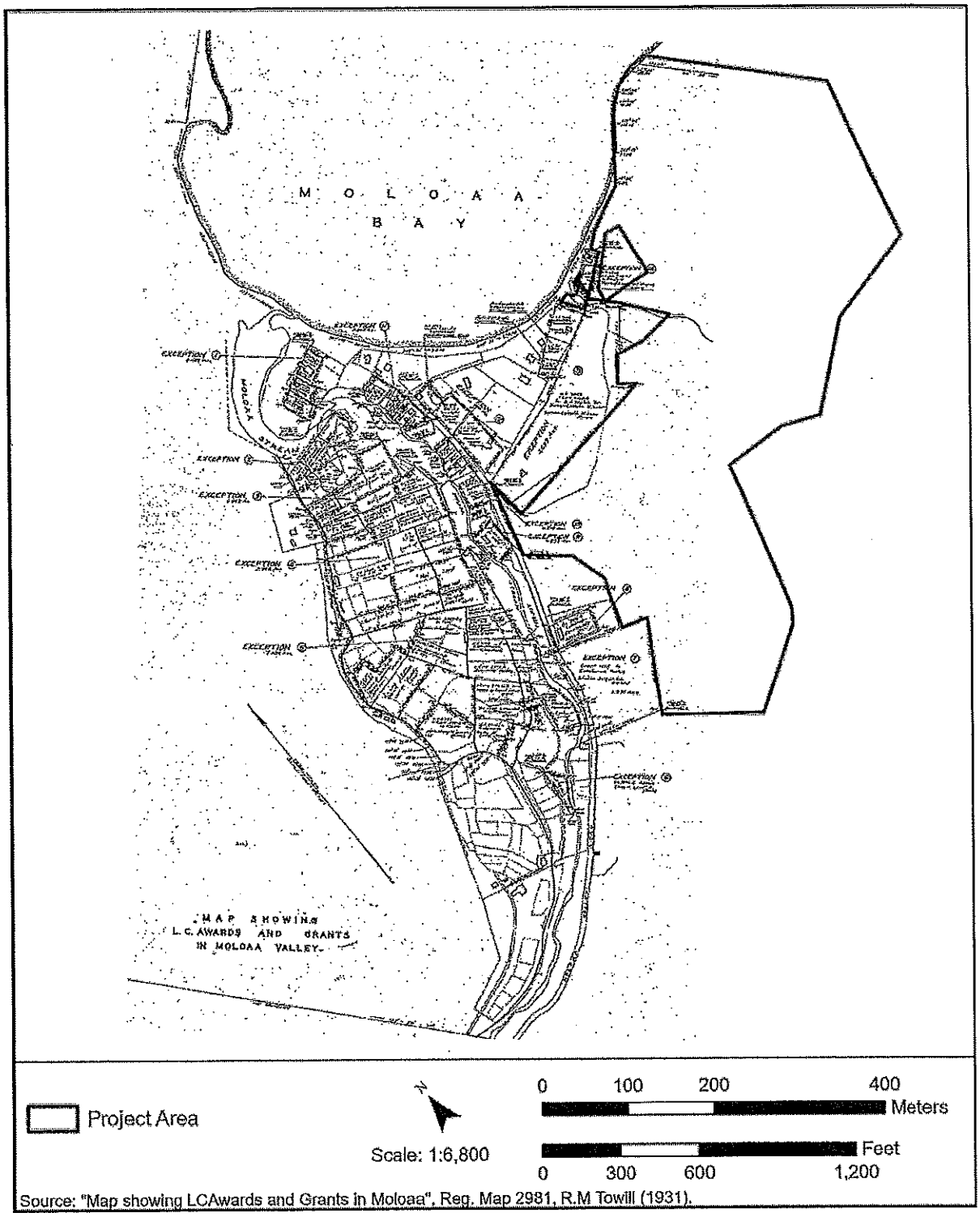


Figure 12. 1931 survey map by R.M. Towill showing LCA awards and grants in Moloaʻa Ahupuaʻa.

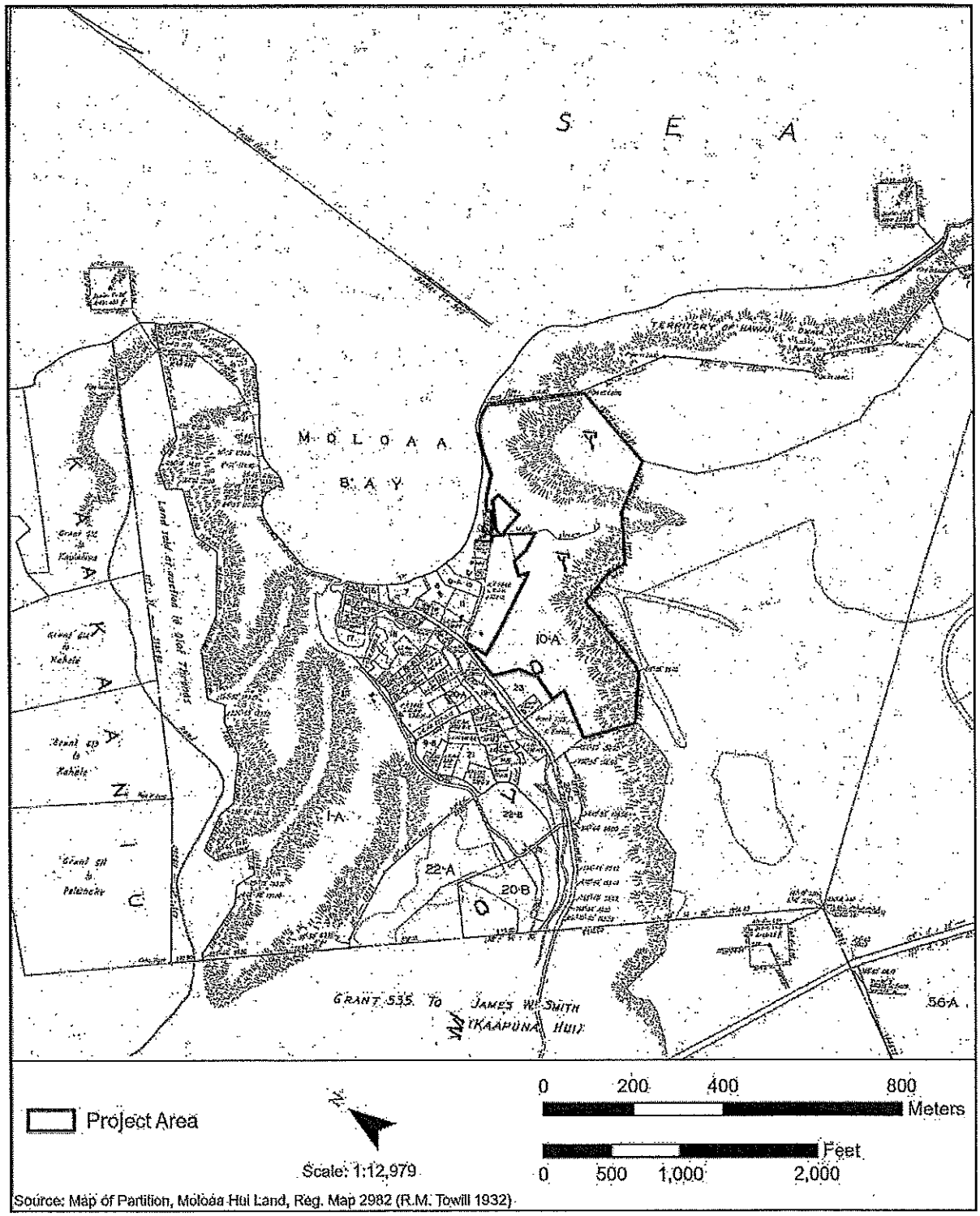
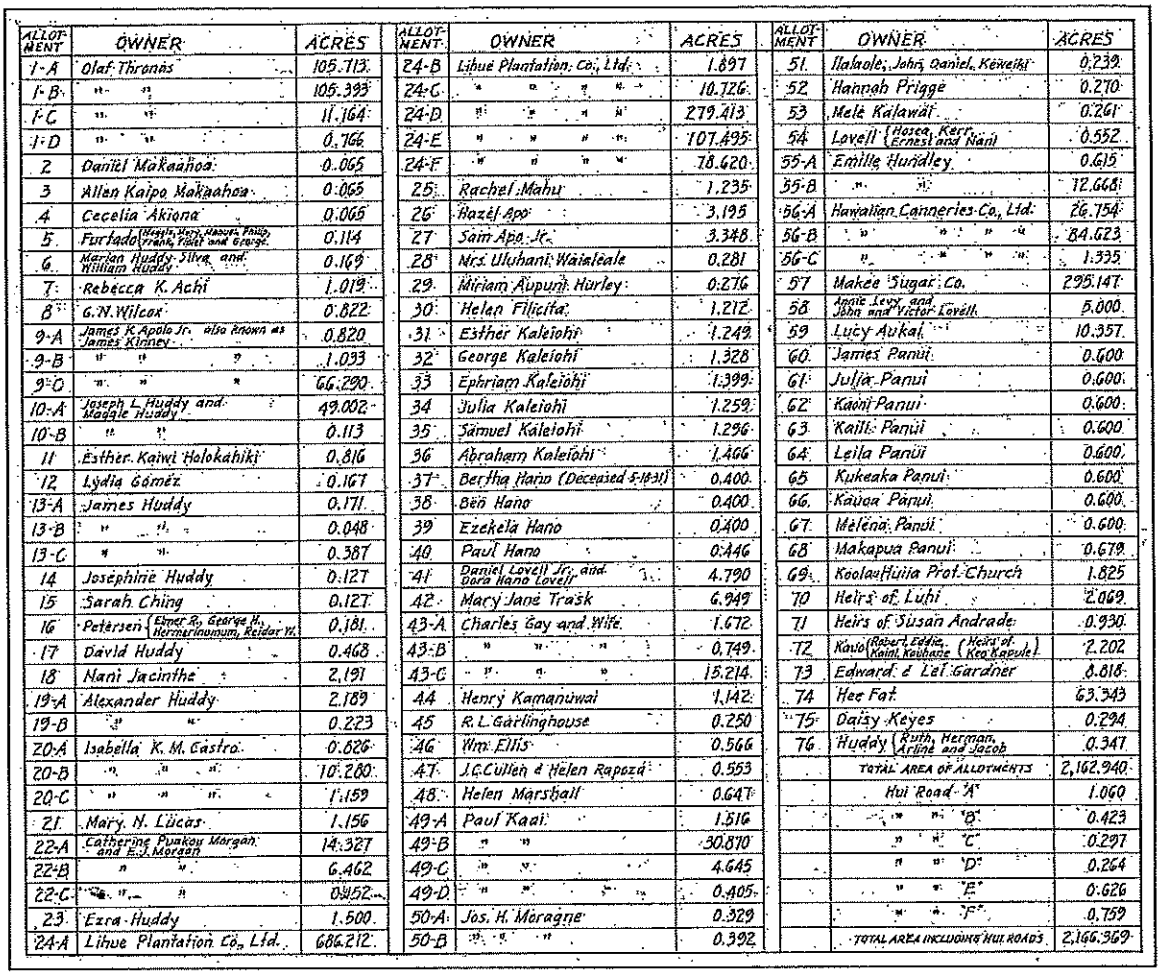


Figure 13. 1932 survey map by R.M. Towill showing the re-partitioned Moloaa Hui Lands.



ALLOTMENT	OWNER	ACRES
1-A	Olaf Thronas	105.713
1-B	" "	105.393
1-C	" "	11.164
1-D	" "	0.766
2	Daniel Makaahoa	0.065
3	Allen Kaipo Makaahoa	0.065
4	Cecelia Akiona	0.065
5	Furtado (Hosea, Mary, Manuel, Philip, Frank, Violet and George)	0.114
6	Marian Huddy Silva and William Huddy	0.169
7	Rebecca K. Achi	1.019
8	G.N. Wilcox	0.822
9-A	James K. Apolo Jr. also known as James Kinney	0.820
9-B	" " "	1.033
9-C	" " "	66.290
10-A	Joseph L. Huddy and Maggie Huddy	49.002
10-B	" "	0.113
11	Esther Kaiwi Holokahiki	0.816
12	Lydia Gomez	0.167
13-A	James Huddy	0.171
13-B	" "	0.048
13-C	" "	0.387
14	Josephine Huddy	0.127
15	Sarah Ching	0.127
16	Petersen (Elmer R., George H., Hermerinomum, Reider M.)	0.181
17	David Huddy	0.468
18	Nani Jacinthe	2.191
19-A	Alexander Huddy	2.189
19-B	" "	0.223
20-A	Isabella K. M. Castro	0.626
20-B	" " "	10.280
20-C	" " "	1.159
21	Mary N. Lucas	1.156
22-A	Catherine Puakou Morgan and E.J. Morgan	14.327
22-B	" "	6.462
22-C	" "	0.952
23	Ezra Huddy	1.500
24-A	Lihue Plantation Co., Ltd.	686.212
24-B	Lihue Plantation Co., Ltd.	1.897
24-C	" " "	10.726
24-D	" " "	279.413
24-E	" " "	107.495
24-F	" " "	78.620
25	Rachel Mahu	1.235
26	Hazel Apo	3.195
27	Sam Apo Jr.	3.348
28	Mrs. Uluhani Wainleale	0.281
29	Miriam Apuna Hurley	0.276
30	Helen Filicita	1.212
31	Esther Kaleiohi	1.249
32	George Kaleiohi	1.328
33	Ephriam Kaleiohi	1.399
34	Julia Kaleiohi	1.259
35	Samuel Kaleiohi	1.296
36	Abraham Kaleiohi	1.466
37	Bertha Hano (Deceased 5-1931)	0.400
38	Ben Hano	0.400
39	Ezekela Hano	0.400
40	Paul Hano	0.446
41	Daniel Lovell Jr. and Dora Hano Lovell	4.790
42	Mary Jane Trask	6.949
43-A	Charles Gay and Wife	1.672
43-B	" " "	0.749
43-C	" " "	15.214
44	Henry Kamanuwai	1.142
45	R.L. Garlinghouse	0.250
46	Wm. Ellis	0.566
47	J.C. Cullen & Helen Rapoza	0.553
48	Helen Marshall	0.647
49-A	Paul Kaai	1.516
49-B	" "	30.810
49-C	" "	4.645
49-D	" "	0.405
50-A	Jos. H. Moragne	0.329
50-B	" " "	0.392
51	Ilalaole, John, Daniel, Keweiki	0.239
52	Hannah Prigge	0.270
53	Mele Kalawai	0.261
54	Lovell (Hosea, Kerr, Ernest and Nani)	0.552
55-A	Emilie Hundley	0.615
55-B	" "	12.668
56-A	Hawaiian Canneries Co., Ltd.	26.754
56-B	" " " "	84.623
56-C	" " " "	1.335
57	Makee Sugar Co.	295.147
58	Annie Levy and John and Victor Lovell	5.000
59	Lucy Aukai	10.357
60	James Panui	0.600
61	Julia Panui	0.600
62	Kaoni Panui	0.600
63	Kaili Panui	0.600
64	Leila Panui	0.600
65	Kukeaka Panui	0.600
66	Kauoa Panui	0.600
67	Melena Panui	0.600
68	Makapua Panui	0.678
69	KoolauHiiia Prot. Church	1.825
70	Heirs of Luhi	2.069
71	Heirs of Susan Andrade	0.930
72	Kaua (Robert, Eddie, Kaimi, Kauhane, (Heirs of Keo Kapule)	2.202
73	Edward & Lei Gardner	8.818
74	Hee Fat	63.343
75	Daisy Keyes	0.294
76	Huddy (Ruth, Herman, Arline and Jacob	0.347
	TOTAL AREA OF ALLOTMENTS	2,162.940
	Hui Road "A"	1.060
	" " "B"	0.423
	" " "C"	0.297
	" " "D"	0.264
	" " "E"	0.626
	" " "F"	0.759
	TOTAL AREA INCLUDING HUI ROADS	2,166.369

Figure 14. Portion of survey map by R.M. Towill (1932; RM 2982) showing the owners of the re-partitioned Moloaa Hui Lands parcels.

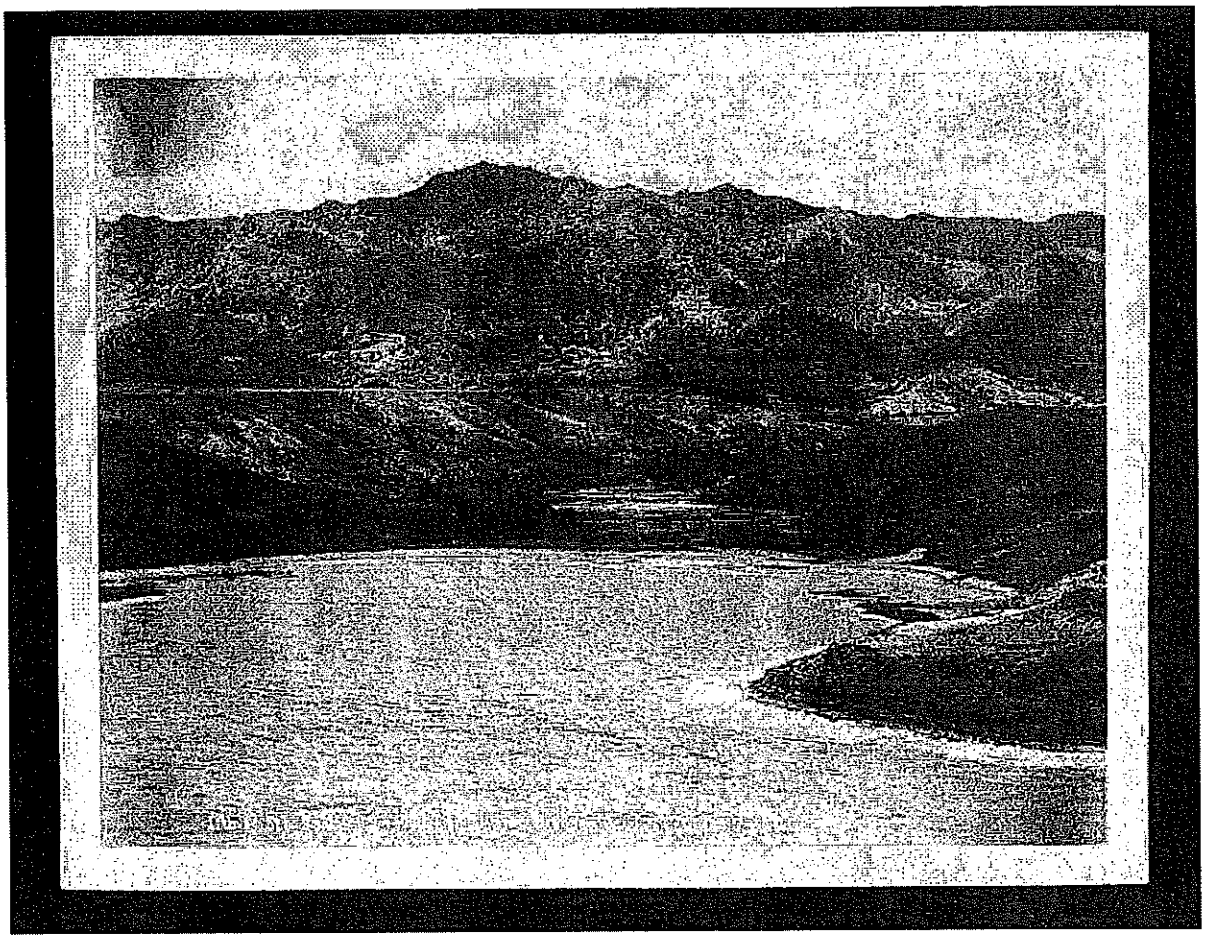


Figure 15. "Moloaa Bay Kauai from N.E. 700 ft., 7-4-24." Photograph from the Eleventh Photo Section, U.S. Army Air Corps, July 4, 1924. (Source: Digital Archives of Hawai'i).

3.2.5 Land Use Beyond Moloaʻa Bay

On his visit in 1865, William T. Brigham described Moloaʻa as "the chief wood station at present on this part of Kauai", further noting that "Here several vessels have been wrecked, and only the week before a schooner ran on the rocks through the carelessness of the master" (Kauai Historical Society 1991:142). Brigham did not elaborate on the wood station further, though Mann et al. (2005) suggested this may have meant that Moloaʻa was a major site for the exporting of firewood to Honolulu during this time.

During the latter half of the nineteenth century, many of the *loʻi kalo* along Moloaʻa Stream were converted to rice fields by Chinese farmers, and Moloaʻa became a significant location for rice cultivation on Kauaʻi (Mann et al. 2005). An 1899 map by Monsarrat (RM 1965) shows rice fields along Moloaʻa Stream to the west of the project area (Figure 16).

Foreign industrialists developed an interest in the agricultural potential of Moloaʻa shortly after the introduction of land privatization. Around 1879 Alexander Lindsay, a man born in rural Scotland in 1840, moved to Kauaʻi with his wife, Isabella Bonnar Lindsay, and their children. Lindsay began work at Kilauea Sugar Co. as a millwright, and eventually came to operate a cattle ranch and dairy in Moloaʻa (Soboleski 2016). Lindsay described himself as "keen for land" as a young man, and soon after arriving in Kauaʻi he moved to Moloaʻa and purchased ranch land from the Moloaa Hui (Damon 1931:780). This land, located in Moloaʻa alongside Kuhio Highway, became the Lindsay home and dairy. It is labeled "Lindsay Land" in Monsarrat's 1899 map (Figure 16). After Lindsay, it became the Hawaiian Canneries Co. Moloaʻa Camp, and after this it was the (now former) Meadow Gold Dairy property. The Lindsay family was likewise influential in the post-Contact history of Kauaʻi, and Lindsay's son, Alexander Lindsay Jr., served as a justice of the Territorial Supreme Court of Hawaii from 1922 until his death in 1926 (*Honolulu Star-Bulletin* September 6, 1926).

Lindsay's Moloaʻa Dairy operated until around 1893, when Lindsay's son-in-law, the sugar magnate Hans Peter Faye, convinced Lindsay to move his Moloaʻa Dairy and consolidate it with Waimea Dairy. However, the Lindsay family continued to live in Moloaʻa for several more years and continued on with various business ventures. For example, an 1898 list of coffee growers throughout the Hawaiian Islands list 14 acres of coffee plantings in Moloaʻa belonging to Alexander Lindsay (Thrum 1898). Faye eventually came to own Waimea Dairy, and in 1904 Alexander Lindsay left Moloaʻa to live in Waimea and manage the dairy. Their former home site is now occupied by a stand of giant Norfolk pines (Soboleski 2016).

In 1919, Hawaiian Canneries Co. established a housing camp for its year-round field employees and their families at the former location of Alexander Lindsay's dairy in Moloaʻa (Soboleski 2017). Hawaiian Canneries Co., in operation from 1913-1962, cultivated pineapple fields throughout northeast Kauaʻi. The Moloaʻa Camp eventually grew to 50 houses, most constructed of tongue-and-groove lumber (Soboleski 2017). Each of the houses had sufficient land for a 20 by 50 ft vegetable garden and a chicken run, and the families were provided with "at least one grafted avocado tree, a macadamia nut tree, a clump of bananas, a clump of papaias [sic] and two citrus trees" (Taylor 1937:9). There were also community resources that included pig pens, a baseball field, a club house, a pool hall, and a general store (Soboleski 2017). A 1937 *Honolulu Star-Bulletin* article announced that the "model community" of Moloaʻa would have electricity in time for Christmas that year (Taylor 1937). When the Hawaiian Canneries Co. shut down in 1962, the camp residents moved out and the houses were either sold and trucked elsewhere or

demolished. The site then became a cattle ranch, and later a Meadow Gold Dairy site from 1989 to 2000 (Soboleski 2017).

The 1946 tidal wave that devastated many parts of the Hawaiian Islands had a severe impact in Moloa'a. The *Honolulu Star-Bulletin* reported the tidal waves "virtually wiped out the Kahiliwai and Moloaa beach districts of east Kauai" (Leong 1946). According to the *Hawaii Times*, five houses were destroyed, including those owned by Joseph L. Huddy, William Achi, Edward Lovell, and the Catholic Church's beach home. They reported that "beach residents climbed trees, housetops and hills to escape the fury of the onrushing water – which at several points swept a mile inland – carrying household effects, radios and furniture" (*Hawaii Times* April 2, 1946:3). An aerial image of Moloa'a Bay taken in 1950 captures the project area and surroundings four years after the tidal wave (Figure 17). While agricultural activities are evident on either side of the bay, there are limited signs of development or permanent habitation around the bay itself.

Soboleski (2019) noted that in 1947, the U.S. Army began clearing dead and live ammunition from areas they had used as target practice during the war. This included some *mauka* areas of Moloa'a.

In 1963, the producers for *Gilligan's Island* were looking for a place in the Hawaiian Islands to film the pilot, as it was determined that the Honolulu area "presented too many visible signs of life by 1963" (Schwartz 1988:47). Eventually, it was decided to film in Moloa'a Bay:

> Our search finally took us to the island of Kauai, and to Moloaa Bay.
>
> Moloaa Bay had everything we needed; the beautiful white sand beach, the bright blue Hawaiian waters. Coconut palms, royal palms, and many other varieties crowded the hillside leading to the beach, and tropical vegetation was everywhere. The landscape was rich with beautiful South Seas flowers: antherium, orchids, zymbium, and birds of paradise. There was only one dirt road, and it little more than a trail, that led down to the beach. The trail could be hidden easily from the camera, with some properly placed tropical bushes and small palms.
>
> We had finally found our "Gilligan's Island."
>
> (Schwartz 1988:47-48)

Schwartz (1988) later described a strong storm and heavy ocean waves which wreaked havoc on the film set in Moloa'a Bay.

A number of recent agricultural ventures have been established in Moloa'a, many produced by cooperative efforts and with financial support from local and national funding bodies. In 1972, the Kauai Task Force was created to find solutions for "Kauai's pressing agricultural problems," and in 1975, they loaned $560,000 to the Moloaa Farmers Cooperative to establish infrastructure for large-scale cultivation of papayas (*Carica papaya*) to be exported for sale in Japan (TenBruggencate 1975). A 1996 *Star-Bulletin* article reported that the venture was less than successful; the farmers who sub-leased land were required to put at least 90 percent of their land into papayas, and subsequently "struggled with two hurricanes, quarantine and treatment problems, competition from Big Island growers, membership shifts and market fluctuations" (Conrow 1996). More recently, the Moloaa Irrigation Cooperative received a

Coronavirus Aid, Relief and Economic Security (CARES) Act Grant to make water system improvements to reduce the cost of water and leaks in the system that serves nearly 600 acres of agricultural lands in an area of the old Moloaa Hui Lands (Bodon 2020). Aerial imagery from 1992 and 2000 (Figure 18 and Figure 19) shows continued intensive agricultural activities on the southeast side of the project area, as well as increased development around the bay and stream.

In more recent years, intensive agricultural activities have declined, making way for other types of development in Moloaʻa. Mann et al. (2005:18) observed the following in 2005:

> Today, there are less than half a dozen original *kuleana* families who live in Moloaʻa. Many families have sold their *kuleana* lands due to high property taxes and large scale investment developments. Issues concerning lack of public access to *kuleana* lands by outsiders who purchase adjacent parcels have also taken their toll—forcing many local families to sell. Timeshares and bed and breakfast businesses have are the prime business endeavors in Moloaʻa today.

The Department of Hawaiian Home Lands (DHHL) owns 316 acres of undeveloped land in Moloaʻa, which does not contain any homesteads and is currently used for grazing. The 2010 Regional Plan for Anahola (covering Kamalomaloʻo, Anahola, and Moloaʻa) designated 47 three-acre lots, across 200 acres, for subsistence agriculture; 86 acres on steep topography for low-intensity general agricultural uses; and 30 acres along the stream as a special district. The report further notes that in this area, wet conditions, steep topography, intermittent stream flow, and lack of sewage treatment make many of the Moloaʻa areas unsuitable for residential and commercial development. However, the designation of 30 acres as a special district does allow community use of the land near the stream for special projects, functions, or activities (DHHL 2010).

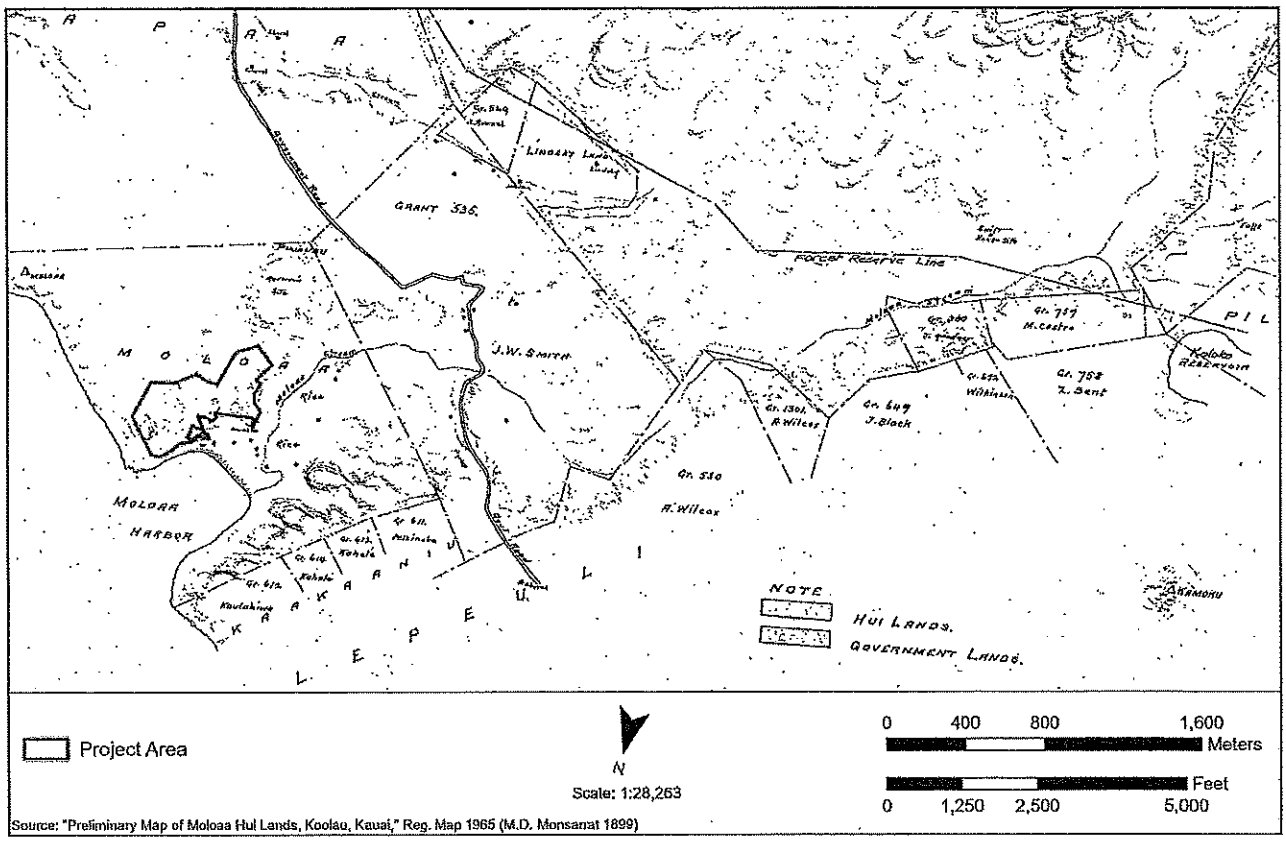


Figure 16. An 1899 map by Monsarrat showing the proposed Estates at Moloa'a Bay Project Area with land grants and other landscape features, including areas for rice cultivation, the "Lindsay land" and a "reservoir site" south of the project area.

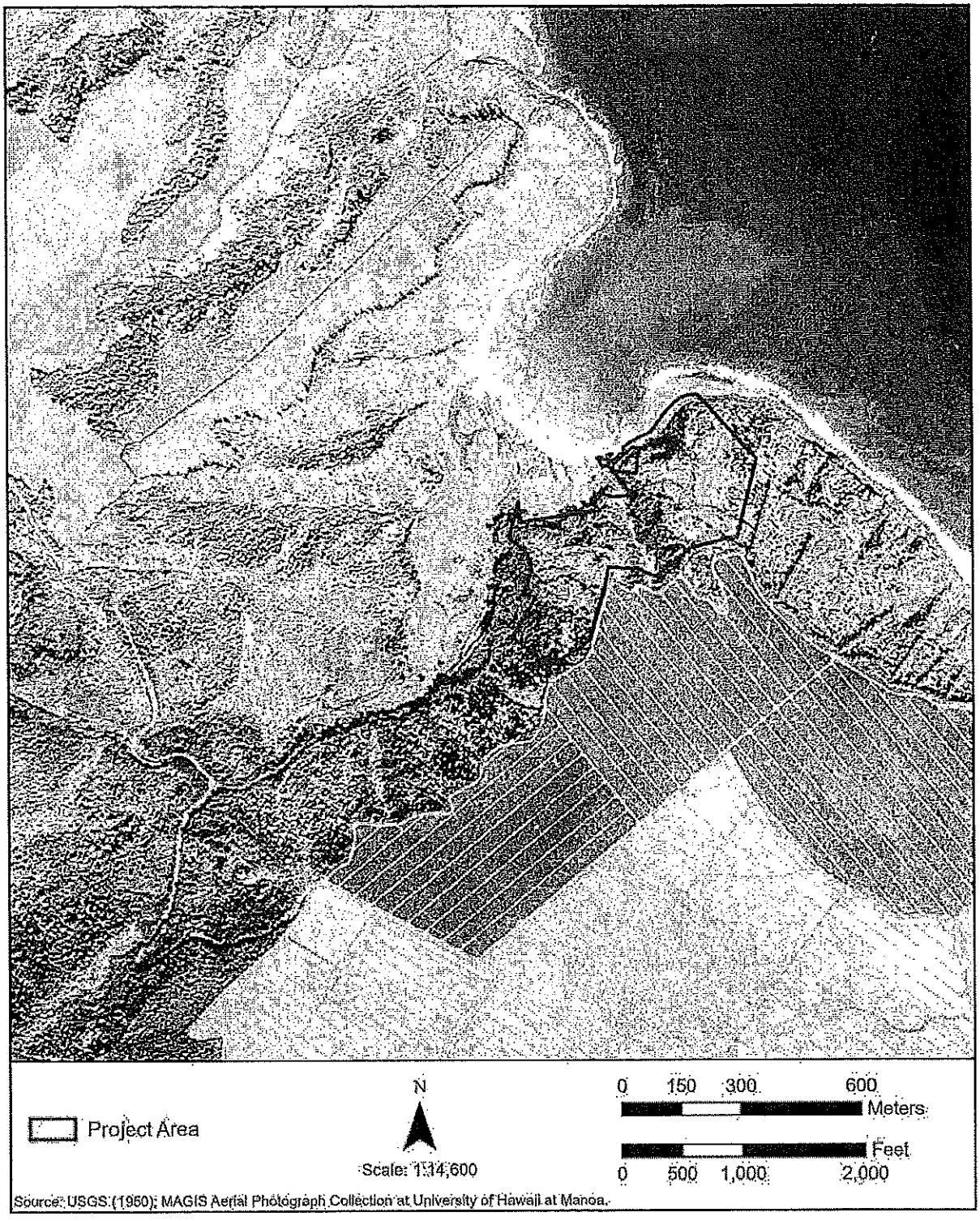


Figure 17. Aerial image from 1950 showing the proposed Estates at Moloaʻa Bay Project Area and surrounding Moloaʻa Bay.

Figure 18. Aerial image from 1992 showing the proposed Estates at Moloaʻa Bay Project Area and surrounding Moloaʻa Bay.

Figure 19. Aerial image from 2000 showing the proposed Estates at Moloa'a Bay Project Area and surrounding Moloa'a Bay.

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.* Bennett (1931) did not identify any archaeological sites within the *ahupuaʻa* of Moloaʻa. However, both he and Thrum located two *heiau* within the *ahupuaʻa* of Pāpaʻa that may be in the nearby vicinity (within 0.5 miles/0.8 km) of the current project area. Bennett (1931) assigned both *heiau* site numbers, along with brief descriptions:

> Site 124. Papaa heiau, at Kawaipapa, Papaa at the junction of a side road and the government highway.
>
> Thrum describes this as, "A walled heiau 60 by 80 feet in size; Kamohoalii its deity." It had been converted into a cattle pen and the internal divisions destroyed. It is of irregular shape with an entryway cut in the wall facing inland. The walls have been restored as shown by the split stone found all through them. The corners are square. The regular walls are 5 feet wide and about 4 feet high.
>
> Site 125. Puwouwou heiau, on top of the hill mapped as "Puu Auau." The heiau has been completely removed and the hill planted to pineapples. Some say this was a place of refuge.
>
> (Bennett 1931:131)

A Traditional Cultural Properties (TCP) study conducted at Puʻu Auʻau (McGerty and Spear 2000) was unable to re-locate either Papaa Heiau or Puwouwou Heiau, and suggested that disturbance by modern cultivation and other activities may have removed any remaining material trace of these *heiau.* Since Bennett's survey, a small number of archaeological studies have been conducted in and around the project area.

In 1998, Scientific Consultant Services, Inc. (SCS) conducted an archaeological inventory survey (AIS) of approximately 725 acres in Moloaʻa and Pāpaʻa Ahupuaʻa (McGerty and Spear 1998). No historic properties were identified.

In 1999, Cultural Surveys Hawaiʻi, Inc. (CSH) completed an archaeological assessment of an approximately 40-acre parcel in Moloaʻa Ahupuaʻa (Borthwick et al. 1999). They identified two historic properties, both of which are located within 0.5 miles of the current project area. SIHP 50-30-04-01033 is a buried cultural layer which contains evidence of pre-Contact habitation. SIHP 50-30-04-01034 is a segment of a trail which presumably provided access to and from Moloaʻa Bay and Larsen's Beach in Kaʻakaʻaniu during both the pre- and post-Contact eras. Both sites were assessed as significant under criterion D and recommended for preservation as is.

In 2000, SCS conducted archaeological monitoring for the construction of a septic tank and leach field on residential lot number 18. The project area was located roughly 40 m away from the Moloaʻa Bay shoreline, and bordered on both sides by Moloaʻa Stream. A single faunal bone and two post-Contact ceramics were identified during monitoring, but no historic properties were identified and no significance assessments or recommendations were made (Calis 2000).

In 2002, SCS completed archaeological monitoring for an approximately 3,000 sq. ft parcel near the Moloaʻa Bay coastline (Powell and Dega 2002). A single historic property was identified

during the course of monitoring (SIHP 50-30-03-02069). SIHP -02069 was described as a traditional cultural deposit with six associated subsurface hearth features. A wood charcoal sample recovered from the Feature A hearth returned a radiocarbon date of cal AD 1470-1680. The report also notes the recovery of *iwi kūpuna* in the form of a single bone fragment; however later SCS reports (e.g., Lyman and Dega 2016) indicate that no *iwi kūpuna* were identified at SIHP -02069. No additional information could be found about the final disposition of any *iwi kūpuna* recovered from SIHP -02069. It therefore appears likely that this *iwi* was misidentified as human and later found to be fauna. The site was assessed as significant under Criterion d, as well as Criterion e due to the presence of *iwi kupuna*. The report recommended archaeological monitoring for any future land-altering activities near the coastline.

In 2016, SCS conducted an AIS of a 46-acre parcel in Moloaʻa Bay (Lyman and Dega 2016), which corresponds to the current project area. Their survey identified four historic properties: SIHP 50-30-04-02291 is a stone alignment of undetermined function; SIHP 50-30-04-02292 is a terrace with five courses of stacked basalt stones; SIHP 50-30-04-02293 is a water diversion ditch; and SIHP 50-30-04-02294 is a modified outcrop with associated alignments located in Maliu Gulch. All four historic properties were assessed as significant under criterion d and recommended for no further work. As these sites are located within the current project area, Lyman and Dega's (2016) site descriptions are reproduced in full:

STATE SITE 50-30-04-2291 (TS-1)
Type: Alignment
Features (#): 2
Age: Undetermined
Condition: Poor
Function: Undetermined/recent planting area

Site -2291 (TS-1) is composed of two roughly rectangular enclosures located adjacent to each other... The enclosures measure 4 meters wide by 5 meters long and are delineated by single alignments of unstacked basalt boulders. The boulders range in size from 20 to 40 cm in diameter. The site is located on a ridge in a small level area before the slope steepens. Guava and java plum were observed in the area.

Two test units were excavated in Feature B. Each test unit measured 40 cm square by 45 cm deep and yielded one layer of reddish brown (5YR 4/3) silty clay. Soils from the excavations were sterile. The soil within Feature A was obstructed with roots and a test unit excavation was not possible. No cultural material was observed.

The age and function of the site is undetermined, although it may be a recent, small planting area. The rocks composing the features were not weathered nor moss covered, as were the other rocks in the area. No further work is recommended for this site.

STATE SITE 50-30-04-2292 (TS-2)
Type: Terrace
Features (#): 1
Age: Undetermined
Condition: Poor
Function: Undetermined

Site -2292 (TS-2) is a terrace consisting of five courses of stacked basalt... The site is located against a steep slope at sea level between the base of the slope and the shoreline. A large ironwood tree grows out of one corner of the terrace and has most likely

negatively impacted site integrity. The site measures 4.3 meters in length by 2.5 meters in width. The terrace wall is 80 cm in height and is composed of waterworn stones 10 to 30 cm in size.

Based on its location and construction, Site -2292 could have served as a pre-Contact fishing-related feature... However, the precise function cannot be determined. No further work is recommended for the site.

(Lyman and Dega 2016:35)

STATE SITE 50-30-04-2293 (TS-3)
Type: Ditch
Features (#): 1
Age: Historic/Modern
Condition: Fair
Function: Water Diversion

Site -2293 (TS-3) is a mechanically excavated ditch located along the top edge of the coastal bluff in the northeast corner of the project area... The ditch is 215 meters in length and 6 meters in width. Typical depth is 70 cm.

It appears that the ditch was located along the edge of the bluff to divert run-off and minimize erosion in connection with historic period agricultural activities on the plateau. The ironwood trees in this area also may date to erosion control efforts such as those performed by the Civilian Conservation Corps on Kauai in the 1930s, although this supposition cannot be substantiated due to the failure to discover historic photographs of the project area during archival research.

No Further Work is recommended for Site -2293.

STATE SITE 50-30-04-2294 (TS-4)
Type: Modified Outcrop w/ Alignments
Features (#): 4
Age: Undetermined
Condition: Poor
Function: Planting Areas/Undetermined

Site -2294 (TS-4) is a modified outcrop with associated rough alignments... The site is located within Maliu gulch. There is some evidence of modification in the area near the Maliu Spring... The site could be associated with alterations to the spring for planting-related activities. The major alignment consists of several large basalt boulders with a small cut step stone placed in between them... The step was excavated in profile to determine any sub-surface features, though none were apparent.

No Further Work is recommended for Site -2294. (Lyman and Dega 2016:40)

A single identified burial site (SIHP 50-30-04-02455) is located in close proximity to the northwest corner of the project area. According to information accessed via SHPD's Hawai'i Cultural Resource Information System (HICRIS), the burial site was an inadvertent discovery located during vegetative clearing, and associated with known burial sites in the area (information on file, SHPD).

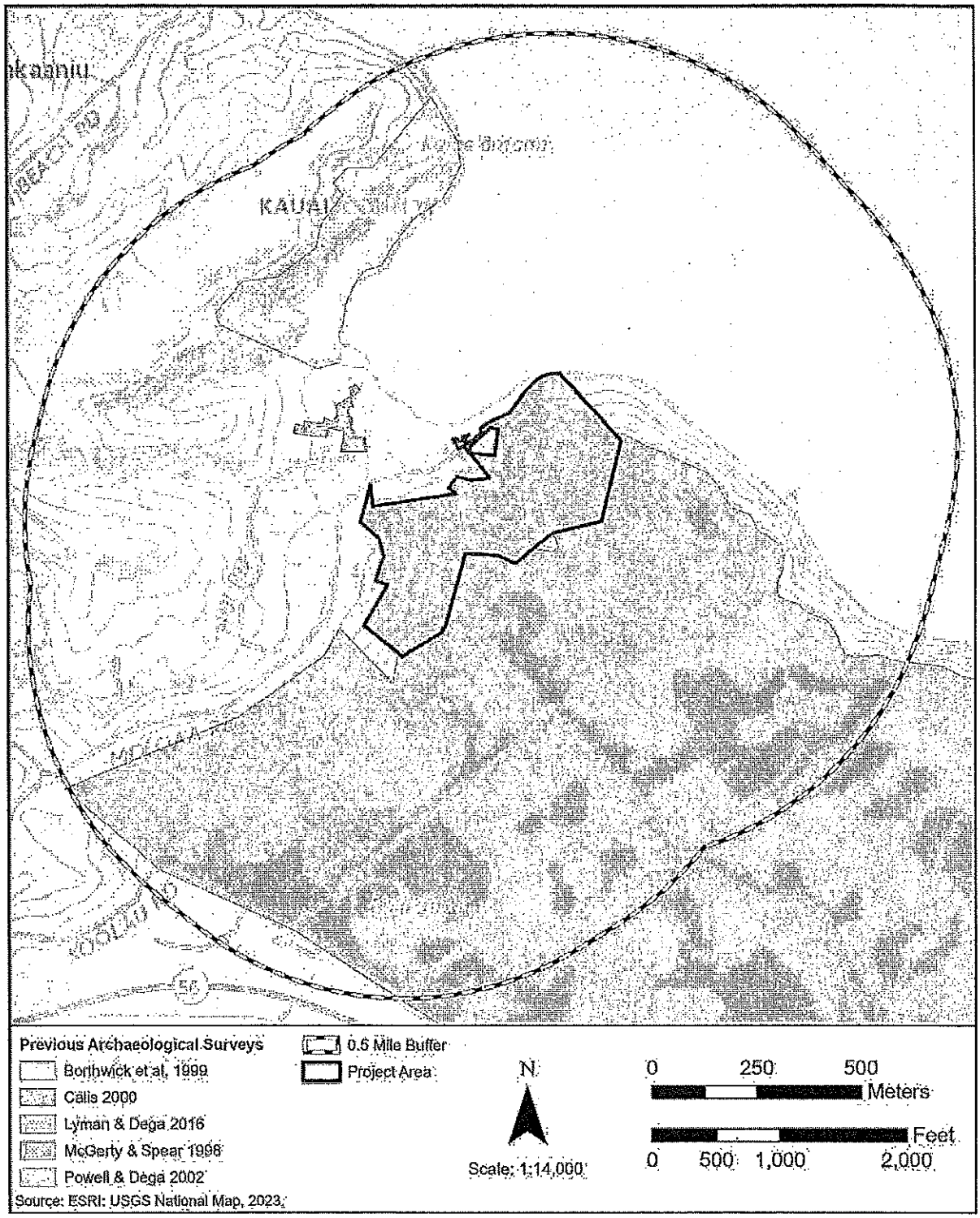


Figure 20. Previous archaeological studies conducted within the nearby vicinity (0.5 miles/0.8 km) of the proposed Estates at Moloa'a Bay Project Area.

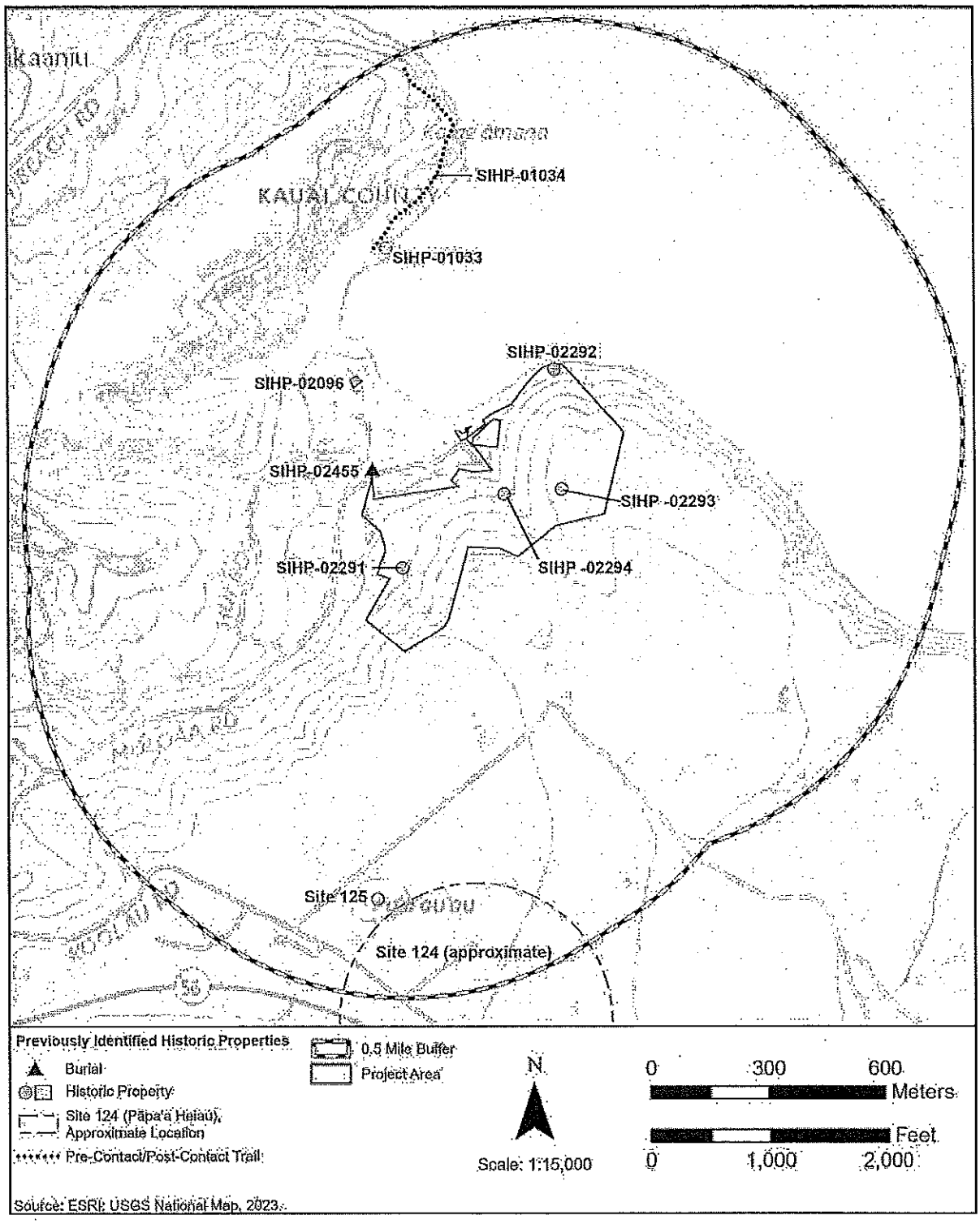


Figure 21. Historic properties identified within the nearby vicinity (0.5 mi/0.8 km) of the proposed Estates at Moloa'a Bay Project Area.

Table 3. Previously Identified Historic Properties within 0.5 Miles (0.8 km) of the Proposed Estates at Moloa'a Bay Project Area

Site Number	Type	Function	Age	Significance	Mitigation Recommendation	Reference(s)
Site 124	Complex	Papa'a Heiau	Pre-Contact	-	-	Thrum 1907; Bennett 1931; McGerty & Spear 2000
Site 125	Complex	Puwouwou Heiau	Pre-Contact	-	-	Thrum 1907; Bennett 1931; McGerty & Spear 2000
50-30-04-01033	Buried cultural layer	Habitation	Pre-Contact	D	Preservation	Borthwick et al. 1999
50-30-04-01034	Trail segment	Transportation	Pre- and Post-Contact	D	Preservation	Borthwick et al. 1999
50-30-03-02069	Subsurface cultural deposit	Temporary habitation	Pre-Contact	d, e	Monitoring	Powell & Dega 2002
50-30-04-02291	Alignment	Undetermined/recent planting area	Undetermined	d	No further work	Lyman & Dega 2016
50-30-04-02292	Terrace	Undetermined	Undetermined	d	No further work	Lyman & Dega 2016
50-30-04-02293	Ditch	Water diversion	Historic/modern	d	No further work	Lyman & Dega 2016
50-30-04-02294	Modified outcrop with alignments	Planting areas/undetermined	Undetermined	d	No further work	Lyman & Dega 2016
50-30-04-02455	Burial	Burial	-	-	-	On File, SHPD

3.4 SUMMARY OF ARCHIVAL AND BACKGROUND RESEARCH

Moloa'a, and some of the place names associated with the *ahupua'a*, are mentioned *mo'olelo* recounted by Fornander (1918). The story of a *menehune* named Maliu is recounted in several later publications, and provides an origin story for Maliu Spring.

Archival sources highlight the many resources of Moloa'a Ahupua'a, especially in the area of Moloa'a Bay, which among other things provided an important source for the highly prized *limu kohu*. This *limu* has specific associations with Kaua'i Island, and was actively cultivated in *limu* "gardens," perhaps more intensively in Moloa'a than anywhere else in the archipelago. Inland, Moloa'a Stream previously watered a large number of agricultural terraces, where kalo, breadfruit, sweet potatoes, and later rice were cultivated. However, by Handy's time, the upper valley where taro used to be plentiful had become dry (Handy 1940:70). *Wauke*, or paper mulberry, was also previously abundant on the upper valley slopes, and the tangled roots of the *wauke* are said to be what gives Moloa'a its name. Moloa'a may have also been a major source for firewood export to Honolulu during the post-Contact era. Large-scale sugarcane and pineapple cultivation, coffee growing, and a dairy were notable post-Contact agricultural endeavors, largely carried out by foreign industrialists.

A small number of previous archaeological studies have been completed in the area, including an AIS completed for the current project (Lyman and Dega 2016). These studies have identified eight historic properties in the vicinity of the project area, including four within the project area: an alignment (SIHP -02291), a terrace (SIHP -02292), a water diversion ditch (SIHP -02293), and a modified outcrop and alignments in Maliu Gulch (SIHP -02294). All four of these historic properties were assessed as significant under criterion d and recommended for no further work. A burial (SIHP -02455) is located in close proximity to the northwest corner of the project area.

The introduction of private land ownership in the mid-nineteenth century via the Mahele had profound consequences for land tenure in Moloa'a, as with everywhere in Hawai'i. From 1841 onward, there was a strong Catholic presence in Moloa'a, with the establishment of a Catholic school and church. Some of the Catholic lands are located adjacent to the project area, including LCA 2668, which was awarded to R.A. Walsh on behalf of the Roman Catholic Mission.

The Moloaa Hui, a consortium of native Hawaiian landowners who pooled their resources to purchase and manage a large tract of land within Moloa'a Ahupua'a, appears to have represented an attempt towards continuing more traditional land tenure practices rooted in collective stewardship, despite the trend towards increasing privatization and foreign ownership. The Moloaa Hui Lands are one of a number of collectively-stewarded parcels to arise after land privatization, and are referenced in a number of historical and contemporary writings. A series of early twentieth-century lawsuits and Supreme Court decisions eventually rendered the "hui lands" model impossible to maintain, and in 1932, the Moloaa Hui Lands were one of the first major *hui* lands to be re-parceled into individually-owned lots. The project area lies in a portion of the former Moloaa Hui Lands, which was re-partitioned into the 49.002-acre Allotment 10-A, owned by Joseph L. Huddy and Maggie Huddy. In 2018, 10-A was legally separated into two parcels: 10-A-3 is the roughly three acres of beachfront property, and 10-A-4 is the approximately 46 acres that encompass the current project area.

The dissolution of the Moloaa Hui was precipitated by foreign interest in the agricultural potential of Moloa'a Ahupua'a. Alexander Lindsay's Moloa'a Dairy was an early such venture, in operation shortly after his arrival to Kaua'i in 1879 until around 1893. In 1919, this land

became the Hawaiian Canneries Co. Moloaʻa Camp, which provided housing for its year-round field employees until the end of the company's operation in 1962. This land then transitioned to ranch land, and was later a Meadow Gold Dairy site from 1989 to 2000. More recent agricultural ventures include the Moloaa Farmers Cooperative, which endeavored to establish large-scale papaya cultivation in the area, and the Moloaa Irrigation Cooperative, who have worked to improve water infrastructure for agricultural lands in Moloaʻa.

The 1946 tidal wave had devastating impacts in Moloaʻa Bay, leading to the destruction of most of the houses and causing many families to relocate, either temporarily or permanently. While some of these families did later return to Moloaʻa, aerial images from the 1950s show limited signs of development or permanent habitation around the bay itself. Mann et al. (2005) noted that at the time of their writing, less than half a dozen of the original *kuleana* or Hui families were still living in Moloaʻa. Following the tidal wave, additional impacts have forced these families out of their ancestral lands, including high property taxes, large-scale investment developments, and issues surrounding public access to *kuleana* or Hui lands. These long-term family dwellings had largely been replaced by timeshares and bed and breakfasts, mostly owned by new arrivals to the area.

4.0 CONSULTATION METHODS AND RESULTS

4.1 PREVIOUS CONSULTATION EFFORTS IN MOLOAʻA AHUPUAʻA

Consultation efforts have been undertaken in Moloaʻa Ahupuaʻa in connection with previous CIAs and AISs. In many cases, these earlier studies interviewed knowledge holders that have passed on or otherwise were unable to participate in the current study. Nevertheless, the knowledge shared by these individuals is a significant contribution to the understanding of cultural practices and native Hawaiian rights in Moloaʻa Ahupuaʻa. These efforts are briefly summarized here, and the reader is referred to Mann et al. (2005), Lyman and Dega (2016), and McGerty and Spear (2000) for further detail.

A major recurring theme in previous interviews for Moloaʻa Bay is the abundant marine resources available in the bay and the stream, and how access to such resources enabled Hawaiian residents to continue traditional gathering practices. Mr. Mark Boiser noted that his family was able to successfully survive off the resources of the land and ocean in Moloaʻa (Mann et al. 2005:27). Most if not all descendants living in the area had memories of gathering *limu kohu* with relatives. Other marine resources mentioned by interviewees included abundant schools of *ʻopelu* (mackerel scad; *Decapturus* sp.) and *akule* (bigeye scad; *Selar crumenopthalmus*). Turtles have also been observed in the bay and were said to come ashore once or twice per year (Mann et al. 2005:28). Mark Boiser recalled fishing for *heʻe* (octopus) on the reef with his grandmothers, as well as *hukilau* (seine net) fishing and sharing the catch with everyone who came down to the bay to pull net. He also recalled seeing a stone wall extending across the entrance to the bay when the ocean receded during the 1958 tidal wave. He believed this wall may have been the remains of a fishpond (McGerty and Spear 2000:18).

Inland, it was noted that *kalo* could be grown on the flat lands by the river, and remnant *ʻauwai* still remained in some areas. Dryland *kalo* was planted in the table lands that were later converted to pineapple agriculture (McGerty and Spear 2000:18). Ms. Isabella Ai Ida was also able to identify a number of medicinal plants that were specifically gathered in Moloaʻa (Mann et al. 2005:28).

A consistent concern was the way further development in Moloaʻa may restrict public access to the bay or to important cultural places or resources. It was noted that recent private developments had created additional restrictions to use and access on private land, reduced available parking, and had been detrimental to the overall ambiance and environment of Moloaʻa (Mann et al. 2005).

In addition to access, a decline in marine resource availability in Moloaʻa Bay and Moloaʻa Stream was observed, likely as a result of mechanical clearing and other activities associated with development (Mann et al. 2005). Clearing activities were also observed to have increased erosional processes and sediment runoff into the bay, further impacting the reef system.

A final concern was the possible presence of human burials in the vicinity of Moloaʻa Bay. For instance, it was reported that four human burials were recovered on both sides of Moloaʻa Stream during the tidal wave of 1958 (Mann et al. 2005:27).

4.2 SCOPING AND COMMUNITY OUTREACH

To initiate consultation for the Estates at Moloaʻa Bay Project CIA, contact was made with a range of government agencies, advisory councils, local community organizations, and individuals with generational ties to Moloaʻa Ahupuaʻa or the broader Kawaihau region. A notification of the project and invitation to participate was posted to the *Ka Wai Ola* monthly online public notices for December 2023.

The first round of letters and project area maps were sent via email to individuals and organizations on November 2, 2023. Some of these parties provided referrals to additional individuals for consultation, who were subsequently contacted when possible with letters and project area maps. All letters requested that recipients respond with their interest in participating within two weeks of receiving the letter.

Three individuals requested to provide feedback anonymously. To preserve their requests for confidentiality, these parties are not listed in Table 4, below.

Letters contained the following text:

> Pacific Legacy, Inc. is conducting a Cultural Impact Assessment for the proposed Estates at Moloaʻa Bay Project in Moloaʻa Ahupuaʻa, Kawaihau District, Island of Kauaʻi [TMK: (4) 4-9-009:002 (por.)].
>
> Moloaʻa Lot 10A, LLC is proposing to develop residential properties within an approximately 45-acre parcel at Moloaʻa Bay (See Figures 1 and 2). The parcel has been divided by a CPR comprising 8 individual parcels. Eight tentative homesites have been identified. None of the possible homesites would impact Maliu Spring, or associated features.
>
> An Archaeological Inventory Survey (AIS) of this project area was previously completed by Scientific Consulting Services, Inc. in 2016. They identified four historic properties within this parcel (see Figure 3). This included a complex of two enclosures (SIHP 50-30-04-02291), a terrace feature located along the Moloaʻa Bay shoreline (SIHP 50-30-04-02292), a ditch and berm water-diversion feature located at the top of the coastal bluff (SIHP 50-30-04-02293) and a collection of alignments and modified outcrops associated with Maliu Spring (SIHP 50-30-04-02294). All four of these historic properties were assessed as significant under criterion 'd' ("Have yielded, or is likely to yield, information important for research on prehistory or history"; Hawai'i Administrative Rules 13-275-6) and recommended for no further work.
>
> A Natural Resources Assessment of the parcel was completed by LeGrande Biological Surveys Inc. in 2023. The survey found that the vegetation was dominated by introduced plant species. A total of 93 plant species were documented, 10 of which were indigenous, one endemic, and five Polynesian-introduced species. Indigenous plants found within the project area were *pālaʻa* (*Odontosoria chinensis*), *moa* (*Psilotum nudum*), *mānienie ʻula* (*Chrysopogon aciculatus*), *ʻakiʻaki* (*Sporobolos virginicus*), *hala* (*Pandanus tectorius*), *nanea* (beach pea; *Vigna marina*), *naupaka kahakai* (*Scaevola sericea*); *milo* (*Thespesia populnea*), *ʻuhaloa* (*Waltheria indica*), and *ʻūlei* (*Osteomeles anthyllidifolia*). The five Polynesian-introduced species were *kalo* (taro; *Colocasia esculenta*), *niu* (coconut; *Cocos nucifera*), *kī* (ti; *Cordyline fruticosa*); *maiʻa* (banana; *Musa xparadisiaca*), and *noni* (*Morinda citrifolia*). The single endemic plant identified within the project area was *ʻākia* (*Wikstroemia uva-ursi*). The survey also identified 17 bird species, one of which is an

endangered endemic species (the *nēnē, Branta sandvicensis*) and two indigenous breeding seabird species which are present on many of the Hawaiian Islands (the white-tailed tropicbird, *Phaethon lepturus dorotheae* and the great frigatebird, *Fregata minor*). The report noted that although they were not observed during the survey, green sea turtles (*Chelonia mydas*) and the Hawaiian hoary bat (*Aeorestes semotus*) may also be present in or around the project area at various times. The survey also observed wetland indicators in the lower portion of Maliu Gulch, and that water was evident in the spring area and downslope in various locations along the gulch bottom, though no surface water was observed flowing into the ocean.

The purpose of the CIA is to evaluate potential impacts to traditional cultural practices that may result from the proposed project, in accordance with the guidelines for assessing cultural impacts, which were adopted by the State of Hawai'i Environmental Council on Nov. 19, 1997. For the CIA, the ahupua'a of Moloa'a is considered the overall study area, while the project area is defined as the approximately 45-acre parcel shown in Figure 1.

We are reaching out to you for this assessment because you have been identified as a source of knowledge in Moloa'a, or may have recommendations for other individuals that we should contact for this study. We are seeking your kōkua regarding any information related to the following components of our study:

Cultural associations of Moloa'a Ahupua'a such as mo'olelo or connections to legendary accounts.

Knowledge of past and present land use within and near the project area.

Knowledge of past and present traditional gathering practices in Moloa'a.

Knowledge of cultural resources which may be impacted by the proposed project, including traditional resource gathering sites, traditional access trails, archaeological sites, historic sites, and burials.

Any other cultural concerns that community members may have in relation to traditional Hawaiian or other cultural practices within or near the proposed project area.

Referrals to other knowledgeable individuals who may be willing to share their cultural knowledge of the proposed project area and wider Moloa'a Ahupua'a.

In addition, an invitation to participate in the CIA was posted to the Public Notice Board for *Ka Wai Ola* for the month of December 2023.

Cultural Impact Assessment: Moloaʻa Bay Project, Kawaihau, Kauaʻi

Pacific Legacy, Inc., on behalf of Moloaʻa Lot 10A, LLC, is conducting a Cultural Impact Assessment (CIA) for the proposed Estates at Moloaʻa Bay Project. The project area encompasses approximately 45 acres and is divided by a CPR with eight tentative homesites identified. The parcel is located in Moloaʻa Ahupuaʻa, Kawaihau (Koʻolau) District, Island of Kauaʻi at TMK: (4) 4-9-009:002 (por).

Pacific Legacy, Inc. is seeking to identify and consult with individuals and organizations who possess knowledge regarding:

- Cultural associations of Moloaʻa Ahupuaʻa, such as moʻolelo or connections to legendary accounts.
- Knowledge of past and present land use within and near the project area.
- Knowledge of past and present traditional gathering practices in Moloaʻa.
- Knowledge of cultural resources which may be impacted by the proposed project, including traditional resource gathering sites, traditional access trails, archaeological sites, historic sites, and burials.
- Any other cultural concerns that community members may have in relation to traditional Hawaiian or other cultural practices within or near the proposed project area.
- Referrals to other knowledgeable individuals who may be willing to share their cultural knowledge of the proposed project area and wider Moloaʻa Ahupuaʻa.

Individuals and organizations willing to share any information that will lend to our understanding of past and present land use and cultural practices in Moloaʻa are invited to contact Dr. Jillian Swift at 808-263-4800 or via email at swift@pacificlegacy.com.

Figure 22. Screenshot of the public notice posted to *Ka Wai Ola* in December 2023.

Table 4. Outreach Summary for the Estates at Moloaʻa Bay CIA

Name	Affiliation	Initial Contact Date	Comments
Sherri Cummings	Malama Anahola	11/2/2023	No response
Kamakana Ferreira	Office of Hawaiian Affairs	11/2/2023	Made referrals
Kauanoe Hoomanawanui	Burial Sites Specialist (Kauaʻi and Niʻihau), State Historic Preservation Division	11/2/2023	No response
Gerald Ida	Kauaʻi Historic Preservation Review Commission	11/2/2023	No response
Kauaʻi Historical Society	Kauaʻi Historical Society	11/2/2023	No response
Abe Kahiwahiwa Makanui	Aha Moku Council	11/2/2023	No response
Malia Nobrega-Olivera	Moku o Manokalanipō, the Kauaʻi Council of the Association of Hawaiian Civic Clubs	11/2/2023	No response
D. Kaliko Santos	Nā Kuleana o Kānaka ʻŌiwi/Office of Hawaiian Affairs	11/2/2023	Made referrals
Kaʻāhiki Solis	Cultural Historian (Oʻahu, Kauaʻi and Niʻihau), State Historic Preservation Division	11/2/2023	Made referrals; provided information on native birds
Kai Markell	Office of Hawaiian Affairs	11/10/2023	Made referrals
Pelika Andrade	Referred by OHA	11/10/2023	No response
Carol Lovell	Referred by OHA	11/10/2023	No response
Mehana Vaughn	Referred by OHA	11/10/2023	No response
Lilliane Makaila	Department of Hawaiian Homelands	12/5/2023	Made referrals
Nancy McPherson	Department of Hawaiian Homelands	12/13/2023	Made referrals
Kuʻuleialoha Punua Johnson	DHHL beneficiary (Anahola)	1/19/2024	Provided feedback via email
John Kaohelaulii	DHHL beneficiary (Anahola)	1/19/2024	No response
Agnes Marti-Kini	DHHL beneficiary (Anahola)	1/19/2024	No response
Rachelle Nam	DHHL beneficiary (Anahola)	1/19/2024	No response

Name	Affiliation	Initial Contact Date	Comments
Damon Boiser	Knowledgeable individual with generational ties to Moloaʻa	1/11/2024	Interviewed on 1/18/2024
Debra & Mikkel Boiser	Knowledgeable individuals with generational ties to Moloaʻa	1/26/2024	Interviewed on 1/31/2024
Lavorn Sparks	Neighbor	1/29/2024	Provided feedback via email
Michael Becker	Neighbor	1/30/2024	Provided feedback via email
Peter Eacott	Neighbor	1/31/2024	Provided feedback via email
Cheri Gienger	Neighbor	1/30/2024	Provided feedback via email
David Neaves	Neighbor	1/31/2024	Provided feedback via email
Mary Ellen Pearlman	Neighbor	1/31/2024	Provided feedback via email
Mike Schwartz	Neighbor	1/30/2024	Provided feedback via email
Betsy and Stuart Scolnik	Neighbor	1/30/2024	Provided feedback via email

4.3 COMMUNITY OUTREACH INTERVIEWS AND RESULTS

Eight people responded to our consultation letter and provided feedback via phone or email. An additional eight people reached out to us near the end of our consultation window, having heard about the project from neighbors. Four individuals with generational ties to and knowledge about Moloaʻa were interviewed either in-person or via Zoom, and a site visit was conducted with one of the interviewees who requested to remain anonymous. Those who were interviewed spoke to a range of valued cultural and natural resources in the project area. Traditional and customary native Hawaiian rights exercised in the area related primarily to activities in Moloaʻa Bay. Feedback emphasized the continued significance of Maliu Stream (usually referred to as 'the stream' or 'the spring') and Moloaʻa Bay, and concerns that these vital waterbodies and the ecosystems they support could be further impacted or their access restricted due to project activities. Concerns were also raised regarding potential impacts to nesting avifauna, and that development activities may cause accelerated soil erosion, which could lead to a range of cascading impacts. A summary of information received from interviews and consultation responses is presented below.

4.3.1 Kaʻāhiki Solis, State Historic Preservation Division

Kaʻāhiki Solis is a Cultural Historian (Oʻahu, Kauaʻi, and Niʻihau) for the History & Culture Branch of the State Historic Preservation Division. Solis provided referrals to additional potential CIA participants, and expressed concerns regarding the potential impacts of the project to native seabirds, particularly the *ʻaʻo* (Newell's shearwater; *Puffinus newelli*), *ʻuaʻu* (Hawaiian petrel; *Pterodroma sandwichensis*), and *ʻakēʻakē* (band-rumped storm petrel; *Oceanodroma castro*). Solis noted that native seabirds are vulnerable to disorientation caused by artificial light, particularly in coastal areas and especially during the time of *Lonoikamakahiki* (late fall/winter). Awareness of these potential vulnerabilities and thoughtful consideration of lighting in project design are recommended to avoid further impacts to native avifauna.

4.3.2 Anonymous Respondent #1 (AR1)

AR1 is an individual who presently resides in Moloaʻa and requested to have their name withheld from this report. They provided information via an unrecorded telephone call on November 6, 2023. They did not identify valued cultural, natural, or historic resources in the project area, nor traditional and customary native Hawaiian rights exercised in the area. However, AR1 did note that concerns may arise from others with regard to water use as well as beach access trails near the project area.

4.3.3 Anonymous Respondent #2 (AR2)

AR2 is a knowledgeable individual with lineal ties to Moloaʻa Ahupuaʻa and a close connection with the project area and surrounding Moloaʻa Bay. Consultation with AR2 included two in-person interviews on and January 4 and 9, 2024, which were recorded and transcribed for integration into this report, and a site visit to Moloaʻa Bay on January 24, 2024.

When AR2 was 5, they went to live with their grandmother at Moloaʻa Bay. The 1946 tidal wave had destroyed all of the existing homes that had been in Moloaʻa Bay, and AR2 recalls living in an army tent on a platform at sea level in Moloaʻa Bay while their grandparents were building a

new home up the hill from the bay. The only houses AR2 could recall in the area were this house and their mother's sister's house, which was located on another knoll overlooking Moloaʻa Bay. The redevelopment of housing around the bay did not occur until around the time AR2 was in high school. They recalled that, at the time, there was no real attention paid to survey boundaries. (In their words: "Because my people never thought of ʻāina as something to 'own,' we never stopped to ask, 'Okay, whose land are we going onto to do this?'"). In around 1948, when AR2's grandmother decided to move back to Kauaʻi, she wanted to build a house up higher that would be protected from future tidal waves. Her father instructed her to just "go up there, clear land, and build your house," and they did so, assuming that all of the land they were building on was part of the family property. The house was largely built with lumber that had been salvaged from the tidal wave. They later learned that some part of the house sat on land owned by the Catholic Church (most of it being pasture land that they had referred to as the "Catholic Land"), and had to make arrangements with them to re-settle land ownership. As AR2 explained, "In Moloaʻa Bay, that was actually how, and this happened, not only to our family, but to many Hawaiian families, where people would come that were not members of the family, and family members would simply say, we're not using that land, go use it, make it productive, make it serve you, and build you a house."

The limited attention to formal property boundaries was not exclusive to AR2's family. They also noted that others in the area would similarly inhabit the land with a much greater degree of freedom and sense of communal use. For instance, AR2 recalled that Olaf Thronas held pasture land on the other side of Moloaʻa Stream, and that the cattle roamed relatively free, and likely had grazed on land owned by others without incident.

They recalled Maliu Stream (which they referred to as just 'the stream') as their main source of water for drinking, cooking, and bathing. They would bathe downstream so that the water they collected further upstream for cooking and drinking had not been contaminated. At certain times of year, they would follow the stream *mauka* to catch *ʻoʻopu* (Hawaiian freshwater goby; *Lentipes concolor*). At one point, AR2's grandparents had built an *auwai* system to divert some of the water to create a pond, where they raised ducks. They also recalled an avocado tree growing on the banks of the stream, and where they would often see a *pueo* (Hawaiian endemic short-eared owl; *Asio flammeus sandwichensis*). Where the stream met the ocean, there used to be a *muliwai* (river mouth, estuary; here, a brackish water delta), where AR2 and other children would play, making sand castles and fashioning boats from the dried pods of the African Tulip (*Spathodea campanulata*) tree. AR2 recalls that when they were growing up, the stream was flowing. However, when they came back for a visit one summer later on, the stream was no longer flowing. Their grandmother told them that papaya farmers had diverted the stream up onto the flat area up *mauka* for their papaya trees, and this was why the stream did not flow anymore. AR2 was unfamiliar with where the source of the stream may have been, and noted that they never referred to this body of water as a spring.

They referred to the larger Moloaʻa Stream as "the river." In Moloaʻa Bay, along the river, were bamboo groves, where AR2 would go with their grandmother to harvest bamboo shoots from these groves to cook and eat. They would also fashion knives out of the bamboo stalks with their grandfather to use to clean the *kalo* before it was ground to *poi*. There were *ʻōpae* (Hawaiian red shrimp; *Halocaridina rubra*) in the river, and they would wade into the river with nets to catch and eat *ʻōpae* raw.

AR2's aunt's house was located adjacent to the project area, and they recall hiking in the woods above this and seeing ironwood trees and nests of *ʻiwa* (great frigatebird; *Fregata minor*). This

area was also frequently used as a location for watching the bay, particularly for fishermen who would observe the schools of fish. AR2 has memories of a fisherman who would come to this hilly area to use as a lookout spot and discern where there were schools of fish in the bay. If he saw fish, he would come to AR2's grandmother's house and use her phone to call his family in Anahola and tell them to bring the boat to the bay to catch fish there. AR2 remembers participating in *hukilau* fishing in Moloaʻa Bay, where the importance of sharing, not hoarding, was reinforced: "no matter who participated in pulling the nets in for the hukilau, they took fish that were caught, with them, wherever they were going to after they left, and that included visitors, tourists, who might have just happened by the bay when a hukilau was occurring. If the tourists, the visitors, participated in hukilau they left with fish, what was caught in the nets was shared with everybody who participated in the hana, the work, that was being done."

AR2's grandfather worked at the pineapple cannery in Kapaʻa, which was their primary source of income. However, much of the family's sustenance was still dependent on the ocean, and the abundant resources of Moloaʻa Bay. AR2's grandmother would observe the bay, from the window of her house. When the tide was low, she would ask for her squid iron, and go onto the reef to poke into crevices under the reef looking for *heʻe* (octopus). She would also fish with scoop nets for the schools of little fish that were in the reef pools. These fish could be snacked on with little preparation: simply bite the head off and discard it, then what remained could be eaten raw. AR2's family would fish off the reef with fishing poles and dive in the channels of the reef to spear fish. They would catch sea turtles in the bay and in their *pā kini* (a galvanized tub) they would cut up the turtle meat and fry turtle steak. Around the [south] point of the bay, there are black rocks where AR2's grandmother would go to gather *ʻopihi* (Hawaiian limpet; *Cellana* sp.). There, AR2 learned important lessons like how to gather *ʻopihi*, and to stay aware and not turn your back to the oncoming waves to make sure not to get sucked out to sea.

On the other side of the bay, an area called Kaʻakaʻaniu was known for being a very rich source of *limu kohu*. AR2 recalls their grandmother hiking along the beach and over the hill to Kaʻakaʻaniu to collect *limu*, or as they referred to it, to "pull limu." AR2 would help to clean the 'rubbish' out of the *limu* so it would be edible. Their grandmother would send the *limu kohu* to Oʻahu to be sold at the Oʻahu Fish Market in Chinatown. Another important value, which AR2 recognizes as a Hawaiian worldview, was to "no make kāpulu" [*kāpulu* meaning to be careless or slovenly]. In AR2's words: "Whenever we helped to clean things that were in a pā kini, whether it was limu kohu or kalo (taro) under the watchful eyes of our kūpuna (elders), we were told 'no make kāpulu,' which was an admonishment to not do things in a slovenly way but, rather, to do things with great care so that everything was properly 'clean' when we were done."

Other important resources from the bay included sea urchins, *wana* (long-spined sea urchins; *Diadema antillarum*) and *hāʻukeʻuke* (helmet urchins; *Colobocentrotus atratus*), and *loli* (sea cucumbers; Holothuroidea). As AR2 remembers: "By observation, I learned how our kūpuna cleaned the wana in wire baskets in the ocean to get all the spikes off the shell before cracking it open to get the 'meat' of the wana which we ate raw."

There were a great deal of terrestrial resources available in Moloaʻa as well, including both wild and cultivated plant resources. AR2 recalls gathering these resources, without any need to pay attention to individual land ownership: "we just went and gathered, taking only what we needed and no more." Among these were the previously mentioned bamboo grove, as well as introduced fruit and nut trees including mangoes (*Mangifera indica*), avocados (*Persea americana*), and macadamia nuts (*Macadamia* sp.). AR2 recalls each of the children in the family planted a coconut tree in the flat area near the seashore, but those trees, including the one they planted,

are no longer there. There were medicinal plants as well, like *pōpolo* (*Solanum Americanum*), whose leaves and berries were used for a wide range of ailments, *noni* (*Morinda citrifolia*), and likely *ʻuhaloa* (*Waltheria indica*), the roots of which AR2's grandmother would use to make a bitter tea for when they got sick. AR2 observed, "I talk about breaking with the past, but they didn't break with the past completely, because when we got sick, they knew what to go get, to prepare, to prepare for us to heal."

AR2 recalls their parents and grandparents made *poi*, though they did not grow *kalo* in Moloaʻa, they would buy it from Hanalei. AR2 could not remember whether there were still any *loʻi* in Moloaʻa when they stayed there. They remembered the process of cooking the *kalo* in large barrels over an open fire, and helping to clean the cooked *kalo* before their grandfather would grind it to make *poi*. On special occasions, they would build an *imu* to cook pigs and hold parties. There were no refrigerators then, so to preserve food AR2's grandparents would also salt and dry *heʻe* and fish and store them in dry boxes to eat later.

With regard to any potential historic properties (archaeological sites) in the area, AR2 noted that they could not recall seeing any. However, they also emphasized the destructiveness of the 1946 tidal wave in Moloaʻa Bay, which may have had a significant impact on any previously existing sites or features.

During interviews and site visits with AR2, they stressed that cultural practices and understandings were things that "just happened" during the course of life, rather than being explicitly taught in (for example) a classroom setting: "life goes on, life is lived, and you observe things, and you hear things...and they become a part of your knowledge or your ʻike, or your worldview simply because of exposure, and not because you're having a lesson in Hawaiian culture, or a lesson in gathering..." They shared the *ʻōlelo noʻeau*, "Ma ka hana ka ʻike" (to learn by doing).

There was no concerted effort to separate doing something in a "Hawaiian" way versus a "Western" way. Rather, what may be recognized as traditional Hawaiian cultural practices were increasingly incorporated into Western structures. For example, traditional gathering and culinary practices readily incorporated introduced flora and fauna alongside indigenous or Hawaiian-introduced species. Their grandparents made their own *poi*, not with a traditional pounder but with a power-generated grinder. AR2 stressed that it is vital that people are able to practice their culture in a modern context and in an adaptive way.

AR2 raised strong concerns that the proposed project may impact access and cultural practices that continue to occur in Moloaʻa, particularly fishing and gathering activities that necessitate access to the shoreline, reef, and wider bay. They highlighted the conflict between native Hawaiian cultural practices and Western concepts of private land ownership, and the tendency for some private landowners to cut off access to important places, including beaches, the ocean, and places where ancestors are buried. They are concerned that their descendants and other families connected to Moloaʻa will face increasing difficulties in accessing the bay to carry out important practices like fishing, and gathering such resources as *ʻopihi*, *wana*, and *limu*. AR2 has a strong lifelong connection to Moloaʻa and intends to have their ashes scattered in Moloaʻa Bay. They worry that this important practice could also be disturbed or otherwise impacted by increasing development and activities in the bay.

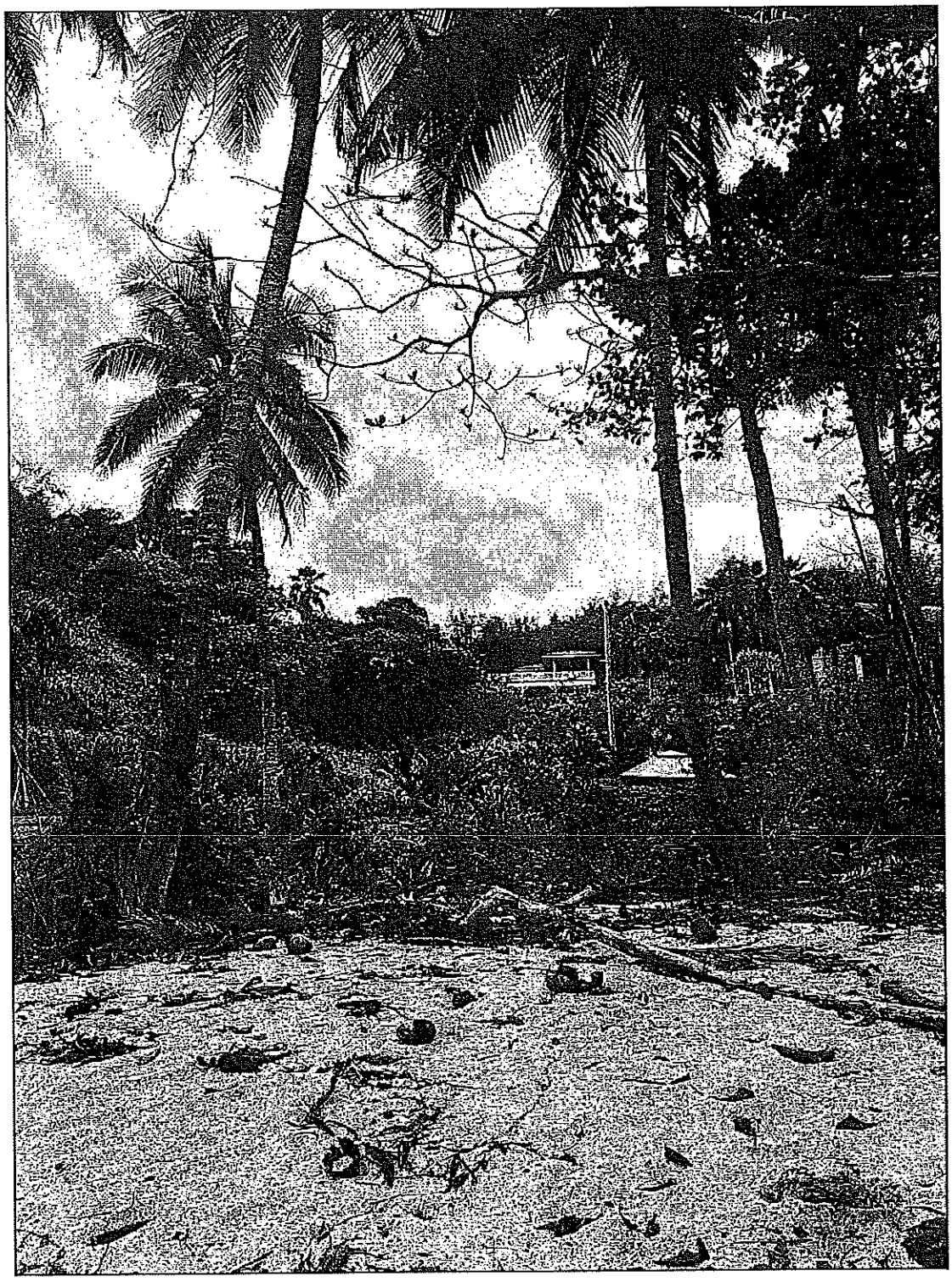


Figure 23. Picture taken from Moloa'a Bay during a site visit on January 24, 2024, looking inland towards the approximate location of where freshwater flowed continuously through Maliu Stream and the *muliwai*.

4.3.4 Anonymous Respondent #3 (AR3)

AR3 is a resident of Kaua'i who requested to be represented as a "Concerned Kanaka." They provided feedback via email on January 20, 2024. In addition, this individual reached out to other community members with information on this CIA report, several of whom later provided feedback via email. They observed that Moloa'a Bay has provided food for generations to the community. Their primary concern was regarding erosion and sediment runoff into the bay. They are concerned that increasing residential properties on the bluff and near the shoreline could accelerate the erosion of the already delicate slopes, which would be exacerbated by heavy rains. This could have significant impact not only on properties downslope from the project area, but also the nearshore and reef ecosystems which could be harmed by sedimentation. They also expressed concern over the native birds that nest and feed in the area, and a desire that no or minimal chemicals would be used on the *'aina*. The native and non-native birds that frequent the grounds include the *nēnē* (*Branta sandvicensis*), albatross, *pueo*, *koa'e kea*, and songbirds like meadowlarks. Recommendations posed by AR3 included that all cultural sites located in the project area should be respected, that building should be set back to not increase erosion rates, and that all types of underground buildings and tunnels should not be permitted unless they are approved by the County Council.

4.3.5 Damon Boiser

Damon Pi'ikalama Keoki Boiser was born and raised on Kaua'i and lived in Moloa'a until 1995. His family has lived in Moloa'a for many generations. He recalled the meaning of Moloa'a to be "twisted roots," and related the meaning to a complicated family. Damon shared many fond memories of growing up in Moloa'a, and spending much of his time in Moloa'a Bay. He talked about surfing at the Big Reef on the Anahola side of the bay, as well as capturing octopus and fishing for *āholehole* (*Kuhlia* sp.). The *āholehole* holes in the reef were so abundant with fish that "you could just spear in it, and not even have to look or aim, and you'd just catch one every time." The Little Reef, located closer to the house Damon grew up in, was where he learned to spear fish with handmade spears built using bamboo and a wire hanger, and where he would go swimming in the morning before work with his adopted dogs and his pig named Arnold. He would also take the canoe out with his father to fish for *akule* using a horseshoe-shaped net, which was intentionally designed to only capture some of the fish and leave the rest. During the summer, when *akule* were especially abundant, Damon's father would sell some of the catch to supermarkets and on the side of the road. Across the bay, on the north side, was the best place to gather *limu*. Damon recalled that at one point, so many people had started coming down to the bay to rake *limu* that they had to start regulating it. Although he didn't particularly like to eat *'opihi* himself, he recalled tagging along with his father and helping him pick *'opihi*. When there were hurricanes, they were able to subsist on food from the land and the bay, and indeed they ate well during these times.

When Damon was growing up in Moloa'a, he recalled that there were fewer houses, and no fences: "we just walked anywhere we wanted, through people's property or anything. They all knew who our family was, and we all knew each other." He observed there were many more houses and fences in the area today, and access was significantly more restricted.

Damon's family cultivated a number of native and non-native plant species around their house, including patches of bananas (*Musa* sp.), *kī* (ti; *Cordyline fruticosa*), and watercress (*Nasturtium officinale*). There were areas where the *lilikoi* (passion fruit; *Passiflora edulis*)

vines grew so thick, they would cover the trees and you could climb into the vines like a hammock.

Damon recalled referring to Maliu Stream, which runs through the project area, as simply "the spring," and did not know of it being referred to as Maliu Stream or Maliu Spring when he was growing up. He was not familiar with *moʻolelo* that had been published about Maliu Stream. According to Damon, the stream ran down through their banana patch and underneath their driveway, then through their *kī* leaf patch and into the ocean. He recalled that sometimes the water was not strong and didn't flow into the ocean, and he and his friends would build dams to make a pond they could play in. He observed that it was still flowing some when he left in 1995, but that now, "it more trickles than flows."

Damon shared that there were other ways that Moloaʻa had transformed since the time when he was growing up. After many of the beachfront parcels were sold, access to the beach was significantly more restricted. He noted that it was no longer possible for his family to come down to the beachfront and set up their tents to camp during the summers. It was no longer possible to pick *ʻopihi*, and now when his family wants to go fishing, they must park their cars further away and walk the length of the beach to the spot they would cast their poles. He is worried that the project may impact access and beach activities further.

In addition to beach access, one of his main concerns about the project is the impact that an additional eight residences would have on the landscape, the bay, and the community. He is worried that although the project currently stands at eight houses, that the number of developments on the parcel could increase in the future and lead to further impacts. Other concerns included potential harm to nearshore ecosystems from sediment runoff into the bay, as well as possible impacts to the [Maliu] Stream from development, including that the spring could be cut off or the stream may further dry up.

4.3.6 Debra and Mikkel Boiser

Debra Jean Boiser and Mikkel David Kaʻuhanehou Boiser were interviewed together via Zoom on January 31, 2024. Debra moved to Kauaʻi in 1984 and lived in Moloaʻa with her husband at the time, Piʻikalama Boiser. Their son Mikkel was born in California, but grew up in Moloaʻa with his younger sister and older brother, Damon (see above). Mikkel moved away when he was 18, but is planning to return to Moloaʻa soon. Debra still lives in Moloaʻa, on property adjacent to the project area. Mikkel's family has lived in Moloaʻa for several generations, and were among the only to return to Moloaʻa after the destruction of the 1946 tidal wave. When they returned, Mikkel's great grandparents built their house on a piece of land adjacent to the project area, which was higher up to be out of tsunami range.

Mikkel recalled hiking to a small beach called Kakaniu (elsewhere referred to as Kaʻakaʻaniu; here, Kakaniu or Kaʻakaʻaniu refers to the small beach north of Moloaʻa Bay, rather than the neighboring Kaʻakaʻaniu Ahupuaʻa) to go fishing. There used to be a trail that led from Moloaʻa to Kakaniu that they would frequently hike, though the current land owners have since moved the trail, which made it more difficult to access. As a family, they used take the trail to watch the sunrise on Easter morning, and would walk the reef to fish and throw net from Kakaniu all the way down through Larsens. There was also a small channel right around the corner where Kakaniu starts that a canoe could just barely fit through. As long as the surf was not rough, they could pull the canoe in onto the beach through this channel. They noted that there were always many sea turtles in this area.

Mikkel's father and grandfather used to fish in the bay, and he remembered taking lay nets out to surround the *akule*. Since they lived up on the hill, he remembered his father could look down from the hill and see the pile of fish in the bay that would indicate the *akule* had come in and it was time to fish. Debra and Pi'ikalama used to take their four-person outrigger canoe to fish for *akule* in Moloa'a Bay. As the one responsible for repairing the net, Debra recalled they would drop the net in a semi-circle around the school of *akule*, and sometimes a monk seal would go right through to get the fish, or the *kahala* (greater amberjack; *Seriola dumerili*) could also torpedo through. They also noted that the *halalu* hide out in the tidepools and reef pockets in the bay. Debra observed that a couple summers ago, they were more abundant than she had seen before in her life, so much so that the water looked solid red.

Mikkel recalled spearfishing around the Little Reef and Big Reef on the Anahola side of Moloa'a Bay. This area was also home to many other resources, particularly out along the shore break, including *limu kohu*, *'opihi*, and lobsters. He remembered that after the hurricane when they did not have access to grocery stores, they still ate well from Moloa'a Bay. On the other side, near Moloa'a Stream, there was a little reef with a *moi* hole where his father and grandfather would throw net. His father also told him stories about Mikkel's grandfather going spearfishing at night, and they would see his underwater lantern going out of the bay and around the corner toward Kakaniu. Mikkel's great grandmother had a special octopus-catching spear with a wooden handle and a metal barb, which she would use to tickle the octopus out of their holes. Debra noted that they would walk the reef when the tide was low and find large cowries, which the *he'e* surely loved.

They have seen dolphins frequent the outskirts of the bay quite often. Monk seals are also a regular appearance. They noted that the seals used to come mainly to Larsens [Beach], but now also frequent Moloa'a Bay, cruising in around the small reef, sometimes beaching down near the channel between the Big Reef and the Little Reef. Once, Mikkel recalls that after Hurricane Iniki, a humpback whale and its calf came all the way into the bay, just outside the small reef. It was the first time he ever thought the reef looked small. *Honu* (green sea turtles) are plentiful in Moloa'a Bay, and would lay their eggs around the bay at night. Debra recalled a time when she was night fishing with friends and saw baby turtles crawling into the carport, likely because they were confused by artificial light coming from the houses in the bay. Some boys from the neighborhood came to help them get back into the ocean.

They both identified Ka'aka'aniu as the primary and most famous source for *limu kohu* in this area. Debra recalled reading that the *limu kohu* was brought by an *ali'i* from Kohala. We discussed what had been written about actively farming *limu kohu* in Moloa'a, and they added that there were learned harvesting techniques which also contributed to improving the health and abundance of the *limu*. This included not pulling the seaweed out by the roots, but pinching at the base, then shaking the *limu* or rubbing it on clothes after picking so that the propagative parts of the plant will fall back into the reef and regrow. They noted that there was still a good amount of *limu kohu* in Moloa'a, though every once in a while with low tides they may get sun-bleached.

Both Debra and Mikkel identified Maliu Stream as an important source of water for their family. They called it both the spring (when referring to the source of the stream) and the stream, but did not use the name Maliu. Debra recalled a spring above their house which was referred to as Maliu Stream, and that Pi'ikalama used to go up to clean the stream out as it would slow or stop running due to disturbances from overgrown vegetation, siltation, and wild pig activity. Mikkel would go with his father to help clean out the stream. They would walk the streambed all the

way to the spring. Debra brought up the *mo'olelo* about Maliu, which indicated Maliu Spring was located on the coast, and suggested that there may also be a freshwater spring in that area in addition to the *mauka* stream source. She had learned from her father-in-law that freshwater input is good for *limu*, of which there is plenty in Moloa'a. Mikkel recalled that when he was growing up, the stream would run strong all the way into the ocean during the winter and whenever there were heavy rains. When it flowed like this, it would uncover rocks and other materials that had been buried. One year, Mikkel found an old Hawaiian adze in the stream.

They had a small *lo'i* on the property, which they estimated to be around 20 by 20 feet in size, which was fed by the stream and where they grew *kalo* and watercress. They also raised Khaki Campbells (a breed of domestic duck from England; *Anas platyrynchos domesticus*) there for a time. In addition, they started attracting the prawns from the stream into the *lo'i* by throwing in chicken scratch, as they had learned that the prawns would migrate downstream to the ocean to reproduce. From the *lo'i*, the water would divert back into the stream where they had a banana patch. The banana patch is still there, though it has become overgrown. Along the stream, the family also had an area that was like a little waterfall, where they (Debra believes it may have been Mikkel's great grandmother) had installed a pipe and grate, with *'awapuhi* (shampoo ginger; *Zingiber zerumbet*) growing on the side, to be able to shower in the stream. This became especially important after the hurricane, when there was no water or power. Debra indicated that past development activities, including the installation of an ATV trail through the current project area, had impacted the streambed and the spring. She noted that the spring had been a consistent spring since she had been in Moloa'a, and for generations past, as a significant aspect of living in the area, but that the stream no longer runs in the way that it used to. Debra and Mikkel did not think that the papaya farms would have had an impact on the stream, as Maliu Spring originates downslope of the papaya fields.

In Moloa'a Stream, Mikkel remembered going crabbing for Samoan crabs (mud crabs; *Scylla serrata*). He remembered the area used to be good for crabbing, but was not sure if people were still crabbing there. They observed that Moloa'a now has some of the highest pollution of anywhere on the island, though their side of the bay remains clean. Debra added that now, she would not eat crab that came out of Moloa'a Stream, and that she advised friends to rinse off well after swimming on that side of the bay. To the left of Moloa'a Stream was another channel that they would take the canoe in, and recalled many people would fish in the far point on that side of the bay for *ulua* and *kahala*.

A mix of native and introduced vegetation was cultivated and continues to grow in the area. They recalled the watercress and *kalo* in the *lo'i*, as well as a number of trees, including bananas, papayas, mangoes, avocados, macadamia, and cashews (*Anacardium occidentale*). Debra recalled Pi'ikalama telling stories about climbing the mango trees with his brothers and throwing mangoes at each other, then gathering them up and taking them to the ocean and playing with them until they had salted mangoes. At present, there are a few *kukui* trees on the farm they maintain in Moloa'a, as well as one *kukui* tree near the house her mother-in-law had built. She added that they have also had purple *lilikoi*, and *hala* trees for hat and *lei* making.

Debra noted there were a number of nesting birds that spent time in Moloa'a. She had observed some pairs of albatross coming to the bay for the last five years, and believes they may come to nest in Moloa'a this year. She has also seen shearwater, *'auku'u* (black-crowned night heron; *Nycitorax nycitorax hoactli*), and a nesting brown booby. She recalled that there used to be a number of hoary bats (*'ōpe'ape'a*; *Aeorestes semotus*) who would come out to catch bugs at

dusk, though she has not seen many of them recently. Debra and Mikkel have also seen *pueo* and barn owls regularly in Moloa'a.

Debra also recalled that there was a large *kukui* forest on the flats across the bay, which had supposedly been the largest in the State until the trees were all cleared, presumably for industrial agriculture. She had heard a story of Queen Emma coming to Kaua'i and being transported by horse-drawn carriage through the *kukui* forest, and that this forest had become one of her favorite places. This may be the same *kukui* grove, Kauhakake, described by Handy (Handy 1940:195).

Debra and Mikkel identified an old pillbox from World War II, which is located on the sand in the middle of the bay. Debra recalled that Damon and his friend Makali'i once spent a full day carving their names into it. They noted that it is mostly cement ruins at this point, but a high winter surf may come in to pull the sand out and uncover it. Lyman and Dega (2016) also reported learning about "a concrete pillbox along the shoreline that is normally covered by sand" (Lyman and Dega 2016:20), though they did not locate any WWII-era features during their survey.

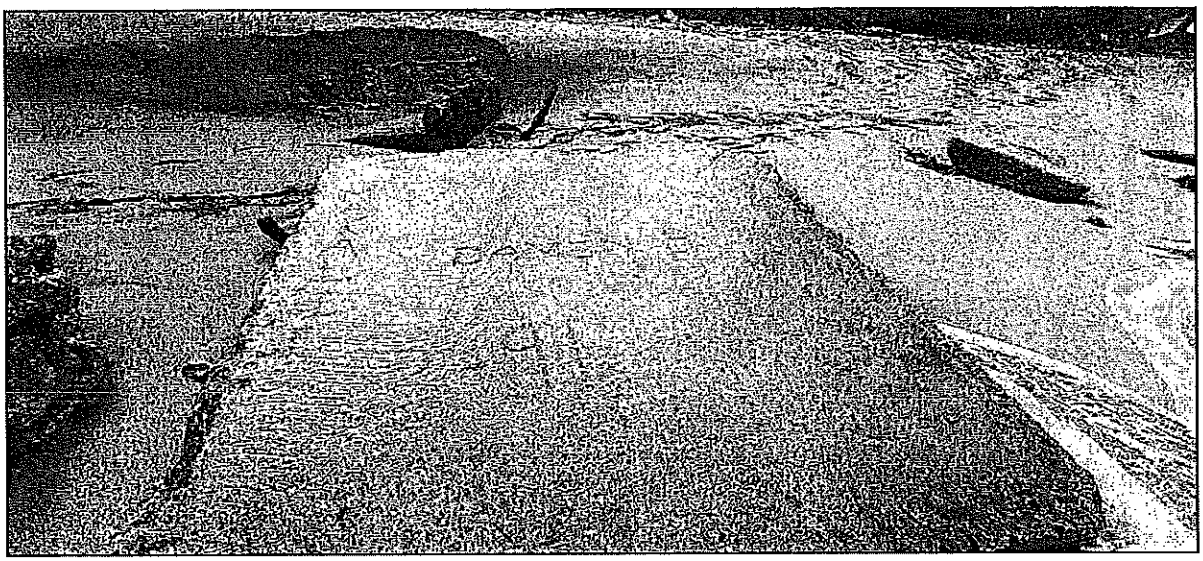


Figure 24. Remnant of a WWII-era pillbox located in Moloa'a Bay. This feature is regularly covered over by sand, though is occasionally uncovered by high surf (image courtesy of Debra Boiser).

Mikkel noted that Moloa'a had always been considered a very spiritual place, and recalled the area around the big horseshoe turn on Ko'olau Road being associated with Kamapua'a in particular. There were legends about people's cars stalling out in this area, and seeing a giant pig in the road. Mikkel further recalled that his brother's (Damon's) friends' parents would not drive all the way down to the bay at night to drop him off. Instead, they would drop him off at the top, by the fruit stand on Ko'olau Road, and he would walk home through the mountains from there. Debra added that, "you had to throw all your food out of the car, and if you had any pork you were in big trouble!" She also recalled coming across the ruins of an old *heiau* across from Kuhio Highway, and that there was a night marchers' path that went all the way down Ko'olau, through Moloa'a, down to the beach. Mikkel's father told him that he had experienced the night

marchers twice, once he saw them and once when all the animals started howling and barking, and the cows went crazy in the pastures, and he saw lights on the hillside.

A major concern from Debra and Mikkel Boiser stems from the history of runoff and pollution into Moloaʻa Bay. Previous grading activities in the area have led to significant runoff and siltation of the bay, which damaged the reef. They noted that Moloaʻa can receive torrential rains, and adding more houses would likely add to the amount of runoff into the bay. They also expressed significant concern over Maliu Stream. They worried that Maliu Stream may be channeled into sections of metal pipes to flow down to the ocean, and that this would be detrimental to the practices and surrounding ecosystem that the stream interacts with and supports.

They also observed that previous development projects in the area created a significant amount of noise and light pollution. This had an impact on the people living in Moloaʻa, and Debra suggested that this likely also disturbed the wild fauna in and around the bay as well. She noted that there were strict light restrictions in order to protect shearwaters, and hoped that the current project would not contribute further to noise and light disturbances in the area.

4.3.7 General Community Concerns

A number of individuals within the Moloaʻa community contacted us near the end of the consultation phase for this CIA to express support and/or concerns via email about the project. Although this feedback did not deal directly with implications for traditional cultural practices, resources, and gathering rights, some of the concerns raised may nevertheless relate to these issues in terms of potential environmental impacts. Copies of this email correspondence, which was received from eight separate individuals between January 29 and January 31, 2024, can be found in Appendix B. Concerns that were particularly relevant to the scope of this assessment included the pollution of Moloaʻa Stream and, consequently, the bay; the possibility that development activities could accelerate soil erosion; and potential destabilization of the hillside, which may leave the area prone to landslides. General concern over potential impacts to native plants and animals was also raised, though in most cases no specific causes or potentially impacted species were identified.

The letter submitted by Mary Ellen Pearlman (Retro Farms) contained several points which were especially salient to the current study. The importance of Maliu Stream was once again highlighted, particularly its role in supporting *limu* growth, which is of value not only to the people of Moloaʻa but in supporting the *honu* population as well. In addition, it was noted that a number of birds nest in the area, including albatross, shearwaters, brown boobies, barn owls, *pueo*, and *nēnē*, and that development could eliminate these nesting sites. There was also concern that development had the potential to affect the health of the beaches and reefs, which have seen an increased number of Hawaiian monk seals and turtles. Disturbance of these habitats could, in turn, affect many continued cultural practices which include harvesting *hala*, *noni*, and *limu*, throwing net, beach fishing, and *hukilau*.

5.0 SUMMARY AND RECOMMENDATIONS

In keeping with the guidelines provided by the Office of Environmental Quality Control (OEQC 1997), the purpose of this CIA was to identify and describe cultural resources, practices, and beliefs within the project area and the broader Moloaʻa Ahupuaʻa; to determine any impacts the project may have on these resource, practices, and beliefs; and to identify alternative actions or mitigation measures to protect any resources, practices, or beliefs which may be impacted.

The following sections provide an analysis of potential effects to known traditional cultural resources, practices, and beliefs within the proposed Estates at Moloaʻa Bay Project Area and broader Moloaʻa Ahupuaʻa, as well as potential mitigation strategies for managing possible impacts.

5.1 TRADITIONAL CULTURAL RESOURCES, PRACTICES, AND BELIEFS WITHIN THE STUDY AREA

Native Hawaiian families have carried out traditional cultural practices and beliefs for generations in Moloaʻa. Even after a devastating tidal wave in 1946 wreaked massive destruction in the bay, families with long generational ties to the area returned shortly thereafter and continued on with established traditional cultural practices and ways of life. Archival research and interviews with knowledgeable individuals who have generational ties to the area have identified a range of these practices, many of which center on Moloaʻa Bay and continued access to its shores, reef, and marine resources. The significance of Maliu Stream (also called "the stream" or "the spring") as a vital source of clean, fresh water and host to a variety of activities and resources was also emphasized. CIA participants also raised concerns about potential impacts to avifaunal species, as well as the possibility that construction activities may accelerate erosional processes and further impact Maliu Stream and Moloaʻa Bay, particularly the reef. The abundant natural and cultural resources of Moloaʻa Ahupuaʻa were evident from archival research and interviews.

Although the foreign concept of land ownership was introduced in the mid-nineteenth century via the Mahele, a more traditional practice of land tenure continued on in Moloaʻa through the early 1900s in the form of the Moloaa Hui. Indeed, even after the surveying and re-parceling of the Moloaa Hui Lands to individual, private owners, there may have been continued resistance to this form of private land ownership, as evidenced by the more recent history of family residences and activities in the area. During the interviews conducted for this CIA, participants reflected on the community not feeling much need to pay attention to survey boundaries in the early days, and mourning the continued loss of access throughout the area, and in particular to Moloaʻa Bay.

Resources and practices associated with Moloaʻa Bay that were identified during this assessment include pole, spear, canoe, and net fishing; *hukilau*, with the catch being shared amongst all who participated; "fishing" for *heʻe* on the reef; scoop net fishing for small schools of fish that could be eaten raw; catching sea turtles and frying turtle steak; gathering *ʻopihi*; hiking along the beach and over the hill to Kaʻakaʻaniu to pull *limu*, especially *limu kohu*; harvesting sea urchins like *wana* and *hāʻukeʻuke*; harvesting *loli*; the presence of a wide range of marine species, which included reef fish and marine mammals like monk seals, dolphins, and whales; and green turtles, which were always plentiful and laid their eggs in the bay. Additionally, the "Little Reef" and "Big Reef" on the Anahola side of Moloaʻa Bay were identified as important spots for fishing,

gathering, swimming, and surfing. The resources available in the bay became especially important after Hurricane Iniki, when it was difficult if not impossible to get food from the grocery stores.

The uplands were also important for fishing, as there was at least one spot in the hills known to be a lookout spot for identifying the presence of fish in the bay. There used to be a trail that led from Moloaʻa to Kakaniu, which was used to access the beach to fish, throw net, and gather *limu*. Inland, there were a range of plants grown that provided food, medicine, flowers, and raw materials (e.g., *hala* trees for hat and *lei* making), and a grove of ironwoods. A number of bird species were identified as inhabiting, nesting, or seasonally present in Moloaʻa, as well as the Hawaiian hoary bat. Archival research points to a sacred *kukui* grove in Moloaʻa, which may be the same forest described by Debra Boiser that was once one of Queen Emma's favorite places, but has since been cleared away, presumably for industrial agriculture.

Maliu Stream ("the stream") holds a great deal of significance to past and present inhabitants of Moloaʻa Ahupuaʻa. It should be noted, however, that the location of the spring in these stories differs from the location that CIA participants identified as the source for Maliu Stream, and that the parties interviewed for this assessment generally did not use the term "Maliu" to refer to these features. The stream used to provide the main source of water for drinking, cooking, and bathing to those living nearby. An *ʻauwai* was built off the stream to create a *loʻi* where ducks were raised, and later *kalo* and watercress were grown. There were prawns in the stream, and the Boiser family learned they could entice the prawns into their *loʻi* with chicken scratch. The stream also held *ʻoʻopu*, which could be caught further upstream. CIA participants indicated that the freshwater inputs of Maliu Stream likely played a key role in supporting *limu* growth, which in turn supported the *honu* population.

In Moloaʻa Stream ("the river"), there are *ʻōpae*, which could be caught with a net and eaten raw. Samoan crabs were available in Moloaʻa Stream, and people would go crabbing, though this practice has diminished with the increased pollution of the water in this stream. The area is also home to bamboo groves which provided both food and the necessary raw materials to craft knives to clean *kalo* for pounding or grinding into *poi*.

5.2 Potential Impacts to Resources and Traditional and Customary Native Hawaiian Rights

A key concern for CIA participants was the further loss of access to Moloaʻa Bay, which would restrict their ability to continue to participate in traditional fishing and gathering practices. Interviewees stressed that it was vital to retain easy access to Moloaʻa Bay so that they and their descendants will be able to continue to carry out these cultural practices and subsistence activities that they have maintained for generations, and which continue to be a vital aspect of living in Moloaʻa.

The avifaunal species that frequent Moloaʻa Bay are increasingly threatened by a range of anthropogenic factors including habitat loss, introduction of nonnative predators, invasive plants, avian diseases, and environmental contaminants like fuel and oil spills (Conry et al. 2015). Avifauna with habitat in Moloaʻa that were identified as potentially impacted species included the *ʻaukuʻu, pueo, ʻaʻo, ʻuaʻu, ʻakēʻakē, ʻiwa, koaʻe kea*, albatross, brown booby, and meadowlarks, as well as one flying mammal, the hoary bat.

Participants were concerned that although only eight house sites were planned for the project area, this number could increase, which would amplify potential impacts of the project on the community, as well as the resources available in the bay and further inland. Further development could increase sediment runoff to the bay, and development activities or careless property owners could cause further harm to Maliu Stream. One interviewee recalled that it was necessary to do regular maintenance on the stream and make sure that siltation, overgrown vegetation, and animal disturbance had not caused the stream to slow or stop running. CIA participants who remembered Maliu Stream as running more reliably in the past expressed a strong desire to see the stream flow freely into the ocean once again, rather than be further diminished, cut off from its spring source, or diverted underground.

Of primary concern was the potential for development to accelerate erosional processes from the hillsides. The potential ramifications of accelerated erosion are numerous, and include an increased risk of landslides, further infilling of Maliu Stream, sedimentation in the bay and disturbance of the reef and other nearshore resources. As noted by CIA participants, Moloaʻa receives torrential rains, and any ecosystem disturbances could have a ripple effect on a wide range of cultural practices, including (though not limited to) harvesting plants, throwing net, beach fishing, *hukilau*, and the continued presence of native species who have lately been thriving in the bay, like turtles and monk seals.

CIA participants also drew attention to impacts of previous development projects in the area, which in addition to causing erosion and pollution of Moloaʻa Stream and its side of the bay, also created a significant amount of noise and light pollution. They recalled that the increased light and noise from previous development activities in Moloaʻa disturbed the people living there, as well as the native fauna.

A burial (SIHP -02455) is located in close proximity to the northwest corner of the project area, and is associated with known burial sites in the area. Information shared in previous CIAs and information shared by CIA participants during the current study indicate the likely presence of other burials in this area. Several CIA participants expressed concern about project activities impacting *iwi kūpuna*.

5.3 Recommendations: Feasible Actions to be Taken to Reasonably Protect Native Hawaiian Rights

A Natural Resources Assessment for the project area was completed in 2023 (LeGrande and David 2023) to document the plant and animal species extant within the project area and offer general recommendations for preservation of native species and habitat within and around the project area. They identified 17 different species of birds, including the endemic *nēnē* and two indigenous breeding seabird species, the white-tailed tropicbird and the great frigatebird. They noted that the native plant habitat within the project area had been highly modified and was presently dominated by non-native species. They noted the possibility that the endangered Hawaiian petrel, the band-rumped storm-petrel, and the threatened Newell's shearwater fly over the project area between April and December. Threats to these species include predation by invasive mammals and collision with human-made structures. In particular, exterior lighting can cause disorientation in seabirds, particularly fledglings, and cause them to collide with buildings and become severely injured or killed. However, according to LeGrande and David (2023) there are no suitable nesting habitats within or close to the project area for these species. They also noted the Hawaiian hoary bat could overfly the project area on a seasonal basis, and

may be particularly sensitive to vegetation removal during the pupping season. They also identified 11 native species of vegetation (*pāla'a, moa, mānienie 'ula, 'akia, 'ūlei, 'uhaloa, naupaka, 'aki'aki, hala, milo,* and *nanea*), but noted that most of these species are considered widespread throughout the archipelago and none are endangered or threatened, and therefore did not make recommendations related to native plant species.

The Natural Resources Assessment also observed wetland indicators in the lower "reservoir" area of Maliu Gulch (LeGrande and David 2023:20), and that Maliu Spring had water evident from the spring area as well as downslope in various locations along the gulch bottom. They noted that water was present under the bridge of the existing culvert and bridge located across Maliu Stream, though no surface water was flowing into the ocean during the time of their survey in August 2023.

Recommendations made by LeGrande and David (2023) include that (1) all outdoor lighting installed should be fully "dark sky compliant" (HDLNR DOFAW 2016), and to follow DLNR recommendations to avoid or minimize night-time lighting between September 15 and December 15; (2) to minimize adverse impacts to the Hawaiian hoary bat, avoid clearing woody vegetation taller than 4.6 m (15 ft) during the period in which bats may have pups (June 1 through September 15); (3) implement intensive erosion control measures in the event of any grading or land moving during construction of roadways and/or house lots; and (4) to prioritize native plant species currently found within the project area, and those appropriate for the habitat, for future outplanting in order to stabilize the slopes to help mitigate further erosion.

Further actions which could be taken to mitigate potential effects of the project include: (1) ensuring that any planned development does not further restrict public access to Moloa'a Bay or parcels adjacent to the project area; (2) ensuring development activities are planned in a way that will not divert, cut off, infill, or otherwise further impact Maliu Stream, as well as developing a plan for any necessary maintenance to the stream to ensure its continued flow; (3) keeping all unnecessary light and noise to a minimum during construction activities; and (4) given the known presence of burials in close proximity to the project area, implementing an archaeological monitoring plan is recommended.

6.0 CONCLUSION

Through background and archival research and community consultation efforts, this CIA has identified a range of native Hawaiian cultural practices and culturally-significant resources in Moloaʻa Ahupuaʻa. These include Moloaʻa Stream and Maliu Stream; productive agricultural lands; habitat for a wide range of native fauna, including marine mammals, *honu*, avifauna, and the Hawaiian hoary bat; Moloaʻa Bay and its fringing reef, which are home to plentiful marine resources; and the cultivation and gathering of *limu*, particularly the highly valued *limu kohu*. Results also highlighted the apparent continuation of a more traditional form of land tenure in the form of the Moloaa Hui, which formed in the late nineteenth century and lasted until around 1932, when the Hui lands were re-parceled to individual owners. The project area lies within the former Moloaa Hui Lands, and was re-parceled into the 49.002-acre Allotment 10-A, originally owned by Joseph L. Huddy and Maggie Huddy.

Community consultation efforts highlighted a number of potential impacts to these important resources and practices. Potential impacts include restricted access to the bay and/or parcels adjacent to the project area, impacts to the hoary bat and to numerous avifaunal species, hillside erosion and sediment runoff into the bay, potential impacts to Maliu Stream, impacts to native fauna from noise and light pollution, and potential disturbance of *iwi kūpuna*.

This assessment supports the previous recommendations made by LeGrande and David (2023), which include dark sky compliant lighting, seasonal limitations on woody vegetation clearance, intensive erosion control measures, and prioritization of appropriate native plant species. Additional recommendations include: ensuring the project does not further restrict public access to Moloaʻa Bay or parcels adjacent to the project area; avoiding further impacts to Maliu Stream and maintaining the stream to ensure its continued flow; keeping unnecessary light and noise to a minimum during construction activities; and implementing archaeological monitoring for ground disturbing activities associated with project construction near known burial locations.

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APPENDIX A

Land Commission Award Testimonies for Moloaʻa Ahupuaʻa

Transliterations by AVA Konohiki

Translations by Waihona ʻAina

Helu 238K, Kahilahaole, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa Koolau Kauai,
Apana 1. Pahale. Penei na mokuna. E hoomaka ana ma ka pa laau ma ke kula alaila
Aku. He. 73° Ko 1 kaul. e pili ana i ka pahale o Napelau. alaila aku He 14° Hi 1 32/100 kaul. e pili ana i ke [?] alanui alaila aku A. 73 Hi 1 kaul. e pili ana i ka pahale o Keauakahi, alaila aku A. 14° Ko 1 37/100 kaul.
e pili ana i ke kula, a i kahi i hoomaka'i e ili ana 22 Perka.
Apana 2. Akolu Loi Penei na mokuna E hoomaka ana ma ka auwai ma ke kihi A.
Ko. na Loi o na Loi o Kauwai alaila aku, He 60° Hi 5 kaula, e pili ana i na Loi o Kauwai, alaila aku
A. 8 Hi 1 10/100 kaul. e pili ana i ke kahawai alaila aku A. 55° Ko. 4 50/100 kaul. e pili ana i na Loi a Hoolili
Alaila aku He. 33° Ko. 1 40/100 kaul. e pili ana i ka auwai a i kahi i hoomaka'i e ili ana 2 Rud. 5 Perka
5 June 1851

W. H. Pease

Helu 238L, Kanahaiki, Moloaa Koolau Kauai

Maloko o ka ahupua. Moloaa Koolau Kauai.
Apana 1. Pahale. Penei na mokuna. E hoomaka ana ma ke kihi A. Hi o ka pa-
hale [pahale] o Lilihae, alaila aku A. 40° Ko. 1 45/100 kaul. e pili ana i ka pahale o Lilihae alaila aku, A. 45° Hi 2 kaul. e pili ana i ke kula, alaila aku He 41° Hi. 1 45/100 kaul. e pili
ana i ke kula, alaila aku He 45° Ko 2 kaul. e pili ana i ka aina o ka Mission a i
kahi i hoomaka ai e ili ana 1 Ruda 5 Parka.
Apana 2. Akolu Loi. Penei na mokuna. E hoomaka ana ma ke kula ma
he kihi A. Ko. o na Loi o Opio, alaila aku A. 65° Hi 2 10/100 kaul. e pili ana i na Loi o
Opio. Alaila aku A. 70° Hi 1 80/100 kaul. e pili ana i na Loi o Opio alaila aku

A. 40° Ko 1 20/100 kaul.e pili ana i Loi o Lilihae alaila aku He 69° Ko 3 95/100

Helu 238M, Keaukahi or Kauakahi, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa Koolau Kauai.
Apana 1. Pahale. Penei na mokuna. E hoomaka ana ma ke kahawai, o Moloaa
ma ke kihi A. Ko. 1 ka pahale o Puhi, alaila aku A. 77° Hi 1 40/100 kaul e pili ana i ka pahale o Puhi
alaila aku A. 10° Ko. 1 25/100 kaul. e pili ana i ka alanui alaila aku He 83° Ko. 1 kaul. e pili ana i ke
kula alaila aku He 7° Ko. 1 kaul. e pili ana i ko Kahawai a i kahi i hoomaka'ai e ili
ana 20 Perka.
Apana 2. Pahale. Penei na mokuna. E hoomaka ana ma ke kula, ma kahi pa
laau, alaila aku. He 73° Ko. 1 65/100 kaul. e pili ana i ke kula alaila aku He. 12° Hi 1 73/100 kaul.
e pili ana i ka alanui, alaila aku, A. 68° Hi 1 80/100 kaul e pili ana i ka pahale o Moo-
puna [Moopuna] alaila aku. A. 16° Ko 1 60/100 kaul. e pili ana i ke kula a i kahi i hoomaka ai e ili ana 1 Ruda 6 Perka.

Apana 3. Akahi Loi. E hoomaka ana ma ke kihi A. Ko. o na Loi o Manui alaila aku He 84
Hi 1 85/100 kaul. e pili ana i ka Loi o Manui, alaila aku. He 3° Hi. 1 15/100 kaul.e pili ana i ka Loi a Hoolili
alaila aku. A. 84° Ko 2 kaul. e pili ana i ke koele alaila aku A. 3° Hi 1 10/100 kaul. e pili ana i ka Loi
o Pihe a i kahi i hoomaka ai, e ili ana 33 Perka.
Apana 4. Aina kalo. Penei na mokuna. E hoomaka ana ma ka pali ma ko kihi
He, Ko. o na Loi o Konohiki, alaila aku, He 79° Hi 3 70/100 kaul. e pili ana i no Loi o Konohiki alaila
aku He 15° Ko1 25/100 kaul. e pili ana i ka auwai, alaila aku He 77° Hi 4 Kaul. e pili ana i ka Loi o Moo-
puna [Moopuna] , alaila aku he 14° Ko 90 Pauku e pili ana i ka kahawai o Moloaa alaila aku A. 74 Ko. 4 40/100
kaul. e pili ana i na Loi o Napalau, alaila aku, He. 15^13 Ko. 1 78/100 ^78? kaul. e pili ana i ka auwai alaila aku
Ak. 79° Ko 3 80/100 kaul. e pili ana i ka Loi o Kauwiki alaila aku. A. 22° Hi 3 60/100 kaul. e pili ana
i ka pali a i kahi i hoomaka ai e ili ana 2 Eka 5 Perka.
Apana 5
Apana 5. Aina kalo me kula. Penei na mokuna. E hoomaka ana ma ke ka-
hawai [kahawai], o Moloaa, ma ka aina o Kauwai alaila aku A. 85° Ko 1 30/100 kaul. e pili ana i na
Loi o Kauwai. alaila aku He. 1° Hi 3 30/100 kaul. e pili ana i ke kula alaila aku He 75
Hi 40 Pauku, e pili ana i ke kula alaila aku A. 26° Hi. 1 50/100 kaul, e pili ana i ke ka-
hawai [kahawai] o Moloaa, alaila aku A. 3° Hi 2 kaul. e pili ana i ke kahawai a i kahi
i hoomaka ai e ili ana 1 Ruda 12 Perka. June 5/51
W. H. Pease

[No. 238M], Kauakahi/Keaukahi, Moloaa, Koolau, Kauai, Source Numerical Index

Native Testimony Volume 12, page 242
[No number], Kauakahi

Kauakahi, sworn: I wrote my claim and sent it to the Land Commissioners in Honolulu before the 14th of February 1848, on the Hooikaika when Keoni Holo was the captain.

Adamu (assistant Konohiki), sworn: I know his sections in Moloaa, Koolau, Kauai. There are five sections.

Section 1 - Taro land with 7 lois of taro.
Section 2 - Taro land with 4 lois.
Section 3 - Taro land with 1 loi.
Section 4 - House lot containing 2 houses.
Section 5 - Planting area.

Section 1:
Mauka by Ua's land
Hanalei by ditch
Makai by Pelaineke's land

Anahola by Ua's land.

Section 2:
Mauka by Mamao's land
Hanalei by kula land
Makai by a river
Anahola by a river.

Section 3:
Mauka by Koele loi
Hanalei by ditch
Makai by Manui's land
Anahola by Hoolili's land.

Section 4:
Mauka by house lot of Pio
Hanalei by Government road
Makai by house lot of Kahilahaole
Anahola by Keola's land, fenced in.

Section 5:
Mauka by Kauai's house lot
Hanalei by river
Makai by Kainoa's house lot
Anahola by Government road.

He received these sections from Kekua, his wife, in 1837, and he also received them from his parents during the time of Kaumualii the King of Kauai, and he has lived there peacefully with his wife until [s]he died during the time of Lord George Paulet in March 1843. (She) bequested it to Kauakahi, her husband and he is living peacefully now in these areas. No one objected.

Papaeka. sworn: all the above testimonies are true; no one is objecting. I have known in the same way as Adamu.

[Award 238M; R.P. 3842 & 3895; Moloaa Koolau; 5 ap.; 2 Acs 3 roods 36 rods]

Helu 238N, Kauwika, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa. Koolau Kauai.
Apana 1. Pahale. Penei na mokuna. E hoomaka ana ma kahi pahu laau^ ma ke kihi Alaila aku. A 50 Ko 1 30/100 kaul. e pili ana i ke kula. alaila aku. A. 45° Hi 1 kaul e pili ana i ke kula. alaila aku He 50° Hi 1 30/100 kaul. e pili ana i ka pahale o Lilihae. alaila aku He. 45 Ko. 1 kaul. e pili ana i ka aina o ka Mission a i kahi i hoomaka ai e ili ana 20 Perka
Apana 2 Alima Loi Penei na mokuna. E hoomkaka ana ma ka pali ma ke kihi A. Ko. o na Loi o kaukahi alaila aku He 73° Hi 9 kaul. e pili ana i na Loi o Puhi alaila aku A. 5° Hi 1 40/100 kaul. e pili ana i na Loi o Kaukini. alaila aku A. 79° Ko 2 20/100 kaul. e pili ana i na Loi o Napalau alaila

aku. A. 50° ko 50 Pauku ^Kaul alaila aku. A.78° Ko 6 kaul. e pili ana i na Loi o Keaukahi [Keaukahi] alaila aku He 23° ko 85 Pauku ^Kaul e pili ana i ka pali a i kahi i hoomaka [hoomaka] ai e ili ana 1 Eka. June 5/51
W. H. Pease

Helu 238O, Kaneiki, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa Koolau Kauai.
Apana 1. Pahale. Penei na mokuna. E hoomaka ana ma ke kula ma kahi pahu laau, alaila aku He. 54° Ko 1 72/100 kaul e pili ana i ke kula alaila aku. A. 30° Ko. 1 kaul. e pili ana i ka pahale o Pihe, alaila aku A. 54° Hi 1 50/100 kaul. e pili ana i ke kula alaila aku He 23 Hi 1
kaul. e pili ana i ke kula a i kahi i Hoomaka ai e ili ana 28 Perka.
Apana 2. Aha Loi. Penei na mokuna. E hoomaka ana ma ka pali ma ke kihi
A. Ko. o na Loi o Pihe alaila aku AHe 85° Hi 1 kaul. e pili ana i ka Loi o Pihe, alaila aku A. 4° Ko. 58 Pauku Kaul e pili ana i ka Loi o Konohiki alaila aku. A. 86° Hi 2 28/100 kaul. e pili ana i ka Loi o Konohiki alaila aku A. 5° Hi 68 Pauku Kaul. alaila aku He. 76° Hi 1 kaul. e pili ana i ka Loi o Konohiki alaila aku. A. 27° Hi 1 10/100 kaul. e pili ana i ke kula alaila aku A. 20° Ko 1kaula e pili ana i ke kula alaila aku He 66° Ko. 4 90/100 kaul. e pili ana i ke kahawai o Moloaa. Alaila aku He 4° Hi 1 kaul. e pili ana i ka pali a i kahi i Hoomaka'i [Hoomaka'i] e ili ana 2 Ruda 25 Perka 5 June 1851
W. H. Pease

Helu 238 Q, Kaaa, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa Koolau Kauai.
Apana 1. Pahale. Penei na mokuna. E hoomaka ana ma ke kahawai ma ke kihi a. ko o ka pahale o Hoolili alaila aku A. 60° Hi 1 60/100 kaul. e pili ana i ka pahale o Hoolili alaila aku A. 27° Ko 1 40/100 kaul. e pili ana i ka alanui alaila aku He 67° Ko. 1 84/100 kaul. e pili ana i ke kula alaila aku He 34° Hi 1 63/100 kaul. e pili ana i ke kahawai a i kahi i hoomaka ai e ili ana 1 Ruda 2 Perka
Apana 2. Akolu Loi. Penei na mokuna. E hoomaka ana ma kahi auwai ma ke kihi He Ko o na Loi o Nuanu, alaila aku. A 3° Hi 60 Pauku e pili ana i ka auwai alaila aku A 23° Hi 1 kaul. e pili ana i ka auwai alaila aku A. 27° Ko 2 40/100 kaul. e pili ana i na Loi o Manini alaila aku He. 74° Ko 2 15/100 kaul. e pili ana i ka Loi o Opio alaila aku He 13° Hi 2 80/100 kaul. e pili ana i ka auwai alaila aku He 83° Hi 2 kaul e pili ana i ka auwai a i kahi i hoomaka ai e ili ana 3 Ruda. 5 Perka.
June 5/51
W. H. Pease

Helu 238R, Kaukini, Moloaa Koolau Kauai

Maloko o ka ahupua o Moloaa Koolau Kauai.
Apana 1. Pahale. Penei na mokuna. E hoomaka ana ma ka papohaku ma ke Kahawai o Maliu, alaila aku A. 3° Ko. 1 kaul. e pili ana i ke kula. ^Konohiki alaila aku A. 43° Hi 2 kaul. e pili ana i ke kula kokoke i ke kahakai alaila aku. He 41° Hi 80/100 Pauku Kaul, e pili ana i ke kula, ^Konohiki alaila aku He 44° Ko. 2 10/100 kaul. e pili ana i ka pali a i kahi i hoomaka ai e ili ana 29 Perka.
Apana 2. Aha Loi me kula. Penei na mokuna. E hoomaka ana ma ke kahawai o Moloaa. ma na Loi o Hoolili. alaila aku A. 69° Ko 2 25/100 kaul. e pili ana i na Loi o Hoolili alaila aku & 25° Hi 60 Pauku Kaul. e pili ana i ka Loi o Puhi alaila aku

He 15° Hi 1 10/100 kaul. e pili ana i na Loi o Kauwiki alaila aku. A. 12° Hi 2 kaul. e pili ana i na Loi o Kauwiki alaila aku A. 5° Ko. 1 25/100 kaul. e pili ana i na Loi o Laipo alaila aku A. 70° Hi 60 Pauku Kaul. e pili ana i ka aina o Keaakahi alaila aku He. 1° Ko. 4 45/100 kaul e pili ana i ke kahawai o Moloaa a i kahi i hoomaka ai e ili ana 1 ruda 15 Perka. June 5/51
W. H. Pease

Helu 238X, Onionio, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa Koolau Kauai.
Apana 1. Pahale. Penei na mokuna. E hoomaka ana ma ke kahawai o Moloaa ma kahi pahu laau, alaila aku. A. 30° 1 80/100 kaul e pili ana i ka pahale o Pihe me ke kula, alaila aku. He 52° Ko. 1 kaul. e pili ana i ke kula alaila aku, He. 30° Hi 1 50/100 kaula e pili ana i ke kula, alaila aku A. 52° Hi 1 kaul e pili ana i ke kahawai a i kahi i hoomaka ai e ili ana 28 Perka.
Apana 2. Aina kalo. Penei na Mokuna. E hoomaka ana ma ka pali a me kula, ma ke kihi a. ko. o na Loi o Kanakaiki, alaila aku, a. 69° Hi 3 75/100 kaul e pili ana i na Loi o Kanakaiki alaila aku A. 20° Ko. 75 pauk. Kaul. e pili ana i ka Loi o Maria alaila aku He 75° Ko.
2 Kula, e pili ana i na Loi o Ihuloa, alaila aku A. 10° Ko 80 Pauku Kaul e pili ana i noi o Ihuloa alaila aku He 75° Ko. 1 kaul. e pili ana i na Loi o Ihuloa alaila aku. He 5° Ko. 2 Kaul. e pili ana i ka pali me kula a i kahi i hoomaka ai e ili ana 1 Ruda 26 Perka.
June 5/51
W.H. Pease

Helu 238Y, Moopuna, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa Koolau Kauai,
Apana 1. Pahale. Penei na mokuna. E hoomaka ana ma ke kihi
He. Hi o ka pahale o Keaukahi alaila aku. He 68° Ko 1 50/100 kaul. e pili ana i ka pahale o Keaukahi [Keaukahi] alaila aku He 10° Hi 1 80/100 3 kaul. e pili ana i ka alanui alaila aku A. 60 Hik. 1 80/100 kaul. e pili ana i ke kula alanui, a i kahi i hoomaka'ai e ili ana alanui Alaila aku Ak. / Kom 3 kaul. e ili ana i ke Kula ana i ke hala.a i kahi i hoomaka ai e ili ana 2 Ruda. 5 Perka
Apana 2. Alua Loi. Penei na mokuna. E hoomaka ana ma ka auwai me na Loi o Keaukaha. alaila aku He 77 Hi 4 kaul. e pili ana i na Loi o Keaukaha, alaila aku A 2 Ko 1 13/100 kaul. e pili ana i ke kahawai o Moloaa, alaila aku A 77 Ko. 3 75/100 kaul. e pili ana i na Loi o Hoolili alaila aku H 15° Ko 1 10/100 kaul e pili ana i ka auwai a i kahi i hoomaka [hoomaka] ai e ili ana 28 Perka 1 Ruda June 5/51
W. H. Pease

Helu 238Z, Inoa, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa Koolau Kauai.
Apana 1. Pahale Penei na mokuna. E hoomaka ana ma ke kahawai o Moloaa me kula ma ka palaau, alaila aku A. 65 Hi. 1 kaul. e pili ana i ke kula alaila aku A. 15° Ko. 1 40/100 kaul. e pili ana i ka alanui, alaila aku He 76° Ko 1 20/100 kaul. e pili ana i ke kula alaila aku He 21° Hi 1 60/100 kaul. e pili ana i ke kahawai a i kahi i hoomaka ai e ili ana 26 Perka.
Apana 2. Akolu Loi Penei na mokuna E hoomaka ana ma ke auwai ma ke kihi A Hi o na Loi o Manini alaila aku He 50° Ko. 1 25/100 kaul. e pili ana i ka auwai alaila aku

He 55° Hi 1 50/100 kaul e pili ana i ka Loi o ka Misionari alaila aku alaila aku He 70° Hi 2 kaul. e pili ana i ka Loi o ka Misionari alaila aku A. 50° Hi 3 15/100 kaul. e pili ana i ke kula me ko kahawai.
Moloaa, alaila aku. A 85° Ko. 4 50/100 kaul. e pili ana i ka Loi o Keauwai a i kahi i hoomaka ai e ili ana 2 Ruda 27 Perka.
May 25/51
W. H. Pease

Helu 239B, Hoolili, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa Koolau Kauai
Apana 1. Pahale. E hoomaka ana ma ka alanui me ke kihi a. Ko. a ka pahale o kahuna. alaila aku. A. 72° Hi 1 40/100 kaul. e pili ana i ka pahale o Kahuna alaila aku A. 22° Ko 1 15/100
kaul. e pili ana i ka Alanui alaila aku Hi. 60° Ko. 1 60/100 kaul. e pili ana i ka pahale o Kaaa. Hem. 34° hik. 90/100 kaul. i ke kahawai
a i kahi i hoomaka ai e ili ana 23 Perka.
Apana 2. Alua Loi. Penei na mokuna. E hoomaka ana ma ka auwai me na Loi o Moo puna[Moopuna]. alaila aku He. 77° Hi 3 Kaul. e pili ana i na Loi o Moopuna. Alaila aku A. 6° 1 92/100 Kaul. e pili ana i na Loi o Puulu alaila aku A. 80° Ko. 2 80/100 Kaul. e pili ana i na Loi o Puulu.
alaila aku He 13° Ko. 1 80/100 Kaul. e pili ana i ke kahawai a i kahi i hoomaka ai e ili ana 2 Ruda 8 Perka.
Apana 3. Alua Loi Penei na mokuna. E hoomaka ana ma ke kahawai ma ke kihi He Hi. o na Loi o Keaukini. alaila aku A. 69° Ko. 2 25/100 kaul e pili ana i na Loi o Keaukini, alaila aku He. 28° Ko. 1 10/100 kaul. e pili ana i ka auwai alaila aku He 56° Hi 3 kaul. e pili ana i na Loi o Makanui, alaila aku. a. 4° Hi 1 88/100 kaul. e pili ana i ke kahawai a i kahi Hoomaka ai e ili ana 1 Ruda 19 Perka June 5/51
W. H. Pease

Helu 240G, Lilihae, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa Koolau, Kauai
Apana 1. Pahale. Penei na mokuna. E hoomaka na ma ke pahale o Kauwika alaila aku A. 50° Ko 1 36/100 kaul. e pili ana i ka pahale o Kauwika alaila aku A. 45° Hi 1 33/100 kaul. e pili ana i ke kula alaila aku He 40° 1 45/100 kaul. e pili ana i ka pahale o Kauakaiki alaila aku He 53° Ko 1 10/100 kaul. e pili ana i ke kula a i kahi i hoomaka ai ili ana 26 Perka.
Apana 2. Alua Loi Penei na mokuna. E hoomaka ana ma ke kihi He ko o na Loi o Onionio alaila aku He 35° Hi 1 60/100 kaul. e pili ana i na Loi o Puhi alaila aku He 45° Hi 1 50/100 kaul. e pili ana i na Loi o Puhi, alaila aku He 27 Ko 1 35/100 kaul. e pili ana i ka auwai alaila aku A. 40 Ko. 3 65/100 kaul. e pili ana i na Loi o Manini. Alaila aku A. 51 Hi 1 25/100 kaul. e pili ana i na Loi o Onionio a i kahi i hoomaka ai e ili ana 1 Ruda 24 Perka. June 5/51
W. H. Pease

Helu 240H, Pihe, Moloaa Koolau Kauai

Maloko o ka Ahupuaa o Moloaa, Koolau Kauai
Apana 1. Pahale. Penei na Mokuna. E hoomaka ana ma ke kula kokoke i ke

kahawai ma kahi pohaku alaila aku. A. 30° Ko 1 40/100 kaul. e pili ana i ka pahale o Kaneiki Onionio
Hem Akau kaul alaila aku Kom 30° Hik 1 40/100 kaul. i ka
alaila aku A. 60° Hi. 90 Pauku e pili ana i ke kula a i kahi i hoomaka ai o ili ana
Pahale Onionio - alaila aku Ak. 160° Hik 80/100 Kaul i ke kula
20 Perka.
Apana 2. 1 Loi. Penei na Mokuna. E hoomaka ana ma ka pali ma ke
kihi A. Ko. o na Loi o Kaneiki. alaila aku. a. 83° Hi. 2 kaul. e pili ana i na Loi o Kaneiki
alaila aku. He 6° Hi 1 kaul. e pili ana i ka Loi o Akam. alaila aku. 85° Ko. 1 30/100 kaul.
e pili i ka Loi o Pauku alaila, aku A. 50° Ko. 1 kaul. e pili ana i ka pali, a i kahi i
hoomaka ai e ili ana 21 Perka.
Apana 3. 2 Loi. Penei na mokuna. E hoomaka ana ma ka pali ma ke kihi
He Ko. o na Loi o Puulu, alaila aku. He 79° Hi 2 30/100 kaul. e pili ana i na Loi o Puulu alaila
aku. He 3° Ko. 1 10/100 kaul. e pili ana i ka Loi o Keaukahi, alaila aku. A. 76° Ko. 2 38/100 kaul.
e
pili ana i ka Loi o Konohiki alaila aku. A. 4° Hi. 1 kaul. e pili ana i ka pali a i kahi
i hoomaka ai e ili ana 38 Perka. June 5/51
W. H. Pease

No. 2668, [Roman Catholic Mission], R. A. Walsh
Foreign Register Volume 3, page 157

To Hon. Wm. Lee, Honolulu, Sir,

With your permission I take the liberty of presenting through you to the Board of Commissioners &c a petition to confirm me, should they think fit, in the right to a small piece of land, which the King gave during his last visit to this island.

His majesty then having inquired my residence and I informing him that I lived on a barren spot near the sea in a place named Poipa, he was pleased to advise to ask land from Kekauonohi, then Governess of this island, and in case of refusal to tell her to come to him. In a few days afterwards the spot where I now reside was given to me by Kahelemakule, the inspector of schools, by order he said of Kekauonohi.

A part of the land was at that time occupied by a native named Kanehekili, and Kahelemakule said I might have his land in case Kanehekili agreed to it; who on my speaking to him, willingly resigned his part of the land and gave me up all the title he had to it. Since this I have been left in the undisturbed possession of it. I have paid from 1 to 3 dollars each year for the land since, though I did not consider it was his majesty's intention to impose any tax on me for it.

The spot of land is in East Koloa, east of all the taro lands except mine and one other taro plot. It is bounded west, north and east by a water run, and on the south by an almost barren stoney place. In addition to the land contained in these boundaries, Kahelemakule allowed me to take a small spot on the north side of it whereon to build a chapel and schoolhouse.

The land contains about 3 acres and only produces taro, sweet potatoes and grass. It has very little soil over a stratum of lava, and in many parts none at all.

If not too intrusive on his Majesty's liberality, I wish to extend the land a little to the north, that in the event of the plain being ceded to others, I might have grass for a horse and two or three

cows. The place is unoccupied at present, and useless for any other purpose but grazing, and not good for that in dry weather, being covered with lava and with very little soil. I would fence any portion of it that his majesty or the Gov[ernor] may grant me with a stone wall, to prevent any risk of trespass on my part.

I got another spot of land from Amelia Keaweamahi when Governess of this island, in the village of Moloaa by near the sea, whereon Revd Mr. Maudet resides at present and has his chapel. This spot contains something less than two acres, and is situated north and east of the Hanalei road through Moloaa and is fenced by (a) hau fence. May I request you to present the Board with a petition to confirm a right to this also.

Should you require further explanations I refer you to Kalama, who is perfectly acquainted with these spots of land, and will give any necessary information.
Kauai Koloa 27 Dec. 1847
Signed &c &c
R.A. WALSH

P.S. it is immaterial whether the right is confirmed personally to Mr. Maudet and me or to the Catholic Mission, in the event of the right being granted to these lands.

No. 2668, Robt A. Walsh
Foreign Testimony Volume 13, page 151

Haukine, sworn, says, I am a Kamaaina of Koloa. I know the land of Mr. Walsh at Koloa. It is in Koloa Hikina. It is in one piece & consists of both kalo & kula land, bounded as follows:

Mauka by Kaanaana's kalo land
Mahaulepu by the most eastern water run of Koloa
Makai by kula of Gov[ernmen]t or Kaanaana's fence
Waimea by one fence & water run.

Mr. Walsh received this land from the Konohiki Kamokuhiwi and Kaelemakuli, the school inspector in the time of Kekauauohi in 1843 or 1844. I think Mr. Walsh has occupied the place in peace from that time until the present. I never heard & do not know of any counter-claim to this land. I was present at the time this land was given to Mr. Walsh & I have resided in Kolea ever since.

See letter of W.H. Pease, survey made with approbation of Judge Lee.

No. 2668, Part 2, R.A. Walsh for the Catholic Mission
Native Testimony Volume 3, page 390
from page 150 v13 Foreign Testimony

Denis Maudet, sworn, says he knows this piece of land at Maloaa. He lives on it; has occupied it for the mission during the last eight years. It was occupied by the Rev. B. Gaston before I was stationed there. The survey made by W.H. Pease is correct. I have always held the land without dispute.

R.A. Walsh, sworn, says, I know this land of the Catholic Mission at Maloaa, on the island of Kauai. It was given to me for the mission by Keaweamahi, formerly Governess of that island, in

the year 1842, I think. The mission has held possession of all but a small piece lately added to it, ever since without dispute.

(The Min[ister] of Publ[ic] Instruction, as Agent for the Gov[ernmen]t, approves this claim & survey).

[Award 2668; Koloa Hikina Kona; 1 ap.; 17 Acs 20 rods; Moloaa Koolau; 1 ap. 4 Acs 13 rods]

Helu 3578, Kauwai, Moloaa Koolau Kauai

Apana 1 Pahale. Penei na mokuna. E hoomaka ana ma ke kahawai o
Moloaa. ma ko kihi A. Ko. o ka pahale o Rouxel. alaila aku He 82° Hi 1 10/100 kaul. e pili ana i ka
pahale o Rouxel. alaila aku. A. 7° Hi 90 Pauku, e pili ana i ke alanui alaila aku A. 90 Ko. 1 10/100
kaul. e pili ana i ka alanui alaila aku A. 87° Ko 1 40/100 kaul. e pili ana i ka pahale o Puhi.
alaila aku He 9° Hi 1 70/100 kaul. e pili ana i ke kahawai a i kahi i hoomaka ai e ili ana 1 Ruda.
Apana 2 Akolu Loi Penei na mokuna. E hoomaka ana ma ka auwai
ma ke kihi He. Ko o na Loi o Lilihae alaila aku. He 55° Hi 4 65/100 kaul. e pili ana i na Loi o
Inoa. alaila aku A. 44° Hi 1 45/100 kaul. e pili ana i ke kahawai o Moloaa, alaila aku A. 60°
Ko 5 kaul. e pili ana i na Loi o Kahilahaole. alaila aku. He 30° Ko 95 Pauku. e pili ana
i ka auwai a i kahi i hoomakaai e ili ana 2 Ruda 12 Perka.
May 28/51

W.H. Pease

Helu 3607, Kahuna, Moloaa Koolau Kauai

Maloko o ka ahupuaa o Moloaa Koolau Kauai.
Apana 1 Pahale. Penei na mokuna. E hoomaka ana ma ke kaliawai ma
kula, alaila aku. A. 81° Hi 1 50/100 kaul. e pili ana i ke kula. alaila aku A. 17° Ko 1 60/100 kaul.
e pili ana i ka alanui alaila aku He 72° Ko 1 40/100 kaul. e pili ana i ka pahale o
Hoolili alaila aku He 20° Hi 95 Pauku e pili ana i ke kahawai a i kahi i hooma-
ka [hoomaka] ai e ili ana 27 Perka.
Apana 2 Alua Loi. Penei na mokuna E hoomaka ana ma ke kihi A. Hi.
o na Loi o Pihe alaila aku He 2° Hi 1 kaul. e pili ana i ka Loi o Pihe alaila aku He 86° Hi
4 kaula. e pili ana i na Loi o Manui me Puulu, alaila aku, A. 1 Hi 2 45/100 kaul.
e pili ana i ke kula. alaila A. 86° Ko 1 70/100 kaul. e pili ana i ke kula alaila aku He 11°
Ko 1 10/100 kaul. e pili ana i ka Loi o Konohiki alaila aku He 84° Ko 2 20/100 kaul. e pili
ana i ka Loi o Konohiki a i kahi i hoomaka ai e ili ana 2 Ruda 35 Perka.
June 5/51
W. H. Pease.

No. 5109, Kuihe
Native Register Volume 9, page 133

I, Kuihe, a man of Moloaa, living on the island of Kauai, hereby state my claim. There is 1 house lot which however has not been properly measured. I have two land claims: one pond /or lo'i/, 15 very scattered kuakua, named Kaapuna. There is a claim for a kula for planting wauke, noni, and so forth. Kawaimake and Puuelemanu are the boundary on the east, Papoko and Kanalo are

the boundary on the south, Kapawai and Lepeuli are the boundary on the west, and kahawai is the boundary on the north . It has not been properly surveyed.
Farewell to you all.
KUIHE

/*a small land area/

No. 5109, Kuihe, Claimant
Foreign Testimony Volume 12, page 140

Kanakali, sworn, says - I know Claimant's lands in Maloaa. It consists of house lot, kula, 1 large & 23 small lois - all in one piece.

Bounded as follows:
Mauka by Konohiki's kula
Hanapepe by Moloaa River
Makai by Konohia's lois
Puna by Konohiki's kula.

These lands were given in the days of Kaikioewa (before 1840) & have been held in peace till this present time. Kuihe alone owns these lands. No one else has any claim on them.

Manene, sworn, says I am acquainted with Claimant's lands I have heard all that Kanakali has testified it is all true.

No. 5109, Kuihe
Native Testimony Volume 12, page 147

Kanakahi, sworn, he has seen claimant's claim in Moloaa in one piece. There are 1 large loi, 23 small lois and a house lot in Kaapuna, the moo.

Mauka by Konohiki pasture
Hanalei Moloaa river
Makai by Konohiki land
Puna by Konohiki pasture.

Land from Konohiki at the time of Kaikioewa. This is securely Kuihe's land.

Manene, sworn, both he and Kanakahi have known in the same way concerning Kuihe's land.

[Award 5109; R.P. 7424; Kaapuna Moloaa Koolau; 1 ap.; 1 Ac. 10 rods]

Helu 5337B, Puhi, Moloaa Koolau Kauai

Maloko o ka Ahupuaa o Moloaa Koolau Kauai.
Apana 1 Pahale. Penei na mokuna. E hoomaka ana ma ke kahawai o Moloaa.
ma ke kihi A. Ko. 1 ka pahale o Kauwai. alaila aku. He 87° Hi 1 25/100 Kaul. e pili ana i ka pahale o Kauwai. alaila aku A. 10° Ko 1 10/100 kaul. e pili ana i ka alanui alaila aku
He. 77° Ko 1 40/100 kaul. e pili ana i ka pahale o Keaukahi. alaila aku. He 25° Hi 80 Pauk.
e pili ana i ke kahawai o Moloaa, a i kahi i hoomakaai e ili ana 19 Perka.

Apana 2 Alua Loi. Penei na mokuna. E hoomaka ana ma ka auwai. ma ke kihi
A. Hi o na Loi o Keaukini alaila aku. A. 74° Ko. 2 72/100 kaul. e pili ana i ka auwai me ka Loi o Kauwika. alaila aku He 59° Ko 1 30/100 kaul. e pili i ka Loi o Maria. alaila aku. He 35° Hi 1 60/100
e pili ana i na Loi o Lilihae alaila aku He 45° Hi 1 50/100 kaul. e pili ana i ka Loi o Lilihaue [sic] [Lilihae] alaila aku A. 37° Hi 2 85/100 kaul. e pili ana. i ka auwai a i kahi i hoomakai e ili ana -- 2 Ruda 13 Perka.

19 W. H. Pease

No. 9799, Konohia
Native Register Volume 9, page 459

No. 9800, Hohe

The Land Commissioners, greetings: We hereby state our claims for 11 lo'i and a cultivated kula together on the sides of these lo'is. Four kou trees and the house stand together in the land of Koakoaniu. The house lot has a circumference of 20 fathoms. That is our claim.
KONOHIA and HOHE
Moloaa, Kauai
26 January 1848

No. 9799, Konohia, Claimant
Foreign Testimony Volume 12, page 139

Manene, sworn, says I know Claimant's lands in Moloaa. They are in three pieces as follows.

No. 1 is house lot in "Pakauila."
No. 2 15 Lois in "Kumuohia."
No. 3 is kula in "Kuaipaoo."

No. 1 is bounded:
Mauka by Kamakapu's house lot
Hanalei by Konohiki's kula
Makai by Konohiki's kula
Puna by Konohiki s kula.

No. 2 is bounded:
Mauka by Kuihe's Lois
Hanalei by Kuihe's Lois
Makai by Moloaa River
Puna by public road.

No. 3 is bounded:
Mauka by Konohiki's loi
Hanalei by Maloaa River
Makai by Konohiki's kula
Puna by Konohiki s kula.

These lands were given Claimant by the Konohiki in the days of Kamualii & have been held in

undisturbed possession till this time. No one has disputed the claim.

Kuihe, sworn, says I know Claimant's lands. I have heard Manene's testimony. It is all true.

No. 9799, Konohia
Native Testimony Volume 12, page 146

Manene, sworn, he has seen Konohia's land in Moloaa in 3 pieces.

Section 1 - Pakauila, a house lot
Mauka by Kamakapu's pa
Hanalei, Makai, Puna by Konohiki pasture.

Section 2 - 15 lois at Kumuohia.
Mauka and Hanalei Kuihe's land
Makai by Moaa (?) river [Moloaa river]
Puna by road.

Section 3 - Pasture.
Mauka by Konohiki loi
Hanalei by Moaa (?) river [Moloaa river]
Makai and Puna by Konohiki pasture.

Land from Konohiki at the time of Kaikioewa and Kaumualii was yet living.

No other claimant is on this land.

Kuihe, sworn, verifies Manene's testimony on Konohia's interests.

[Award 9799; R.P. 7423; Moloaa Koolau; 1 ap.; 1 rood 11 rods]

No. 9800, Hohe, Claimant
Foreign Testimony Volume 12, page 140

Kauakahi, sworn, says I am brother-in-law to Hohe & can testify that he has one claim to lands in Moloaa. He had lands there but he left them & returned them to the Konohiki & went to another place to reside. Hohe has since died & his lands have been given to another tenant.

No. 9800, Hoopi
Native Testimony Volume 12, page 147

Kanakahi, sworn, he has seen Hoopi's brother-in-law. He returned his land to the Konohiki because he died and his land is secure with the Konohiki until such time that he (Konohiki) should give it to another person.

[No. 9800 not awarded; See 9799 for Native Register document]

No. 9799, Konohia
Native Register Volume 9, page 459

No. 9800, Hohe

The Land Commissioners, greetings: We hereby state our claims for 11 lo'i and a cultivated kula together on the sides of these lo'is. Four kou trees and the house stand together in the land of Koakoaniu. The house lot has a circumference of 20 fathoms. That is our claim.
KONOHIA and HOHE
Moloaa, Kauai
26 January 1848

No. 9799, Konohia, Claimant
Foreign Testimony Volume 12, page 139

Manene, sworn, says I know Claimant's lands in Moloaa. They are in three pieces as follows.

No. 1 is house lot in "Pakauila."
No. 2 15 Lois in "Kumuohia."
No. 3 is kula in "Kuaipaoo."

No. 1 is bounded:
Mauka by Kamakapu's house lot
Hanalei by Konohiki's kula
Makai by Konohiki's kula
Puna by Konohiki s kula.

No. 2 is bounded:
Mauka by Kuihe's Lois
Hanalei by Kuihe's Lois
Makai by Moloaa River
Puna by public road.

No. 3 is bounded:
Mauka by Konohiki's loi
Hanalei by Maloaa River
Makai by Konohiki's kula
Puna by Konohiki s kula.

These lands were given Claimant by the Konohiki in the days of Kamualii & have been held in undisturbed possession till this time. No one has disputed the claim.

Kuihe, sworn, says I know Claimant's lands. I have heard Manene's testimony. It is all true.

No. 9799, Konohia
Native Testimony Volume 12, page 146

Manene, sworn, he has seen Konohia's land in Moloaa in 3 pieces.

Section 1 - Pakauila, a house lot

Mauka by Kamakapu's pa
Hanalei, Makai, Puna by Konohiki pasture.

Section 2 - 15 lois at Kumuohia.
Mauka and Hanalei Kuihe's land
Makai by Moaa (?) river [Moloaa river]
Puna by road.

Section 3 - Pasture.
Mauka by Konohiki loi
Hanalei by Moaa (?) river [Moloaa river]
Makai and Puna by Konohiki pasture.

Land from Konohiki at the time of Kaikioewa and Kaumualii was yet living.

No other claimant is on this land.

Kuihe, sworn, verifies Manene's testimony on Konohia's interests.

[Award 9799; R.P. 7423; Moloaa Koolau; 1 ap.; 1 rood 11 rods]

No. 10020, Luuloa, Koloa, Kauai, January 15, 1848
Native Register Volume 9, page 255

The Land Commissioners, greetings: I, Luuloa, a Hawaiian subject living at Waipake, hereby state my claim for land, some lo'is and the kula, they are situated together as shown on the diagram:

[DIAGRAM]

My house lot is in a separate place I have a claim at Moloaa for a kula for cultivating wauke.
LUULOA

No. 10020, Luuloa, Claimant
Foreign Testimony Volume 12, page 215

Hulimoku, sworn, says I know Claimant's lands in Waipake.

No. 1 is house lot in "Kaa."
No. 2 is 3 Lois & kula adjoining in "Kaluaopoki."

No. 1 is bounded:
Mauka by Konohiki's kula
Halelea by Konohiki's kula
Makai by sea beach.
[No Anahola side given].

No. 2 is bounded:
Mauka by Pakana's lois
Makai by Hahaimei's lois

Anahola by Pakana's lois.

These lands were given by the Konohiki in 1839 & have been held peaceably till this time.

Pelehu, sworn, says I know the lands of Claimant. I have heard all that Hulimoku has testified. It is all true.

No. 10020, Luuloa
Native Testimony Volume 12, page 220

Hulimoku, sworn, he has seen claimant's land claims in Waipake - three lois, a house lot and a pasture together.

Section 1 - House lot.
Mauka and Halelea by Konohiki pasture
Makai by beach
Anahola by Konohiki pasture.

Section 2 - Three lois and a pasture in Kaluaole.
Mauka by Pakana's lois
Halelea by Konohiki pasture
Makai by Pakana pasture
Anahola by Haihaimea's land.

Land from the Konohiki in 1839, it has been secure to the present.

Pelehu, sworn, he has seen Luuloa's land in Waipake, a house lot and an adjoining pasture.

[Award 10020; Kaa Waipake Halelea; 1 ap.; 1 rood 8 rods; Kaluaopoki Waipake Halelea; 1 ap.; 1 Ac]

APPENDIX B

Email correspondence from concerned neighborhood individuals

From:	kaualmosber@gmail.com
To:	Jillian Swift
Subject:	Moloaa Bay
Date:	Monday, January 29, 2024 4:16:24 PM

Dear Mr Swift,
I have owned our family home at 3671 Moloaa rd since Sept of 1992. It survived Iniki and has been a refuge for our family for these past three decades.
My biggest concern is the sewage polluting the Moloaa stream and the Bay that appears to be coming from several homes in the Moloaa Valley that have failed to upgrade their old, outdated, cesspools to the cleaner options now available.
The solution to pollution is not dilution when the environment is over taxed by the number of homes now existing in the Bay.
We plead with you to immediately address the pollution in the Stream and the Bay.
Regarding the development of the 45 acre parcel on the ridge of the Bay, I see no valid reason for objecting to allowing up to 8 buildable lots on said 45 acres. To deny the tax paying owner of the property the right to use his property would be an insult to the American promise of freedom.
Unlike others in the area, I have walked on the property and seen the proposal and seen the owners of the property. and believe that their proposal is a positive proposal for our area.
I feel that it is a selfish travesty for those who object to this proposal for land development now that they have developed or purchased their properties and want to deny someone else to develop theirs. 8 homes on 45 acres is hardly high density development. I notice that many of those objecting have homes in dramatically high density areas in the Bay. Their neighbors complain about an acoustic guitar being played by a neighbor because their home proximity is so close. 1 home on 5 acres is very acceptable.
The developer will protect his investment by reducing erosion and planting and beautifying his property, whereas it has been left to nature for many decades in the past.
Please allow the property owner to exercise his right to use his property like any person would want to use the property they own and pay taxes on. This is America, land of the free, home of the brave. Selfish neighbors nor Government bodies attempting to deprive a property owner from using his property within the guidelines provided by our zoning and building ordinances should be ignored.
Please use your influence to resolve the pollution in our Stream while you help our neighbor use his legal right to develop his property in the responsible way he has requested.
Thank you,
Lavern Sparks

Sent from my iPad

From: Cheri Gienger
To: Jillian Swift
Subject: Estates at Moloa'a Bay Project
Date: Tuesday, January 30, 2024 4:50:03 AM

Dear Ms. Swift,

We have recently been informed of the above-mentioned project. As nearby neighbors, we are very concerned about the problems it may create. We've already had severe erosion on the other side of the Bay when Moloaa Ranch was forming.

The impact of more traffic on Moloaa Road is very worrisome. As it is now, there are days when we can't get in and out of our property and navigating the road with another car approaching is a challenge. If an emergency vehicle were needed, it would be impossible to pass at some points along our road.

Our indigenous plants and birds will be jeopardized. Our water, which is already reported to be the worst on the island, could become even worse. We have many concerns over this project moving forward.

Sincerely,
Cheri Gienger
3575 Moloa'a Road

From:	Mike Schwartz
To:	Jillian Swift; Peter Facett; Betsy Scolnik; Stuart Scolnik; Patty Schwartz
Subject:	Moloaa estates project
Date:	Tuesday, January 30, 2024 6:54:34 AM

Dear Ms Swift:

My wife and I bought our home in the Moloa'a Bay community in 2009 -- a time when comparatively few folks even knew about the area. Back then, we never experienced the type of traffic congestion and illegal parking (including on our property) issues that are now an every day occurrence. It seems clear that Moloa'a road and other infrastructure was never designed to accommodate the current volume of residents, visitors and traffic.

The evidence that this trend poses a serious and growing risk to our community could not be clearer. The level of pollution impacting our stream and bay is nothing short of remarkable. Bacterial counts continue to climb, and now are routinely 10 times over the 'safe limit' or higher -- the highest on the island. And yet families with small children routinely bathe and play where the stream meets the ocean. The only thing more striking than the incredible beauty of Moloa'a Bay is the extent of its pollution -- a truly remarkable, but barely hidden threat. Clearing the land for an extensive construction project will only pollute our ground water and stream further, while also threatening our local flora and fauna.

Combined with the poor quality of our road and lack of any semblance of routine road maintenance or improvement, the last thing the community can tolerate is months to years of use by heavy land clearing and construction equipment. Beyond this, the land clearing itself will destabilize the hillside. To be reminded of the risk of a major slide, all one needs do is recall the many devastating slides that shut down the roads to Ke'e and then to Hanalei in recent years. Moloa'a Road is certainly not immune to this type of event. The prospect of a slide that takes out Moloa'a Road is too troubling to contemplate -- and yet where is the environmental impact study that would reassure us that this cannot happen?

To be clear, we do not reflexively oppose any and all development on our island. But we must oppose development that threatens the well being and safety of our community. Thank you for your attention to these very real concerns.

Sincerely,

Michael W. Schwartz, MD
Patricia A Schwartz
3556 Moloa'a Road

From:	Michael Becker
To:	Jillian Swift
Subject:	Comment: Estates at Moloa'a Bay
Date:	Tuesday, January 30, 2024 11:02:07 AM

Dear Ms. Swift:

Our neighbor, Ku'ulelaloha Punua Johnson, forwarded your request for input regarding the Estates at Moloa'a Bay Project. I first came to Moloa'a in 1990 on holiday. There were many fewer homes. The area was substantially wilder with little tourism. Thereafter, I stayed in the bay 6-8 weeks a year over winter and summer teaching holidays. In 2021, I bought my home. I live on Moloa'a stream, often cited by Surfrider as the first or second most polluted in the county and among the most polluted in the state. Fecal coliform levels are literally off the charts. Contact with the water is dangerous and crossing the stream to the beach represents risk. Yet, small children and their parents play in what appears an idyllic lagoon as the fetid water flows into and pollutes the bay.

Over the more than 30 years, there have been enormous changes in the bay. Today, Moloa'a road, always narrow, poorly maintained and entirely unsigned, is utterly hazardous. From sunup until sundown (and often into the night) there is a near constant flow of residential, local and in particular, exponentially growing tourist traffic as visitors race to and from the bay to pack in the sites, often unheeding of pedestrians or unmindful that Moloa'a is a residential neighborhood. Prior to cell service (which became reliable in Moloa'a only over the last few years), and the advent of the numerous digital travel guides downloaded and religiously followed by most visitors, Moloa'a remained remote.

Moloa'a has no services or restrooms, little parking and limited beach access. Visitor cars are typically poorly, or double parked, limiting access to our homes. It is not unusual to find barely concealed human excrement by

the stream or near the beach. A recent, welcome influx of many young children on bicycles complicates the equation. Near collisions are daily occurrences. The beach, though sublime, is hazardous to the extreme. I've rescued nearly two dozen visitors since 1990. In aggregate with neighbors, water rescues climb into the hundreds. There has been a dramatic increase in distressed visitors and regular drownings. Yet there is no signage.

Moloa'a road, an often backed up, single lane semi paved strip with no shoulders, notably down which the postal service will not travel, can neither support, nor sustain the level of heavy traffic such a development requires absent widening and substantial improvement. Moreover, the existing access road to the project is problematic to the extreme. The current required turning radius to enter the road traveling northeast (moving toward the beach from Koolau road) appears unworkable for larger construction vehicles and machinery absent substantial widening of Moloa'a road (likely impossible) further degrading the stream. At present, it would appear that such vehicles would likely have to continue past the road, turning around at the beach or at tiny Kuono road to approach the access, moving toward Koolau. Of course, this is impracticable, if not near impossible given the often bumper to bumper traffic.

I do not oppose thoughtful, environmentally sound development. The proposed Estates at Moloa'a Bay Project, about which we have only just learned, threatens the overburdened, arguably collapsing ecosystem of Moloa'a. As envisaged, and given the little we understand, the many potential homes to be built absent legitimate, or possibly any environmental study, with seemingly little concern for our dramatically overtaxed infrastructure threatens our fragile, small community. Certainly, such development absent real impact study, is likely to dramatically increase already unsustainable traffic, and further degrade Moloa'a stream. As all residents know, the proposed sites are prone to landslides and erosion.

Importantly, runoff from the friable soil will likely threaten the struggling reef just below the project.

Ms. Swift, I appreciate the opportunity to comment on the proposed project and trust you will consider and address the legitimate concerns of Moloa'a residents prior to moving forward with plans as currently envisaged.

Warmest Regards,

Michael Becker
3584 B Moloa'a Road
Anahola, HI 96703

From:	Betsy Scolnik
To:	Jillian Swift
Cc:	Stuart Scolnik
Subject:	Proposed Moloa'a Estates
Date:	Tuesday, January 30, 2024 12:11:40 PM

Dear Ms Swift:

Our neighbor, Ku'ulei'aloha Punua Johnson, forwarded your request for input regarding the Estates at Moloa'a Bay Project. As a resident of Moloa'a Bay I am very concerned about this project. It is the first we have been notified about it! This project proposes to jeopardize the already overtaxed resources and infrastructure of our community, poses significant potential safety hazards and is a threat to our community practices of gathering, fishing, providing homes to our wildlife and for our agricultural.

Moloa'a is a small community. Many grow our food and fish for sustenance. We love our Bay and we gather at and, some of us fish in the bay. The lack of infrastructure on Moloa'a is already posing significant challenges to our health and safety. The water in Moloa'a Bay is dirty with some of the highest bacteria counts in the State, already jeopardizing our fishing, swimming, surfing, clean drinking water, reefs, and our plants/agriculture. Our semi paved dirt road, which the proposed project sits above, is a delicate balance of nature as it is. The cutting of trees, plowing away of dirt, etc could result in a failure of the roadsides and hills. Run off from construction and new home uses will contaminate our water further. If large construction vehicles are blocking access or creating traffic on our tiny road it would pose a potential catastrophic safety issue for us in an emergency or natural disaster.

We are also concerned about our indigenous plants and birds that are so critical to Hawaiian culture and to all of us in the Bay. The impacts of the loss of these plants and wildlife is well known and documented often with many efforts on Kauai and all of the Islands to protect them.

Thank you for including us and making us aware of the project.

Sincerely,

Stuart and Betsy Scolnik
3648 Moloa'a Road

--

Betsy Scolnik
(305) 632-9569
Betsyscolnik.org

From:	peter eacott
To:	Jillian Swift
Subject:	Estates of Moloaa Bay Project
Date:	Wednesday, January 31, 2024 8:24:41 AM

Dear Jillian Swift,
Thank you for what you do.
My wife and I are longtime residents of Moloaa Bay. A friend sent me your request for comments and recommended we communicate. After reading your presentation I realized you are looking for information about Hawaiian cultural evidence of which I do not have much knowledge other than a burial site located near the river mouth that was found years ago after flooding of the Moloaa Stream (not on the subject property).
However, I would like to take the opportunity to raise several issues which in my mind scream loudly for caution and some form of impact study to understand what would happen to this gem of a Hawaiian location.
Due to its difficult terrain the entirety of Moloaa Road (.9 mi. long) was created as a convenience and does not conform to standard road recommended requirements. It varies in width - often narrowing so only one lane of traffic can pass at a time. There are no shoulders on either side of the road - dropping 15+ feet nearly straight down on one side and rising 15+ feet straight up on the other side. It varies in width from 14' and up and is far short of the recommended 20 to 24' for a paved county road. There are no signs of warning, caution or speed limits - it is heavily trafficked and most drivers in each direction must use extreme caution at all points. It also facilitates pedestrians, pet walkers, children, cylists, and joggers. The traffic mix is local, fishing folks, tourists, services (Ups and Fed x) as well as commercial deliveries. The USPS does not service the area so residents have to drive 7 miles to get to the nearest Post Office. Our trash is picked up in locations we drag our bins to and often is skipped due to the inability of the trash truck to fit on the road.
There are no stores or commercial properties, public facilities, limited parking and very little beach access. Many internet sites list Moloaa as a "must see" beach so the traffic is way beyond what one would expect. Residents often cannot get out of their driveways and are stuck until someone moves their vehicles. Arguments about parking and access are common and the local residents are forced to defend their properties. The last 500 hundred feet of the road is only a single lane.
There are several vacation rentals (some legal) and the whole area is mostly serviced with cesspools although a very small number of residents (2 that I know of) have installed state of the art aerobic systems. The Department of Health and the planning department have been little to no help in working with local residents and building projects and expressed no interest in a plan that might result in cleaning up the area and the overall result is we live on the banks of a stream that often tests as the most polluted in the state of Hawaii with several owners dumping their waste directly into the stream. The stream overflows its banks almost annually and leaves the sludge and smell of human waste in the air for weeks. After a heavy rain the whole bay smells and turns brown and becomes unswimmable - sometimes for weeks.
The Estates of Moloaa was originally advertised as several house sites, then 3, then possibly 5 and now is going for 8 lots. The impact would be significant. The addition of more traffic, building activities, etc. on this small community will further tax the system - cause delays and result in a critical situation. There is no possible way this narrow road which is already in terrible condition can facilitate the "Estates of Moloaa Bay" and I see no way it can be allowed to enter or exit onto Moloaa Road.
At the very least an impact/traffic study should be done and the local residents should be informed and have a say of what is best for everyone.

Sorry to be so wordy - and again we appreciate what you do. If there are any meetings or organizations that might benefit in knowing this information I would greatly appreciate knowing the who, what, and where's. Thank you for listening.

Peter Eacott, Sharon Carlson
Moloaa Bay, Kauai

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Friends... they cherish one another's hopes. They are kind to one another's dreams. hdt

From: mary ellen pearlman
To: Jillian Swift
Subject: Moloa'a
Date: Wednesday, January 31, 2024 11:34:08 AM

Aloha Jillian,

I am writing from Retro Farms in Moloa'a Bay View lots. Our farm is located on Moloa'a Iliui Road. We are an established non-profit organization dedicated to connecting the youth of Kauai with their environment, hence my interest in this proposed project. Our mission at Retro Farms is to foster a deep respect for the environment and hawaiian culture. We promote advocacy through protection of our resources and Ahupua'a.

I received a copy of your letter from Ku'uleialoha Johnson .

Our concerns regarding the proposed development are as follows:

Maliu Stream is an important fresh water source for the health of the reef. The fresh water also supports the Limu growth , which is a valuable for the honu and the people. This stream has already been disturbed by the seller of this property. As repair of this damage has not been a priority to the seller, we have concerns that further development of this property will contribute to the degradation and likewise be of low importance to the new owners.

We also have many concerns about the development of this property as it pertains to the elimination of nesting sites for Albatross, Shearwater, Brown Boobies, barn Owls, Pueo and Nene. Contamination of the reef from unconscious development will affect the health of the reef and beaches which has seen increased dependance from Hawaiian Monk Seals and Honu, due to thier habitat and rest areas along the NE coastline in the past decades.

Collectively, the disturbance of habitats and undeveloped coast line directly affect the continuation of many cultural practices, from harvesting hala and noni and limu, to throwing net, beach fishing and conducting hukilau for fish harvest. The site of the proposed project, Estates at Moloa'a Bay Project in Moloa'a Ahupua'a is adjacent to the Moloa'a farm lands, which comprises the most important farm lands on the North Shore, contributing the majority of island grown produce to the farmers markets..Historically, this area was used for farming and should be considered for future farm sites to reflect the history of this valuable resource.

Thank you for conducting this study and for the opportunity to participate in a discussion regarding the importance of this culturally rich, ecologically diverse area of land in the Kawaihau Ahupua'a.

Best wishes,
Mary Ellen Pearlman
Director Retro Farms

From:	david neaves
To:	Jillian Swift
Subject:	Moloa'a Bay Road
Date:	Wednesday, January 31, 2024 12:10:15 PM

Sent from my iPhone, my name is David Neaves. I'm very concerned about any construction going on off the road to the bay. We've been using this road for about 15 years from our farm about five minutes away. It's already very dangerous with the increase of traffic. It's really a one-way road and heavy equipment being moved on. It will be very dangerous. Also, the potential for landslides is real. I'm not sure if there's any archaeological sites on that hillside, but that is not stopped developers before. Thank you for your time, please forward this text. Thank you, David Neaves.

EXHIBIT "K"

A Natural Resources Assessment for the Moloa'a 10-A Property, Moloa'a, Island of Kaua'i TMK : [4]4-9-09:02

LeGrande Biological Surveys Inc
4348 Waialae Ave 940
Honolulu HI 96816

Prepared by: Maya L. LeGrande and Reginald David
Prepared for: Moloa'a 10A LLC

September 2023

EXHIBIT "K"

Introduction

LeGrande Biological Surveys Inc (LBS Inc) conducted a plant and animal survey of a 45-acre parcel located within the Moloa'a Ahupua'a, Kawaihau District, Kaua'i. LBS Inc was tasked with providing a report documenting the current plant and animal species extant within the Project Area (PA) and general recommendations for preservation of native species and habitat that are located within the PA or in close proximity. Fieldwork was conducted by Maya LeGrande and Reginald David.

Site Description

The 45-acre parcel is located along the coast of the northeast shoreline of Kaua'i Island. The PA, referred to as, Moloa'a parcel 10-A, is located at the southern side of Moloa'a Bay (Fig 1). The terrain of the PA is characterized by sloping ridgelines and small gulleys that bisect the land from the higher elevation areas near grassy tablelands just outside of the PA to the south. Many of these small ridgelines are denuded with little vegetation exposing the reddish barren Badland (BL) soil type that dominates the majority of the PA (USDA 2023). Additional soil types within the PA are; Lihue Silty Clay (LhB), Rough broken Land (rRR), and Beaches (BS). All soil types excepting the Lihue Silty Clay found in the upper elevation areas of the PA are well-drained soils with high or very high runoff rates.

The land within the PA is dominated by non-native forest and shrubland with very few native plant elements remaining. Previous land use and natural events such as tsunami, hurricanes, and landslides are causes for extreme habitat modification. Historical and present day land use in Moloa'a Bay includes agricutural crops along Moloa'a Stream such as lo'i used for kalo and later rice. The tablelands above and south of the PA were historically planted with crops including sugar cane, pineapple, and papaya (SCS 2016). The tsunamis of 1868 and 1946 impacted Moloa'a Bay, destroying most of the structures near the shoreline. The 1946 tsunami had waters rising to 40 feet, undoubtedly affecting the vegetation along the lower portions of the PA.

Alteration of native habitat may also be due to military use. No defined records were noted in the 2016 archaeological report by SCS but verbal accounts of pillboxes, and gun postions in the hills around the bay were noted by local residents when interviewed. The "Anahola-Moloaa Arty Impact Area" is located just inland in a 1970 WWII training area map of Kauai.

Figure 1. Moloa'a Lot 10-A is the 45 acres project area outlined in red. Moloa'a Bay to the northwest of the PA and grasslands to the southeast.

Methods

Botanical Survey

Maya LeGrande surveyed the PA on August 27 and 28, 2023. Plant species were identified as they were encountered during meandering transects through the PA and along boundaries. Notes were made on plant associations and distribution, disturbances, topography, substrate type, exposure, and drainage. Species names follow *Manual of the Flowering Plants of Hawai'i* (Wagner, Herbst, & Sohmer, 1990; Wagner & Herbst, 1999) for native and naturalized flowering plants, *Hawai'i's Ferns and Fern Allies* (Palmer, 2003) and *Taxonomic and Nomenclatural Updates to the Fern and Lycophyte Flora of the Hawaiian Islands* (Ranker et al, 2019) for ferns, and *A Tropical Garden Flora* (Staples & Herbst, 2005) for ornamental plants. More recent name changes for naturalized plant species follow Imada (2019). A full plant species list is provided in Table 1.

Figure 2. View of Maliu Gulch and headlands of PA with Moloa'a Bay to the left.

Figure 3. Beach strand area of PA. Casuarina forest at the northern end of the PA in background and milo and naupaka in foreground.

Terrestrial Vertebrates Survey

Avian Survey

We conducted a reconnaissance survey of the PA on August 27, 2023, followed by a bird survey conducted by Reginald David on the morning hours of August 28, 2023. Birds were identified by visual observations aided by Leica 8 X 42 binoculars, and by listening for vocalizations. Avian species abundance was estimated at seven, point count-stations distributed more-or-less evenly across the study area. A single eight-minute avian point-count was made at each of the count-stations. Weather conditions were ideal, with no rain, unlimited visibility, and winds between 1 and 5 kilometers per hour. The avian phylogenetic order and nomenclature used in this report follows the *AOU Check-List of North and Middle American Birds* 2022 and the 63rd Supplement to the Checklist (Chesser et al., 2022, 2023).

Mammalian Survey

A list was made of mammals encountered during the survey. Indicators of mammalian presence, such as tracks, scat, and other, sign were noted. Mammalian phylogenetic order and nomenclature follow *Mammal Species of the World* (Wilson and Reeder, 2005), and for Hawaiian hoary bat (Pinzari, et. al., 2020)

Results

Vegetation

The vegetation is dominated by introduced (non-native) plant species over the entire PA. In general, there are four vegetation types within the PA; denuded scrub, Java plum/Strawberry guava forest, Casuarina forest, and Coastal Strand. A total of 93 plant species were documented with eleven being native (10 indigenous and 1 endemic) and five Polynesian introductions. The following section describes the dominant species for each vegetation type as well as their general locations.

Flora

Denuded scrub

The steeper sloping areas of the PA are characterized by open denuded ground with scattered vegetation mainly in the small gulleys including species such as Java plum (*Syzygium cumini*), kāhili flower (*Grevillea banksii*), ironwood (*Casuarina equisetifolia*), sourbush (*Pluchea carolinensis*), lantana (*Lantana camara*), Asian swordfern (*Nephrolepis brownii*), silver fern (*Pityrogramma calomelanos*), and narrow-leaved carpetgrass (*Axonopus fissifolius*). Yellow granadilla (*Passiflora laurifolia*) vines were commonly observed festooning trees and shrubs. Several of the

native species noted during the survey were observed in this habitat including ʻākia (*Wikstroemia uva-ursi* var. *kauaiensis*), pālaʻa (*Odontosoria chinensis*), mānienie ʻula (*Chrysopogon aciculatus*), ʻuhaloa (*Waltheria indica*), and ʻūlei (*Osteomeles anthyllidifolia*).

Java plum/Strawberry guava Forest

This forest type was found at the edges of the denuded ridges as well as in Maliu Gulch. Dominant trees include Java plum, strawberry guava (*Psidium cattleyanum*), Christmas berry (*Schinus terebinthifolius*), octopus tree (*Heptapleurum actinophylla*), Moluccan albizia (*Falcataria moluccana*), and mango (*Mangifera indica*). Undertory plants included sisal (*Agave sisalana*), Asian swordfern, laua'e (*Microsorum grossum*), wood rose (*Distimake tuberosus*), and wait-a-bit (*Biancaea decapetala*). Maliu Gulch bottom was dominated by ōwī (*Stachytarpheta jamaicensis*), white shrimp plant (*Justicia betonica*) shoebutton ardisia (*Ardisia elliptica*), Guinea grass (*Megathyrsus maximus*), Octopus tree, and noni (*Morinda citrifolia*).

Casuarina forest

The headland or most northern section of the PA is dominated by a monotypic stand of ironwood trees with an undertory of Guinea grass. Other species noted sparsely in the area were natal redtop (*Melinis repens*), smooth rattlepod (*Crotalaria pallida*), yellow granadilla, and white shrimp plant.

Coastal Strand

The coastal strand along the southern curve of Moloaʻa Bay includes plants growing at the edge of sand and slope interface, including naupaka kahakai (*Scaevola sericea*), niu (*Cocos nucifera*), tropical almond (*Terminalia catappa*), milo (*Thespesia populnea*), hala (*Pandanus tectorius*), and kī (*Corydyline fruticosa*). The basin area that the water from Maliu Gulch settles is just inland of the beach strand. Plants in this area form a thicket of umbrella sedge (*Cyperus involucratus*), Guinea grass, wedelia (*Sphagneticola trilobata*), be-still plant (*Thevetia peruviana*), pothos (*Epipremnum pinnatum*), kalo (*Colocasia esculenta*), and nanea (*Vigna marina*). A small population of the native ʻakiʻaki (*Sporobolus virginicus*) grass was observed growing in the sand at the point near the northern tip of the PA. The ironwood forest extends downslope to the coastline at this northern end of the headland as well.

Figure 4. Denuded ridges characteristic of the middle and southern areas of the PA. Vegetation includes Java plum, ironwood, broomsedge, kāhili flower, and silver fern.

Figure 5. ʻākia shrub, located in the southwestern section of the PA, is one of the few native plant species found during the survey.

Table 1. Plant Species Observed at the Moloa'a 10-A Project Area

Pteridophytes
Ferns and fern allies

Scientific Name	Common Name	Status
BLECHNACEAE		
Blechnum appendiculatum Willd.	blechnum	Nat
LINDSAEACEAE		
Odontosoria chinensis (L.) J.Sm.	pāla'a	**Ind**
NEPHROLEPIDACEAE		
Nephrolepis brownii (Desv.) Hovencamp & Miyam.	Asian sword fern	Nat
POLYPODIACEAE		
Microsorum grossum (Langsd. & Fisch.) S.B.Andrews	laua'e	Nat
Phlebodium aureum (L.) J. Sm.	rabbit's-foot fern, laua'e haole	Nat
PSILOTACEAE		
Psilotum nudum (L.) P.Beauv.	moa	**Ind**
PTERIDACEAE		
Pityrogramma calomelanos (L.) Link	silver fern	Nat
THELYPTERIDACEAE		
Christella parasitica (L.) H.Lev.		Nat

Gymnosperms

ARAUCARIACEAE		
Araucaria columnaris (G.Forst) Hook.	Cook pine	Nat

Monocotyledons

ARACEAE		
Colocasia esculenta (L.) Schott	kalo, taro	**Pol**
Epipremnum pinnatum (L.) Engl.	pothos	Nat
Xanthosoma robustum Schott	'ape	Nat
ARECACEAE		
Cocos nucifera L.	niu, coconut	**Pol**
Pritchardia sp.	fan palm	Orn
ASPARAGACEAE		
Agave sisalana Perrine	sisal, sisal hemp	Nat
Corydyline fruticosa L.	kī, ti	**Pol**

COMMELINACEAE		
Commelina diffusa N. L. Burm.	day flower	Nat
CYPERACEAE		
Cyperus involucratus Rottb.	umbrella sedge	Nat
Cyperus rotundus L.	nut grass	Nat
MUSACEAE		
Musa xparadisiaca L.	mai'a, banana	**Pol**
ORCHIDACEAE		
Spathoglottis plicata Blume	Philippine ground orchid	Nat
POACEAE		
Andropogon virginicus L.	Broomsedge	Nat
Axonopus fissifolius Raddi Kuhlm.	narrow-leaved carpetgrass	Nat
Chloris barbata Sw.	swollen fingergrass	Nat
Chrysopogon aciculatus (Retz.) Trin.	mānienie 'ula	**Ind**?
Cynodon dactylon (L.) Pers.	Bermuda grass	Nat
Digitaria insularis (L.) Mez ex Ekman	sourgrass	Nat
Eleusine indica (L.) Gaertn.	wiregrass	Nat
Megathyrsus maximus (Jacq.) B.K. Simon & W.L. Jacobs	Guinea grass	Nat
Melinis repens (Willd.) Zizka	Natal redtop	Nat
Setaria parviflora (Poir.) Kerguelen	yellow foxtail	Nat
Sporobolus virginicus (L.) Kunth	'aki'aki	**Ind**
Urochloa mutica (Forssk.) T.Q.Nguyen	California grass	Nat
PANDANACEAE		
Pandanus tectorius S.parkinson ex Z	hala	**Ind**
ZINGIBERACEAE		
Alpinia zerumbet (Pers.) B.L.Burtt&R.M. Sm.	shell ginger	Nat

Dicotyledons

ACANTHACEAE		
Justicia betonica L.	white shrimp plant	Nat
Megaskepasma erythrochlamys Lindau	Brazilian bower plant	Nat
Thunbergia fragrans Roxb.	white thunbergia	Nat
ANACARDIACEAE		
Mangifera indica L.	mango	Nat
Schinus terebinthifolius Raddi	Christmas berry	Nat
APOCYNACEAE		
Thevetia peruviana (Pers.) K.Schum.	be-still tree	Nat
ARALIACEAE		
Heptapleurum actinophylla (Endl.) Harms	octopus tree, umbrella tree	Nat

ASTERACEAE (COMPOSITAE)		
Bidens pilosa L.	Spanish needle	Nat
Conyza bonariensis (L.) Cronq.	hairy horseweed	Nat
Pluchea carolinensis (Jacq.) G. Don	sourbush	Nat
Pluchea xfosbergii Cooperr.& Galang	marsh fleabane	Nat
Pluchea indica (L.) Less.	Indian fleabane	Nat
Sonchus oleraceus L.	sow thistle	Nat
Sphagneticola trilobata (L.) Pruski	wedelia	Nat
CASUARINACEAE		
Casuarina equisetifolia L.	common ironwood	Nat
COMBRETACEAE		
Terminalia catappa L.	tropical almond	Nat
CONVOLVULACEAE		
Distimake tuberosus (L.) Simoes & Staples	wood rose	Nat
Ipomoea obscura (L.) Ker-Gawl.	---	Nat
Ipomoea triloba L.	little bell	Nat
EUPHORBIACEAE		
Euphorbia hirta L.	garden spurge	Nat
Euphorbia prostrata Alton	prostrate spurge	Nat
Ricinus communis L.	castor bean	Nat
FABACEAE		
Albizia lebbeck L. Benth.	siris tree, white monkeypod	Nat
Biancaea decapetala (Roth) O.Deg.	wait-a-bit, mysore thorn	Nat
Canavalia cathartica Thouars	maunaloa	Nat
Chamaecrista nictitans (L.) Moench	partridge pea	Nat
Crotalaria pallida Aiton	smooth rattlepod	Nat
Desmanthus pernambucanus (L.) Thell.	slender mimosa	Nat
Desmodium triflorum (L.) DC.	tick clover	Nat
Falcataria moluccana (Miq.) Barneby&J.W.Grimes	Moluccan albizia	Nat
Indigofera suffruticosa Mill..	indigo	Nat
Leucaena leucocephala (Lam.) de Wit subsp. *leucocephala*	koa haole	Nat
Macroptilium atropurpureum (DC.) Urb.	twining cow pea	Nat
Mimosa pudica L. var. unijuga (Duchass. & Walp.) Griseb.	sensitive plant	Nat
Neonotonia wightii (Wight& Arn.) Lackey		Nat
Samanea saman (Jacq.) Merr.	monkeypod	Nat
Senna pendula (Humb. & Bonpl. ex Willd.) H.S.Irwin & Barneby var. *advena* (Vogel) H.S.Irwin & Barney		Nat

Vigna marina (Burm.) Merr.	nanea, beach pea	**Ind**
GOODENIACEAE		
Scaevola sericea L.	naupaka kahakai	**Ind**
HELIOTROPIACEAE		
Heliotropium foertherianum Diane & Hilger	tree heliotrope	Nat
MALVACEAE		
Sida acuta Burm.f. subsp. *carpinifolia* (L.f.) Borss. Waalk.		Nat
Thespesia populnea (L.) Sol ex Correa	milo	**Ind**
Waltheria indica L.	ʻuhaloa	**Ind**?
MELASTOMATACEAE		
Miconia crenata (Vahl) Michelang.	Koster's curse, clidemia	Nat
MORACEAE		
Ficus microcarpa L. fil.	Chinese banyan	Nat
MYRTACEAE		
Psidium cattleyanum Sabine	strawberry guava	Nat
Syzygium cumini (L.) Skeels	Java plum	Nat
PASSIFLORACEAE		
Passiflora edulis Sims	passion fruit, liliko'i	Nat
Passiflora laurifolia L.	yellow granadilla	Nat
PETIVERIACEAE		
Rivina humilis L.	coral berry	Nat
POLYGALACEAE		
Polygala paniculata L.	milkwort	Nat
PRIMULACEAE		
Ardisia elliptica Thunb.	shoebutton ardisia	Nat
PROTEACEAE		
Grevillea banksii R.Br.	kāhili flower	Nat
ROSACEAE		
Osteomeles anthyllidifolia (Sm.) Lindl.	ʻūlei	**Ind**
RUBIACEAE		
Morinda citrifolia L.	noni	**Pol**
THYMELEACEAE		
Wikstroemia uva-ursi A.Gray var. *kauaiensis* Skottsb.	ʻākia	**End**
VERBENACEAE		
Lantana camara L.	lantana	Nat
Stachytarpheta jamaicensis (L.) Vahl	Jamaica vervain, ōwī	Nat

Legend to Table 1

STATUS = distributional status for the Hawaiian Islands:

- **End**= endemic; native to Hawai'i, unique to Hawaiian Islands.
- **Ind** = indigenous; native to Hawai'i, but not unique to the Hawaiian Islands.
- **Ind?**= questionably indigenous to Hawai'i, data is unclear as the exact arrival in the Hawaiian Islands.
- Nat = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778, and well-established outside of cultivation.
- Orn = A cultivated plant; a species not known to be naturalized (spreading on its own) in Hawai'i.
- **Pol** = An early Polynesian introduction, introduced before 1778.

Figure 6. Maliu Spring with non-native shoebutton ardisia growing in and around the spring and evident pig disturbance.

Figure 7. Outflow of Maliu Gulch at coastal strand.

Avian Fauna

A total of 125 individual birds of 17 species, representing 14 separate families, were recorded during station counts (Table 2). One of the species recorded, Nēnē (*Branta sandvicensis*) is an endangered endemic species, additionally, two species recorded, White-tailed Tropicbird (*Phaethon lepturus dorothea*) and Great Frigatebird (*Fregata minor*) are indigenous breeding seabird species present on many of the Hawaiian Islands. The remaining 15 species recorded are alien to the Hawaiian Islands.

Avian diversity and densities were in keeping with the location and vegetation present within the PA. Four species— Warbling White-eye (*Zosterops japonicus*), Rose-ringed Parakeet (*Psittacula krameria*), Zebra Dove (*Geopelia striata*), and Northern Cardinal (*Cardinalis cardinalis*)—accounted for 55% of all birds recorded during station counts. The most frequently recorded species was Warbling White-eye, accounting for 24% of the total number of individual birds recorded.

Table 2. Avian Species detected at Moloa'a 10-A , August 2023

Common Name	Species	Status	RA
	Order		
	Family		
	ANSERIFORMES		
	ANATIDAE - Ducks, Geese & Swans		
	Anserinae - Geese & Swans		
Hawaiian Goose	*Branta sandvicensis*	ER	0.71
	PHASIANIDAE - Pheasants & Partridges		
	Phasianinae - Pheasants & Allies		
Red Junglefowl	*Gallus gallus*	A	1.43
	COLUMBIFORMES		
	COLUMBIDAE - Pigeons & Doves		
Spotted Dove	*Streptopelia chinensis*	A	0.14
Zebra Dove	*Geopelia striata*	A	1.86
	PHAETHONIFORMES		
	PHAETHONTIDAE - Tropicbirds		
White-tailed Tropicbird	*Phaethon lepturus*	IB	0.14
	SULIFORMES		
	FREGATIDAE - Frigatebirds		
Great Frigatebird	*Fregata minor*	IB	0.14
	PSITTACIFORMES		

	PSITTACULIDAE - Lories, Lovebirds, and Indomalayan and Papua-Australasian Parrots		
	Psittaculineae - Indomalayan and Papua-Australsian Parrots		
Rose-ringed Parakeet	*Psittacula krameri*	A	3.43
	PASSERIFORMES		
	ZOSTEROPIDAE - White-eyes		
Warbling White-eye	*Zosterops japonicus*	A	4.14
	LEIOTHRICHIDAE - Babblers		
Chinese Hwamei	*Garrulax canorus*	A	0.57
	STURNIDAE - Starlings		
Common Myna	*Acridotheres tristis*	A	0.14
	MUSICAPIDAE - Old World Flycatchers		
White-rumped Shama	*Copsychus malabaricus*	A	0.86
	ESTRILDIDAE - Estrildid Finches		
Java Sparrow	*Padda oryzivora*	A	0.43
Chestnut Munia	*Lonchura atricapilla*	A	.043
	FRINGILLIDAE - Fringilline and Carduline Finches & Allies		
House Finch	*Haemorhous mexicanus*	A	0.86
	CARDINALIDAE - Cardinals & Allies		
Northern Cardinal	*Cardinalis cardinalis*	A	0.71
	THRAUPIDAE - Tanagers		
	Thraupinae - Core Tanagers		
Red-crested Cardinal	*Paroaria coronata*	A	1.14

Key to Table 2.

Status:

A = Naturalized, non-native species (introduced).

IB = Indigenous Breeding species – native to Hawai'i but also found elsewhere naturally.

RA : Relative Abundance ~ species count / number of point-count stations (n=7).

Mammalian Fauna

We recorded three terrestrial mammalian species during this survey. One cat (*Felis catus*) was seen on the lower section of the dirt road that runs through the site in a west-to-east direction. Several dogs (*Canis lupus familiaris*) were heard barking from areas outside of the PA, and tracks and scat of this species were encountered on the site. Both biologists saw several European house mice (*Mus musculus domesticus*) during the survey.

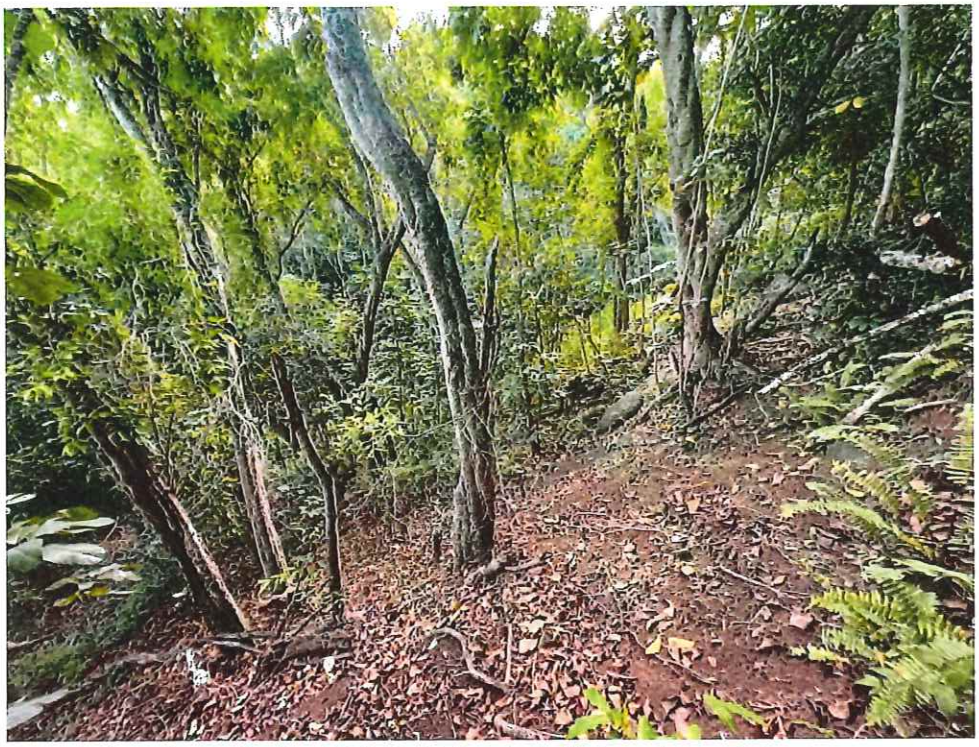

Figure 8. Slope descending into Maliu Gulch forested with Java plum and strawberry guava.

Figure 9. Small gulley charactersitic with lower elevations of the PA along the coastline.

Discussion and Recommendations

Floral Resources

Native plant habitat within the proposed project subdivision has been highly modified by human activities uses over time and is presently dominated by non-native species. Eleven native species were documented at the site, pāla'a, moa, mānienie 'ula, 'akia, 'ūlei, 'uhaloa, naupaka, 'aki'aki, hala, milo, and nanea. Most of these species are considered widespread throughout the Hawaiian Islands. None of the plant species observed are listed as endangered or threatened under either the federal or State of Hawai'i endangered species statutes. (HDLNR, 1998; USFWS, nd-a).

None of the Endangered 18 plant species listed by the informal USFWS Information for Planning and Consultation (IPaC) for the PA location were observed during our survey. They are; 'aiea (*Nothocestrum latifolium*), 'āwikiwiki (*Canavalia napaliensis* and *C. pubescens*), 'āwiwi (*Schenkia sebaeoides*), Carter's panicgrass (*Panicum faurei* var. *carteri*), *Cyperus pennatiformis*, dwarf iliau (*Wilkesia hobdyi*), 'ihi (*Portulaca villosa*), *Kadua st.-johnii*, ma'oli'oli (*Schiedea apokremnos*), makou (*Peucedanum sandwicense*), 'ohai (*Sesbania tomentosa*), pu'uka'a (*Cyperus trachysanthos*), *Schiedea spergulina var. leiopoda and var. spergulina, Spermolepis hawaiiensis,* uhiuhi (*Mezoneuron kavaiense*), and *Microlepia strigosa* var. *mauiensis* (USFWS, 2023). Owing to the general location and highly altered nature of the site, none of these species were expected in the area.

Faunal Resources

We consulted with the USFWS Information for Planning and Consultation (IPaC) portal – The list contained one reptile species, Green sea turtle (*Cheldonia mydas*), one mammalian species, Hawaiian hoary bat (*Lasiurus cinereus semotus*), and eight avian species were listed: Band-rumped Storm-Petrel (*Oceanodroma castro*)[1], Hawaiian Duck (*Anas wyvilliana*), Hawaiian Common Gallinule (*Gallinula galeata sandvicensis*), Hawaiian Coot (*Fulica alai*), Hawaiian Goose (Nēnē = *Branta sandvicensis*), Hawaiian Petrel (*Pterodroma sandwichensis*), Hawaiian Stilt (*Himantopus mexicanus knudseni*), and Newell's Townsends Shearwater (*Puffinus newelli*)[2] (USFWS, 2023).

[1] The scientific name of this species was changed to (*Hydrobatis castro*) by the American Ornithological Union (AOU) in 2019 (Chesser et. al. 2019).

[2] The common and scientific name of this species were changed by the AOU to Newell's Shearwater (*Puffinus newelli*) in 2015 (Chesser et. al., 2015)

Reptilian Resources

Although we did not observe Green Sea Turtles on the sandy coastal strand section of the PA during the survey or the nearshore waters of Moloa'a Bay, the turtles undoubtedly access the waters and sandy shore from time to time for basking and feeding.

Avian Resources

Of the eight avian Threatened or Endangered species provided by the IPac system only one, Nēnē was recorded during the survey. Five Nēnē were heard and seen flying over the site towards the north. For three identified species, Hawaiian Duck, Hawaiian Coot, and Hawaiian Stilt there is no suitable habitat within the site or immediately adjacent to the site to support these-water obligate species. Nēnē are not water obligate but require relatively low stature grass and or shrubs as suitable habitat, currently no such habitat is present on the site.

As previously mentioned, 17 species, were recorded during station counts (Table 2). No other species were detected while transiting the site between count stations. Two of the species recorded White-tailed Tropicbird and Great Frigatebird are indigenous breeding seabird species present on many of the Hawaiian Islands. Both of those species were recorded as flying over the site, there is no suitable nesting habitat for either species on the site. The remaining 15 species recorded are alien to the Hawaiian Islands. However, see the discussion below as to the potential of four of the listed species provided by the USFWS, potentially using either airspace or habitat within the site on a temporal or seasonal basis.

Seabirds

It is possible that the endangered Hawaiian Petrel, Band-rumped Storm-Petrel (*Hydrobates castro*), and the threatened Newell's Shearwater (*Puffinus newelli*) over-fly the Project Area between April and the middle of December each year in small numbers. The primary cause of mortality in Hawaiian Petrels, Newell's Shearwaters and Band-rumped Storm-Petrels in Hawai'i is thought to be predation by alien mammalian species at the nesting colonies (USFWS, 1983; Simons and Hodges, 1998; Ainley et al., 2001). Collision with man-made structures is considered the second most significant cause of mortality of these seabird species in Hawai'i. Nocturnally flying seabirds, especially fledglings on their way to sea in the summer and fall, can become disoriented by exterior lighting. Disoriented seabirds may collide with man-made structures and, if not killed outright, become easy targets of opportunity for feral mammals (Hadley, 1961; Telfer, 1979; Sincock, 1981; Reed et al., 1985; Telfer et al., 1987; Cooper and Day, 1998; Podolsky et al., 1998; Ainley et al., 2001; Hue et al.,

2001; Day et al., 2003). No suitable nesting habitat exists within or close to the Project Area for any of these three seabird species.

The principal potential impact that future construction poses to protected seabirds is an increased threat that birds will be downed after becoming disoriented by lights. The two ways outdoor lighting can pose a threat to nocturnally flying seabirds is if: 1) during construction it is deemed expedient or necessary to conduct night-time construction activities; or 2) following build-out, outdoor lighting is operated during the seabird nesting season.

- All outdoor lighting installed should be fully "dark sky compliant" (HDLNR-DOFAW, 2016). DLNR recommends avoiding or minimizing night-time lighting between September 15 and December 15 (DLNR, 2016).

Mammalian Resources

The findings of the mammalian survey are consistent with the location of the PA and habitats present. Although only European house mouse were recorded it is likely that some of the other three established Muridae found on Kaua'i—roof rat (*Rattus rattus*), brown rat (*Rattus norvegicus*), and Polynesian rat (*Rattus exulans hawaiiensis*), use resources within the general Project Area on a seasonal basis. These introduced rodents are deleterious to native ecosystems and native faunal species.

No mammalian species currently protected or proposed for protection under either the federal or State of Hawai'i endangered species programs were detected during this survey (DLNR, 2015; USFWS, nd-a).

Hawaiian hoary bat

It is probable that the Hawaiian hoary bat currently recognized as an endemic species *Lasiurus semotus* (Pinzari et al. 2020) overflies the Project Area on a seasonal basis as they are regularly recorded in the greater Moloa'a area (David, 2023). The removal of trees within the Project Area could temporarily displace individual bats using the trees for roosting. As bats use multiple roosts within their home territories, the potential disturbance resulting from the removal of the vegetation is likely to be minimal. However, during the pupping season, females carrying their pups may be less able to vacate a roost site if the tree is felled. Further, adult female bats sometimes leave their pups in the roost tree while they forage. Very small pups may be unable to flee a tree that is being felled.

- Potential adverse impacts from such disturbance can be avoided or minimized by not clearing woody vegetation taller than 4.6 m (15 ft) between June 1 and September 15, the period in which bats may have pups.

Other Resources of Potential Concern

Critical Habitat

No federally delineated Critical Habitat for any species occurs within the PA (USFWS 2023). There is no equivalent designation under State of Hawai'i endangered species statutes.

Wetlands/Riparian Habitat

The National Wetland Inventory (NWI) maps an area to the west of Moloa'a Stream as a Freshwater Emergent Wetland (figure 8) as well as a section to the northwest and downslope of the PA. Maliu Gulch and spring are mapped as 'Riverine' with an outfall to the ocean. Although our surveys did not include wetland delineation or determination, we did observe and note wetland indicators present within the lower or coastal "reservoir" area of Maliu Gulch. The Maliu Spring and gulch did have water evident from the spring area and downslope in various locations along the gulch bottom. There is an exisiting culvert and bridge just mauka of the outfall at the coastline in which water was noted under the bridge at the time of the current survey. No surface water was observed flowing into the ocean (Figure 7). During heavy rain events the gulch acts as a collection point and water flows out to the ocean (Personal communication with B.Campbell August 2023). Interviews with residents for the 2015 Archeological report (SCS 2016) noted that Pi'i Kalama, a resident of Moloa'a, recounted that there was a pond inland from the shoreline fed by Maliu Spring where ducks and watercress could be found. Figure 8 shows the NWI wetland and stream map.

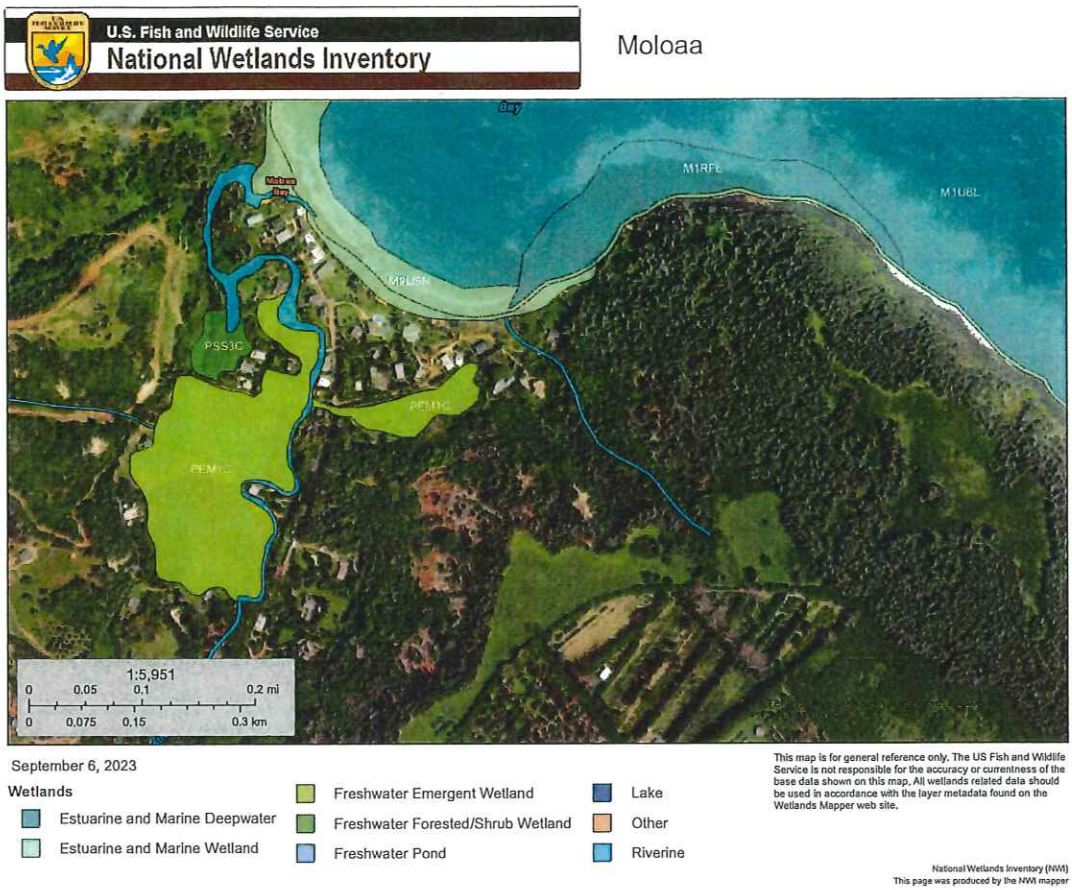

Figure 10. USFWS NWI wetland map of Moloa'a Bay. Note Riverine mapped running through Maliu Gulch within the project area. Freshwater Emergent Wetlands (light green) occur along the west of Moloa'a Stream leading to the coastal outfall as well as below the PA to the northwest.

Any additional modification to the slopes above Moloa'a Bay have the potential to create greater runoff of water and soil into the drainages and bay. If any grading/land moving is anticipated for any of the construction of roadways and/or house lots, intensive erosion control measures should be implemented. Native plant species currently found within the PA as well as those appropriate for the habitat should be prioritized for future outplanting to stabilize the slopes to help mitigate further erosion.

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