



Final Environmental Assessment

PU‘UNANI HOMESTEAD SUBDIVISION WATER SYSTEM STORAGE IMPROVEMENTS (TMK NO. (2)3-5-002:003(por.))

Prepared for:

**State of Hawai‘i,
Department of Hawaiian Home Lands**

Approving Agency:

Hawaiian Homes Commission

October 2022

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MUNEKIYO HIRAGA

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Executive Summary

Project Name: Pu'unani Homestead Subdivision Water System Storage Improvements

Type of Document: Final Environmental Assessment

Legal Authority: Chapter 343, Hawai'i Revised Statutes
Title 11, Chapter 200.1, Hawai'i Administrative Rules

Anticipated Determination: Finding of No Significant Impact (FONSI)

Applicable Environmental Assessment review "Trigger": Use of State Funds

Location: Maui Island
Waikapū
TMK No. (2)3-5-002:003(por.)

Landowner: Kuikahi Properties LLC
Contact: John Varel
191 Waihe'e Valley Road
Wailuku, Hawai'i 96793
Phone No.: (808)357-0702

Applicant: State of Hawai'i
Department of Hawaiian Home Lands
Contact: Stewart Matsunaga, Acting Land Development
Division Administrator
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Kapolei, Hawai'i 96707
Phone No.: (808)620-9500

Approving Agency: State of Hawai'i
Department of Hawaiian Home Lands
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Project Summary:

The State of Hawai'i, Department of Hawaiian Home Lands (DHHL) is proposing to develop a new water system storage tank and related improvements on a portion of an approximately 148-acre parcel identified by Tax Map Key (TMK) No. (2)3-5-002:003 and owned by Kuikahi Properties, LLC in Waikapū, Maui, Hawai'i. The project will be implemented on approximately 1.26 acres of the 148-acre parcel and is located mauka of Honoapi'ilani Highway, with Wailuku Heights to the west, the Kehalani subdivision to the north, and the Waiolani Mauka subdivision to the southeast. Directly to the east of the project TMK parcel is the location of the proposed DHHL Pu'unani Homestead Subdivision.

The proposed water system storage improvements have been requested by the County of Maui, Department of Water Supply (DWS) and will provide adequate infrastructure in order for the DWS to be able to supply water to the Pu'unani Homestead Subdivision, which will comprise 161 residential lots for DHHL native Hawaiian beneficiaries. The proposed water storage tank will tie into existing DWS infrastructure and distribution systems in the area.

The subject site has been designated for agricultural use by the State Land Use Commission, Maui County Zoning, and the Wailuku-Kahului Community Plan.

The proposed project will utilize State funds. The use of State funds triggers compliance with the environmental review requirements of Hawai'i Revised Statutes (HRS), Chapter 343 and Hawai'i Administrative Rules (HAR), Chapter 11-200.1. Accordingly, this Environmental Assessment (EA) has been prepared to evaluate the technical characteristics and potential environmental impacts of the proposed project, as well as to advance findings and mitigative measures relative to the project. The Hawaiian Homes Commission serves as the approving agency for the EA.

List of Acronyms

AIS	Archaeological Inventory Survey
ALISH	Agricultural Lands of Importance to the State of Hawai'i
AMP	Archaeological Monitoring Plan
BMPs	Best Management Practices
cfs	cubic feet per second
CIA	Cultural Impact Assessment
CO ₂ EQ	carbon dioxide equivalent
DEM	Department of Environmental Management
DHHL	Department of Hawaiian Home Lands
DOE	Department of Education
DOH	Department of Health
DWS	Department of Water Supply
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GHG	Greenhouse Gases
GIS	Geographic Information System
HAR	Hawai'i Administrative Rules
HCZMP	Hawai'i Coastal Zone Management Program
HHC	Hawaiian Homes Commission
HHCA	Hawaiian Homes Commission Act
HRS	Hawai'i Revised Statutes
IcC	Iao Clay, 7 to 15 percent slope
LUC	Land Use Commission
LSB	Land Study Bureau
MG	Million Gallon
MIP	Maui Island Plan
mph	miles per hour
MSL	mean sea level
PER	Preliminary Engineering Report
REC	Recognized Environmental Condition
RGB	Rural Growth Boundary
SCS	Scientific Consulting Services, Inc.
SHPD	State Historic Preservation Division
SIC	Sandwich Isles Communications, Inc.
TIAR	Traffic Impact Assessment Report
TMK	Tax Map Key
U.S.	United States
USFWS	U.S. Fish and Wildlife Service
WKWRF	Wailuku-Kahului Wastewater Reclamation Facility



PROJECT OVERVIEW



I. PROJECT OVERVIEW

A. PROPERTY BACKGROUND, EXISTING USE AND LAND OWNERSHIP

The State of Hawai'i, Department of Hawaiian Home Lands (DHHL) is proposing to develop a new water system storage tank and related improvements on a 1.26-acre portion ("project site") of an approximately 148-acre parcel, identified by Tax Map Key (TMK) No. (2)3-5-002:003 ("project parcel") and owned by the Kuikahi Properties, LLC, in Waikapū, Maui, Hawai'i. This action will be referred to herein as the "project", and the affected 1.26-acre portion of the project parcel will be referred to as the "project site". See **Figure 1**.

Above the project site is an irrigation reservoir (Wailuku Water Reservoir No. 10) that connects to the Waihe'e Ditch and the County of Maui's 1.5 million gallon (MG) Kehalani Mid-Level Storage Tank that serves the Kehalani Subdivision. Other than water system infrastructure, the project parcel is mostly vacant and is surrounded by residential subdivisions including Kehalani, Wailuku Heights and Waiolani Mauka. The proposed water tank will be located west of the planned Pu'unani Homestead Subdivision and directly adjacent to the existing 1.5 MG Kehalani Mid-Level Storage Tank. See **Figure 2**.

The project site has been designated for agricultural use by the State Land Use Commission (LUC), Maui County Zoning, and the Wailuku-Kahului Community Plan. The proposed water storage tank is a permitted use in the "Agricultural" district pursuant to Chapter 205-4.5 of the Hawai'i Revised Statutes (HRS) and Section 19.30A of the Maui County Code.

B. PROJECT NEED

The mission of the DHHL is to effectively manage the Hawaiian Home Lands trust and to develop and deliver land to native Hawaiians. The Hawaiian Homes Commission Act (HHCA), codified within the constitution of the State of Hawai'i, states as its purpose:

- (a) *The Congress of the United States and the State of Hawaii declare that the policy of this Act is to enable native Hawaiians to return to their lands in order to fully support self-sufficiency for native Hawaiians and the self-determination of native Hawaiians in the administration of this Act, and the preservation of the values, traditions, and culture of native Hawaiians.*
- (b) *The principal purposes of this Act include but are not limited to:*
 - (1) *Establishing a permanent land base for the benefit and use of native Hawaiians, upon which they may live, farm, ranch, and otherwise engage in commercial or industrial or any other activities as authorized in this Act;*

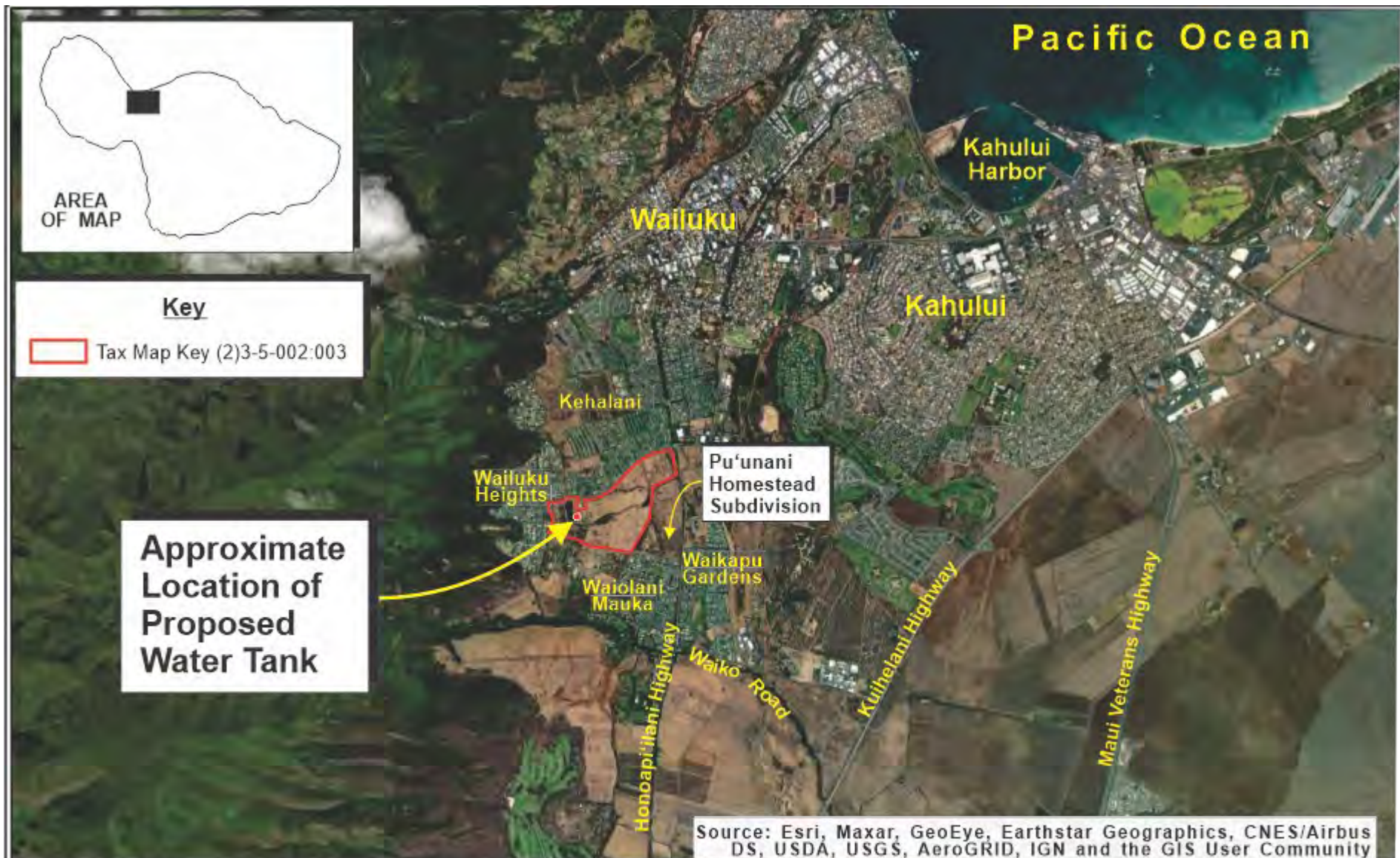


Figure 1

**Pu'unani Homestead Subdivision
Water System Storage Improvements
Regional Location Map**



Prepared for: State of Hawai'i, Department of Hawaiian Home Lands



DDC/Puunani Water Tank/Applications/figures/Regional.DEA



Figure 2

Pu'unani Homestead Subdivision Water System Storage Improvements Project Location Map



Prepared for: State of Hawai'i, Department of Hawaiian Home Lands



DDC/Puunani Water Tank/Applications/Figures/Regional.DEA

- (2) *Placing native Hawaiians on the lands set aside under this Act in a prompt and efficient manner and assuring long-term tenancy to beneficiaries of this Act and their successors;*
- (3) *Preventing alienation of the fee title to the lands set aside under this Act so that these lands will always be held in trust for continued use by native Hawaiians in perpetuity;*

Additionally, the DHHL General Plan, adopted in 2002, lists the following as goals under the Water Resources objective:

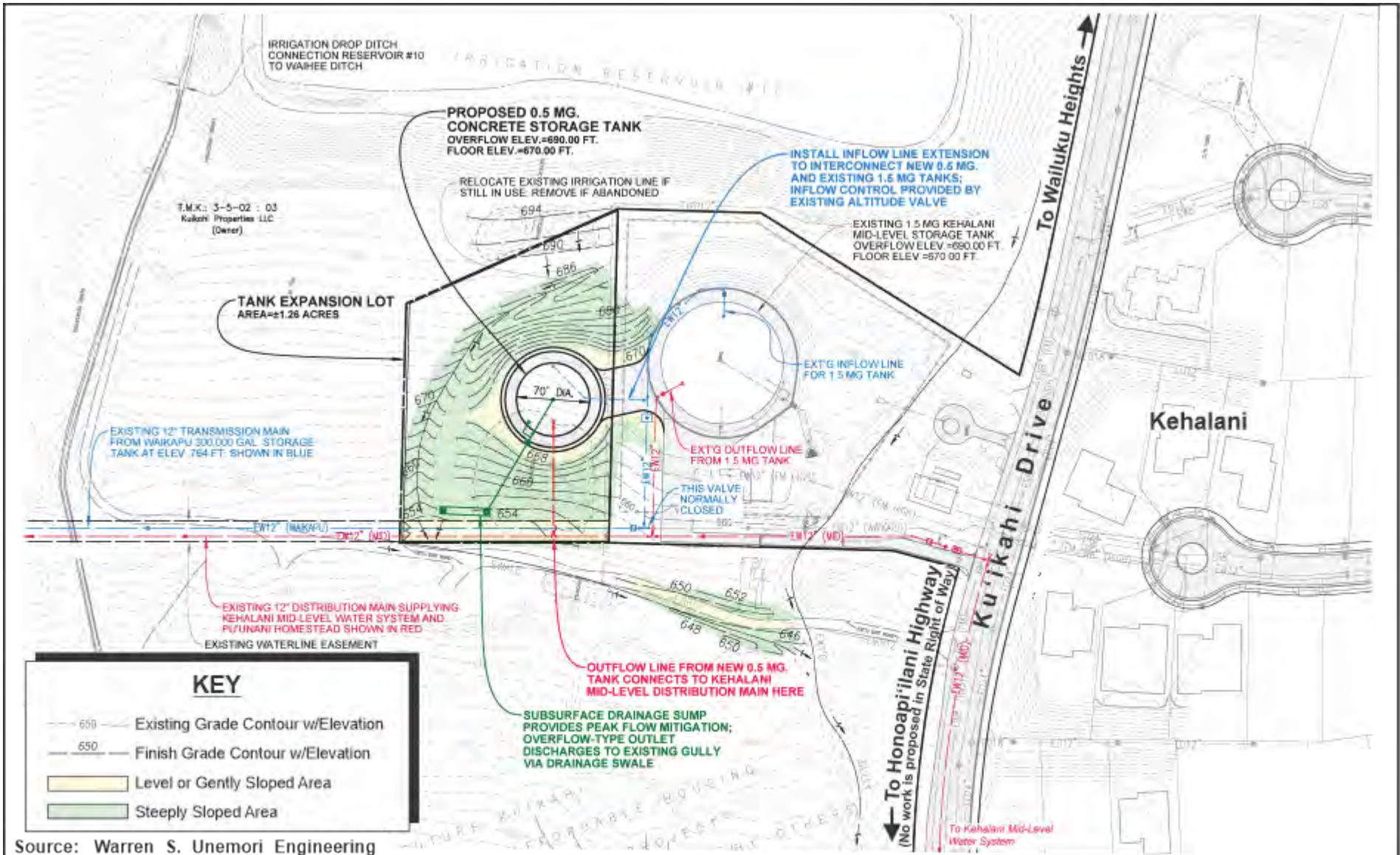
- *Provide access to quality water in the most cost-effective and efficient manner.*
- *Ensure the availability of sufficient water to carry out Hawaiian Home Lands' mission.*

The proposed water storage tank will be located mauka of the DHHL Pu'unani Homestead Subdivision and has been requested by the County of Maui, Department of Water Supply (DWS) as a necessary improvement that will allow the DWS to provide adequate system storage for the area, and, thus, a reliable supply of water to the Pu'unani Homestead Subdivision which will ensure that the residential lots are suitable for lease. The proposed project will allow DHHL native Hawaiian beneficiaries to inhabit the Pu'unani Homestead Subdivision, thereby, fulfilling the above stated purposes and goals of the HHCA and DHHL General Plan.

C. PROPOSED ACTION

The proposed action involves the construction of up to a 0.5 MG concrete water system storage tank on 1.26 acres of land adjacent to the County's existing 1.5 MG Kehalani Mid-Level Storage Tank. The proposed water storage tank will be approximately 23 feet in height and approximately 70 feet in diameter. The final dimensions of the proposed water tank will be finalized with the DWS during the design phase of the project. This new water storage tank will interconnect with the existing Kehalani Mid-Level Distribution System and eventually, lots within the Pu'unani Homestead Subdivision. Related improvements include the development of a subsurface drainage sump, inflow and outflow lines to interconnect with the existing distribution main, and the installation of fencing around the new tank expansion lot, grading, paving, and other miscellaneous equipment for the proposed tank. See **Figure 3**.

The tank expansion site will be graded to accommodate the proposed water storage tank. A paved connection will be constructed between the new and existing tank sites to provide vehicular access to the proposed 0.5 MG water storage tank. The existing paved driveway on Ku'ikahi Drive will serve as the main access to both the new and existing tanks. No work is proposed within Honoapi'ilani Highway, the State right-of-way.



Source: Warren S. Unemori Engineering

Figure 3

Pu'unani Homestead Subdivision Water System Storage Improvements Water Tank Site Plan



Prepared for: State of Hawai'i, Department of Hawaiian Home Lands

MUNEKIYO HIRAGA

DDC/Puunani Water Tank/Applications/Figures/Site Plan.FEA


D. CHAPTER 343, HAWAI'I REVISED STATUTES, ENVIRONMENTAL ASSESSMENT

State funds will be used for the proposed project. The use of State funds triggers compliance with the environmental review requirements of HRS, Chapter 343. As such, this Final Environmental Assessment (EA) has been prepared pursuant to Chapter 343, HRS and Chapter 200.1 of Title 11, Hawai'i Administrative Rules (HAR). Accordingly, this document addresses the technical characteristics and potential environmental impacts of the proposed project, as well as advances findings and mitigative measures relative to the project.

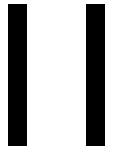
The Hawaiian Homes Commission serves as the approving agency for the EA.

E. ESTIMATED CONSTRUCTION SCHEDULE AND COSTS

Based on the DHHL's current design, permitting, and development schedule, site work and tank construction are targeted to begin following receipt of all applicable permit approvals. The total estimated construction cost for the proposed project is approximately \$4.2 million.



DESCRIPTION OF THE
EXISTING CONDITIONS,
POTENTIAL IMPACTS AND
MITIGATION MEASURES



II. DESCRIPTION OF THE EXISTING CONDITIONS, POTENTIAL IMPACTS AND MITIGATION MEASURES

This chapter has been prepared to describe the existing conditions of the project area as well as the potential impacts and proposed mitigation measures related to implementation of the proposed action.

A. PHYSICAL SETTING

1. Surrounding Land Use

a. Existing Conditions

The project will be implemented on approximately 1.26 acres of the approximately 148-acre parcel located in northern Waikapū. The project property consists of vacant agricultural lands and is bounded by Ku'ikahi Drive to the north and the Old Waikapū Road, Honoapi'ilani Highway and the planned Department of Hawaiian Home Lands' (DHHL) Pu'unani Homestead Subdivision to the east. The Wailuku Heights residential subdivision is located to the west and the Waiolani Mauka subdivision is located to the southeast of the property. Directly south of the property are agricultural lots, some of which are occupied. Various other residential developments and a handful of small locally owned businesses comprise the general land use fabric of this area of Waikapū. Refer to **Figure 1**.

b. Potential Impacts and Mitigation Measures

The proposed project is located west of the Pu'unani Homestead Subdivision it will serve and adjacent to existing County of Maui, Department of Water Supply (DWS) infrastructure and residential subdivisions of Wailuku Heights. The proposed project is compatible with the surrounding existing uses of the area. In the context of surrounding land uses, the proposed project is not anticipated to have a significant adverse effect on the surrounding landscape. The proposed project will provide necessary infrastructure for the DWS system to supply water to the DHHL Pu'unani Homestead Subdivision.

2. Climate

a. Existing Conditions

Maui's climate is relatively consistent throughout the year. The island's climate varies as the terrain changes. Characteristic of Maui's climate, the

proposed project site experiences mild and uniform temperatures year-round, moderate humidity and consistent trade winds.

Average temperatures at the general project area (based on temperatures recorded at Kahului Airport) range from the low 60s to high 80s (Fahrenheit). August is historically the warmest month, while January is the coolest. Annual precipitation rainfall average is approximately 16 inches per year (Maui County Data Book, 2020). Winds blow predominantly out of the north-northeasterly direction.

b. Potential Impacts and Mitigation Measures

The proposed action will occur on a parcel formerly used for agricultural cultivation which is now mostly vacant, and will be located in the midst of existing DWS water system infrastructure and residential developments. The proposed project is not anticipated to have an adverse effect on climate.

3. Topography and Soil Conditions

a. Existing Conditions

The existing terrain slopes steadily downward across the project site from west to east at a grade of approximately 15 percent. Elevation ranges from 694 feet at the northwestern corner of the site to 652 feet at its southeastern corner. See **Appendix “A”**, Preliminary Engineering Report (PER).

Underlying the project site and surrounding area are soils belonging to the Pulehu-Ewa-Jaucus association. According to the Soil Survey of the Islands of Kaua’i, O’ahu, Maui, Moloka’i, and Lāna’i, State of Hawai’i, prepared by the United States Department of Agriculture Soil Conservation Service, these soils are characterized as having a slight to moderate erosion hazard (Foote et al., 1972). See **Figure 4**.

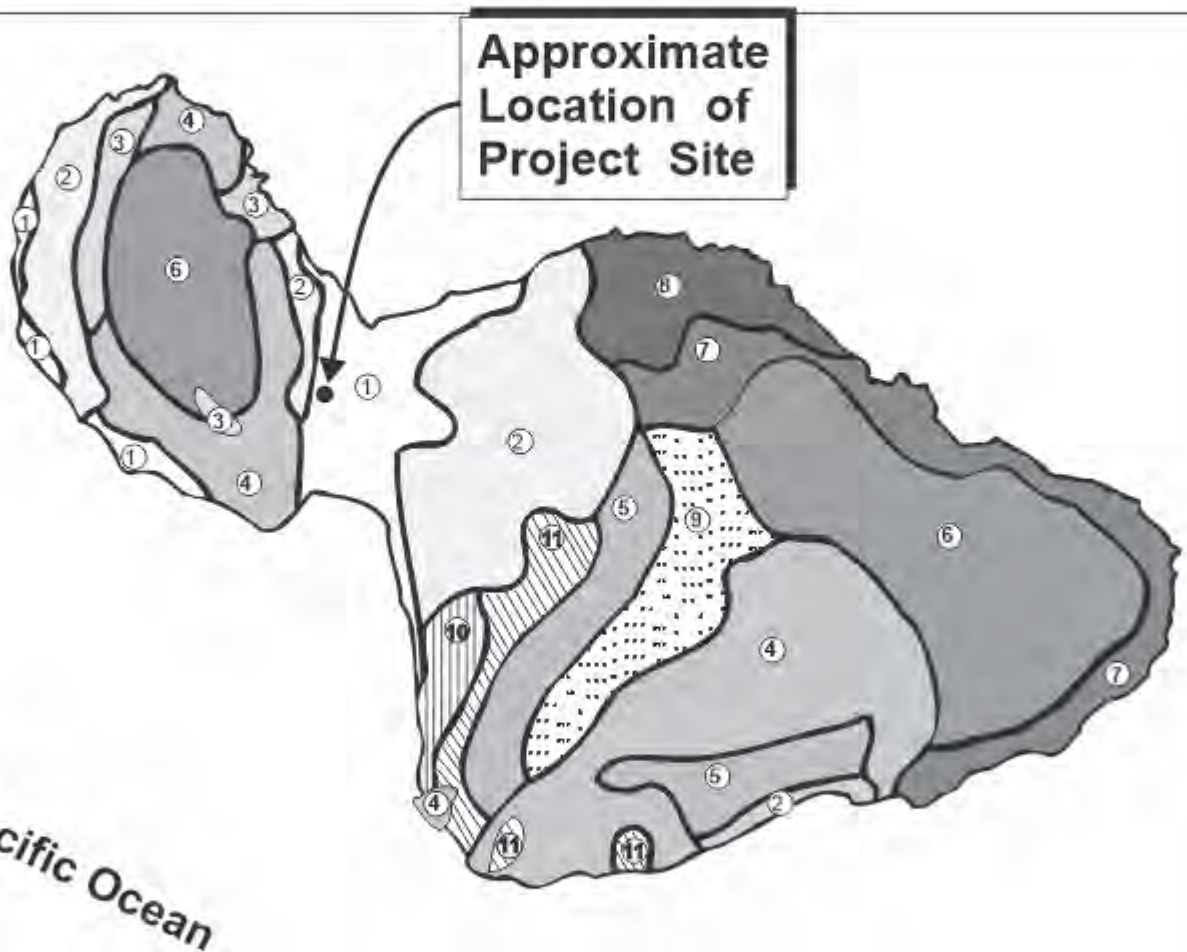
The project area is located on soils identified as Iao Clay (IcC), 7 to 15 percent slopes. These soils are reported to produce a medium amount of runoff and represent a moderate erosion hazard. See **Figure 5**.

b. Potential Impacts and Mitigation Measures

The project site was previously used for agriculture, specifically sugar cane and pineapple cultivation, but is now mostly vacant aside from existing water infrastructure. Best Management Practices (BMPs) will be implemented during construction to minimize impacts from potential soil

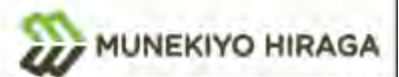
LEGEND

- | | |
|--|---------------------------------------|
| ① Pulehu-Ewa-Jaucas association | ⑦ Hana-Makaalae-Kailua association |
| ② Waiakoā-Keahua-Molokai association | ⑧ Pauwela-Haiku association |
| ③ Hōnolua-Olelo association | ⑨ Laumaia-Kaipōpoi-Olinda association |
| ④ Rock land-Rough mountainous land association | ⑩ Keawakapu-Makena association |
| ⑤ Puu Pa-Kula-Pane association | ⑪ Kamaole-Onapuka association |
| ⑥ Hydrandepts-Tropaquods association | |



Map Source: U.S. Department of Agriculture, Soil Conservation Service, 1972

Figure 4 Pu'unani Homestead Subdivision Water System Storage Improvements Soil Association Map NOT TO SCALE



Prepared for: State of Hawai'i, Department of Hawaiian Home Lands

DOI\Puunani Water Tank Applications\Figures\SOILS

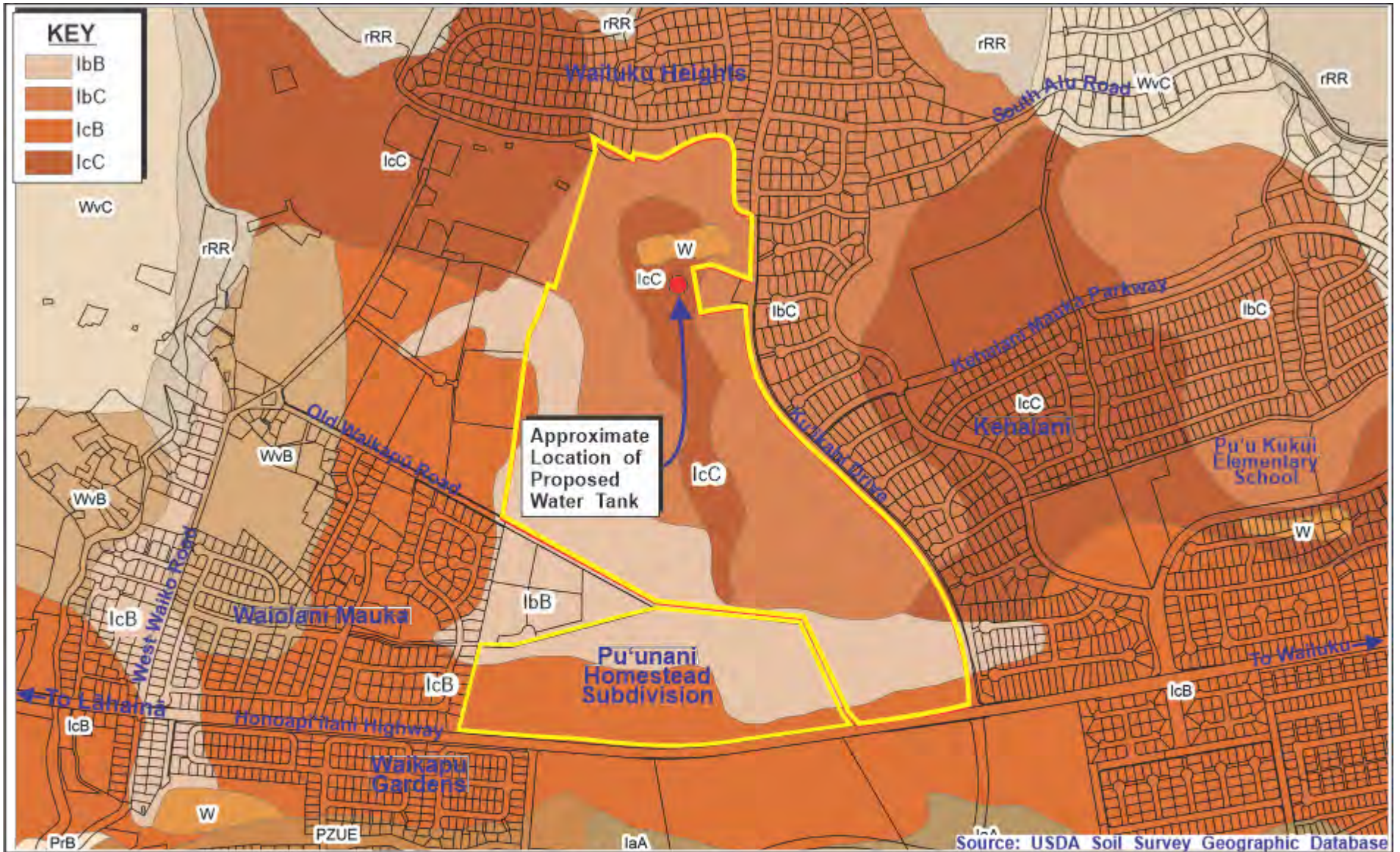


Figure 5

Pu'unani Homestead Subdivision Water System Storage Improvements Soil Classification Map

erosion resulting from wind and water. The BMPs will include, but not be limited to, silt and dust fences as well as filter socks, inlet protection, maintaining equipment in accordance with manufacturer specifications, periodic water spraying of loose soils to minimize airborne dirt particles from reaching adjacent properties, and prompt revegetation of graded areas. Grading permits will also be sought for the proposed water storage tank area. The underlying soils do not pose limitations with respect to project constructability. The proposed project is not anticipated to have a significant adverse effect on topography and soils. Refer to **Appendix “A”**.

4. Agricultural Productivity Considerations

a. Existing Conditions

The proposed project is located on fallow agricultural lands that have not been used for active agricultural production in many years, is adjacent to existing DWS infrastructure and is in proximity to residential communities.

In 1977, the State Department of Agriculture developed a classification system to identify Agricultural Lands of Importance to the State of Hawai‘i (ALISH). The classification system is based primarily, but not exclusively, on the soil classification of the land. The three (3) categories are “Prime”, “Unique” and “Other Important” agricultural lands, with all remaining lands identified as “Unclassified”.

“Prime” agricultural lands have soil quality, growing season, and moisture supply needed to produce sustained high yield crops economically. “Unique” agricultural lands possess a combination of soil quality, growing season, and moisture supply to produce sustained high yields of specific crop. “Other Important” agricultural lands are lands that have not been rated “Prime” or “Unique” agricultural lands that are also of statewide or local importance for agricultural use.

As previously stated, the project site is located in an area of Waikapū that was formerly utilized for agricultural purposes for multiple decades. The project site is located within the ALISH’s “Prime” land area. See **Figure 6**.

Separately, the University of Hawai‘i, Land Study Bureau (LSB) developed the Overall Productivity Rating, which classified soils according to five (5) productivity levels, with “A” representing the class of highest productivity soils and “E” representing the lowest.

The project site has been classified “B” by the LSB. See **Figure 7**.

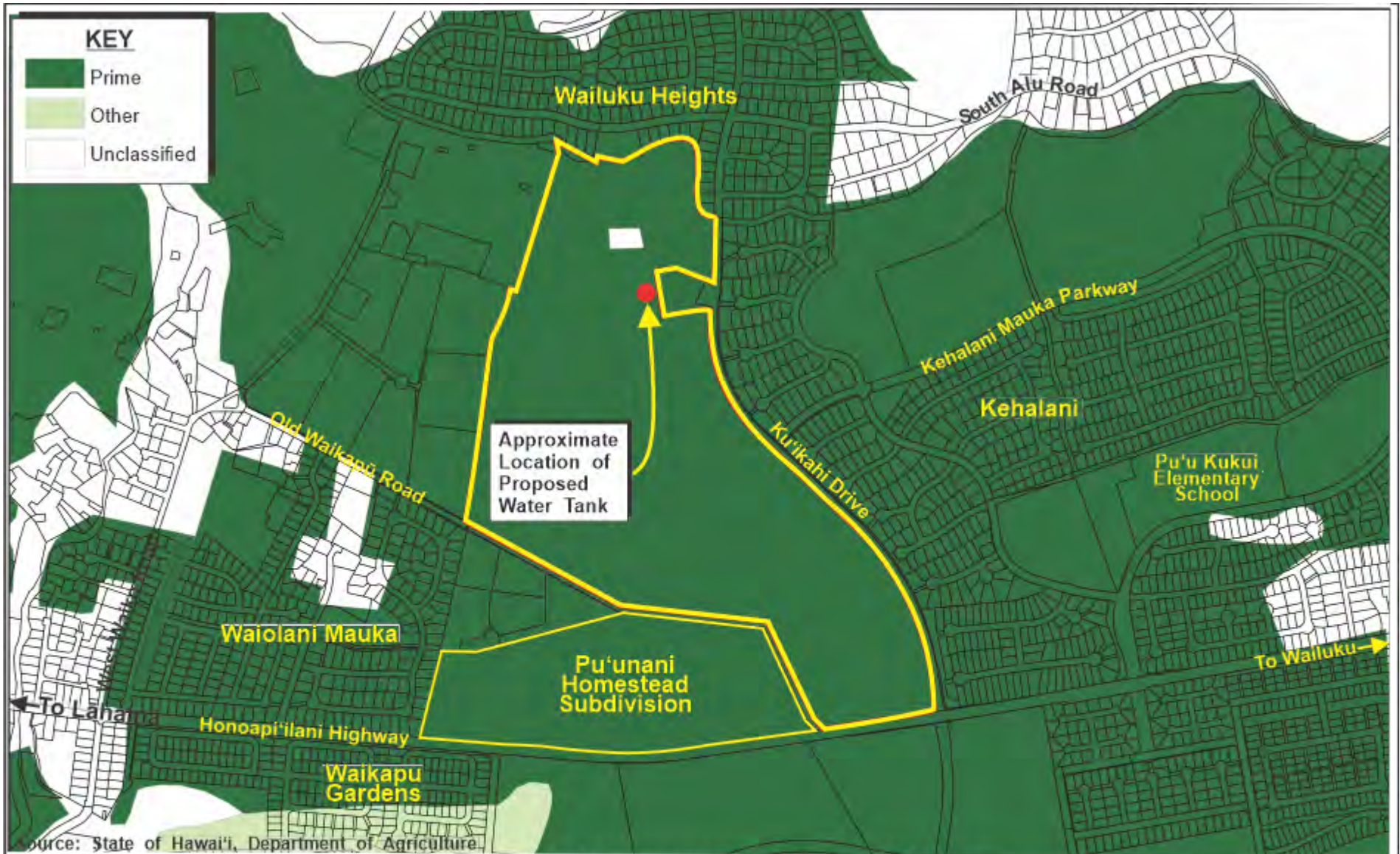
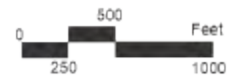


Figure 6

Pu'unani Homestead Subdivision
 Water System Storage Improvements
 Agricultural Lands of Importance to the
 State of Hawai'i Map



Prepared for: State of Hawai'i, Department of Hawaiian Home Lands



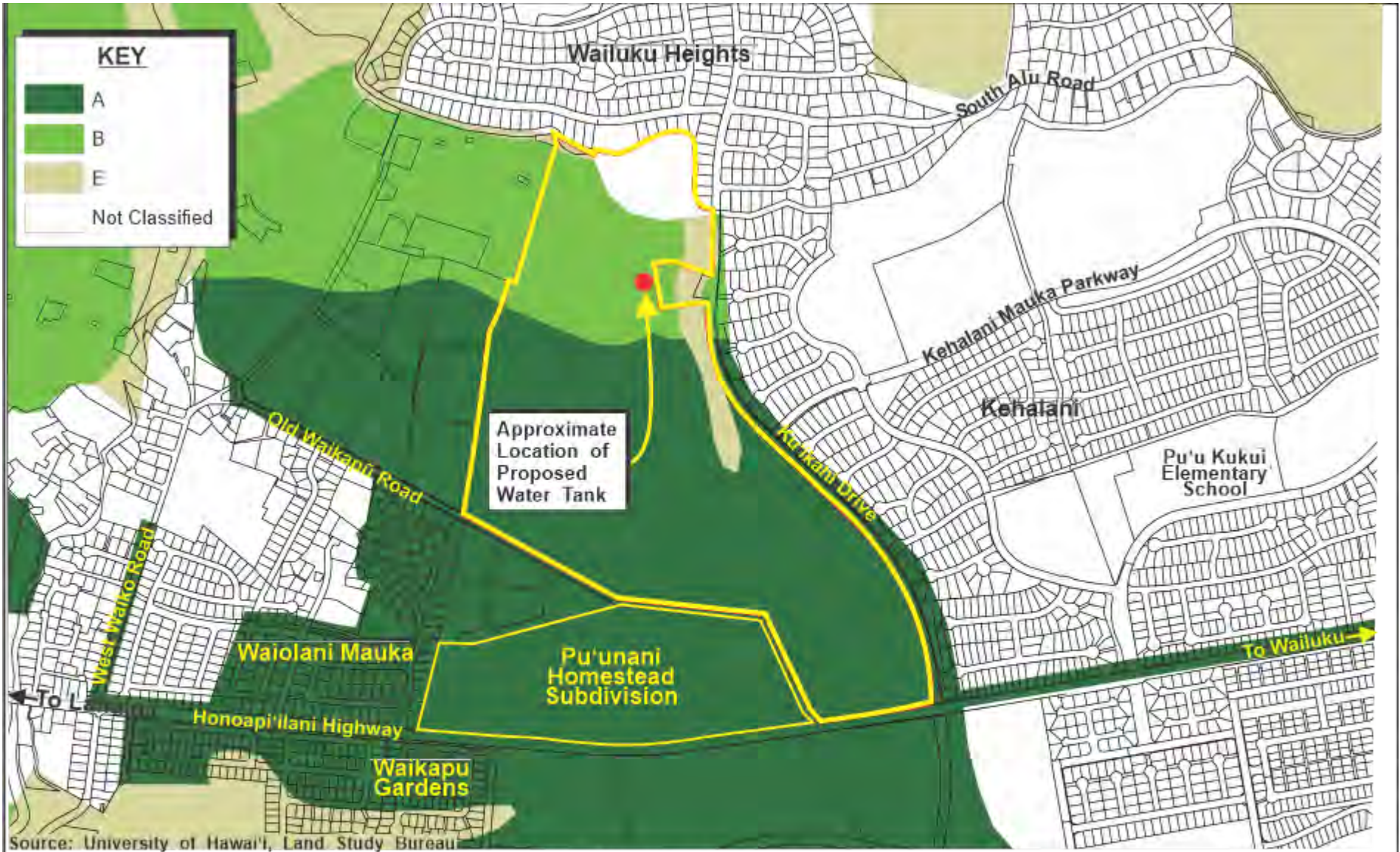


Figure 7

Pu'unani Homestead Subdivision
 Water System Storage Improvements
 Land Study Bureau Map



b. Potential Impacts and Mitigation Measures

The proposed project will utilize approximately 1.26 acres of the project TMK parcel for water system storage infrastructure adjacent to the existing County water tank and water system infrastructure. The proposed action will occur on lands that are not currently actively cultivated. Further, the project will be located in an urbanized area surrounded by residential subdivisions and is not considered a substantial adverse impact in the context of the overall “Prime” designated lands on Maui.

5. Flood, Tsunami, and Sea Level Rise

a. Existing Conditions

The project site does not experience any significant local flooding problems due to its location in Waikapū’s gently sloping mauka to makai topography.

The Flood Insurance Rate Map (FIRM), Geographic Information System (GIS) layer provided by the United States (U.S.) Federal Emergency Management Agency (FEMA) indicates the project site is situated in Flood Zone X (unshaded). Flood Zone X (unshaded) represents areas outside of the 0.2 percent annual chance flood plain and there are no restrictions upon development within this zone.

In addition, the project site is located outside of the tsunami evacuation zone.

A 3.2-foot rise in sea level is projected for the Hawaiian Islands by the mid-to-latter half of the 21st century based on the findings of the Hawai’i Sea Level Rise Vulnerability and Adaptation Report that was prepared in 2017 by the Hawai’i Climate Change Mitigation and Adaptation Commission (Hawai’i Climate Change Mitigation and Adaptation Commission, 2017). It is noted that the project site is located inland at over 500 feet above mean sea level (MSL) and outside of the projected 3.2-foot sea level rise exposure area.

b. Potential Impacts and Mitigation Measures

The proposed subsurface stormwater detention chamber will mitigate expected increases in peak post-construction stormwater flows and stormwater-related water pollution by limiting the downstream release of stormwater. This is in compliance with Maui County drainage standards. As such, there will be no significant adverse impacts to drainage conditions, nor is flooding anticipated as a result of the proposed project. Accordingly,

significant adverse impacts associated with floods, tsunamis, and sea level rise are not anticipated.

6. Streams and Wetlands

a. Existing Conditions

There are no streams or wetlands located within the project site. A natural, typically dry drainageway (gully), Kaiapaokaʻīlio Stream, that originates in the West Maui Mountains traverses through the TMK parcel and into the northernmost portion of the property. See **Figure 8**. Kaiapaokaʻīlio Stream ultimately empties into a dry overflow basin in the Waiʻale Reservoir.

As further discussed in Section A.8., Archaeological Resources, of this chapter, there are a number of old ditches located in the vicinity, but not within the project site, including Waiheʻe Ditch and Waikapū Ditch, which are considered to be part of a network of old irrigation systems for the sugar cane industry. Wailuku Water Reservoir No. 10 that connects to the Waiheʻe Ditch and the 1.5 million gallon (MG) Kehalani Mid-Level Storage Tank that serves the Kehalani Subdivision is located immediately to the west of the project site. Refer to **Figure 8**.

b. Potential Impacts and Mitigation Measures

The project site is located in the midst of existing County water system infrastructure and residential developments in Waikapū and Wailuku and does not contain any streams or wetlands. Appropriate BMPs will be used during construction and applicable drainage detention methods will be employed. DHHL will make every effort to ensure that the project will not have a direct impact upon the natural drainageway or any other waterbody in the region.

7. Flora and Fauna

a. Existing Conditions

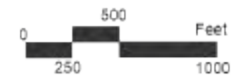
A flora and fauna survey was conducted for the proposed Kuʻikahi Village Project by Robert W. Hobdy, environmental consultant, in June 2020 which is planned to be located on the same parcel, immediately east of the proposed Puʻunani Water System Storage Tank.

The objectives of the survey were to document what plant and animal species occur on the property, document the status and abundance of each



Figure 8

Pu'unani Homestead Subdivision Water System Storage Improvements Streams and Wetlands Map



Prepared for: State of Hawai'i, Department of Hawaiian Home Lands



species, determine the presence of any native flora and fauna, particularly that are federally listed as threatened or endangered, and, if such occur, identify what features of the habitat may be essential for these species, and to determine if the project area contains any special habitats, which if lost or altered, might result in a significant negative impact on the flora and fauna in the vicinity of the project.

A walk-through botanical survey was conducted to identify all plant species, distribution, and abundance at the project site. The vegetation in the project area was dominated by tall, dense grass. Plant diversity was low and many species were heavily grazed by goats and deer. A total of 30 plant species were recorded during the survey. One (1) species of Guinea grass was abundant throughout the project area, two (2) other species were common, koa haole and glycine. The remaining 27 plant species were either uncommon or rare. There were no native plants found during the survey.

In conjunction with the botanical survey, a walk-through fauna survey was also conducted. Additionally, field observations were made with the aid of binoculars and by listening to vocalizations. An evening visit was made to the area to record crepuscular activities and vocalization and to see if there was any evidence of occurrence of the endemic and endangered Hawaiian hoary bat in the area. Signs of presence of two (2) species of non-native mammals were observed in the project area during two (2) site visits, domestic goats and axis deer. An evening survey using a bat-detecting device was made in the project area to determine any presence of the Hawaiian hoary bat. No bat activity was detected with the use of this device. Other nonnative mammals that would likely use this project area, but which were not seen, include rats, mice, and domestic cats. Bird diversity and total numbers were low in the project area. Only six (6) widespread non-native bird species were observed during the two (2) site visits. One (1) species was uncommon, the zebra dove, while the remaining five (5) species were all of rare occurrence. A few other nonnative bird species would likely utilize this habitat occasionally, but this dry, nearly monotypic grassland is not suitable for Hawai'i's native forest birds, sea birds, water birds or nēnē, and none were seen. Similarly, insect species and total numbers were likewise sparse in the project area. Six (6) non-native insects were recorded during the two (2) site visits. One (1) species was uncommon, the long-tailed blue butterfly. The remaining five (5) insect species were of rare occurrence. No native insects were seen, and no host plants for any rare native insects were seen.

All mammal, bird and insect species recorded in this project area were nonnative species. Heavy grazing and browsing by domestic and wild

animals has reduced plant species to only the hardiest and least edible components. This in turn has resulted in low numbers of all other animal species at the project area.

In addition, the U.S. Fish and Wildlife Service (USFWS) provided an early consultation comment via email on April 24, 2022, and requested the project to utilize its online portal to develop an official species list for the project. The official species list downloaded from the USFWS Information for Planning and Consultation portal is included herein as **Appendix “B”**. The list includes a total of 29 threatened, endangered, or candidate species which may be present in the area of the proposed action. See **Table 1**.

Table 1. U.S. Fish and Wildlife Service Official Species List

Scientific Name	Common Name/Hawaiian Name	Federal Status
Mammals		
<i>Lasiurus cinereus semotus</i>	Hawaiian Hoary Bat/‘Ōpe‘ape‘a	Endangered
Birds		
<i>Oceanodroma castro</i>	Band-rumped Storm-petrel	Endangered
<i>Loxops coccineus</i>	Hawai‘i ‘Ākepa	Endangered
<i>Anas wyvilliana</i>	Hawaiian Duck/Koloa	Endangered
<i>Fulica americana alai</i>	Hawaiian Coot/‘Alae kea	Endangered
<i>Branta (=Nesochen) sandwicensis</i>	Hawaiian Goose/Nēnē	Threatened
<i>Himantopus mexicanus knudseni</i>	Hawaiian Stilt/Ae‘o	Endangered
<i>Puffinus auricularis newelli</i>	Newell’s Townsend’s Shearwater	Threatened
Reptiles		
<i>Chelonia mydas</i>	Green Sea Turtle	Threatened
Insects		
<i>Manduca blackburni</i>	Blackburn’s Sphinx Moth	Endangered
Flowering Plants		
<i>Hibiscus brackenridgei</i>	Native Yellow Hibiscus/Ma‘o hau	Endangered
<i>Nothoestrum latifolium</i>	‘Aiea	Endangered
<i>Pseudognaphalium sandwicense var. molokaiense</i>	‘Ena‘ena	Endangered
<i>Bonamia menziesii</i>	No common name	Endangered
<i>Panicum fauriei var. carteri</i>	Carter’s Panicgrass	Endangered
<i>Gouania hillebrandii</i>	No common name	Endangered
<i>Gardenia brighamii</i>	Hawaiian Gardenia/Na‘u	Endangered
<i>Portulaca villosa</i>	‘Ihi	Endangered
<i>Bidens micrantha ssp. kalealaha</i>	Ko‘oko‘olau	Endangered
<i>Abutilon menziesii</i>	Ko‘oloa‘ula	Endangered

Scientific Name	Common Name/Hawaiian Name	Federal Status
<i>Santalum haleakalae</i> var. <i>lanaiense</i>	Lanai Sandalwood/'Iliahi	Endangered
<i>Sesbania tomentosa</i>	'Ōhai	Endangered
<i>Achyranthes splendens</i> var. <i>rotundata</i>	Round-leaved Chaff-flower	Endangered
<i>Schiedea salicaria</i>	No common name	Endangered
<i>Spermolepis hawaiiensis</i>	No common name	Endangered
<i>Tetramolopium remyi</i>	No common name	Endangered
<i>Mezoneuron kawaiense</i>	Uhiuhi	Endangered
<i>Vigna o-wahuensis</i>	No common name	Endangered
<i>Isodendrion pyriformium</i>	Wahine noho kula	Endangered

b. Potential Impacts and Mitigation Measures

As discussed above, the flora and fauna present at the project site were entirely represented by non-native species of no environmental concern.

While the Hawaiian hoary bat was not detected at the project site, the flora and fauna report noted that the bats are highly mobile and appear to migrate around in response to flushes in insect activity, wherever it may occur. As such, there is a likelihood that these bats may utilize the habitat on the subject property at some time during the year. As recommended by the USFWS, to minimize potential impacts to the Hawaiian hoary bat during construction, the project will avoid removing trees over 15 feet tall during the bat birthing and pup rearing season (June 1 to September 15).

Furthermore, while not seen at the site, there are two (2) native seabirds, the endangered Hawaiian petrel (*Pterodroma sanwicensis*) and the threatened Newell's shearwater (*Puffinus newelli*), that fly over lowlands during the evenings on their way to their burrows high in the mountains and then fly out to the ocean early in the morning during the summer and fall months. These seabirds, and especially their young fledglings, are attracted to bright lights and can be disoriented and crash. They are then vulnerable to injury, vehicle strikes or predators. The flora and fauna report recommended that any significant outdoor lighting be shielded to direct the light downward. Outdoor night lighting is not anticipated to be installed at the water tank site unless it is required by reviewing agencies during the Chapter 343, Hawai'i Revised Statutes (HRS) environmental review process. Should any outdoor night lighting be used, the DHHL will shield all significant outdoor lighting downward to minimize disorientation of any native seabirds flying overhead.

In addition, the USFWS' official species list includes a total of 29 threatened, endangered, or candidate species which may be present in the area of the proposed action. Refer to **Table 1**. The official species list and USFWS' recommended conservation measures have been forwarded to the project team and will be implemented, as may be applicable.

With implementation of the above-noted mitigation measures, the development of the proposed project is not anticipated to result in a significant negative impact on native fauna or habitats in this part of Maui.

8. Archaeological Resources

a. Existing Conditions

A previous Archaeological Inventory Survey (AIS) was conducted in 2005 for two (2) parcels totaling 215.8 acres (TMK Nos. (2)3-5-002:002 and 003), which included the project area. The AIS was conducted by Scientific Consultant Services, Inc. (SCS) and was composed of historic background settlement pattern research, a complete pedestrian survey of the survey area, and subsurface testing via backhoe and reporting. The State Historic Preservation Division (SHPD) accepted the AIS by letter dated November 18, 2005. See **Appendix "C"** and **Appendix "C-1"**.

The literature research review involved a review of all previous archaeological work conducted in the surrounding area. The fieldwork involved the execution of a complete pedestrian survey of the subject area, as well as lands beyond for the purpose of site inventory and limited subsurface testing to evaluate the significance of any subsurface deposits. Laboratory work consisted of analysis of any subsurface deposits found during the field work.

During the field inspection, seven (7) historical sites related to the former use of the area for sugar cane cultivation were identified. The sites were determined significant under Criterion "D" as having the potential to yield information important to understanding the history of the region and were determined to be adequately documented by SHPD. Refer to **Appendix "C"**. The sites included Waihe'e Ditch (State Site 50-50-04-5197), Waikapū Ditch (State Site 50-50-04-5493), an unnamed lesser ditch (State Site 50-50-04-5729), another unnamed lesser ditch (State Site 50-50-04-5726), a larger unnamed reservoir (State Site 50-50-04-5727), a series of 14 sugar canefield erosion-control soil berms (State Site 50-50-04-5728), and Old Waikapū Road (State Site 50-50-04-5730). All seven (7) sites are located outside of the project area. See **Figure 9**. These sites revealed a network of irrigation systems in the form of ditches and a reservoir, erosion-control

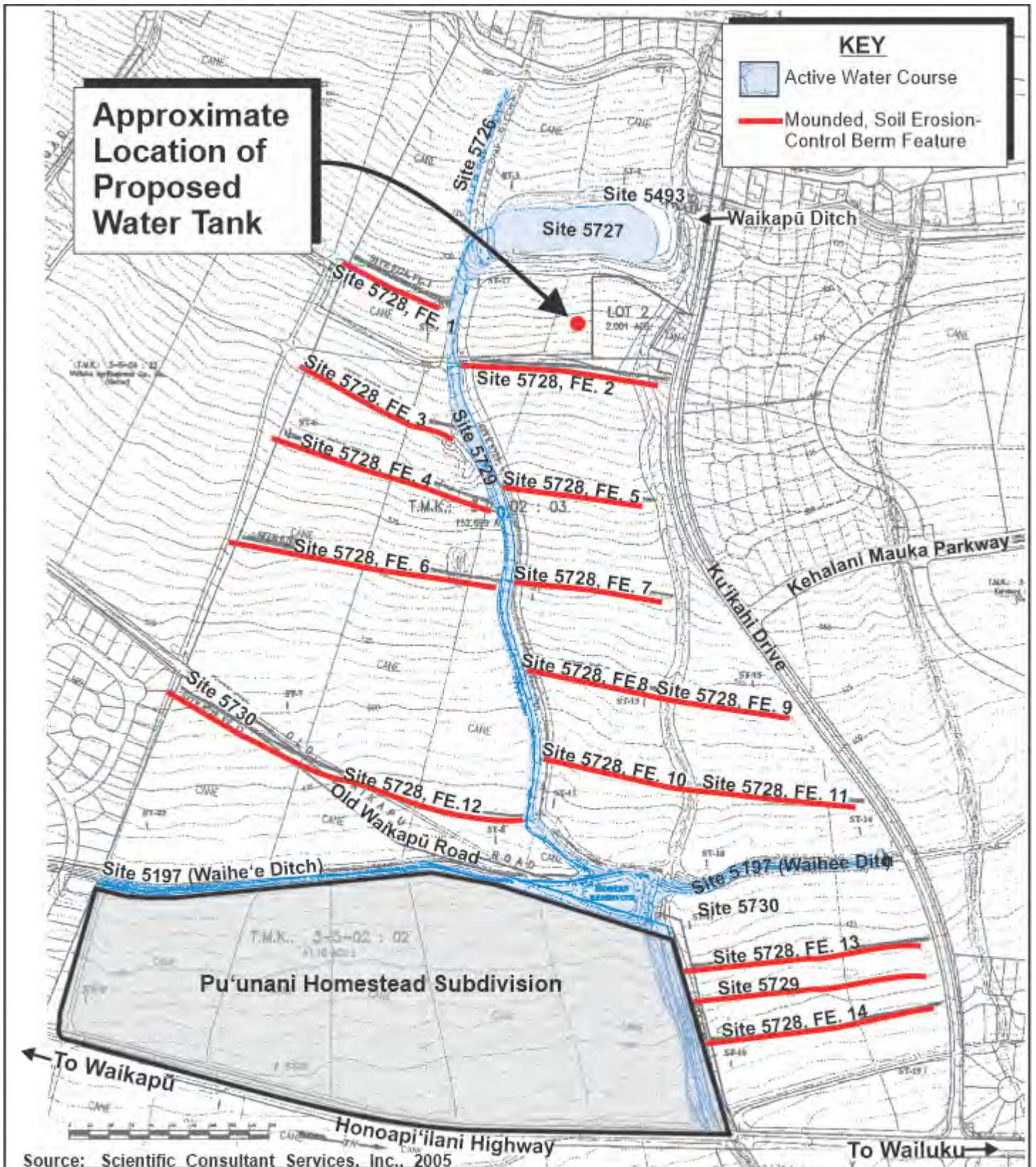


Figure 9 Pu'unani Homestead Subdivision Water System Storage Improvements Archaeological Sites Location Map NOT TO SCALE



berms, and a historic dirt road and were a part of the turn-of-the century sugar industry in Hawai'i. No burial features or human remains were identified during the pedestrian surveys or subsurface testing.

As recommended by the Cultural Impact Assessment (CIA) prepared for the Pu'unani Homestead Subdivision project, and as a result of consultation comments received, an archaeological field inspection was conducted on August 24, 2020, consisting of a pedestrian walk-through of the subdivision site to determine if Pōhāko'i, the legendary grinding stone, was present at the site of the subdivision. No discoveries were made. See **Appendix "C-2"**.

In addition to the above, an archaeological field inspection was prepared by SCS in April 2022, specifically for the water tank site. See **Appendix "C-3"**. The archaeologist conducted a pedestrian survey of the entire water tank site, which did not lead to the identification of any historic properties. No surface architecture or even isolated artifacts or ecofacts were identified. Given the location of the property, results of the former AIS, and associated soil series, burials are not anticipated to exist in this area. All sites identified in this portion of Waikapū have been related to Historic-era cultivation, in the forms of irrigation ditches, reservoirs, and bermed planting areas. The archaeological field inspection for the water tank site concluded that there is a very low probability that historic properties would be adversely affected by development of the proposed water tank.

b. Potential Impacts and Mitigation Measures

The previous AIS containing the water tank site involved evaluation, documentation, and recordation and when necessary, subsurface investigation of recorded sites. Laboratory analysis was also performed, where necessary.

As noted previously, the AIS was accepted by SHPD by letter dated November 18, 2005. In their acceptance letter, SHPD concluded that no further archaeological mitigation is necessary. Refer to **Appendix "C-1"**. Nonetheless, SCS submitted a Section 6E, HRS form to SHPD on April 5, 2019 for the Pu'unani Homestead Subdivision, to reconfirm SHPD's acceptance of the previous AIS and that no further action is necessary.

Subsequently, DHHL, by letter dated March 27, 2020, requested the SHPD's reconfirmation of the previous determination made on the AIS, and that no further work was required. The SHPD provided their concurrence via return signature on the March 27, 2020 letter. Refer to **Appendix "C-4"**. Although the SHPD has concurred that no further work is necessary in

accordance with the findings of the previously accepted AIS, the DHHL has elected to conduct archaeological monitoring during all ground disturbance activities at the site of the proposed residential subdivision as well as the new water storage tank. As such, an Archaeological Monitoring Plan (AMP) was prepared and approved by the SHPD on May 20, 2021. See **Appendix “C-5”** and **Appendix “C-6”**. The contractor, once selected, will be required to follow the provisions of the AMP.

The Archaeological Field Inspection for the proposed water storage tank site reconfirmed the findings of the previous AIS and the recommendation that no further work is required.

Based on the foregoing and with implementation of archaeological monitoring, no significant adverse impacts to the archaeological resources are anticipated.

9. Cultural Resources

a. Existing Conditions

As previously noted, a CIA report was prepared by SCS for the DHHL Pu'unani Homestead Subdivision, which is located approximately 0.5 miles east of the proposed water tank, in order to identify the possibility of ongoing cultural activities and resources within the subdivision area, and assess the potential for impacts on these cultural resources from the subdivision. See **Appendix “D”**. The report contains archival and documentary research involving both published and unpublished sources, including legendary accounts of native and early foreign writers; early historical journals and narratives; historic maps; land records; and previous archaeological reports, as well as information gathered from organizations and individuals having knowledge of the Pu'unani Subdivision area, its cultural resources, and its practices and beliefs through written responses to requests for information, as well as through voluntary interviews conducted. The CIA includes traditional and historic background research, as well as a summary of archaeological projects previously conducted in the subdivision and water tank areas.

According to the CIA report, the Pu'unani subdivision and proposed water tank and related improvements are located within the Central Maui isthmus, between Wailuku and Mā'alaea. Traditionally, lands within Hawai'i were divided into *moku* (districts), which were then subdivided into *ahupua'a*, which were land divisions governed by chiefs that customarily ran from the ocean inland into the mountains. Extended household groups living within the *ahupua'a* were, therefore, able to harvest from both the land and the

sea. *Ahupua'a* were further divided into *'ili'āina* and then *mo'ō āina*. The Pu'unani Subdivision and the proposed water tank site are located within the *moku* of Wailuku, and *ahupua'a* of Waikapū. The *ahupua'a* of Waikapū was one (1) of four (4) in Wailuku, which were collectively known as "Nā Wai 'Ehā", or "the four waters", which refers to the valleys and streams in each of these *ahupua'a*. The Waikapū *ahupua'a* was once rich in taro farming with water being diverted from the stream into *lo'i kalo* (wetland taro patches).

During the mid-1800s, extreme modification to traditional land tenure occurred throughout all of the Hawaiian islands. The transition from traditional Hawaiian communal land use to private ownership and division was commonly referred to as the *Māhele* (Division). The *Māhele* of 1848 set the stage for vast changes to land holdings within the islands as it introduced the western concept of land ownership to the islands. The *Māhele* divided lands between the king, the chiefs, the government, and began the process of private ownership of lands. The subsequently awarded parcels were called Land Commission Awards (LCAs). Once lands were made available and private ownership was instituted, the *maka'āinana* (commoners) were able to claim the plots on which they had been cultivating and living. The Wailuku District was declared Crown Land and numerous LCAs were awarded for Waikapū *ahupua'a* which reflect continued *lo'i* cultivation, kula lands, and house sites.

As the sugar industry developed in the mid-1800s, sugar cane took over the traditional taro lands. Land use in the Waikapū in the mid-19th and early 20th century was largely devoted to the sugar industry. During the 1860s, the sugar business grew, with plantations and mills operating at Wailuku, Waihe'e, Waikapū, and Ha'ikū.

Wahi pana can be defined as celebrated or noted places or locations. There are several legends associated with the meaning of the name Waikapū. According to several accounts, the name Waikapū (Water of the Conch) refers to an ancient cave in the area where a famous conch shell (*pū*) was hidden until it was stolen by *Puapua-Ienalena* (a supernatural dog). Other accounts tell of the area known as Nā Wai 'Ehā, which is renowned for the battles fought there. The name Waikapū (the water where the conch was blown) referred to a conch shell that was blown to announce the commencement of a battle. In another account, Waikapū (Forbidden Water) refers to the time Kamehameha I beached his canoes at Kalepolepo and placed a *kapu* (taboo, restriction) on the nearest stream. In addition, although it has been said that Waikapū Valley contained "many temples and sites", most of their locations were not recorded.

The consultation process for preparation of the CIA report was conducted via telephone, email, U.S. Postal Service, and in-person interviews when possible. Initial letters of inquiry were mailed between July 30, 2019 and March 31, 2020 to 25 individuals to obtain information pertaining to cultural resources and traditional cultural practices conducted within the subdivision area or within Waikapū *ahupua'a*. Follow-up letters of inquiry were also emailed and sent via U.S. Postal Service between August 30, 2019 and December 12, 2019. In addition, a CIA Notice was also published in the September 2019 issue of *Ka Wai Ola*, the newsletter of the Office of Hawaiian Affairs (OHA) requesting information.

No responses were received as a result of the posting in the OHA newsletter. In addition, 12 responses to the request for information were received via email, and two (2) telephone interviews were conducted. A summary of the interviews is included in the CIA prepared for the subdivision. The responses and interviews allow for an assessment of the potential effects on cultural resources in the Pu'unani Subdivision area, and recommendations for mitigation of these effects.

In addition to the above, an addendum to the CIA was prepared in April 2022 by Keala Pono Archaeological Consulting, LLC specifically for the water tank site. See **Appendix "D-1"**. Consultation for the Addendum CIA was conducted between January and April of 2022. The 25 individuals who were contacted during the original CIA were again contacted for the Addendum CIA consultation. Two (2) individuals participated in telephone interviews and several individuals provided written responses via email. No traditional cultural practices or cultural resources were identified within the water tank site and the interviewees were not opposed to the proposed water tank, however, several concerns were raised pertaining to effects that the proposed project may have on natural resources, cultural resources, and cultural practices in the surrounding area. These concerns include the following:

- The project might impact the surface water supply, the Maui aquifer, native plants, and iwi kūpuna;
- Access to cultural resources may be affected;
- Currently conducted traditional practices, including taro cultivation may be affected;
- The quality of life may change, through an increase of traffic resulting from an increase in population;

- The project might affect access to areas where cultural activities are currently practiced; and
- The aesthetics of the area could be impacted.

b. Potential Impacts and Mitigation Measures

The CIA prepared for the Pu'unani Homestead Subdivision noted that based on historical research and responses received during the consultation process, it is reasonable to conclude that there is evidence of cultural practices related to Hawaiian rights related to agricultural pursuits, access to resources (i.e., water), and possibly other customary activities presently occurring in the vicinity of the Pu'unani Subdivision area, but not specifically within the subdivision site. Refer to **Appendix "D"**.

The Addendum CIA concluded that while no traditional cultural practices or cultural resources were identified within the water tank site, cultural resources and ongoing cultural practices have been identified in the vicinity of the proposed project area and recommended that the following mitigation measures be conducted:

- Access to cultural resources will remain open;
- Access to areas where cultural practices are currently conducted will remain open;
- Cultural resources are protected and replenished; and
- The Kingdom Laws prevail upon the lands.

Refer to **Appendix "D-1"**.

As previously noted, although the SHPD has concurred that no further work is necessary in accordance with the findings of the previously accepted AIS, the DHHL has elected to conduct archaeological monitoring during all ground disturbance activities at the site of the Pu'unani subdivision. As such, an AMP was prepared, and approved by SHPD. The contractor, once selected for the water tank project, will be required to follow the provisions of the approved AMP. Refer to **Appendix "C-5"** and **Appendix "C-6"**.

Based on the foregoing, and with implementation of the mitigation measures discussed herein, the proposed project is not anticipated to result in significant adverse impacts to cultural resources.

10. **Air Quality**

a. **Existing Conditions**

There are no point sources of airborne emissions in the immediate vicinity of the project site. Although minimal, airborne pollutants are largely attributable to vehicular traffic on the surrounding roadways. Windblown dust from surrounding fallow agricultural lands is another source of indirect emissions in the region. These sources, however, are intermittent and prevailing winds quickly disperse the particulates generated by these temporary sources. Overall, the air quality in the region is considered good.

b. **Potential Impacts and Mitigation Measures**

In the short term, construction-related activities for the proposed project will be the primary source of airborne pollutants affecting the surrounding area. Site work involving clearing, grubbing, and grading operations will generate fugitive dust. Appropriate BMPs, such as periodic watering of exposed surfaces, installation of dust screens, and regular maintenance of construction equipment will be utilized to minimize air quality impacts associated with project construction.

The proposed project is not an action which will generate adverse long-term air quality impacts.

11. **Greenhouse Gas Considerations**

a. **Existing Conditions**

Greenhouse gases (GHG) (carbon dioxide, methane, nitrous oxide and fluorinated gases) trap heat in the earth's atmosphere. In the context of climate and ocean warming, increases in levels of atmospheric GHG have been attributed to human activity (IPCC, 2021). Within the State of Hawai'i, the energy sector (including fossil fuel burning to produce electricity, transportation, waste incineration, and natural gas systems) is identified as the source of approximately 89 percent of GHG emissions (Hawai'i Department of Health, 2021). Other sources of GHG emissions include industrial facilities, agriculture and forestry, and waste treatment such as landfills, composting, and wastewater treatment.

The Federal Greenhouse Gas Reporting Program (40 CFR Part 98) requires mandatory reporting of GHG emissions from sources that emit 25,000 metric tons or more of carbon dioxide equivalent (CO₂ EQ) per year in the United States. Categories of use which are generally associated with

this level of reporting include power plants, petroleum and natural gas systems, refineries, and other heavy manufacturing processes. On Maui, the facilities operating at or above the 25,000 metric ton level include Hawaiian Electric Company's Kahului Power Plant, Maalaea Power Plant, the Hawaiian Commercial Sugar Company Industrial Waste Landfill, and the Central Maui Landfill (United States Environmental Protection Agency (U.S. EPA) 2020).

b. Potential Impacts and Mitigation Measures

The proposed action involves the construction of a water system storage tank which will serve a residential subdivision. In the context of the GHG Reporting Program (25,000 metric tons of CO₂ EQ), the relative effects of GHG emissions (CO₂ EQ) from the project are not considered significant.

The proposed action will involve short-term consumption of fuel for construction equipment, vehicles, and machinery during the construction period. This usage is temporary and is not anticipated to be substantial or excessive within the context of the water tank's use over time as water storage tanks are not significant contributors of GHG emissions.

The proposed action is not anticipated to create significant direct and indirect foreseeable GHG emissions. This action does not fall within the threshold of mandatory GHG reporting.

12. Noise Quality

a. Existing Conditions

There are no fixed noise generators in the vicinity of the project site. Noise generated in the area is primarily attributed to vehicular traffic along the surrounding roadways, including Ku'ikahi Drive and Honoapi'ilani Highway. Overall, the noise level in the region is fairly low.

b. Potential Impacts and Mitigation Measures

Ambient noise conditions may be temporarily affected by construction activities. Heavy construction machinery, such as backhoes, dump trucks, front-end loaders, and material-transport vehicles are anticipated to be the dominant noise-generating sources during the construction period of the proposed project.

In order to mitigate noise impacts, construction activities are anticipated to be limited to daylight work hours. Project-related noise will be minimized

through use of applicable BMPs, such as regular maintenance of construction equipment and use of properly muffled equipment. Construction noise impacts will be mitigated through compliance with the provisions of the State of Hawai'i, Department of Health (DOH) Administrative Rules Title 11, Chapter 46, "Community Noise Control". These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels set forth in Chapter 46.

In the long term, the proposed project is not anticipated to have adverse noise quality impacts.

13. Hazardous Materials

a. Existing Conditions

The project site is former agricultural lands. Agricultural production has since ceased on the property, and the site is used for pasture and water infrastructure. Due to its former agricultural use, there may be the potential for residual hazardous materials, such as pesticides. A Phase I Environmental Site Assessment (ESA) was conducted by Vuich Environmental Consultants, Inc. in 2004 and Bureau Veritas North America, Inc. in 2018 for projects located in the vicinity of the project, including the Ku'ikahi Affordable Housing and Pu'unani Homestead Subdivision projects located makai of the proposed water tank. Both reports determined that the land underlying the proposed water tank and the Pu'unani Homestead Subdivision were utilized as agricultural land from at least 1950 until the early to mid 2000s, when the property was primarily vacant or used as pasture land.

b. Potential Impacts and Proposed Mitigation Measures

Site reconnaissance and records review for the ESA reports evaluated the surrounding properties. Both ESA reports noted that agricultural chemicals were not detected at or above regulatory levels.

Based on the findings of the prior ESA reports, there are no hazardous or regulated substances on the project site and, as such, no adverse impacts are anticipated.

14. Scenic and Open Space Resources

a. Existing Conditions

Mauna Kahālāwai (West Maui Mountains) to the west, Haleakalā to the east and Kahului Bay and the Pacific Ocean to the northeast define the scenic resources in Central Maui.

The project site is surrounded by fallow former agricultural lands and residential developments and is adjacent to existing water storage infrastructure.

b. Potential Impacts and Mitigation Measures

The proposed water storage tank will be located on fallow agricultural lands. The height of the proposed water storage tank is anticipated to be approximately 23 feet and the diameter is anticipated to be approximately 70 feet. The final tank dimensions will be finalized with the DWS during the design phase of the project. The height of the proposed tank will be consistent with the adjacent existing 1.5 MG Kehalani Mid Level Storage Tank, while the diameter will be smaller. Potential visual impacts of the proposed water tank are anticipated to be mitigated by the line-of-sight obstruction provided by the County's existing 1.5 MG Kehalani Mid Level Storage Tank when viewed from the north (i.e., from Ku'ikahi Drive), and the makai embankment of the irrigation reservoir when viewed from the west (i.e., from Wailuku Heights). In addition, the DHHL will coordinate with the DWS to select a neutral paint color for the proposed water tank that will blend into its surroundings. As such, the proposed action is not anticipated to impede scenic views or impact open space resources.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Land Use and Community Character

a. Existing Conditions

From a regional perspective, the project site is located immediately south of the urbanized area of Wailuku Town and immediately north of Waikapū Town. Wailuku Town serves as the commercial and governmental center of the region while Waikapū Town primarily consists of residential development and former agricultural lands. The project site is surrounded by fallow former agricultural lands, existing water system infrastructure, and other residential developments.

b. Potential Impacts and Proposed Mitigation Measures

The project is compatible with the adjacent existing County water system infrastructure, residential uses and community character. As such, the proposed project is in consonance with the current land use and community character of the area.

2. Population

a. Existing Conditions

The population of the County of Maui has exhibited growth over the past several decades. According to the U.S. Census, the resident population of the Maui County in 2020 was 164,754, an increase of 6.4 percent from the 2010 population of 154,834 (U.S. Census 2020). The population of Maui County is projected to increase to 211,537 by the year 2045 (Maui County Data Book, 2020).

b. Potential Impacts and Proposed Mitigation Measures

The proposed project involves the construction of a water system storage tank to serve the DHHL Pu'unani Homestead Subdivision. The proposed water tank and subdivision it will serve will provide much needed housing and access to potable water for DHHL native Hawaiian beneficiaries. The project will indirectly serve a slight population increase for the Waikapū area, however, it is not anticipated to adversely impact the island's population parameters.

3. Economy

a. Existing Conditions

The economy of Maui is heavily dependent upon the visitor industry. Many of the hotel and resort amenities are in South Maui and West Maui, with non-resort, smaller hotels located in Central Maui.

The economy of the Wailuku region is anchored by government services, with many County and State agency offices occupying the civic center portion of town, near the High Street-Main Street intersection. With access to government offices, professional services such as engineering, architectural, and accounting offices are located nearby. Waikapū, while mainly residential in nature, also features a number of small businesses and the Maui Tropical Plantation.

Hawai'i's economy through 2019 was strong, with record-setting visitor arrivals and low unemployment. However, the COVID-19 pandemic has had far reaching impacts on the economy on Maui, in Hawai'i, and across the nation and world. Stay-at-home regulations and travel quarantines aimed to curb the spread of COVID-19 virus in Hawai'i have caused many businesses to shut down or drastically reduce operations. This caused unemployment rates in Hawai'i to peak at 21.9 percent in April and May 2020, compared to just 2.7 percent in February 2020 (Department of Labor and Industrial Relations, 2021). As the State has slowly reopened, unemployment has gradually decreased. In July 2022, the State unemployment rate was 4.1 percent, recovering closer to the pre-pandemic levels (Department of Labor and Industrial Relations, 2022).

b. Potential Impacts and Mitigation Measures

The proposed project is anticipated to have economic and fiscal impacts. In the short term, the development of the water storage tank will contribute to the local economy through the generation of construction jobs and activity. In the long term, the project indirectly supports the development of the DHHL Pu'unani Homestead Subdivision, which will contribute to the County revenue fund through real property and water assessment fees.

4. Housing

a. Existing Conditions

Median sales prices for single-family homes and condominiums on Maui have reached historically high rates, highlighting the need for workforce and affordable housing.

The mission of the DHHL is to effectively manage the Hawaiian Home Lands trust and to develop and deliver land to native Hawaiians. The Hawaiian Homes Commission Act (HCCA), codified within the constitution of the State of Hawai'i, states as its purpose:

- (a) *The Congress of the United States and the State of Hawaii declare that the policy of this Act is to enable native Hawaiians to return to their lands in order to fully support self-sufficiency for native Hawaiians and the self-determination of native Hawaiians in the administration of this Act, and the preservation of the values, traditions, and culture of native Hawaiians.*

- (b) *The principal purposes of this Act include but are not limited to:*
- (1) *Establishing a permanent land base for the benefit and use of native Hawaiians, upon which they may live, farm, ranch, and otherwise engage in commercial or industrial or any other activities as authorized in this Act;*
 - (2) *Placing native Hawaiians on the lands set aside under this Act in a prompt and efficient manner and assuring long-term tenancy to beneficiaries of this Act and their successors;*
 - (3) *Preventing alienation of the fee title to the lands set aside under this Act so that these lands will always be held in trust for continued use by native Hawaiians in perpetuity;*

Similarly, the DHHL General Plan, adopted in 2002, lists as goals under the Residential Uses objective:

- *Substantially increase the number of residential homesteads awarded each year.*
- *Provide a mix of housing opportunities that reflect the needs and desires of native Hawaiian beneficiaries.*
- *Provide residential homesteads, financing, and other housing opportunities, especially to those most in need.*

b. Potential Impacts and Mitigation Measures

The proposed project will provide adequate water system infrastructure to accommodate the planned Pu'unani Homestead Subdivision which will consist of a maximum of 161 residential lots in Waikapū for DHHL native Hawaiian beneficiaries. The proposed project will indirectly positively contribute to the housing shortage on Maui and supports the stated purposes of the HHCA and goals outlined in the DHHL General Plan.

C. PUBLIC SERVICES

1. Solid Waste Collection and Disposal

a. Existing Conditions

Single-family residential solid waste collection service in Waikapū is provided by the County of Maui on a weekly basis. Residential solid waste collected by County crews are disposed of at the County's Central Maui Landfill located 4.0 miles southeast of the Kahului Airport. In addition to County-collected refuse, the Central Maui Landfill accepts commercial waste from private collection companies. A privately operated greenwaste recycling facility, Maui Earth Compost Company, is situated at Pulehu Road and Hansen Road, while Eko Compost is operated at the Central Maui Landfill. According to the County of Maui, the Central Maui Landfill has adequate capacity to accommodate residential and commercial waste needs through the year 2026. The County's Department of Environmental Management (DEM) is currently planning to implement a processing facilities project adjacent to the landfill, which would further extend the projected capacity by an estimated 16 years. The remaining capacity estimate is based on future disposal volumes that assume significant population growth.

b. Potential Impacts and Mitigation Measures

Construction-related waste will be properly disposed of in accordance with policy and practices established by the Solid Waste Division to ensure that there are no adverse impacts to the County's Central Maui Landfill.

The proposed project is not anticipated to have adverse impacts on solid waste collection on Maui.

2. Police, Fire, and Medical Facilities

a. Existing Conditions

Police protection for the Wailuku-Kahului region is provided by the Maui Police Department located at the Wailuku Station headquartered on Mahalani Street, approximately two (2) miles northeast of the project site. The Maui Police Department provides investigative services, uniform patrol services, technical support, and traffic services as stated in its mission to protect the residents of Maui County.

Fire prevention, protection, rescue, and emergency services for the Wailuku-Kahului region are provided by the Maui County Department of Fire and Public Safety. The department has two (2) stations to service the Wailuku-Kahului region, both in proximity of the project site. The Wailuku station is located in Wailuku town approximately 1.5 miles northeast of the project site and the Kahului station is located on Dairy Road in Kahului approximately three (3) miles southeast of the project site.

Maui Memorial Medical Center is managed by Kaiser Permanente and is the only major medical facility on the island. Acute, general, and emergency care services are provided by the 214-bed Maui Memorial Medical Center facility located on Mahalani Street, Wailuku, about two (2) miles east of the subject property.

In addition, Kaiser, Maui Medical Group, Maui Medical Clinic, and Liberty Dialysis Clinic provide health care for the island of Maui. These facilities are located in Wailuku and Kahului. Dental and other medical offices are also located within the Wailuku-Kahului region to serve its residents and visitors.

b. Potential Impacts and Mitigation Measures

The proposed project involves the construction of a water system storage tank that will connect to the County DWS system and service a residential subdivision. The proposed project is located within service areas for existing police, fire, and medical facilities and is not anticipated to adversely impact these services.

3. Educational Facilities

a. Existing Conditions

The State Department of Education (DOE) operates several schools in the Wailuku-Kahului region. Public school facilities within the Wailuku-Kahului District area include: two (2) high schools, Henry Perrine Baldwin High and Maui High (grades 9 to 12); two (2) intermediate schools, Iao Intermediate and Maui Waena Intermediate School (grades 6 to 8); and six (6) elementary schools (Grades K to 5), Wailuku Elementary, Waihe'e Elementary, Pōmaika'i Elementary, Kahului Elementary, Lihikai Elementary, and Pu'u Kukui Elementary School.

The area is also served by several privately operated schools providing education for elementary, intermediate, and high school students. Privately operated schools serving the Wailuku-Kahului region include St. Anthony

School (grades K to 12), Kaahumanu Hou Christian School (grades K to 12), Emmanuel Lutheran School (K to 6), and Maui Adventist School (grades 1 to 8).

Additionally, the University of Hawai'i Maui College is a four-year college located on Ka'ahumanu Avenue in Kahului.

b. Potential Impacts and Mitigation Measures

The proposed water system storage tank will provide adequate water system infrastructure for the Pu'unani Homestead Subdivision and on its own will not impact education facilities. However, it is noted that school impact fees will be imposed on the Pu'unani Homestead Subdivision project to help fund school improvement projects associated with increased student enrollment.

4. Recreational Facilities

a. Existing Conditions

Within the Wailuku-Kahului Community Plan Region, there are many recreational activities, including shoreline and boating activities at the Kahului Harbor and adjoining beach parks, and organized recreational activities provided/offered at County Parks. Within close proximity of the project site is Waikapū Park and Community Center. In Wailuku town are Wells Park, the Wailuku Elementary School Park, the 'Īao Valley State Park the Kehalani Mauka Park, the Velma McWayne Santos Community Center, Papohaku Park, War Memorial Athletic complex, Wailuku Little League baseball fields, the 65-acre Maui Regional Park, Maui Lani Parkway Park, Sakamoto Swimming Pool, and Keōpūolani Regional Park.

In addition, there are several golf courses in the Wailuku-Kahului region. These include the Kahili and Kamehameha Golf Courses, The Dunes at Maui Lani Golf Course, and the Maui County-owned Waiehu Golf Course.

b. Potential Impacts and Mitigation Measures

The proposed project entails the development of a new water storage tank that is necessary in order for the DWS to supply water to a new residential subdivision in Waikapū. As such, adverse impacts to recreational resources are not anticipated.

D. INFRASTRUCTURE

1. Roadways

a. Existing Conditions

The proposed water tank will be located south of Ku'ikahi Drive. The existing paved driveway on Ku'ikahi Drive will serve as the main access to both new and existing tanks.

Ku'ikahi Drive is an east-west, two-lane, two-way undivided collector roadway with posted speed limits ranging between 25 and 30 miles per hour (mph). Ku'ikahi Drive begins approximately 1.2 miles west of Honoapi'ilani Highway within the Wailuku Heights subdivision and extends eastward past Honoapi'ilani Highway, terminating where it becomes Maui Lani Parkway.

b. Potential Impacts and Proposed Mitigation Measures

A paved connection will be constructed between the new and existing tank sites to provide vehicular access to the proposed water storage tank. No work is proposed within Honoapi'ilani Highway, the State right-of-way. The existing paved driveway on Ku'ikahi Drive will serve as the main access to both new and existing tanks. Access to the new tank site will be infrequent and limited to maintenance visits by the DWS personnel, and, therefore, the proposed project is not anticipated to affect the traffic conditions of Ku'ikahi Drive or roadways in the project's vicinity. Refer to **Appendix "A"**.

2. Water

a. Existing Conditions

The proposed water system storage tank will be integrated into the DWS system. The DWS has an existing distribution system in Waikapū, which uses a groundwater well as its source and distributes water from the existing 1.5 MG capacity Kehalani storage tank located along Ku'ikahi Drive at an elevation of approximately 670 feet above MSL, which is located immediately adjacent to the proposed water tank site. It was previously anticipated that the County's Kehalani storage tank had adequate water storage capacity to accommodate water demands from the Pu'unani Homestead Subdivision. However, the DWS has since informed the DHHL that additional infrastructure would be needed to supply water to the subdivision.

b. Potential Impacts and Mitigation Measures

According to the Preliminary Engineering Report (PER) prepared for the Pu'unani Homestead Subdivision Water System Storage Improvements, the minimum storage capacity required for the Pu'unani Homestead Subdivision is approximately 161,000 gallons pursuant to the Maui County Code. Refer to **Appendix "A"**.

A new inflow waterline will be extended from the existing 12-inch inflow line currently supplying the existing 1.5 MG Kehalani storage tank to the proposed 0.5 MG water tank. A new outflow waterline will also be extended to the proposed water tank from the existing 12-inch distribution main located along the east border of the project site which conveys water to the Waikapū service area. The proposed 0.5 MG water tank will also include underground piping, control valves, and telemetry equipment which will be interconnected to the flow control system currently installed for the existing 1.5 MG Kehalani storage tank which will allow the new and existing storage tanks to work in parallel. See **Figure 10**.

The proposed project will provide the necessary improvements to increase the storage capacity of the DWS system in order to supply water to the Pu'unani Homestead Subdivision. No significant adverse impacts to the DWS water system are anticipated as a result of the proposed project.

3. Wastewater

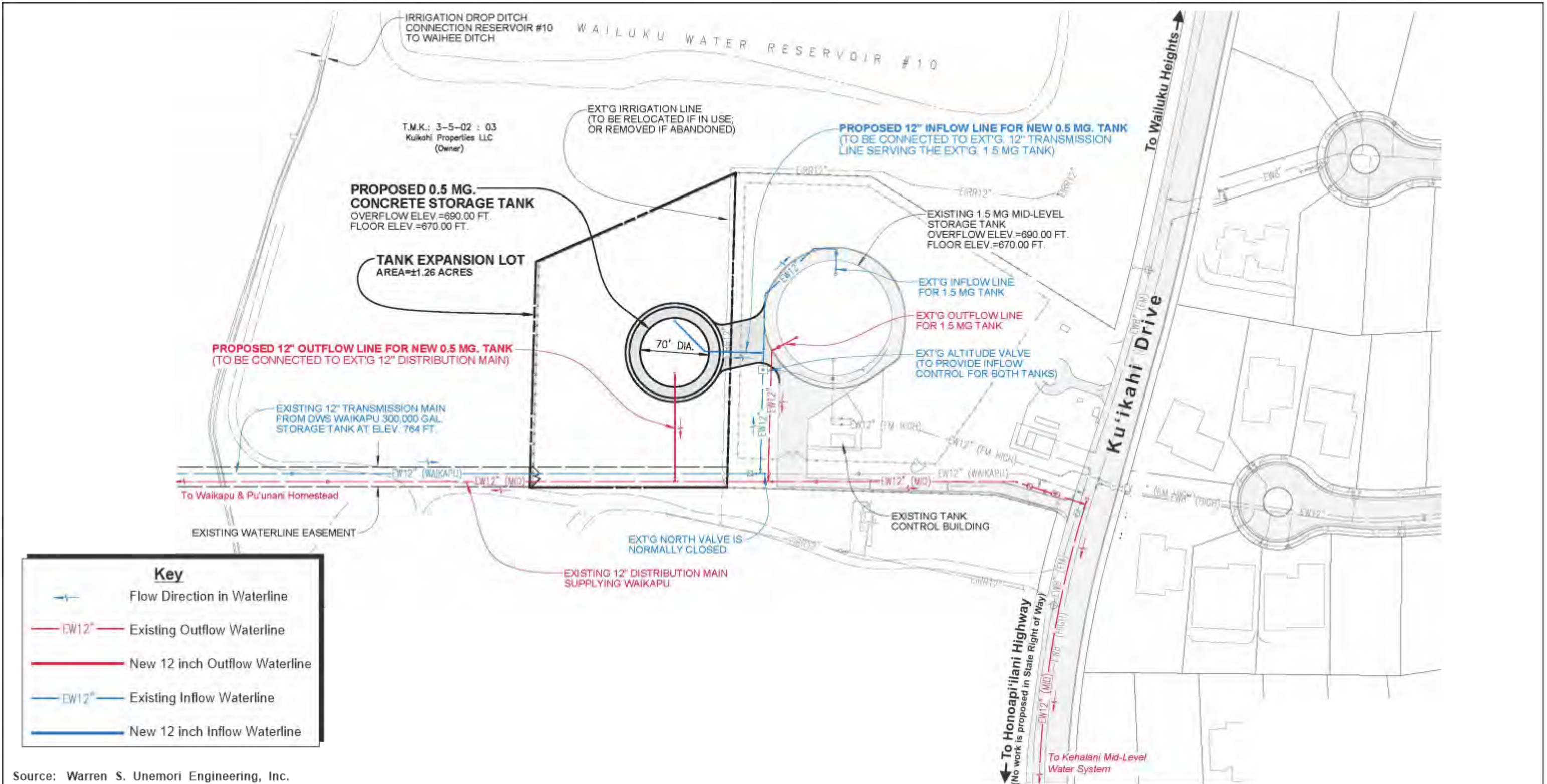
a. Existing Conditions

The parcel on which the proposed water tank will be developed has no sewer service currently available. The Waikapū area, however, is served by the County of Maui's sewer system, which collects wastewater and conveys it to the Wailuku-Kahului Wastewater Reclamation Facility (WKWRF) for treatment and disposal.

The 12- and 18-inch diameter County-owned gravity sewer main located near Wai'ale Road is the closest existing sewerline to the project site. The sewerline collects wastewater from the Waikapū and Kehalani residential areas and conveys it toward Lower Main Street on its way to the WKWRF.

b. Potential Impacts and Mitigation Measures

The proposed project will not require connection to the County sewer system and is not anticipated to have adverse impacts on wastewater infrastructure.



Source: Warren S. Unemori Engineering, Inc.

Figure 10

Pu'unani Homestead Subdivision Water System Storage Improvements
Water System Connection Plan

NOT TO SCALE



Prepared for: State of Hawai'i, Department of Hawaiian Home Lands



DOC/Puunani Water Tank/Applications/figures/water/FEA

4. Drainage System

a. Existing Conditions

Surface runoff generated by the undeveloped 1.26-acre project site sheet flows eastward toward an existing dirt road. The runoff then concentrates and flows northward towards an existing drainage gully, which conveys the runoff west towards Honoapi'ilani Highway. The runoff passes through two (2) existing drainage culverts under Honoapi'ilani Highway and Wai'ale Road and eventually is impounded to the Wai'ale irrigation reservoir. The 10-year, 1-hour peak flow rate generated by the project site (under the existing condition) is estimated to be 1.4 cubic feet per second (cfs). Refer to **Appendix "A"**.

The majority of the offsite surface runoff is captured and conveyed into the existing irrigation reservoir, Wailuku Water Reservoir No. 10, located on the western side of the proposed project site. Approximately 0.6 cfs of the offsite storm runoff, originating from 0.5 acre downstream of Wailuku Water Reservoir No. 10, drains eastward toward the project site which commingle with the onsite flows and continues along the same drainage path.

b. Potential Impacts and Mitigation Measures

The proposed 0.5 MG water tank is anticipated to produce a peak runoff volume of 2.0 cfs from a 10-year, 1-hour storm after it is fully developed, which represents a net increase of approximately 0.6 cfs. Refer to **Appendix "A"**.

Surface runoff generated by the proposed water tank and new paved access within the project site will be directed to a new drain inlet located on the east side of the proposed water tank. The collected runoff will be conveyed by a new underground drainage pipe to a new subsurface stormwater detention chamber located near the southeast corner of the tank expansion lot, which will discharge in a drainage swale and eventually be conveyed north toward the existing drainage gully, similar to the existing condition. See **Figure 11**. The proposed subsurface stormwater detention chamber, which capacity will be at least 0.12 acre-feet, will fully mitigate the expected increase in peak flow by limiting the downstream release of stormwater to a flow rate which does not exceed pre-development levels in compliance with Maui County storm drainage standards.

The offsite runoff will continue to drain onto the site. The new onsite diversion swale will intercept the offsite runoff and convey it eastward

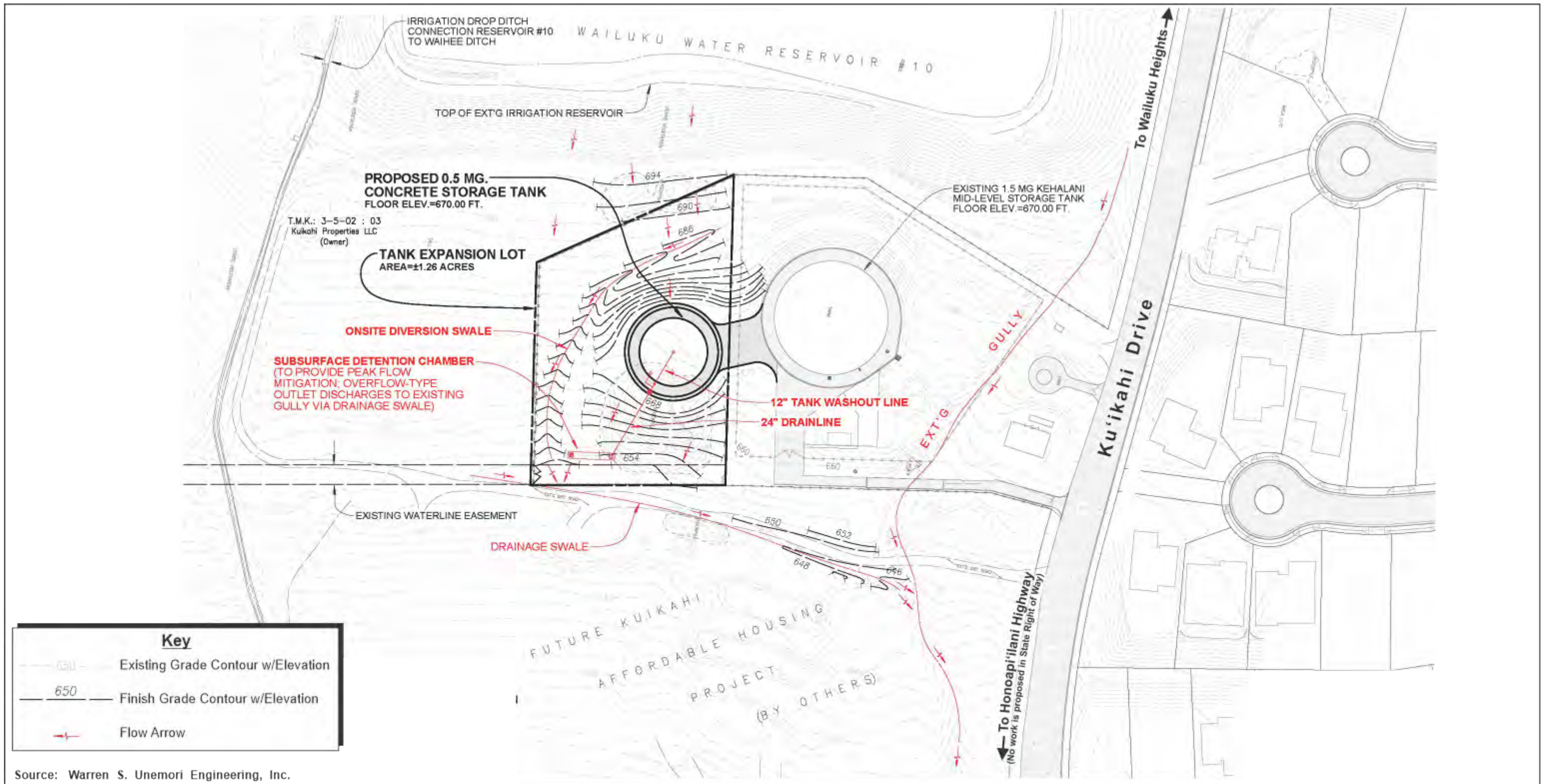


Figure 11

Pu'unani Homestead Subdivision Water System Storage Improvements
Post Development Drainage Plan

NOT TO SCALE



toward the existing dirt road continuing along the same drainage path as the existing condition.

The County of Maui requires the implementation of water quality control measures to reduce water pollution from stormwater runoff. A “detention based” treatment approach will be employed to mitigate stormwater-related water pollution associated with development of the water tank site. The project will provide additional storage volume in the proposed detention chamber to facilitate sediment removal in addition to peak flow mitigation.

Table 2 below provides a summary of the onsite peak runoff mitigation.

Table 2. Result of Onsite Peak Runoff Mitigation
(10 year – 1-hour storm)

Pre-Development Flow	Post-Development Flow Before Mitigation	Post-Development Flow After Mitigation	Net Change in Peak Runoff
1.4 cfs	2.0 cfs	1.4 cfs	0 cfs
Source: Warren S. Unemori Engineering, Inc., Preliminary Engineering Report.			

During construction, appropriate stormwater runoff BMPs will be utilized to mitigate potential stormwater impacts related to construction activities. With implementation of the mitigation measures discussed herein, the proposed project will not result in significant adverse drainage impacts to the downstream properties.

5. Electric, Telephone, and Cable

a. Existing Conditions

There are existing overhead electrical, telephone, and cable transmission lines provided by Hawaiian Electric Company, Ltd (Maui Electric), Hawaiian Telcom, and Spectrum Cable, respectively, along Honoapi'ilani Highway which are adjacent to the project site. In addition, Sandwich Isles Communications (SIC), which provides telephone and internet service to DHHL projects, has an underground fiber optic trunk line located along Honoapi'ilani Highway.

b. Potential Impacts and Mitigation Measures

The proposed action does not require connection to telephone or cable. The DHHL will coordinate with the utility companies, as may be required, when a construction schedule is defined.

E. CUMULATIVE AND SECONDARY IMPACTS

Pursuant to the Hawai'i Administrative Rules, Chapter 200, Section 11-200.1-2, entitled Environmental Impact Statement Rules, a cumulative impact means:

...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

“Secondary impacts” or “indirect impacts” are defined as:

...effects that are caused by the action or are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems including ecosystems.

Cumulative and secondary impacts can be viewed as actions of others that are taken because of the presence of the project. Secondary impacts from highway projects, for example, can occur because they can induce development by removing one (1) of the impediments to growth.

The project is proposed to be implemented on a property adjacent to an existing County water tank of a similar nature along with various County water system infrastructure. The project's location next to existing DWS system infrastructure allows the DWS to efficiently connect the proposed water tank to existing water mains and to make use of an existing waterline easement. The project is a necessary improvement to provide adequate water system storage for the area and for the viability of the DHHL Pu'unani Homestead Subdivision. As such, cumulative and secondary impacts from the project are being assessed giving consideration to impacts from the Pu'unani Homestead Subdivision. Given the surrounding residential developments and infrastructure, significant environmental impacts are not anticipated as a result of the project or the subdivision it will serve. In addition, and as previously mentioned, an AIS, PER, and Traffic Impact Assessment Report (TIAR) for the Pu'unani Homestead Subdivision were assessed as part of the environmental review process and evaluated in the Final EA, which received a Finding of No Significant Impact (FONSI) determination from the Hawaiian Homes Commission (HHC) and was published in the November 8, 2020 edition of The Environmental Notice.

Secondary impacts are those which have the potential to occur later in time or farther in distance, but are still reasonably foreseeable. They can be viewed as actions of others that are taken because of the presence of a project. The proposed project involves the

development of up to a 0.5 MG concrete water storage tank which will supply water to the Pu'unani Homestead 161-lot residential subdivision. The subdivision will be leased to DHHL native Hawaiian beneficiaries who are anticipated to primarily be Maui residents relocating from other areas. As such, secondary impacts related to population increase in the region are not anticipated. It is noted that other planned developments in the region are anticipated to contribute to traffic conditions by the time of expected buildout of the project and Pu'unani Homestead Subdivision. However, according to the TIAR completed for the Pu'unani Homestead Subdivision, upon completion of the project, all study intersections are forecasted to operate at LOS similar to the base year 2024 conditions. As such, given the surrounding development, significant environmental impacts are not anticipated as a result of the project. Therefore, the project is not anticipated to result in significant adverse secondary impacts.



RELATIONSHIP TO
GOVERNMENTAL PLANS,
POLICIES, AND CONTROLS



III. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE DISTRICTS

Pursuant to Chapter 205, Hawai'i Revised Statutes (HRS), all lands in the State have been placed into one (1) of four (4) major land use districts by the State Land Use Commission. These land use districts are designated "Urban", "Rural", "Agricultural", and "Conservation". The project site is located within the "Agricultural" district. See **Figure 12**. Pursuant to Chapter 205, HRS, the "Agricultural" district shall include uses or activities provided by ordinances or regulations of the County in which the "Agricultural" district is located. **Section G** below outlines the County of Maui's zoning regulations that are applicable to the proposed project, namely the County's "Agricultural" district regulations. Because minor utilities, including water storage tanks, are permitted within the County's "Agricultural" district, the proposed project is consistent with the State "Agricultural" district designation.

B. DEPARTMENT OF HAWAIIAN HOME LAND PLANNING SYSTEM

The mission of the Department of Hawaiian Home Lands (DHHL) is to effectively manage the Hawaiian home lands trust and to develop and deliver land to native Hawaiians. The Hawaiian Homes Commission Act (HHCA), codified within the constitution of the State of Hawai'i, vests onto the DHHL the authority to use its lands at its discretion. Specifically, HHCA Section 204 states, "*all available lands shall immediately assume the status of hawaiian home lands and be under the control of the department to be used and disposed of in accordance with the provisions of this Act*". As such, the DHHL has implemented its own planning system consisting of a General Plan, Island Plans, Community-Specific Regional Plans, Program Plans, and Special Area Plans to guide its development of its lands. It is noted that there are no Regional Plans or Special Area Plans that cover the project site. Below is a discussion of the project's consistency with the DHHL General Plan, Maui Island Plan, and Water Policy Plan.

1. General Plan

The DHHL General Plan was adopted by the Hawaiian Homes Commission (HHC) in February 2002. It outlines the DHHL's goals and objectives for land use planning, residential uses, agricultural and pastoral uses, water resources, land and resource management, economic development, and building healthy communities. The proposed project is in consonance with the following goals and objectives of the DHHL General Plan.

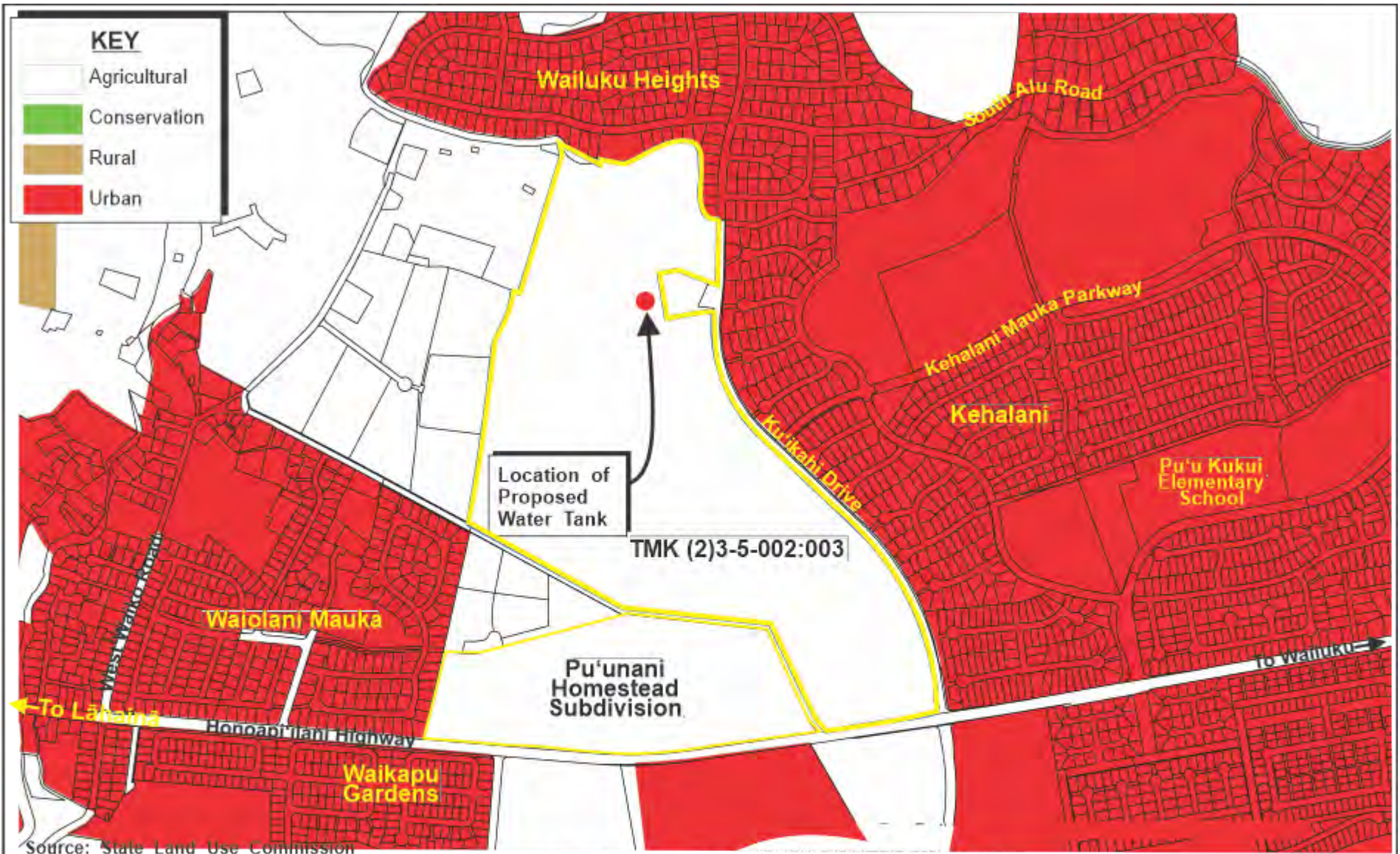


Figure 12

Pu'unani Homestead Subdivision
 Water System Storage Improvements
 State Land Use District Map



LAND USE PLANNING

Goals

- *Utilize Hawaiian Home Land for uses most appropriate to meet the needs and desires of the beneficiary population.*
- *Encourage a balanced pattern of growth into urban and rural growth centers.*
- *Develop livable, sustainable communities that provide space for or access to the amenities that serve the daily needs of its residents.*

Objectives

- *Direct urban growth to priority development areas based on infrastructure availability, feasible site conditions, beneficiary preferences, and job opportunities.*
- *Consider opportunities to acquire or exchange lands best suited for purposes of the Hawaiian Homes Commission Act.*

RESIDENTIAL USES

Goals

- *Substantially increase the number of residential homesteads awarded each year.*
- *Provide a mix of housing opportunities that reflect the needs and desires of native Hawaiian beneficiaries.*
- *Provide residential homesteads, financing, and other housing opportunities, especially to those most in need.*

Objectives

- *Provide a variety of residential types to meet the needs of beneficiaries in terms of construction procedures (owner-builder, turnkey, self-help), types of housing units (single-family, multi-family, kupuna housing, rental etc.) and financing.*
- *Ensure the availability of housing with a range of types and affordability to accommodate persons and families of all income levels and in locations that are convenient to employment and quality public and private facilities.*

Discussion and Response: The proposed project indirectly supports the above-noted goals and objectives of the DHHL General Plan as the water system improvements will foster an increase in the residential unit availability on Maui Island for native Hawaiian beneficiaries, in an area close to employment centers, medical facilities, and commercial centers.

WATER SOURCES

Goals

- *Provide access to quality water in the most cost-effective and efficient manner.*
- *Ensure the availability of sufficient water to carry out Hawaiian Home Lands' mission.*

Objectives:

- *Establish water partnership arrangements.*
- *Identify and establish a clear understanding of existing water resources available to the Hawaiian Home Lands Trust.*
- *Implement State water use plans, rules and permits to ensure access to water resources for current and future uses on Hawaiian home lands.*

Discussion and Response: The proposed project directly supports the above-noted goals and objectives of the DHHL General Plan as the project will enable the County Department of Water Supply (DWS) system to connect to the DHHL Pu'unani Homestead Subdivision to provide access to quality water in the most cost-effective and efficient manner. The proposed water tank is a necessary improvement which will ensure the availability and supply of sufficient water to the Pu'unani Homestead Subdivision and advances the DHHL's mission of developing and delivering land to native Hawaiians and developing self-sufficient and healthy communities.

2. Maui Island Plan

The DHHL Maui Island Plan (MIP) was adopted in 2004 and serves as a comprehensive resource for planning and managing the Maui Island lands and establishes land use designations to encourage orderly social, physical, and economic development. The proposed water tank will be constructed on land owned by Kuikahi Properties, LLC and is not specifically designated or discussed in the MIP. Additionally, the lands on which the Pu'unani Homestead Subdivision will be developed are not yet designated by the MIP for a specific use.

The MIP provides data from a beneficiary survey conducted in 2003 to assess the preferences of DHHL native Hawaiian beneficiaries on Maui. The results of the survey show that most beneficiaries prefer an award of improved land with a turnkey single-family house on it. The proposed project provides necessary improvements to supply water to the DHHL's 161-lot subdivision and advances the goal of increasing the delivery of residential homesteads to beneficiaries.

3. Water Policy Plan

The Water Policy Plan is one of the DHHL’s program plans and was approved by the HHC in 2014. The vision of the water policy plan is that

. . . there will be adequate amounts of water and supporting infrastructure so that homestead lands will always be usable and accessible, to enable us to return to our lands to fully support our self-sufficiency and self-determination in the administration of the Hawaiian Homes Commission Act (HHCA), and the preservation of our values, traditions, and culture.

The proposed project is in keeping with the following policies and goals identified in the Water Policy Plan:

Policies:

1. *Expressly determine and plan for future water needs and actively participate in broader water management, use and protection efforts in Hawai’i in order to secure water.*

* * *

3. *Develop, manage, and steward water in a manner that balances cost, efficiency measures, and Public Trust uses in the short and long term.*

* * *

6. *Foster self-sufficiency of beneficiaries by promoting the adequate supply of water for homesteading when developing or managing water.*

* * *

12. *Explicitly consider water availability and the costs to provide adequate water when developing new homestead areas, designating land uses, issuing land dispositions, or exchanging properties.*

Goals:

Part II. Plan for our water needs

5. *Design homesteads and manage lands to create and enhance water availability, optimizing costs, use of alternative sources and efficiency measures.*

* * *

Part III. Aggressively understand, exercise and assert our water rights

6. *Secure adequate and enforceable reservations of water for current and foreseeable future needs for all of its lands across the islands.*

Discussion and Response: The proposed project directly supports the above noted policies and goals of the DHHL Water Policy Plan as the project will enable the County DWS system to connect to the DHHL Pu'unani Homestead Subdivision to provide access to quality water and increase self-sufficiency in the most cost-effective and efficient manner.

C. HAWAI'I STATE PLAN

Chapter 226, HRS, also known as the Hawai'i State Plan, is a long-range comprehensive plan which serves as a guide for the future long-term development of the State by identifying goals, objectives, policies, and priorities, as well as implementation mechanisms. The Plan consists of three (3) parts. Part I includes the Overall Theme, Goals, Objectives, and Policies; Part II includes Planning, Coordination, and Implementation; and Part III establishes Priority Guidelines. Part II of the State Plan covers its administrative structure and implementation process.

The overall theme of the Hawai'i State Plan is governed by the following general principles.

1. Individual and family self-sufficiency
2. Social and economic mobility
3. Community or social well-being

In consonance with the foregoing principles, the Hawai'i State Plan identifies three (3) clarifying goals:

1. A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai'i's present and future generations.
2. A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.
3. Physical, social, and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring, and of participation in community life.

This section of the environmental assessment examines the applicability of the proposed action as it relates to the objectives, policies, and priority guidelines of the Hawai'i State Plan, as set forth in HRS Sections 226-5 through 226-27.

Table 3 below summarizes the relationship between the proposed action and the goals of the Hawai'i State Plan. The relationship between the action and the goals are categorized into the following groups.

1. **Directly applicable**: the action and its potential effects directly advances or promotes the objective, policy or priority guideline.
2. **Indirectly applicable**: the action and its potential effects indirectly supports or advances the objective, policy or priority guideline.
3. **Not applicable**: the action and its potential effects have no direct or indirect relationship to the objectives and policies of the Hawai'i State Plan.

In general, a proposed action's applicability to the objectives, policies and priority guidelines of the Hawai'i State Plan is judged on the basis of the action's direct or indirect relationship to the respective objectives, policies and priority directions. It is recognized that the categorization of "applicability" is subject to interpretation and should be appropriately considered in the context of local and regional conditions. The analysis presented in **Table 3** and summarized below focuses on key elements of the proposed action's relationship to the Hawai'i State Plan. Detailed discussion on the applicability of the proposed action to each goal and related objectives, policies, and implementing actions of the Hawai'i State Plan is provided in **Appendix "E"**.

Table 3. Relationship Between the Proposed Pu'unani Homestead Subdivision Water System Storage Improvements Project and the Hawai'i State Plan

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
HRS 226-1: Findings and Purpose			
HRS 226-2: Definitions			
HRS 226-3: Overall Theme			
HRS 226-4: State Goals. In order to guarantee, for the present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self determination, it shall be the goal of the State to achieve: (1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii's present and future generations. (2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people. (3) Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life.			

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
Chapter 226-5 Objective and Policies for Population			
Objective: It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter.		✓	
Chapter 226-6 Objectives and policies for the economy -- in general			
Objectives: Planning for the State's economy in general shall be directed toward achievement of the following objectives:			
(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.		✓	
(2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.		✓	
Chapter 226-7 Objectives and policies for the economy -- agriculture.			
Objectives: Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:			
(1) Viability of Hawaii's sugar and pineapple industries.			✓
(2) Growth and development of diversified agriculture throughout the State.			✓
(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.			✓
Chapter 226-8 Objective and policies for the economy -- visitor industry.			
Objective: Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.			✓
Chapter 226-9 Objective and policies for the economy -- federal expenditures.			
Objective: Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaii's economy.			✓
Chapter 226-10 Objective and policies for the economy -- potential growth and innovative activities.			
Objective: Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawaii's economic base.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
Chapter 226-10.5 Objectives and policies for the economy – – information industry.			
Objective: Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaii as a leader in broadband and wireless communications and applications in the Pacific Region.			✓
Chapter 226-11 Objectives and policies for the physical environment – – land based, shoreline, and marine resources.			
Objectives: Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:			
(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.		✓	
(2) Effective protection of Hawaii's unique and fragile environmental resources.		✓	
Chapter 226-12 Objective and policies for the physical environment – – scenic, natural beauty, and historic resources.			
Objective: Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.		✓	
Chapter 226-13 Objectives and policies for the physical environment – – land, air, and water quality.			
Objectives: Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives.			
(1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.		✓	
(2) Greater public awareness and appreciation of Hawaii's environmental resources.			✓
Chapter 226-14 Objective and policies for facility systems – – in general.			
Objective: Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.	✓		
Chapter 226-15 Objectives and policies for facility systems – – solid and liquid waste.			
Objectives: Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:			
(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.			✓
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
Chapter 226-16 Objective and policies for facility systems – – water.			
Objective: Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.	✓		
Chapter 226-17 Objectives and policies for facility systems – – transportation.			
Objectives: Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives:			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.			✓
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.			✓
Chapter 226-18 Objectives and policies for facility systems – – energy.			
Objectives: Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:			
(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;			✓
(2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation.			✓
(3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems;			✓
(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and			✓
(5) Utility models that make the social and financial interests of Hawaii's utility customers a priority.			✓
Chapter 226-18.5 Objectives and policies for facility systems – – telecommunications.			
Objectives: Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.			✓
Chapter 226-19 Objectives and policies for socio-cultural advancement – – housing.			
Objectives: Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:			
(1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population.		✓	
(2) The orderly development of residential areas sensitive to community needs and other land uses.		✓	

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.			✓
Chapter 226-20 Objectives and policies for socio-cultural advancement – – health.			
Objectives: Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:			
(1) Fulfillment of basic individual health needs of the general public.			✓
(2) Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities.			✓
(3) Elimination of health disparities by identifying and addressing social determinants of health.			✓
Chapter 226-21 Objectives and policies for Socio-cultural advancement – – education.			
Objective: Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.			✓
Chapter 226-22 Objective and policies for socio-cultural advancement – – social services.			
Objective: Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.			✓
Chapter 226-23 Objective and policies for socio-cultural advancement – – leisure.			
Objective: Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.			✓
Chapter 226-24 Objective and policies for socio-cultural advancement – – individual rights and personal well-being.			
Objective: Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations.			✓
Chapter 226-25 Objective and policies for socio-cultural advancement – – culture.			
Objective: Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaii's people.		✓	
Chapter 226-26 Objectives and policies for socio-cultural advancement – – public safety.			
Objective: Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:			

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
(1) Assurance of public safety and adequate protection of life and property for all people.			✓
(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.			✓
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawaii's people.			✓
Chapter 226-27 Objectives and policies for socio-cultural advancement – – government.			
Objectives: Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:			
(1) Efficient, effective, and responsive government services at all levels in the State.		✓	
(2) Fiscal integrity, responsibility, and efficiency in the state government and county governments.			✓

The proposed project involves the construction of water system storage improvements to support the DHHL Pu'unani Homestead Subdivision and is most directly applicable to the objectives for facility systems and water facility systems. The proposed water storage tank will improve the efficiency and storage capabilities of water facilities. As the improvements will supply water to the Pu'unani Homestead Subdivision, the project indirectly advances the objectives for the socio-cultural advancement of housing and the development of residential areas sensitive to community needs and other land uses. The project will indirectly support the objectives for the economy through short-term design and construction activity. In addition, archaeological and cultural investigations were undertaken for this project as part of the environmental review process. These studies foster increased knowledge of native Hawaiian cultural practices and indirectly promotes the preservation of natural and historic resources.

Priority Guidelines

"Priority guidelines" means those guidelines which shall take precedence when addressing areas of statewide concern. This section addresses applicability criteria to the priority guidelines set forth in HRS 226-103.

Priority guidelines of the Hawai'i State Plan covers the economy, population growth and land resources, crime and criminal justice, affordable housing, quality education, sustainability, and climate change adaptation.

Table 4 below summarizes the relationship between the proposed action and the priority guidelines of the Hawai'i State Plan. More detailed discussion is presented in **Appendix "E"**.

Table 4. Relationship Between the Proposed Pu'unani Homestead Subdivision Water System Storage Improvements Project and the Priority Guidelines of the Hawai'i State Plan

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	N/A
Chapter 226-101: Purpose. The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.			
Chapter 226-102: Overall direction. The State shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation.			
Chapter 226-103: Economic priority guidelines.			
(a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaii's people and achieve a stable and diversified economy		✓	
(b) Priority guidelines to promote the economic health and quality of the visitor industry			✓
(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries			✓
(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture			✓
(e) Priority guidelines for water use and development			✓
(f) Priority guidelines for energy use and development			✓
(g) Priority guidelines to promote the development of the information industry			✓
Chapter 226-104: Population growth and land resources priority guidelines.			
(a) Priority guidelines to effect desired statewide growth and distribution	✓		
(b) Priority guidelines for regional growth distribution and land resource utilization		✓	
Chapter 226-105: Crime and criminal justice.			
Priority guidelines in the area of crime and criminal justice			✓
Chapter 226-106: Affordable housing.			
Priority guidelines for the provision of affordable housing		✓	
Chapter 226-107: Quality education.			
Priority guidelines to promote quality education			✓
CHAPTER 226-108: Sustainability			
Priority guidelines and principles to promote sustainability		✓	
CHAPTER 226-109: Climate change adaptation			
Priority guidelines and principles to promote climate change adaptation		✓	

The proposed water system storage improvements is directly supportive of the priority guidelines for desired statewide growth and distribution through ensuring the provision of adequate water storage facilities to accommodate planned housing distribution in Central Maui. Coordination has been undertaken with the DWS to ensure adequate water is available for the DHHL Pu'unani Homestead Subdivision. The proposed improvements will be implemented adjacent to an existing water system storage and infrastructure of a similar nature in the vicinity of existing residential subdivisions and urban development in Central Maui. Indirectly, the project supports economic priority guidelines by supporting construction activity which contributes to increased employment opportunities, job choices, and living standards. In addition, the project will be implemented outside of flood zones, the tsunami evacuation zone, as well as the projected sea level rise hazard area which will help avoid adverse impacts related to climate change.

D. STATE FUNCTIONAL PLAN

A key element of the Statewide Planning System is the Functional Plans which set forth the policies, statewide guidelines, and priorities within a specific field of activity. There are 13 Functional Plans which have been developed by the State agency primarily responsible for a given functional area. Together with the County General Plans, the State Functional Plans establish more specific strategies for implementation. In particular, State Functional Plans provide for the following:

- Identify major Statewide priority concerns
- Define current strategies for each functional area
- Identify major relationships among functional areas
- Provide direction and strategies for departmental policies, programs, and priorities
- Provide a guide for the allocation of resources
- Coordinate State and County roles and responsibilities in the implementation of the Hawai'i State Plan

Thirteen (13) Functional Plans have been prepared by State agencies. **Table 5** provides an assessment of the relationship between the proposed action and each of the 13 Functional Plans.

Table 5. Relationship Between the Proposed Pu‘unani Water System Storage Improvements and the State Functional Plans

State Functional Plan		State Coordinating Agency	Purpose	Analysis
1	Agriculture Functional Plan (1991)	Department of Agriculture	Continued viability of agriculture throughout the State	The proposed project is situated on agricultural lands and represents a permissible use within the Agriculture District pursuant to HRS 205-4.5. The proposed action is not anticipated to contravene the objectives and policies of this functional plan.
2	Conservation Lands State Functional Plan (1991)	Department of Land and Natural Resources	Addresses issues of population and economic growth and its strain on current natural resources; broadening public use of natural resources while protecting lands and shorelines from overuse; additionally, promotes the aquaculture industry	The proposed project will not utilize any State Conservation lands. Similarly, the project is located inland, and not near the coastline. Best Management Practices (BMPs) will be implemented to minimize adverse impacts to downstream properties and the shoreline. The proposed action is not anticipated to contravene the objectives and policies of this functional plan.
3	Education State Functional Plan (1989)	Department of Education	Improvements to Hawai‘i’s educational curriculum, quality of educational staff, and access to adequate facilities	The proposed action is not anticipated to contravene the objectives and policies of this functional plan.
4	Employment State Functional Plan (1990)	Department of Labor and Industrial Relations	Improve the qualifications, productivity, and effectiveness of the State’s workforce through better education and training of workers as well as efficient planning of economic development, employment opportunities, and training activities	The proposed action will result in the creation of construction jobs throughout the construction period. This will provide local residents with opportunities to successfully compete in the workforce. The proposed action is not anticipated to contravene the objectives and policies of this functional plan.

State Functional Plan		State Coordinating Agency	Purpose	Analysis
5	Energy State Functional Plan (1991)	Department of Business, Economic Development and Tourism	Lessen the reliance on petroleum and other fossil fuels in favor of alternative sources of energy so as to keep up with the State's increasing energy demands while also becoming a more sustainable island state; achieving dependable, efficient, and economical statewide energy systems	The proposed action is not anticipated to contravene the objectives and policies of this functional plan.
6	Health State Functional Plan (1989)	Department of Health	Improve health care system by providing for those who don't have access to private health care providers; increasing preventative health measures; addressing 'quality of care' elements in private and public sectors to cut increasing costs	The proposed action is not anticipated to contravene the objectives and policies of this functional plan.
7	Higher Education Functional Plan (1984)	University of Hawai'i	Prepare Hawai'i's citizens for the demands of an increasingly complex world through providing technical and intellectual tools	The proposed action is not anticipated to contravene the objectives and policies of this functional plan.
8	Historic Preservation State Functional Plan (1991)	Department of Land and Natural Resources	Preservation of historic properties, records, artifacts and oral histories; provide public with information/education on the ethnic and cultural heritages and history of Hawai'i	Archaeological and cultural investigations conducted as part of the environmental review process for the proposed project demonstrates an effort to preserve Hawai'i's natural and historical resources and protect Hawai'i's ethnic and cultural heritage. The State Historic Preservation Division (SHPD) has been consulted and although not required, the DHHL will voluntarily employ archaeological monitoring during all ground altering activities.

State Functional Plan		State Coordinating Agency	Purpose	Analysis
9	Housing State Functional Plan (2017)	Hawai'i Housing Finance and Development Corporation	Based largely on joint public/private efforts to finance, build, and maintain an adequate supply of affordable housing. It will be a working tool to guide the State, the counties, as well as the private sector in meeting the overall goal that every Hawaii resident will have the opportunity to live in a safe, decent and affordable home.	The project will provide needed water storage infrastructure to support a residential housing subdivision. The proposed action is in consonance with this functional plan.
10	Human Services State Functional Plan (1989)	Department of Human Services	Refining support systems for families and individuals by improving elderly care, increasing preventative measures to combat child/spousal abuse and neglect; providing means for 'self-sufficiency'	The proposed action is not anticipated to contravene the objectives and policies of this functional plan.
11	Recreation State Functional Plan (1991)	Department of Land and Natural Resources	Manage the use of recreational resources via addressing issues: (1) ocean and shoreline recreation, (2) mauka, urban, and other recreation opportunities, (3) public access to shoreline and upland recreation areas, (4) resource conservation and management, (5) management of recreation programs/facilities/areas, and (6) wetlands protection and management	The proposed action is not anticipated to contravene the objectives and policies of this functional plan.
12	Tourism State Functional Plan (1991)	Department of Business, Economic Development and Tourism	Balance tourism/economic growth with environmental and community concerns; development that is cognizant of the limited land and water resources of the islands; maintaining friendly relations between tourists and community members; development of a productive workforce and enhancement of career and employment opportunities in the visitor industry	The proposed action is not anticipated to contravene the objectives and policies of this functional plan.

State Functional Plan		State Coordinating Agency	Purpose	Analysis
13	Transportation State Functional Plan (1991)	Department of Transportation	Development of a safer, more efficient transportation system that also is consistent with planned physical and economic growth of the state; construction of facility and infrastructure improvements; develop a transportation system balanced with new alternatives; pursue land use initiatives which help reduce travel demand	The proposed action is not anticipated to contravene the objectives and policies of this functional plan.

E. GENERAL PLAN OF THE COUNTY OF MAUI

As indicated by the Maui County Charter, the purpose of the general plan shall be to:

... indicate desired population and physical development patterns for each island and region within the county; shall address the unique problems and needs of each island and region; shall explain opportunities and the social, economic, and environmental consequences related to potential developments; and shall set forth the desired sequence, patterns and characteristics of future developments. The general plan shall identify objectives to be achieved, and priorities, policies, and implementing actions to be pursued with respect to population density, land use maps, land use regulations, transportation systems, public and community facility locations, water and sewage systems, visitor destinations, urban design, and other matters related to development.

Chapter 2.80B of the Maui County Code, relating to the General Plan and Community Plans, implements the foregoing Charter provision through enabling legislation which calls for a Countywide Policy Plan and a Maui Island Plan.

1. Countywide Policy Plan

The Countywide Policy Plan was adopted in March 2010 and is a comprehensive policy document for the islands of Maui County to the year 2030. The plan replaces the General Plan of the County of Maui 1990 Update and provides the policy framework for the development of the Maui Island Plan as well as for updating the nine (9) detailed Community Plans. The Countywide Policy Plan provides broad goals, objectives, policies and implementing actions that portray the desired direction of the County's future. Goals are intended to describe a desirable condition of the County by the year 2030 and are intentionally general. Objectives tend to be more specific and may be regarded as milestones to achieve the larger goals. Policies are not intended as regulations, but instead provide a general guideline for County decision makers, departments, and collaborating organizations toward the attainment of goals and objectives. Implementing actions are specific tasks, procedures, programs, or techniques that carry out policy.

Table 6 below summarizes the relationship between the proposed action and the 11 goals of the Countywide Policy Plan. The relationship between the action and the goals are categorized into the following groups.

1. **Directly applicable:** the action and its potential effects directly advances, promotes or affects the relevant goal, objective, or policy.
2. **Indirectly applicable:** the action and its potential effects indirectly supports, advances or affects the objective, policy or priority guideline.

3. **Not applicable:** the action and its potential effects have no direct or indirect relationship to the objectives and policies of the Countywide Policy Plan.

In general, a proposed action’s applicability to the goals, objectives, policies and implementing actions of the Countywide Policy Plan is judged on the basis of the action’s direct or indirect relationship to the respective objectives, policies and priority directions. It is recognized that the categorization of “applicability” is subject to interpretation and should be appropriately considered in the context of local and regional conditions. The analysis presented in **Table 6** and summarized below focuses on key elements of the proposed action’s relationship to the Countywide Policy Plan. Detailed discussion on the applicability of the proposed action to each goal and related objectives, policies, and implementing actions of the Countywide Policy Plan is provided in **Appendix “E-1”**.

Table 6. Relationship Between the Proposed Pu’unani Homestead Subdivision Water System Storage Improvements Project and the Goals of the Countywide Policy Plan

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
A. PROTECT THE NATURAL ENVIRONMENT			
Goal: Maui County’s natural environment and distinctive open spaces will be preserved, managed, and cared for in perpetuity.		✓	
B. PRESERVE LOCAL CULTURES AND TRADITIONS			
Goal: Maui County will foster a spirit of pono and protect, perpetuate, and reinvigorate its residents’ multi-cultural values and traditions to ensure that current and future generations will enjoy the benefits of their rich island heritage.		✓	
C. IMPROVE EDUCATION			
Goal: Residents will have access to lifelong formal and informal educational options enabling them to realize their ambitions.			✓
D. STRENGTHEN SOCIAL AND HEALTHCARE SERVICES			
Goal: Health and social services in Maui County will fully and comprehensively serve all segments of the population.			✓
E. EXPAND HOUSING OPPORTUNITIES FOR RESIDENTS			
Goal: Quality, island-appropriate housing will be available to all residents.	✓		
F. STRENGTHEN THE LOCAL ECONOMY			
Goal: Maui County’s economy will be diverse, sustainable, and supportive of community values.		✓	
G. IMPROVE PARKS AND PUBLIC FACILITIES			
Goal: A full range of island-appropriate public facilities and recreational opportunities will be provided to improve the quality of life for residents and visitors.			✓
H. DIVERSIFY TRANSPORTATION OPTIONS			
Goal: Maui County will have an efficient, economical, and environmentally sensitive means of moving people and goods.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)			
	DA	IA	NA
I. IMPROVE PHYSICAL INFRASTRUCTURE			
Goal: Maui County's physical infrastructure will be maintained in optimum condition and will provide for and effectively serve the needs of the County through clean and sustainable technologies.	✓		
J. PROMOTE SUSTAINABLE LAND USE AND GROWTH MANAGEMENT			
Goal: Community character, lifestyles, economies, and natural assets will be preserved by managing growth and using land in a sustainable manner.		✓	
K. STRIVE FOR GOOD GOVERNANCE			
Goal: Government services will be transparent, effective, efficient, and responsive to the needs of residents.		✓	
L. MITIGATE CLIMATE CHANGE AND WORK TOWARD RESILIENCE			
Goal: Minimize the causes and negative effects of climate change.			✓

The proposed project is most supportive of the goal for physical infrastructure and the objective of improving water systems to ensure the DHHL Pu'unani Homestead Subdivision has adequate access to water. Indirectly, the project expands housing opportunities for DHHL native Hawaiian beneficiaries by supplying water system storage to convey potable water to a residential subdivision. The preservation of local cultures and traditions is supported by the proposed project through the archaeological and cultural investigations undertaken and consultation with the SHPD which seeks to evaluate the project's potential impacts to cultural, traditional and archaeological resources and implement mitigation measures in the form of archaeological monitoring. Furthermore, the environmental review processes involved detailed analysis of the proposed project's potential impacts on the environment, infrastructure, and socio-economic conditions, advancing efficiency in land use planning and management. The proposed action will be implemented inland, away from the coastline and the 3.2-foot sea-level rise exposure area, indirectly mitigating the effects of climate change and ensuring the long-term viability of the project.

2. **Maui Island Plan**

The Maui Island Plan (MIP) is applicable to the island of Maui only, providing more specific policy-based strategies for population, land use, transportation, public and community facilities, water and wastewater systems, visitor destinations, urban design, and other matters related to future growth.

As provided by Chapter 2.80B, the MIP shall include the following components:

1. *An island-wide land use strategy, including a managed and directed growth plan*

2. *A water element assessing supply, demand and quality parameters*
3. *A nearshore ecosystem element assessing nearshore waters and requirements for preservation and restoration*
4. *An implementation program which addresses the County's 20-year capital improvement requirements, financial program for implementation, and action implementation schedule*
5. *Milestone indicators designed to measure implementation progress of the MIP*

The MIP addresses a number of planning categories with detailed policy analysis and recommendations which are framed in terms of goals, objectives, policies and implementing actions. These planning categories address the following areas:

1. *Population*
2. *Heritage Resources*
3. *Natural Hazards*
4. *Economic Development*
5. *Housing*
6. *Infrastructure and Public Facilities*
7. *Land Use*

Additionally, an essential element of the MIP is its directed growth plan which provides a management framework for future growth in a manner that is fiscally, environmentally, and culturally prudent. Among the directed growth management tools developed through the MIP process are maps delineating urban growth boundaries, small town boundaries and rural growth boundaries (RGB). The respective boundaries identify areas appropriate for future growth and their corresponding intent with respect to development character.

The proposed project is located within the RGB of the MIP. In this regard, it is consistent with the directed growth strategy defined via growth maps adopted in the MIP. See **Figure 13**.

Table 7 below summarizes the relationship between the proposed action and the goals of the MIP. The relationship between the action and the goals are categorized into the following groups.

1. **Directly applicable:** the action and its potential effects directly advances or promotes the objective, policy or priority guideline.

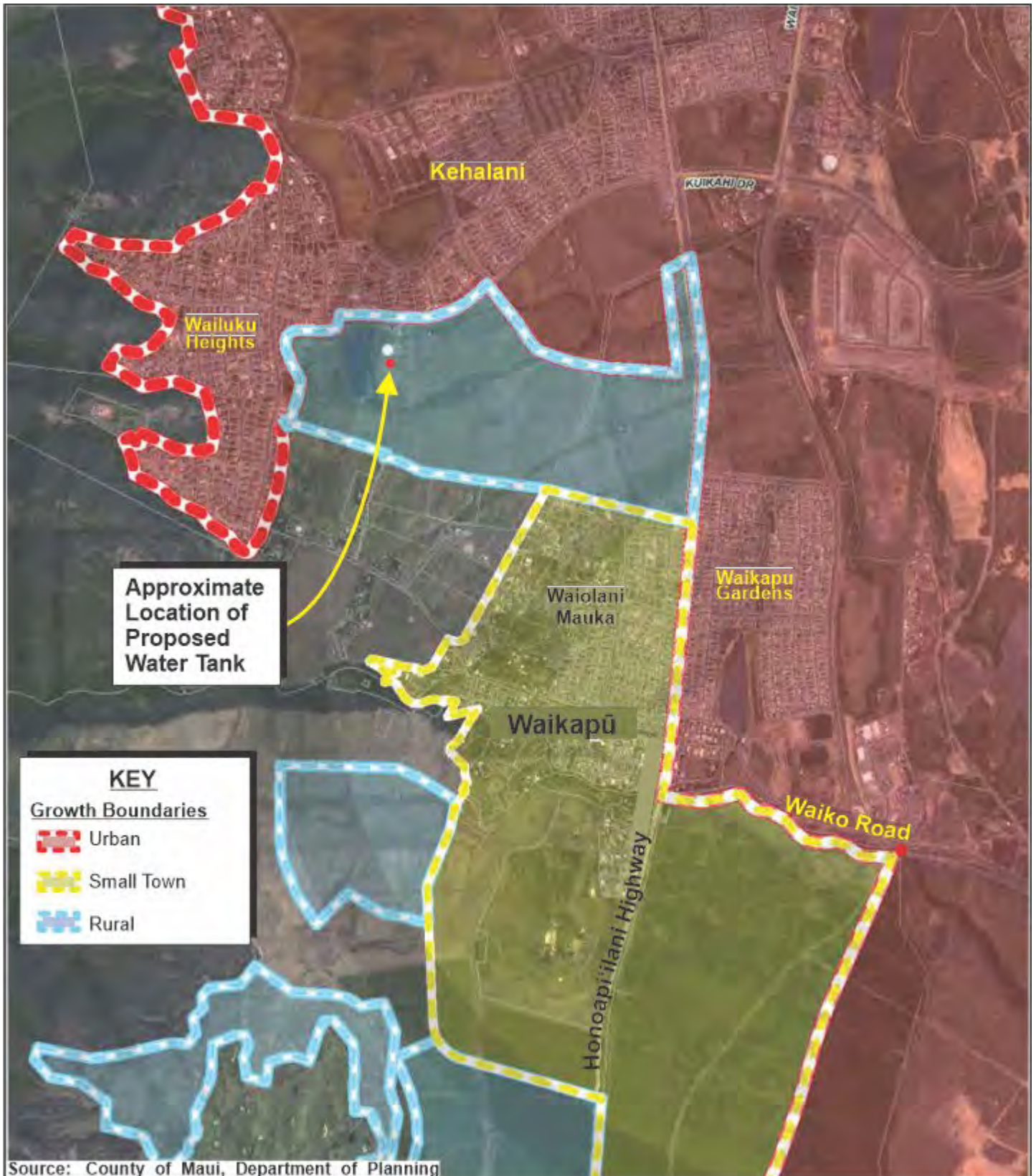


Figure 13 Pu'unani Homestead Subdivision NOT TO SCALE
Water System Storage Improvements
 Maui Island Plan Map



2. **Indirectly applicable:** the action’s potential effects indirectly supports or advances the objective, policy or priority guideline.
3. **Not applicable:** The action and its potential effects have no direct or indirect relationship to the objectives and policies of the Maui Island Plan.

In general, a proposed action's applicability to the MIP is judged on the basis of the action's direct or indirect relationship to the respective objectives, policies and priority directions. It is recognized that the categorization of "applicability" is subject to interpretation and should be appropriately considered in the context of local and regional conditions. The analysis presented in **Table 7** and summarized below focuses on key elements of the proposed action's relationship to the MIP. Detailed discussion on the applicability of the proposed action to each goal and related objectives, policies, and implementing actions of the MIP is provided in **Appendix “E-2”**

Table 7. Relationship Between the Proposed Pu’unani Homestead Subdivision Water System Storage Improvements Project and the Goals of the Maui Island Plan

Maui Island Plan Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
CHAPTER 1 – POPULATION			
1.1 Maui’s people, values, and lifestyles thrive through strong, healthy, and vibrant island communities.		✓	
CHAPTER 2 – HERITAGE RESOURCES			
CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES ISSUES			
2.1 Our community respects and protects archaeological and cultural resources while perpetuating diverse cultural identities and traditions.		✓	
SHORELINE, REEFS, AND NEARSHORE WATERS			
2.2 An intact, ecologically functional system of reef, shoreline, and nearshore waters that are protected in perpetuity.		✓	
WATERSHEDS, STREAMS, AND WETLANDS ISSUES			
2.3 Healthy watersheds, streams, and riparian environments.		✓	
WILDLIFE AND NATURAL AREAS			
2.4 Maui’s natural areas and indigenous flora and fauna will be protected.		✓	
SCENIC RESOURCES			
2.5 Maui will continue to be a beautiful island steeped in coastal, mountain, open space, and historically significant views that are preserved to enrich the residents’ quality of life, attract visitors, provide a connection to the past, and promote a sense of place.		✓	

Maui Island Plan Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
CHAPTER 3 – NATURAL HAZARDS			
3.1 Maui will be disaster resilient.			✓
CHAPTER 4 – ECONOMIC DEVELOPMENT			
ECONOMIC DIVERSIFICATION			
4.1 Maui will have a balanced economy composed of a variety of industries that offer employment opportunities and well-paying jobs and a business environment that is sensitive to resident needs and the island's unique natural and cultural resources.		✓	
TOURISM			
4.2 A healthy visitor industry that provides economic well-being with stable and diverse employment opportunities.			✓
AGRICULTURE			
4.3 Maui will have a diversified agricultural industry contributing to greater economic, food, and energy security and prosperity.			✓
EMERGING SECTORS			
4.4 A diverse array of emerging economic sectors.			✓
SMALL BUSINESS DEVELOPMENT			
4.5 Small businesses will play a key role in Maui's economy.			✓
HEALTH CARE SECTOR			
4.6 Maui will have a health care industry and options that broaden career opportunities that are reliable, efficient, and provide social well-being.			✓
EDUCATION AND WORKFORCE DEVELOPMENT			
4.7 Maui will have effective education and workforce development programs and initiatives that are aligned with economic development goals.			✓
CHAPTER 5 – HOUSING			
5.1 Maui will have safe, decent, appropriate, and affordable housing for all residents developed in a way that contributes to strong neighborhoods and a thriving island community.	✓		
CHAPTER 6 – INFRASTRUCTURE AND PUBLIC FACILITIES			
SOLID WASTE			
6.1 Maui will have implemented the ISWMP thereby diverting waste from its landfills, extending their capacities.			✓
WASTEWATER			
6.2 Maui will have wastewater systems that comply with or exceed State and Federal regulations; meet levels-of-service needs; provide adequate capacity to accommodate projected demand; ensure efficient, effective, and environmentally sensitive operation; and maximize wastewater reuse where feasible.			✓

Maui Island Plan Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
WATER			
6.3 Maui will have an environmentally sustainable, reliable, safe, and efficient water system.	✓		
TRANSPORTATION			
6.4 An interconnected, efficient, and well-maintained, multimodal transportation system.			✓
TRANSIT			
6.5 An island-wide transit system that addresses the needs of residents and visitors and contributes to healthy and livable communities.			✓
PARKS			
6.6 Maui will have a diverse range of active and passive recreational parks, wilderness areas, and other natural-resource areas linked, where feasible, by a network of greenways, bikeways, pathways, and roads that are accessible to all.			✓
PUBLIC FACILITIES			
6.7 Maui will have adequate public facilities that meet the diverse needs of residents.			✓
SCHOOLS AND LIBRARIES			
6.8 Maui will have school and library facilities that meet residents' needs and goals.			✓
HEALTH CARE			
6.9 All of Maui residents will have the best possible health care to include healthy living, disease prevention, as well as acute and long-term care.			✓
ENERGY			
6.10 Maui will meet its energy needs through local sources of clean, renewable energy, and through conservation.			✓
HARBORS AND AIRPORT			
6.11 Maui will have harbors and airports that will efficiently, dependably, and safely facilitate the movement of passengers and cargo.			✓
CHAPTER 7 – LAND USE			
AGRICULTURAL LANDS			
7.1 Maui will have a prosperous agricultural industry and will protect agricultural lands.			✓
RURAL AREAS			
7.2 Maui will have a rural landscape and lifestyle where natural systems, cultural resources and farm lands are protected and development enhances and compliments the viability and character of rural communities.			✓

Maui Island Plan Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
URBAN AREAS			
7.3 Maui will have livable human-scale urban communities, an efficient and sustainable land use pattern, and sufficient housing and services for Maui residents.			✓
CHAPTER 8 – DIRECTED GROWTH PLAN			
URBAN AND SMALL TOWN GROWTH AREA			
8.1 Maui will have well-serviced, complete, and vibrant urban communities and traditional small towns through sound planning and clearly defined development expectations.			✓
RURAL GROWTH AREA			
8.2 Maui will maintain opportunities for agriculture and rural communities through sound planning and clearly defined development expectations.		✓	

The proposed water system storage improvements directly advances the goal and objectives for Maui’s water system by increasing the efficiency and capacity of water system storage to meet the water needs of a residential subdivision that will serve DHHL native Hawaiian beneficiaries and support the retention of island residents. The proposed action also directly advances the goal for housing by providing infrastructure improvements necessary to construct the DHHL Pu’unani Homestead Subdivision. As mentioned previously, archaeological and cultural investigations were conducted with the objective of enhancing and preserving cultural and archaeological resources. Appropriate BMPs will be implemented during construction to ensure the project does not adversely affect natural and scenic resources. In addition, the project is located within the RGB and is complementary of the surrounding residential community.

F. WAILUKU-KAHULUI COMMUNITY PLAN

The project site is located within the Wailuku-Kahului Community Plan region, one (1) of nine (9) community plan regions established in the County of Maui. Each region’s growth and development is guided by a Community Plan. The County’s Community Plan reflects current and anticipated conditions in the Wailuku-Kahului region and advances planning goals, objectives, policies, and implementation considerations to guide decision-making in the region. The primary purpose of the Community Plan is to outline a detailed agenda for carrying out these policies and objectives. The Wailuku-Kahului Community Plan was adopted by the County of Maui through Ordinance Number 3061, and became effective on June 5, 2002. The Community Plan land use map designates the project site as “Agriculture”. See **Figure 14**. The proposed project is consistent with the following goals, objectives, and policies of the Wailuku-Kahului Community Plan as outlined below.

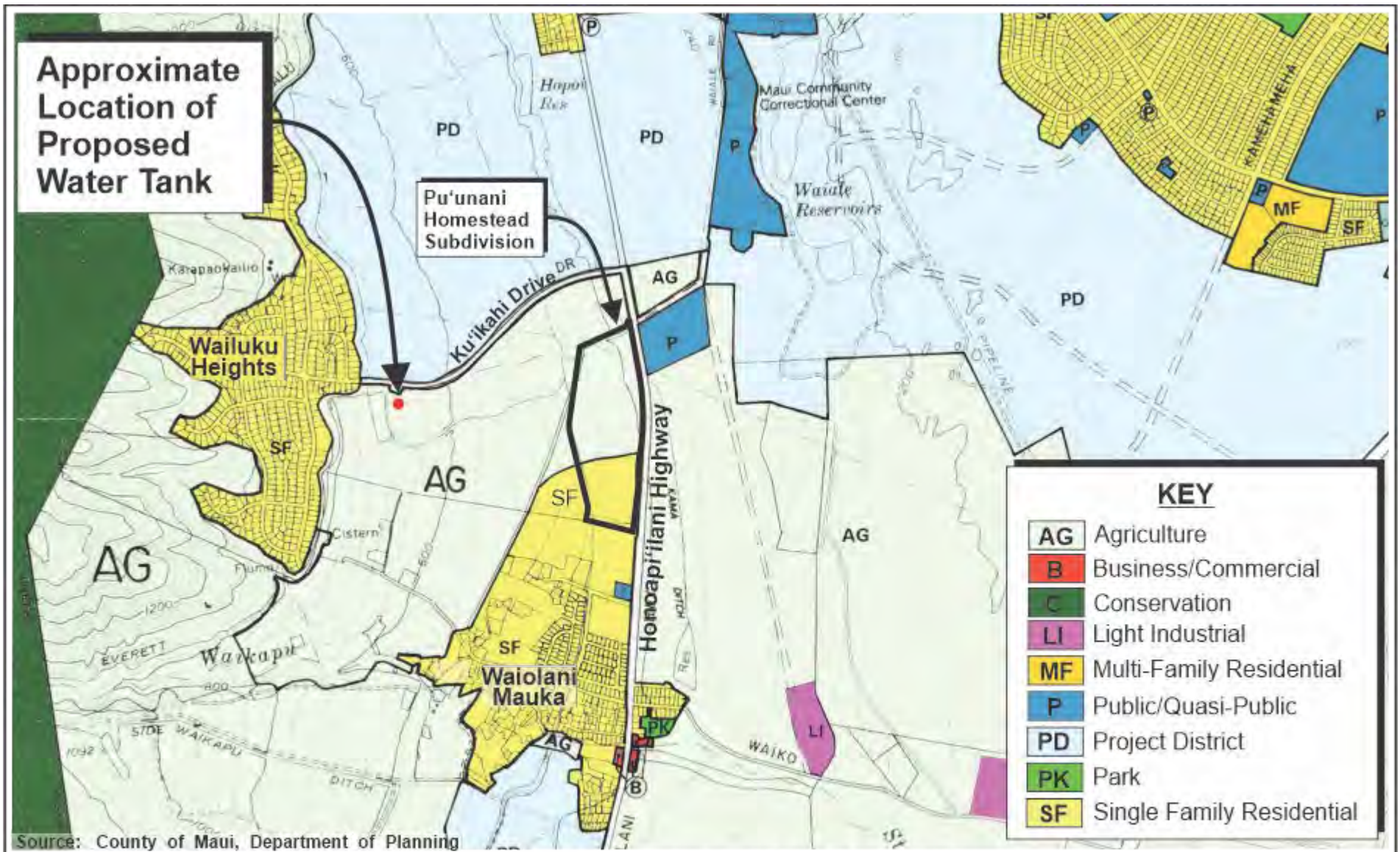


Figure 14

Pu'unani Homestead Subdivision
Water System Storage Improvements
Wailuku-Kahului Community Plan Map

NOT TO SCALE



HOUSING

Goals

A sufficient supply and choice of attractive, sanitary and affordable housing accommodations for the broad cross section of residents, including the elderly.

Objective and Policy:

- *Plan, design and construct off-site public infrastructure improvements (i.e. water, roads, sewer, drainage, police and fire protection, and solid waste) in anticipation of residential, commercial and industrial developments defined in the Community Plan.*

Discussion and Response:

The water system storage improvements are proposed to serve the DHHL's anticipated Pu'unani Homestead Subdivision and will ensure the adequate supply of water to this residential subdivision.

GOVERNMENT

Goals

Government that demonstrates the highest standards of fairness; responsiveness to the needs of the community; fiscal integrity; effectiveness in planning and implementation of programs and projects; a fair and equitable approach to taxation and regulation; and efficient, results oriented management.

Objective and Policy:

- *Ensure that adequate infrastructure is or will be available to accommodate planned development.*

Discussion and Response:

The proposed water storage tank will ensure adequate water storage infrastructure to connect to the County's water system to accommodate the water needs of the DHHL's planned Pu'unani Homestead Subdivision.

INFRASTRUCTURE

Goals

Timely and environmentally sound planning, development and maintenance of infrastructure systems which serve to protect and preserve the safety and health of the region's residents, commuters and visitors through the provision of clean water, effective waste disposal and drainage systems, and efficient transportation systems which meet the needs of the community.

WATER AND UTILITIES

Objectives and Policies:

- *Coordinate water system improvement plans with growth areas to ensure adequate supply and a program to replace deteriorating portions of the distribution system. Future growth should be phased to be in concert with the service capacity of the water system.*
- *Coordinate the construction of all water and public roadway and utility improvements to minimize construction impacts and inconveniences to the public.*
- *Coordinate expansion of and improvements to the water system to coincide with the development of residential expansion areas.*

Objective and Policy:

- *Plan and construct water system improvements, including additional source, transmission, and storage capabilities.*

Discussion and Response:

The proposed water system storage improvements will be constructed to coincide with development of the DHHL Pu'unani Homestead Subdivision to provide adequate potable water to the residential subdivision.

G. COUNTY ZONING

The land underlying the proposed project site is zoned "Agriculture" by the Maui County Zoning Ordinance. See **Figure 15**. Pursuant to Chapter 19.30A.050 of the Maui County Code, minor utilities are permitted uses within the Agricultural district. The proposed water storage tank is a minor utility as defined in Chapter 19.04.040 of the Maui County Code. The proposed action is consistent with this designation.

H. HAWAI'I COASTAL ZONE MANAGEMENT PROGRAM

The Hawai'i Coastal Zone Management Program (HCZMP), as formalized in Chapter 205A, HRS, establishes objectives and policies for the preservation, protection, and restoration of natural resources of Hawai'i's coastal zone. Although the project area is not within the County of Maui's Special Management Area, the applicability of coastal zone management considerations applies to all lands in the State of Hawai'i and, as such, has been reviewed and assessed as follows.

1. Recreational Resources

Objective:

Provide coastal recreational opportunities accessible to the public.

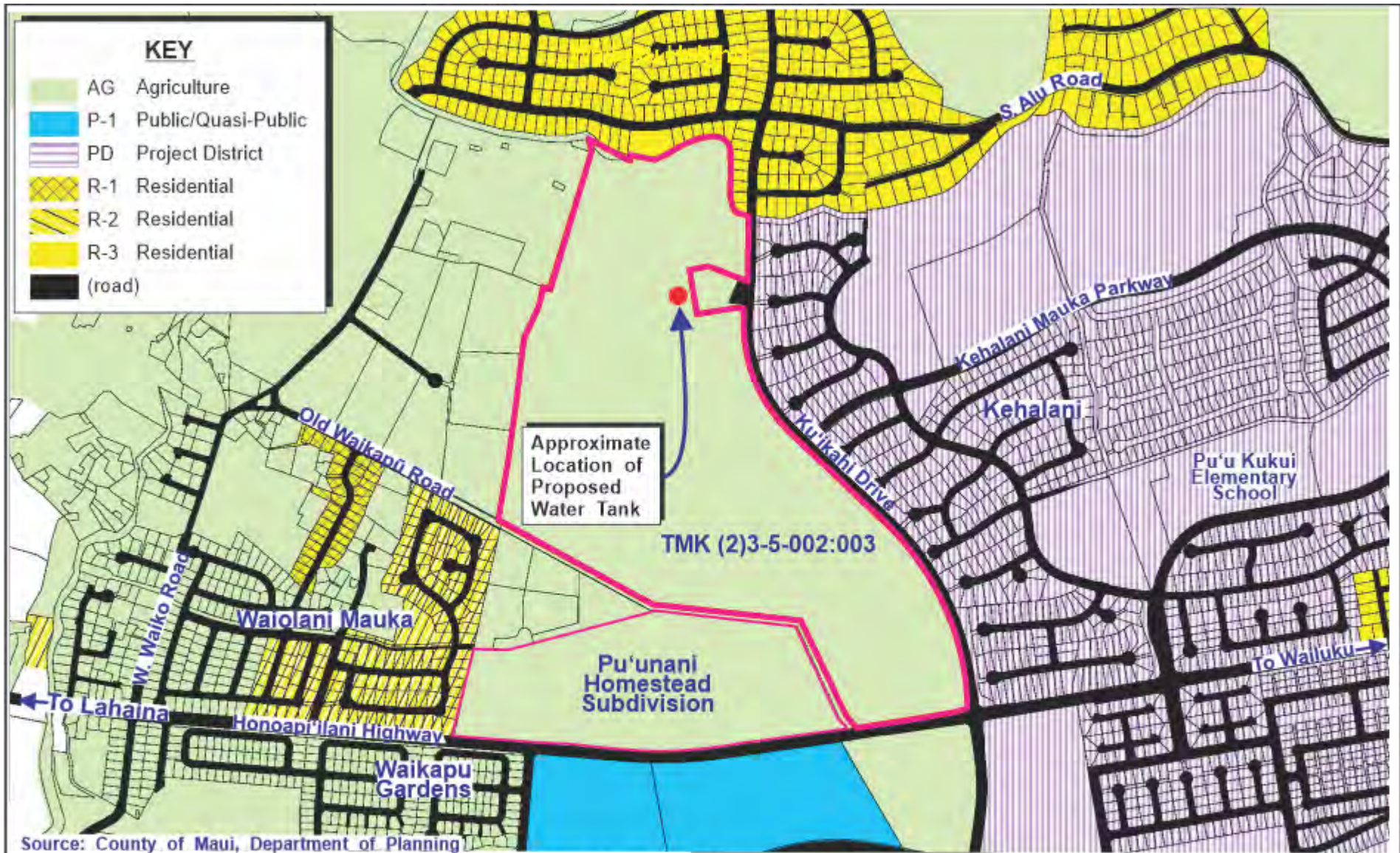


Figure 15

Pu'unani Homestead Subdivision
 Water System Storage Improvements
 Maui County Zoning Map



Policies:

- a. *Improve coordination and funding of coastal recreational planning and management; and*
- b. *Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by*
 - i. *Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
 - ii. *Requiring restoration of coastal resources that have significant recreational and ecosystem value, including but not limited to coral reefs, surfing sites, fishponds, sand beaches, and coastal dunes, when these resources will be unavoidably damaged by development; or requiring monetary compensation to the State for recreation when restoration is not feasible or desirable;*
 - iii. *Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
 - iv. *Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
 - v. *Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*
 - vi. *Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*
 - vii. *Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and*
 - viii. *Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting that dedication against the requirements of section 46-6.*

Response: The project site is located inland and away from the coastline. The proposed action is not anticipated to impact coastal recreational opportunities or affect existing public access to and along the shoreline.

2. **Historic Resources**

Objective:

Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:

- a. *Identify and analyze significant archaeological resources;*
- b. *Maximize information retention through preservation of remains and artifacts or salvage operations; and*
- c. *Support state goals for protection, restoration, interpretation, and display of historic resources.*

Response: Although not near the coastline, archaeological and cultural investigations have been conducted as part of the environmental review process for the proposed project, which demonstrates an effort to preserve Hawai'i's natural and historical resources and protect Hawai'i's ethnic and cultural heritage. The SHPD has been consulted and although not required, the DHHL will voluntarily employ archaeological monitoring during all ground altering activities.

3. **Scenic and Open Space Resources**

Objective:

Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:

- a. *Identify valued scenic resources in the coastal one management area;*
- b. *Ensure that new developments are compatible with their visual environment by designing and locating those developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*
- c. *Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*
- d. *Encourage those developments that are not coastal dependent to locate in inland areas.*

Response: As indicated previously, the project is located inland and not on or near the shoreline. The proposed project is not anticipated to adversely impact coastal scenic and open space resources.

4. **Coastal Ecosystems**

Objective:

Protect valuable coastal ecosystems, including reefs, beaches, and coastal dunes from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

- a. *Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*
- b. *Improve the technical basis for natural resource management;*
- c. *Preserve valuable coastal ecosystems of significant biological or economic importance, including reefs, beaches, and dunes;*
- d. *Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*
- e. *Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

Response: The proposed project is located inland, away from coastal ecosystems and is, therefore, not anticipated to have adverse impacts on coastal/shoreline resources, including reefs and marine resources. Appropriate construction and permanent BMPs will be utilized to ensure that runoff is appropriately detained, minimizing any impact on coastal waters.

5. **Economic Uses**

Objective:

Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

- a. *Concentrate coastal dependent development in appropriate areas;*
- b. *Ensure that coastal dependent development and coastal related development are located, designed, and constructed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts in the coastal zone management area; and*
- c. *Direct the location and expansion of coastal development to areas designated and used for that development and permit reasonable long-term growth at those areas, and permit coastal development outside of designated areas when:*
 - i. *Use of designated locations is not feasible;*
 - ii. *Adverse environmental effects and risks from coastal hazards are minimized; and*
 - iii. *The development is important to the State's economy.*

Response: The proposed project is not a coastal dependent development. The project site is located inland from the shoreline. The proposed project will have positive, short-term impacts on the economy through construction activity. The proposed project does not contravene the objective and policies for economic uses.

6. Coastal Hazards

Objective:

Reduce hazard to life and property from coastal hazards.

Policies:

- a. *Develop and communicate adequate information about the risks of coastal hazards;*
- b. *Control development, including planning and zoning control, in areas subject to coastal hazards;*
- c. *Ensure that developments comply with requirements of the National Flood Insurance Program; and*
- d. *Prevent coastal flooding from inland projects.*

Response: According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the area, the project site falls within Zone X (shaded), an area of minimal flooding. In addition, the project site is not located

within the tsunami evacuation zone or projected 3.2-foot sea level rise exposure area. Drainage improvements will be designed in accordance with the Drainage Standards of the County of Maui to ensure that the project will not adversely affect downstream properties from the effects of flooding and erosion. Adverse impacts to hazard-sensitive areas are not anticipated.

7. **Managing Development**

Objective:

Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Policies:

- a. *Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*
- b. *Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and*
- c. *Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.*

Response: Opportunities for agency and public review of the proposed action are provided pursuant to Chapter 343, HRS. In addition, the public also had the opportunity to provide comments on the Environmental Assessment (EA) during the HHC's review of the document.

8. **Public Participation**

Objective:

Stimulate public awareness, education, and participation in coastal management.

Policies:

- a. *Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;*
- b. *Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do*

not interfere with existing recreational and waterline activities;

- c. *Minimize the construction of public erosion-protection structures seaward of the shoreline;*
- d. *Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and*
- e. *Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.*

Response: Opportunities for public participation will be provided through the Chapter 343, HRS EA process, as well as during the HHC's review of the EA document.

9. Beach and Coastal Dune Protection

Objectives:

- a. *Protect beaches and coastal dunes for:*
 - i. *Public use and recreation;*
 - ii. *The benefit of coastal ecosystems; and*
 - iii. *Use as natural buffers against coastal hazards; and*
- b. *Coordinate and fund beach management and protection.*

Policies:

- a. *Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;*
- b. *Prohibit construction of private shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;*
- c. *Minimize the construction of public shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;*
- d. *Minimize grading of and damage to coastal dunes;*

- e. *Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and*
- f. *Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.*

Response: As previously mentioned, the project site is located inland, away from the shoreline and is not anticipated to impact coastal and shoreline processes. Construction and permanent BMPs will be utilized to ensure the downstream coastal environment is not adversely affected.

10. **Marine and Coastal Resources**

Objective:

Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Policies:

- a. *Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*
- b. *Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;*
- c. *Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;*
- d. *Promote research, study, and understanding of ocean and coastal processes, impacts of climate change and sea level rise, marine life, and other ocean resources to acquire and inventory information necessary to understand how coastal development activities relate to and impact ocean and coastal resources; and*
- e. *Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.*

Response: Due to the project's location away from the ocean, and with the implementation of construction and permanent BMPs, the proposed action is not anticipated to have an impact on marine or coastal resources.



ALTERNATIVES TO
THE PROPOSED ACTION

IV



IV. ALTERNATIVES TO THE PROPOSED ACTION

The following is a discussion of the various development alternatives that have been considered by the Applicant as part of the planning process.

A. PREFERRED ALTERNATIVE

The preferred alternative is the proposed up to 0.5 million gallon (MG) capacity water storage tank and related improvements as required by the County of Maui, Department of Water Supply (DWS) described in Chapter I of this document. The proposed water system storage improvements represent a use which will serve to advance the Department of Hawaiian Home Lands' (DHHL) efforts to provide water storage improvements for the development of the Pu'unani Homestead Subdivision, thereby allowing the DHHL to fulfill its mission.

As discussed previously, the mission of the DHHL is to effectively manage the Hawaiian Home Lands trust and to develop and deliver land to native Hawaiians. The Hawaiian Homes Commission Act (HHCA), codified within the constitution of the State of Hawai'i, states as its purpose:

- (a) *The Congress of the United States and the State of Hawaii declare that the policy of this Act is to enable native Hawaiians to return to their lands in order to fully support self-sufficiency for native Hawaiians and the self-determination of native Hawaiians in the administration of this Act, and the preservation of the values, traditions, and culture of native Hawaiians.*
- (b) *The principal purposes of this Act include but are not limited to:*
 - (1) *Establishing a permanent land base for the benefit and use of native Hawaiians, upon which they may live, farm, ranch, and otherwise engage in commercial or industrial or any other activities as authorized in this Act;*
 - (2) *Placing native Hawaiians on the lands set aside under this Act in a prompt and efficient manner and assuring long-term tenancy to beneficiaries of this Act and their successors;*
 - (3) *Preventing alienation of the fee title to the lands set aside under this Act so that these lands will always be held in trust for continued use by native Hawaiians in perpetuity;*

Additionally, the DHHL General Plan, adopted in 2002, lists the following goals under the Water Resources objective:

- *Provide access to quality water in the most cost-effective and efficient manner*

- *Ensure the availability of sufficient water to carry out Hawaiian Home Lands' mission*

The proposed project directly supports the stated purposes of the HHCA and the DHHL General Plan goals for water resources.

Also as previously discussed, the DHHL Maui Island Plan (MIP), adopted in 2004 as the comprehensive resource for planning and managing the Maui Island lands and establishes land use designations to encourage orderly social, physical, and economic development on the island. The MIP acknowledges the importance of establishing water infrastructure or planning developments near or adjacent to existing infrastructure. The proposed project will integrate into the DWS system and provide adequate water system storage to service the Pu'unani Homestead Subdivision. The MIP also provides data from a beneficiary survey conducted in 2003 to assess the preferences of DHHL native Hawaiian beneficiaries on Maui. The results of the survey show that most beneficiaries prefer an award of improved land with a turnkey single-family house on it. In addition, almost 900 beneficiaries indicated a preference of the Wailuku area in terms of award location. The proposed project provides the necessary improvements to develop the Pu'unani Homestead Subdivision for lease to DHHL native Hawaiian beneficiaries and is in line with beneficiary preferences as discussed in the MIP.

In addition, the proposed project is consistent with the following policies and goals identified in the DHHL Water Policy Plan approved by the Hawaiian Homes Commission (HHC) in 2014:

Policies:

2. *Expressly determine and plan for future water needs and actively participate in broader water management, use and protection efforts in Hawai'i in order to secure water.*

* * *

4. *Develop, manage, and steward water in a manner that balances cost, efficiency measures, and Public Trust uses in the short and long term.*

* * *

6. *Foster self-sufficiency of beneficiaries by promoting the adequate supply of water for homesteading when developing or managing water.*

* * *

12. *Explicitly consider water availability and the costs to provide adequate water when developing new homestead areas,*

designating land uses, issuing land dispositions, or exchanging properties.

Goals:

Part II. Plan for our water needs

5. *Design homesteads and manage lands to create and enhance water availability, optimizing costs, use of alternative sources and efficiency measures.*

* * *

Part III. Aggressively understand, exercise and assert our water rights

6. *Secure adequate and enforceable reservations of water for current and foreseeable future needs for all of its lands across the islands.*

For these reasons, the preferred alternative is considered to be the most viable alternative which meets the stated purposes of DHHL and the HHCA, meets stated preferences of DHHL native Hawaiian beneficiaries, the policies and goals of the DHHL Water Policy Plan, and will be developed in an area with existing DWS infrastructure, residential developments and access to government and professional services.

B. ALTERNATIVE CONFIGURATIONS


The DHHL had previously proposed to construct an 8-inch water main which would connect the Pu'unani Homestead Subdivision to the existing DWS 12-inch distribution water main along Old Waikapū Road. The subject property contains existing water infrastructure which supplies water to surrounding residential developments. However, DHHL was informed by DWS that water system storage improvements would be necessary to increase storage capacity so that the DWS could adequately supply water to the Pu'unani Homestead Subdivision. Therefore, the proposed water system storage improvements are the preferred alternative.

C. NO ACTION ALTERNATIVE

Under the "no action" alternative, the project site would remain "as is". The "no action" alternative is not considered to be in the best interest of DHHL native Hawaiian beneficiaries as the "no action" alternative would not improve the DWS water system infrastructure, thereby not allowing the DHHL to develop and provide new homestead opportunities. The "no action" alternative is in direct conflict with the stated purposes of the DHHL and HHCA, as well as the policies and goals of the DHHL Water Policy Plan. In this context, the proposed project is considered the most appropriate alternative.

D. DEFERRED ACTION ALTERNATIVE

A deferral of the proposed action means that the development proposal would be pursued at a later point in time. The deferral alternative is not considered viable from a project implementation standpoint. The DHHL's commitment to planning, design, and construction allows for the project to proceed at this time. Delays in project implementation will likely result in higher development costs and greater uncertainty with respect to infrastructure systems capacity. In addition, delays in the proposed project would result in delays in the development of the Pu'unani Homestead Subdivision, which may also result in a longer waiting time for those of the DHHL homestead waiting list thereby not allowing the DHHL to fulfill its mission of providing homestead opportunities for its beneficiaries in a timely manner. The DHHL believes that the project can be viably developed under current market and financing conditions. With this in mind, the "deferred action alternative" is not considered appropriate.



SUMMARY OF ADVERSE
ENVIRONMENTAL
EFFECTS WHICH
CANNOT BE AVOIDED

V



V. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

An assessment of construction-related and post construction-related impacts on the physical and socio-economic environment were carried out as part of the environmental assessment documentation process. The proposed development may result in limited, unavoidable construction-related impacts on the environment, as described in Chapter II.

In the short term, construction associated with the proposed project will have a temporary impact on air quality from dust generation and discharge of exhaust from construction equipment during ground altering activities and site grading. Appropriate Best Management Practices (BMPs) will be incorporated to mitigate adverse construction-related impacts, including but not limited to, watering of exposed surfaces, installing dust screens, and regular maintenance of construction equipment.

Construction of the proposed project will also generate unavoidable short-term noise impacts. The use of properly maintained construction equipment will mitigate noise impacts caused by equipment. The incorporation of State Department of Health construction noise limits and curfew times are measures to mitigate noise impacts caused by construction activities.

A program of archaeological monitoring will be carried out to ensure that the proposed project will not impact any significant historical or cultural sites that may be present.

In summary, the proposed action is not anticipated to create any significant, long-term adverse environmental effects.



IRREVERSIBLE AND
IRRETRIEVABLE
COMMITMENT OF
RESOURCES

VI



VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The proposed action will not entail a substantial commitment of public services or facilities. The County of Maui, Department of Water Supply (DWS) has determined there is an adequate supply of water to supply the Department of Hawaiian Home Lands' (DHHL) Pu'unani Homestead Subdivision with implementation of the proposed water system storage improvements. Development of the proposed project will involve a commitment of labor, fiscal, energy, and material resources by the DHHL. The use of these resources, when weighed against the expected benefit to be derived from the proposed water system storage improvements, is not considered an adverse commitment.



LIST OF PERMITS
AND APPROVALS

VII



VII. LIST OF PERMITS AND APPROVALS

The following permits and approvals may be required prior to the implementation of the project:

State of Hawai'i

1. Chapter 343, Hawai'i Revised Statutes (HRS), Environmental Assessment
2. Chapter 6E, Historic Preservation Compliance
3. Noise Permit pursuant to Chapter 11-46, Hawai'i Administrative Rules (HAR), Community Noise Control, as applicable
4. Air Pollution Control Permit pursuant to Chapter 11-60.1-33, HAR, Fugitive Dust, as applicable
5. National Pollutant Discharge Elimination System (NPDES) Permit, as applicable.

County of Maui

1. Construction permits (i.e., building and grading permits)



SIGNIFICANCE
CRITERIA
ASSESSMENT

VIII



VIII. SIGNIFICANCE CRITERIA ASSESSMENT

The “Significance Criteria”, defined in Chapter 11-200.1-13 of the Hawai‘i Administrative Rules (HAR), were reviewed and analyzed to determine whether the proposed project will have significant effect on the environment. As defined under Chapter 343, Hawai‘i Revised Statutes “significant effect” means the sum of effects on the quality of the environment, including actions that irrevocably commit a natural resource, curtail the range of beneficial uses of the environment, are contrary to the State’s environmental policies or long-term environmental goals as established by law, or adversely affect the economic welfare, social welfare, or cultural practices of the community and State. The analysis required to determine whether a proposed action may have a significant effect requires that every aspect of the proposed action, expected primary and secondary consequences, and the cumulative as well as the short-term and long-term effects are evaluated in accordance with the Significance Criteria of Section 11-200.1-13 of the Administrative Rules. The following criteria and analyses are provided.

1. **Irrevocably commit a natural, cultural, or historic resource.**

There are no known rare, threatened, or endangered species of flora, fauna, avifauna, or important habitats located within the project site. Nevertheless, as may be applicable, appropriate mitigation measures will be implemented to avoid potential adverse impacts on species that have potential to exist in the project area, as recommended by the U.S. Fish and Wildlife Service. An Archaeological Inventory Survey (AIS) was previously conducted for the TMK parcel and no burial features or human remains were identified. As such, the AIS did not recommend any further archaeological mitigation. The AIS was submitted to and accepted by the State Historic Preservation Division (SHPD). A project-specific Archaeological Field Inspection was completed for the proposed water storage tank site and confirmed that the no burial features or human remains were identified. In addition, a Cultural Impact Assessment (CIA) was prepared for the Department of Hawaiian Home Lands DHHL Pu‘unani Homestead Subdivision project area, and noted that based on historical research and consultation, there is evidence of cultural practices for Hawaiian rights for agricultural pursuits, access to resources, and other customary activities presently occurring in the Waikapū area, but not specifically within the subdivision. In addition, a legendary grinding stone (Pōhāko‘i) was believed to be located in the vicinity of the site of the proposed subdivision. As such, the CIA provided recommendations that an archaeological field inspection be conducted by a qualified archaeologist prior to the commencement of any construction-related ground-altering activities for the residential homestead in an effort to locate Pōhāko‘i, and that archaeological monitoring be conducted for all construction-related ground-altering activities. To this end, an archaeological field inspection was undertaken, and yielded no discoveries. While the SHPD has concurred that no further work is necessary in

accordance with the findings of the previously accepted AIS, the DHHL has also elected to undertake archaeological monitoring for all ground altering activities for the homestead subdivision, as well as the proposed water storage tank. An Addendum CIA for the proposed water system storage tank was prepared and supported the findings and recommendations of the CIA prepared for the residential development.

Based on the foregoing and with implementation of archaeological monitoring, the proposed project is not anticipated to involve an irrevocable commitment to loss or destruction of any natural, cultural, or historic resources.

2. Curtail the range of beneficial uses of the environment.

The proposed action will be implemented adjacent to an existing water storage tank of a similar nature, and the commitment of land resources for the proposed action will not curtail the range of beneficial uses of the environment. The project site is located on fallow agricultural land in the midst of residential subdivisions. The proposed use of the site for development of a new water storage tank is compatible with surrounding County water system infrastructure and residential uses.

3. Conflict with the State's environmental policies or long-term environmental goals established by law.

The proposed action does not conflict with the policies and guidelines of Chapter 343, HRS. This environmental assessment (EA) has been carried out to ensure the proposed project will not have significant adverse construction-related impacts on the environmental resources. While this project may cause temporary construction-related temporary impacts, based on the analysis conducted in this EA, the adverse impacts are not anticipated to be significant or long lasting. Where mitigation measures are required due to potential impacts attributed to the project, DHHL will implement those applicable measures to further reduce potential adverse impacts.

4. Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State.

The proposed action will have a beneficial effect on the local economy during the construction phase of the project. Positive economic and social impacts anticipated as a result of the project include the creation of construction-related jobs and contributions from water service fees.

5. **Have a substantial adverse effect on public health.**

As mentioned previously, although the proposed project site is former agricultural lands, a Phase I Environmental Site Assessment conducted for the subdivision area did not reveal any Recognized Environmental Condition (RECs). Due to the location of the proposed water tank site close to the subdivision site, RECs are similarly not anticipated to be present at the site for the proposed water storage tank. In addition, the project is not anticipated to result in long-term air or noise impacts. Furthermore, the proposed action is not anticipated to create significant direct or indirect foreseeable greenhouse gas (GHG) emissions, and does not fall within the threshold of mandatory GHG reporting. As such, no adverse impact to public health or welfare is anticipated as a result of the proposed action. Rather, the proposed water storage tank will benefit DHHL native Hawaiian beneficiaries by providing potable water to the Pu'unani Homestead Subdivision.

6. **Involve adverse secondary impacts, such as population changes or effect on public facilities.**

The proposed project will provide water infrastructure improvements needed in order for the DWS to supply water to the DHHL Pu'unani Homestead Subdivision. While some residents of this new community may come from off island, most are anticipated to relocate from other areas on Maui. As such, the project and the subdivision it will serve are not anticipated to involve substantial secondary impacts on public facilities due to population changes.

7. **Involve a substantial degradation of environmental quality.**

No substantial degradation of environmental quality resulting from the action is anticipated. Best Management Practices (BMPs) and appropriate erosion control measures will be utilized during the construction period. Drainage system improvements will be constructed in accordance with applicable regulatory design standards to ensure that surface runoff will not have an adverse effect on adjacent or downstream properties.

Any potential short-term impacts to air and noise quality during the construction phase of the project will be mitigated through employing BMPs. In the long term, the project will not adversely impact air quality and ambient noise.

8. **Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions.**

The proposed action involves the development of the proposed water system storage improvement and is necessary for the DWS to supply water to the DHHL Pu'unani Homestead Subdivision. As previously discussed, an EA was prepared

for the Pu'unani Homestead Subdivision in which the Final EA received a Finding of No Significant Impact (FONSI) determination. The DHHL was later informed by DWS that additional water system storage would be needed to adequately supply water to the subdivision. The cumulative impacts of the proposed project, together with other reasonably foreseeable actions, will include the build-out of the Pu'unani Homestead Subdivision and would result in increased population in and surrounding the subdivision and infrastructural demands. The proposed project and all infrastructure improvements for the Pu'unani Homestead Subdivision will be designed to meet applicable local, State, and Federal regulations. The engineering and technical reports prepared for the proposed project and the Pu'unani Homestead Subdivision have assessed potential impacts and designed infrastructure systems in the context of future planned regional growth. Given the foregoing, the proposed project is not anticipated to cumulatively have considerable effect upon the environment, nor does it involve a commitment for larger actions.

9. **Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat.**

No known rare, threatened, or endangered species of flora, fauna, avifauna, or important habitats were identified on the project area. Nevertheless, as may be applicable, appropriate mitigation measures will be implemented to avoid potential adverse impacts on species that have potential to exist in the project area, as recommended by the U.S. Fish and Wildlife Service. The project site is located adjacent to existing residential developments and a water tank of a similar nature. The project is not anticipated to substantially affect rare, threatened, or endangered species, or its habitat.

10. **Have a substantial adverse effect on air or water quality or ambient noise levels.**

Construction activities will result in short-term air quality and noise impacts. BMPs, including erosion control and dust control measures (such as regular watering and sprinkling and installation of dust screens and timely revegetation of graded areas), will be implemented to minimize wind-blown emissions. In the short term, noise impacts will occur primarily from construction equipment. Equipment mufflers or other noise attenuating equipment, as well as proper vehicle maintenance and limiting construction to daylight hours, will be used during construction activities. Construction noise impacts will be mitigated through compliance with the provisions of the State of Hawai'i, Department of Health (DOH) Administrative Rules Title 11, Chapter 46, "Community Noise Control." These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels set forth in Chapter 46. In the long term, the proposed new

water system storage tank is not anticipated to significantly impact ambient noise levels.

With implementation of foregoing mitigation measures, the proposed project is not anticipated to detrimentally affect air or water quality or ambient noise levels.

11. **Have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.**

The project site is situated inland and is not anticipated to have any adverse impact upon coastal waters or resources, beaches, estuaries, or other fresh water bodies.

According to the Federal Emergency Management Agency's Flood Insurance Rate Maps currently in effect, the project site falls within Zone X (unshaded), an area of minimal flooding. The project site is located outside of the tsunami inundation zone. In addition, the project site is located outside of the 3.2-foot projected sea level rise exposure area.

Drainage improvements will be designed to mitigate runoff in accordance with County drainage and stormwater quality rules and regulations. During construction, recommended BMPs will be implemented for erosion and sedimentation control to minimize potential impacts to water quality.

12. **Have a substantial adverse effect on scenic vistas and viewplanes, day or night, identified in county or state plans or studies.**

The proposed water storage tank will be smaller in scale with the adjacent, existing water storage tank and will not impede views of scenic resources identified in county or state plans or studies. The proposed action is not anticipated to have substantial adverse effects on scenic vistas or viewplanes.

13. **Require substantial energy consumption or emit substantial greenhouse gasses.**


The proposed action will involve the short-term commitment of fuel for equipment, vehicles, and machinery during construction activities. However, this use is not anticipated to result in a substantial consumption of energy resources or substantial emission of greenhouse gasses.

The project's technical characteristics and related impact considerations were thoroughly evaluated by the DHHL and the Hawaiian Homes Commission (HHC). In accordance with HAR, Section 11-200.1-13, "Significance Criteria" every phase of the proposed action, the anticipated

impacts, both primary and secondary, and the cumulative as well as the short-term and long-term effects of the action were considered. The analysis contained in this EA was supported through in-depth technical studies that were prepared by qualified professionals, and agencies having jurisdiction and expertise in their respective fields of authority were consulted during the EA preparation process.

Each section of the EA included a discussion and analysis of the impacts related to the respective environmental, infrastructural, public services and socio-economic parameters. While this project may cause impacts, based on the analysis conducted in the EA, the impacts are not anticipated to be significant. Where mitigation measures are required due to potential impacts attributed to the project, DHHL will implement those applicable measures to further reduce adverse impacts. Furthermore, the project will also result in positive impacts for DHHL native Hawaiian beneficiaries, many of whom are long-time Maui residents seeking affordable housing opportunities for themselves and their families.

In summary, the project site is situated adjacent to existing DWS infrastructure, fallow agricultural lands and residential uses. This project will be developed in an area with existing infrastructure systems, and will not extend County service areas. The proposed project is not anticipated to have a significant adverse impact on the surrounding physical, cultural and socio-economic environments. Based on the preceding analysis in this EA document, and in accordance with the significance criteria set forth in 11-200.1-13, HAR, the proposed project has been determined to qualify for a Finding of No Significant Impact (FONSI) by the HHC.



PARTIES CONSULTED
DURING THE
PREPARATION OF
THE DRAFT
ENVIRONMENTAL
ASSESSMENT;
LETTERS RECEIVED
AND RESPONSES TO
SUBSTANTIVE COMMENTS

IX



IX. PARTIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

The following agencies, organizations, and individuals were consulted during preparation of the Draft Environmental Assessment (EA). This Chapter addresses early consultation comments received from these agencies, organizations, and individuals.

FEDERAL AGENCIES

1. Larry Yamamoto, State Conservationist
Natural Resources Conservation Service
U.S. Department of Agriculture
P.O. Box 50004
Honolulu, HI 96850-0001
2. Linda Speerstra, Chief
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via email: CEPOH-RO@usace.army.mil
3. Cade London, Acting Island Team Leader
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7. Dr. Elizabeth Char, Director
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8. Patti Kitkowski, Director
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9. Suzanne Case, Chairperson
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5. Phyllis Shimabukuro-Geiser, Chair
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6. Keith Hayashi, Interim Superintendent
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10. Jade Butay, Director
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11. Sylvia Hussey, Chief Executive Officer
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12. Mary Alice Evans, Director
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14. Brad Ventura, Chief
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15. Lori Tshako, Director
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Department of Housing and Human
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16. Karla Peters, Director
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17. Michele Chouteau McLean, Director
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2200 Main Street, Suite 315
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18. Jordan Molina, Director
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19. Marc Takamori, Director
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110 Ala'ih Street, Suite 210
Kahului, HI 96732
20. Helene Kau, Director
County of Maui
Department of Water Supply
200 South High Street, 5th Floor
Wailuku, HI 96793

21. John Pelletier, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, HI 96793

22. Alice Lee, Council Chair
Maui County Council
200 South High Street
Wailuku, HI 96793

MAUI COUNTY ORGANIZATIONS

23. Hawaiian Telcom Plan Review Department
via email: HT-PlanReviews@hawaiiantel.com
24. Michael Grider, Manager, Engineering
Maui Electric Company, Ltd.
P.O. Box 398
Kahului, HI 96733
25. Clyde Kahalehau, Po'o
Aha Moku O Wailuku
via email: ahamokuowailuku@yahoo.com
26. Travis Polido, President
Waikapu Community Association
via email: waikapuca@gmail.com
27. Glenn Adolpho
Waikapu Gardens Homeowners Association
via email: gncadolpho@hawaiiantel.net
28. Wailuku Heights Extension Unit I
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29. Wailuku Heights Extension Unit II
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30. Joseph G. Blackburn, II
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31. Joseph G. Blackburn, II
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Wailuku, HI 96793

32. Joseph G. Blackburn, II
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Wailuku, HI 96793

33. Scott Matsuura, President
Kehalani Community Association
P. O. Box 1530
Wailuku, HI 96793

DHHL HOMESTEAD ASSOCIATIONS

34. Ahahui Aina Hoopulapula o Waiohuli

35. Ka Ohana O Kahikinui, Inc.

36. Keokea Homestead Farm Lots Association

37. Paukukalo Hawaiian Homestead Commty
Association

38. Pa'upena Community Development
Corporation

39. Villages of Leialii Phase 1A Association

40. Waiehu Kou Community Homestead
Association

41. Waiehu Kou Residence Lots, Phase II
Association Inc.

42. Waiehu Kou Phase 3 Association, Inc.

43. Waiehu Kou Phase 4 Association, Inc.

44. Waiohuli Hawaiian Homesteaders Inc.

45. Keokea Waiohuli Undivided Lessees

46. Maui Mokupuni Council

Subject: FW: Proposed DHHL Pu'unani Subdivision Water System Storage Improvements, Waikapu, Maui
Attachments: IPaC Info Letter_Species List Instructions_PIFWO_20Apr2022_Final.pdf; Invasive Species Biosecurity Protocols_FINAL_Feb 2022 Maui.pdf; Plant Avoidance and Minimization Measures_FINAL_Feb 2022.pdf; BMPs For Work In or Around Aquatic Environment_revised Nov 2018.pdf

From: Cady, Melissa N <melissa_cady@fws.gov>
Sent: Tuesday, April 26, 2022 3:53 PM
To: Yukino Uchiyama <Yukino@munekiyohiraga.com>; General eMail <planning@munekiyohiraga.com>
Cc: Stewart.t.matsunaga@hawaii.gov
Subject: Proposed DHHL Pu'unani Subdivision Water System Storage Improvements, Waikapu, Maui

Hello Yukino Uchiyama,

I have been assigned your request to provide technical assistance for the proposed Pu'unani Subdivision Water System Storage Improvements, Waikapu, Maui. USFWS Pacific Islands Fish and Wildlife Office has adopted an online portal where you can generate an official species list including threatened and endangered species and designated critical habitat for your project area. USFWS requests that you please use this portal to develop your official species list for this project. I have attached a letter with instructions for using the portal, and I invite you to reach out to me if you have any questions or problems using the portal to meet your project needs. The portal will provide a letter with a list of species that may occur in the area and links to our recommended avoidance and minimization measures for those species. I have also attached our recommended Biosecurity Protocol to avoid the introduction of invasive species, our Aquatic Best Management Practices, and avoidance and minimization measures for listed plants for your use, as applicable.

Please don't hesitate to reach out if I can be of assistance.

Best Regards,

Melissa Cady
(she/her)
Maui Nui & Hawai'i Island Team
Pacific Islands Fish and Wildlife Office
U.S. Fish and Wildlife Service
154 Waiuanue Avenue Suite 103
Hilo, Hawai'i 96720-2452

Cell Phone: 808-443-9795
Email: melissa_cady@fws.gov

Mailing Address:
U.S. Fish and Wildlife Service
PO Box 653
Hilo, HI 96721



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai'i 96850

Subject: IPaC generated official species list for the Pacific Islands Fish and Wildlife Office

Dear Action Agency or Applicant:

The Pacific Islands Fish and Wildlife Office (PIFWO) is transitioning to the Information for Planning and Consultation (IPaC) online portal, <https://ipac.ecosphere.fws.gov/> for federal action agencies and non-federal agencies or individuals to obtain official species lists, including threatened and endangered species, designated critical habitat, and avoidance and minimization measures to consider in your general project design. IPaC has been used by continental USFWS offices to provide official species lists and avoidance and minimization guidance since 2017. Using IPaC expedites the process for species list distribution. Obtaining a species list in IPaC is relatively straightforward and takes minimal time to complete. Step by step instructions are included below.

Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of your species list should be verified after 90 days. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change the species list. Verification can be completed by visiting the IPaC website at regular intervals during project planning and implementation. An updated list may be requested through the IPaC system by completing the same process used to obtain the initial species list.

We hope this process provides efficiencies to our partners in obtaining a species list. For federal action agencies, it also opens additional IPaC functionality that the PIFWO office is still working on, such as the use of Determination Keys for informal section 7 programmatic consultations. We will let our agency partners know when that functionality becomes available.

If you have questions about a species list obtained through the IPaC system or need assistance in completing an IPaC species list request, please contact the Service at 808-792-9400 or via email at pifwo_admin@fws.gov. We appreciate your efforts to conserve listed species across the Pacific Islands.

INTERIOR REGION 9
COLUMBIA-PACIFIC NORTHWEST

IDAHO, MONTANA*, OREGON*, WASHINGTON

*PARTIAL

INTERIOR REGION 12
PACIFIC ISLANDS

AMERICAN SĀMOA, GUAM, HAWAI'I, NORTHERN
MARIANA ISLANDS

100

Instructions for Action Agencies and partners to obtain an official species list in IPaC

- Navigate to <https://ipac.ecosphere.fws.gov/>
- You can get an unofficial species list without logging in. However, if you want an official species list you will need to log in first using your Login.gov account. If you don't have an IPaC account, they are easy to create.



Select Log in with Login.gov and sign in using your email and password.

A login form with the following elements: a label 'Email address' above a text input field; a label 'Password' above another text input field; a checkbox labeled 'Show password' to the right of the password field; a blue button labeled 'Sign in'; a white button with a blue border labeled 'Create an account'; and a blue link at the bottom that says 'Sign in with your government employee ID'. The form has a light blue background and rounded corners.

If you have a PIV or CAC card, you can sign in using that method as well.

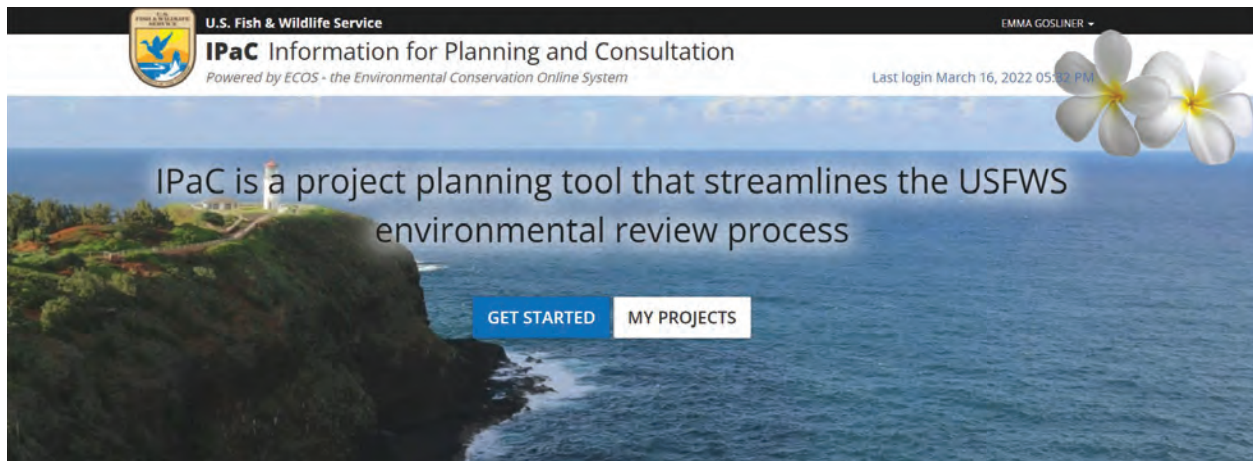
Sign in with your PIV or CAC

Make sure you have a [Login.gov](#) account and you've set up PIV/CAC as a two-factor authentication method.

[Insert your PIV/CAC](#)

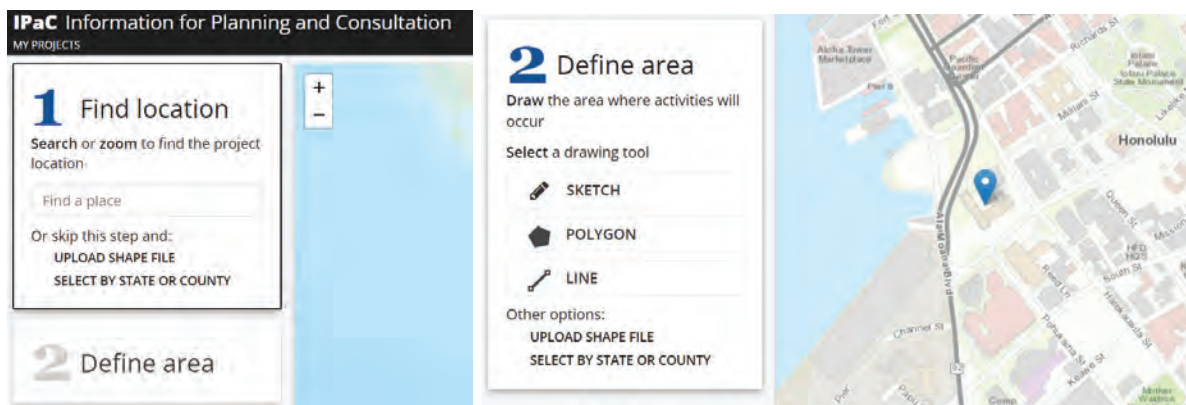
[Cancel](#)

- Once you log in, select “Get Started”.



The image shows the IPaC landing page. At the top, it says "U.S. Fish & Wildlife Service" and "EMMA GOSLINER". The main heading is "IPaC Information for Planning and Consultation" with the subtext "Powered by ECOS - the Environmental Conservation Online System". A user login notice says "Last login March 16, 2022 05:32 PM". The main content area features a scenic coastal image with the text "IPaC is a project planning tool that streamlines the USFWS environmental review process". Below this text are two buttons: "GET STARTED" (highlighted in blue) and "MY PROJECTS".

- Define the action area: Identify the location of the proposed action by uploading an existing shapefile or by entering an address or coordinates of the action area. Once identified on the map, you can manually draw the action area using the drawing tools.

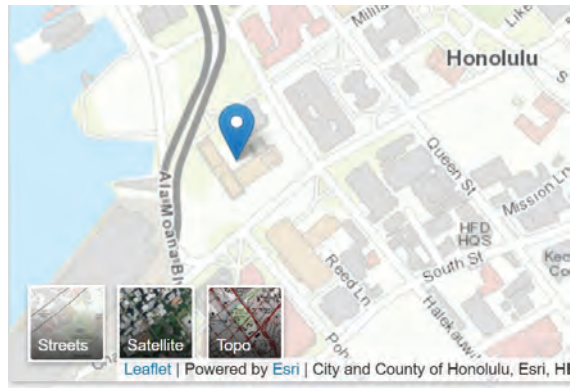


The image shows a screenshot of the IPaC interface for defining an action area. It is divided into two main sections: "1 Find location" and "2 Define area".

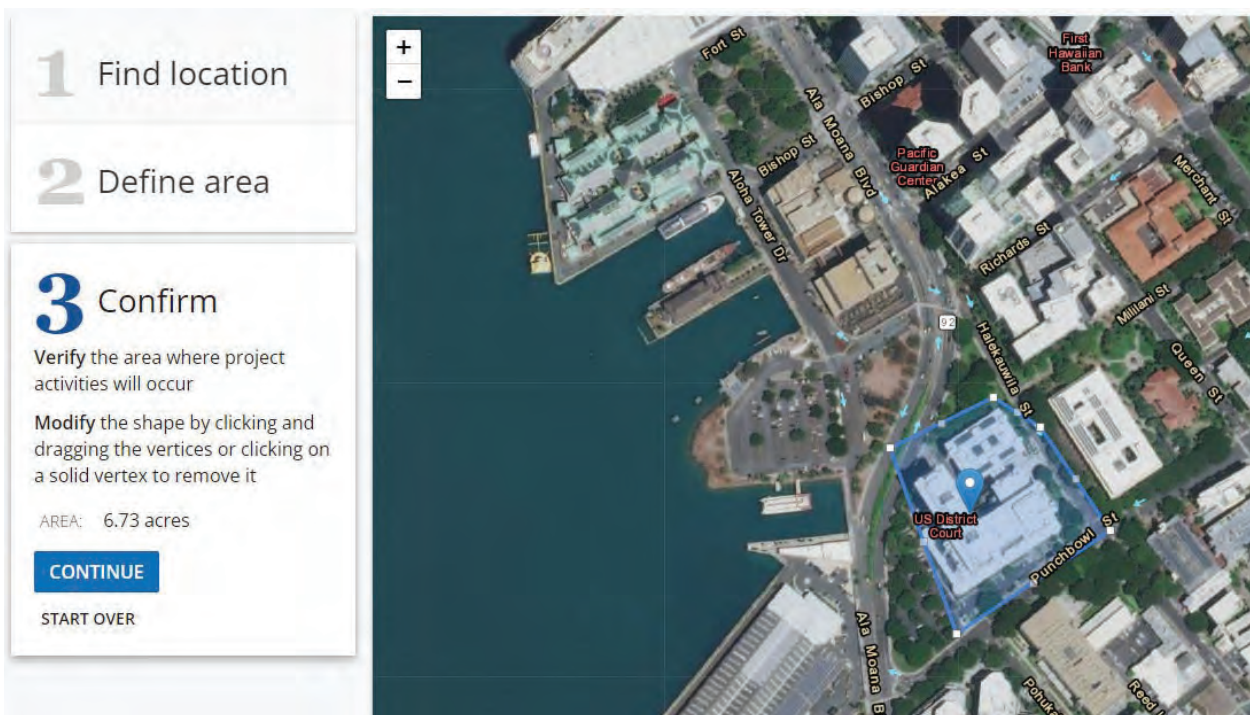
1 Find location
Search or zoom to find the project location:
Find a place
Or skip this step and:
UPLOAD SHAPE FILE
SELECT BY STATE OR COUNTY

2 Define area
Draw the area where activities will occur
Select a drawing tool
SKETCH
POLYGON
LINE
Other options:
UPLOAD SHAPE FILE
SELECT BY STATE OR COUNTY

The right side of the screenshot shows a map of Honolulu with a blue location pin and a drawing tool icon overlaid on the map.



To help identify your action area you can choose between multiple base maps available.



Press continue when you have finished drawing or uploading the action area location.

- The species information on the page that follows is not official. However, it identifies the project County, local Fish and Wildlife Field Office, species covered under NOAA Fisheries as well as Migratory Bird Treaty Act species. The list can be viewed in Thumbnail or List format.
- Once the species list populates you will see images of the species that may occur on, near, or transgress across your project. Click on SPECIES GUIDELINES on your top right to see Avoidance and Minimization measures to incorporate into your General Project Design Guidelines.

Explore location
 LOCAL OFFICE: PACIFIC ISLANDS FISH AND WILDL. OFC -

LOCATION: Honolulu County, Hawaii
 CHANGE LOCATION

Resources

- ENDANGERED SPECIES 20
- MIGRATORY BIRDS 5
- FACILITIES
- WETLANDS !

PRINT RESOURCE LIST

What's next?
 Define a project at this location to evaluate potential impacts, get an official species list, and make species determinations.
 DEFINE PROJECT

Endangered species

Listed species and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).


Additional information on endangered species data is provided [below](#).

The following species are potentially affected by activities in this location:

THUMBNAILS LIST SPECIES GUIDELINES

Mammals

Endangered



Hawaiian Hoary Bat
Lasiurus cinereus semotus
 Wherever found

- Continue with the following steps to comply with the requirements of ESA section 7 to obtain an **official species list**.
- Select Define Project

Define project

Define a project at this location to evaluate potential impacts, get an official species list, and make species determinations.

Project name:

Project description: Describe the location, size, scope, and timing of this project.

SAVE CANCEL


What's next?
 Define a project at this location to evaluate potential impacts, get an official species list, and make species determinations.
 DEFINE PROJECT

Enter the Project Name and a brief description of the project (a description is not mandatory, but recommended for future coordination with the Service). Click SAVE at bottom of page.

- At the bottom of the What's next box on the right, click Request Species List

Test Project

Testing



LOCATION Honolulu County, Hawaii
CREATED March 17, 2022

1 MEMBER 2 DOCUMENTS

What's next?

ESA REVIEW
Review this project's effects on listed species pursuant to the Endangered Species Act (ESA), as part of the overall regulatory review.

[START REVIEW](#)

SPECIES LIST
Requesting an official species list is now part of IPaC's ESA Review.

[REQUEST SPECIES LIST](#)

Local office

Pacific Islands Fish And Wildlife Office

- on the following screen, click Yes, Request Species List

Endangered Species Act Review

← BACK EXIT REVIEW

1 Request an official species list

2 Evaluate determination keys
No Dkeys for project

3 Analyze project (optional)

4 Download documentation

Step 1: Request an official species list

An official species list is a letter from the local U.S. Fish and Wildlife Service field office that assists in the evaluation of potential impacts of your project. It includes a list of species that should be considered under [Section 7](#) of the Endangered Species Act, a project tracking number, and other pertinent information from the field office.

Does this project require an official species list?

Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action" ([Section 7](#) of the Endangered Species Act).

This requirement applies to projects that are **conducted, permitted, funded, or licensed** by any Federal agency.

YES, REQUEST A SPECIES LIST

SKIP / DOES NOT APPLY

- Fill out the contact information for yourself or your agency. Contractors, state partners, and any other project proponents may request a species list and should be covered using the dropdown menus.

Tell us about the project and your organization or agency

Is this project being conducted, permitted, funded, or licensed by a Federal agency?

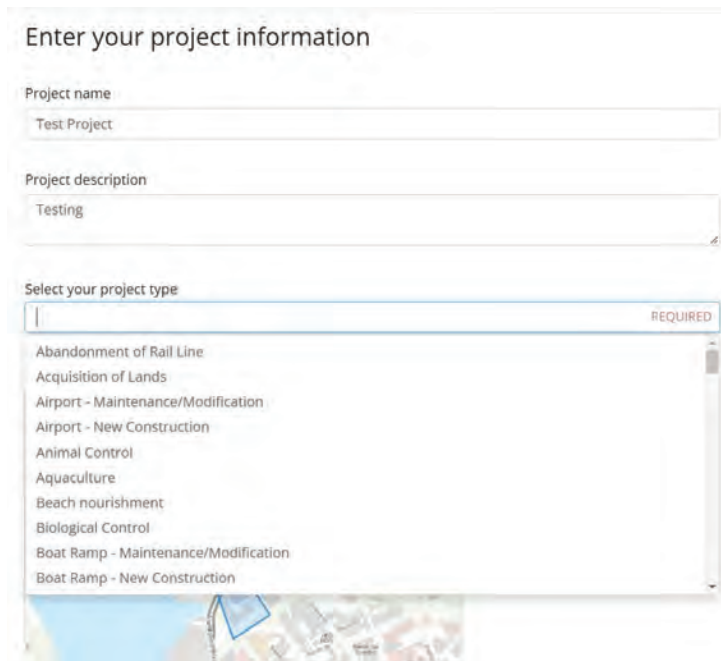
- Yes
- No

What kind of organization are you working for directly?



A screenshot of a web form showing a dropdown menu. The menu is open, displaying a list of organization types. The options are: Federal Agency, Tribe (highlighted in blue), State Agency, Federal Agency, Territory Agency, City, County, and Non-Governmental Organization. The dropdown is titled "What kind of organization are you working for directly?"

- From the pull-down menu for Classify Type of Project, select the project type that best fits the proposed action.



A screenshot of a web form titled "Enter your project information". It contains two text input fields: "Project name" with the value "Test Project" and "Project description" with the value "Testing". Below these is a dropdown menu titled "Select your project type" with a "REQUIRED" label. The dropdown is open, showing a list of project types: Abandonment of Rail Line, Acquisition of Lands, Airport - Maintenance/Modification, Airport - New Construction, Animal Control, Aquaculture, Beach nourishment, Biological Control, Boat Ramp - Maintenance/Modification, and Boat Ramp - New Construction. A small map is visible at the bottom of the form.

- Once all required sections are filled out, press **SUBMIT OFFICIAL SPECIES LIST REQUEST**

Location



SUBMIT OFFICIAL SPECIES LIST REQUEST

- An Official Species List should be generated and available for download in a couple of seconds.
- If you need additional information on a species, click on their name that is hot-linked to their species information page. A brief overview of the species' status, description and critical habitat will appear as well as a link to their ECOS species profile.

A screenshot of a web application interface. On the left, there is a sidebar with a 'Resources' section containing a list of categories: 'ENDANGERED SPECIES' (20), 'MIGRATORY BIRDS' (5), 'FACILITIES', and 'WETLANDS' (with a red exclamation mark). Below this is a 'PRINT RESOURCE LIST' button and a 'What's next?' section with a 'DEFINE PROJECT' button. The main content area displays information for the 'Iiwi' bird (*Drepanis coccinea*). It features a photograph of a bright red Iiwi bird perched on a hand. Below the photo, the status is listed as 'Threatened: A species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.' The description states: 'The Iiwi is an Hawaiian forest bird in the endemic honeycreeper subfamily of the Fringillidae (finch family). Iiwi are medium-sized forest birds (total body length is approximately 14 centimeters (cm) (5.5 inches (in)) with bright scarlet feathers, black wings and tail, and a small white patch on the inner secondary flight feathers. The bill is long, deeply'. To the right of the main content, there is a partial view of another species page for 'Hawaii Aképa' (*Loxia coccinea*), which is also marked as 'Endangered'.

PIFWO Invasive Species Biosecurity Protocols

(Updated February 2022)

Project activities may introduce or spread invasive species, causing negative ecological consequences to new areas or islands, resulting in potential impacts to fish, wildlife, and their habitat. For example, seeds of invasive plant species (e.g., *Chromolaena odorata*, *Senecio madagascariensis*, *Cyathea cooperi*, or *Miconia calvescens*) can be inadvertently transported on equipment from a previous work site to a new site where the species are not present. Likewise, equipment used in an area infected with a pathogen or insect pest that can have ecological consequences (e.g., rapid 'ōhi'a death (*Ceratocystis spp.*), black twig borer (*Xylosandrus compactus*), or naio thrips (*Klambothrips myopori*), if not properly decontaminated, can act as a vector to introduce the pathogen into a new area. Additionally, vehicles must be properly inspected and cleaned to ensure vertebrate or invertebrate pests do not stowaway and spread to other areas. These are just a few examples of how even well-intended project activities may inadvertently introduce or spread invasive species.

To avoid and minimize invasive species potential impacts to fish, wildlife, and their habitat we recommend incorporating general biosecurity protocols into your project planning. Additionally, your project occurs in a geographic area and/or involves activities that risk spreading the following specific invasive species: little fire ant (*Wasmannia auropunctata*). Therefore, we recommend including additional protocols specific to those invasive species (please see species-specific biosecurity protocol(s) below). Additional consultation is recommended if project activities involve transportation of materials, equipment, vehicles, etc. between islands or transpacific movement of materials or equipment.

Invasive Species Biosecurity Protocol

The following biosecurity protocol is recommended to be incorporated into planning for your project to avoid or minimize transportation of invasive species with potential to impact to fish, wildlife, and their habitat. Cleaning, treatment, and/or inspection activities are the responsibility of the equipment or vehicle owner and operator. However, it is ultimately the responsibility of the action agency to ensure that all project materials, vehicles, machinery, equipment, and personnel are free of invasive species before entry into a project site. Please refer to the resources listed below for current removal/treatment recommendations that may be relevant to your project.

1. Cleaning and treatment:

Project applicants should assume that all project materials (i.e., construction materials, or aggregate such as dirt, sand, gravel, etc.), vehicles, machinery, and equipment contain dirt and mud, debris, plant seeds, and other invasive species, and therefore require thorough cleaning. Treatment for specific pests, for example, trapping and poison baiting for rodents, or baiting and fumigation for insects, should be considered when applicable. For effective cleaning we offer the following recommendations prior to entry into a project site:

- a. Project materials, vehicles, machinery, and equipment must be pressure washed thoroughly (preferably with hot water) in a designated cleaning area. Project materials, vehicles, machinery, and equipment should be visibly free of mud/dirt (excluding aggregate), seeds, plant debris, insects, spiders, frogs (including frog eggs), other vertebrate species (e.g., rodents, mongoose, feral cats, reptiles, etc.), and rubbish. Areas of particular concern include bumpers, grills, hood compartments, wheel wells, undercarriage, cabs, and truck beds. Truck beds with accumulated material are prime sites for hitchhiking invasive species.
- b. The interior and exterior of vehicles, machinery, and equipment must be free of rubbish and food, which can attract pests (i.e., rodents and insects). The interiors of vehicles and the cabs of machinery should be vacuumed clean particularly for any plant material or seeds.

2. Inspection:

- a. Following cleaning and/or treatment, project materials, vehicles, machinery, and equipment, must be visually inspected by its user, and be free of mud/dirt (excluding aggregate), debris, and invasive species prior to entry into a project site. For example, careful visual inspection of a vehicle's tires and undercarriage is recommended for any remaining mud that could contain invasive plant seeds.
- b. Any project materials, vehicles, machinery, or equipment found to contain invasive species (e.g., plant seeds, invertebrates, rodents, mongoose, cats, reptiles, etc.) must not enter the project site until those invasive species are properly removed/treated.

3. For all project site personnel:

- a. Prior to entry into the project site, visually inspect and clean your clothes, boots or other footwear, backpack, radio harness, tools and other personal gear and

equipment for insects, seeds, soil, plant parts, or other debris. We recommend the use of a cleaning brush with sturdy bristles. Seeds found on clothing, footwear, backpacks, etc., should be placed in a secure bag or similar container and discarded in the trash rather than being dropped to ground at the project site or elsewhere.

4. Additional considerations:

- a. Consider implementing a Hazard Analysis and Critical Control Point (HACCP) plan (<https://www.fws.gov/policy/A1750fw1.html>) to improve project planning around reducing the risk of introducing or spreading invasive species.
- b. When applicable, use pest-free or low-risk sources of plants, mulch, wood, animal feed or other materials to be transported to a project site.
- c. For projects involving plants from nurseries (e.g., outplanting activities, etc.), all plants should be inspected, and if necessary, appropriately cleaned or treated for invasive species prior to being transported to the project site.
- d. Avoid unnecessary exposure to invasive species at a particular site (to the extent practical) to reduce contamination and spread. For example, if your project involves people or equipment moving between multiple locations, plan and organize timelines so that work is completed in native habitat prior to working in a disturbed location to reduce the likelihood of introducing a pest into the native habitat.
- e. Maintain good communication about invasive species risks between project managers and personnel working on the project site (e.g., conduct briefings and training about invasive species). Ensure prevention measures are communicated to the entire project team. Also consider adding language on biosecurity into contracts or permitting mechanisms to provide clarity to all involved in the project. Report any species of concern or possible introduction of invasive species to appropriate land managers.

For current removal/treatment recommendations please refer to the following:

Hawaiian Islands:

- Hawai‘i Island – <https://www.biisc.org/>
- Maui – <https://mauiinvasive.org/>
- Moloka‘i - <https://www.molokaiisc.org/>
- Lāna‘i - <https://pulamalanai.com/>
- O‘ahu – <https://www.oahuisc.org/>
- Kaua‘i – <https://www.kauaiisc.org/>

Mariana Islands:

- Guam – <https://biosecurity.guam.gov/>
- CNMI – <http://www.dfwcnmi.com/>

Species-Specific Biosecurity Protocols

Table 1. Current island distribution of invasive species with specific biosecurity protocols in the Pacific Islands (PIFWO jurisdiction).

Island	Invasive Species with Specific Protocols			
	Rapid ‘Ōhi‘a Death	Little Fire Ant	Coconut Rhinoceros Beetle	Brown Treesnake
Maui	not present	incipient	not present	not present

Little Fire Ant (LFA)

The little fire ant (*Wasmannia auropunctata*), or LFA, is an invasive species with a painful sting that can inhabit many different environments. In Hawai‘i, it often infests agricultural fields and farms, damaging crops and stinging unsuspecting workers. Little fire ants are also highly disruptive to native tropical ecosystems and harmful to wildlife. Slow moving, but tiny and capable of foraging 24 hours a day with multiple queens per colony, LFA is a formidable threat to biodiversity, agriculture, and quality of life on tropical islands in the Pacific.

For more information about LFA including helpful guides and workshops for treating or detecting LFA, please visit www.littlefireants.com.

To reduce the risk of spreading LFA, the following biosecurity protocol is recommended:

Biosecurity Protocol for LFA

1. For projects involving plants from nurseries (e.g., outplanting activities, etc.), all plants should be inspected for little fire ants and other pests prior to being transported to the project site. If plants are found to be infested by ants of any species, plants should be sourced from an alternative nursery and the infested nursery should follow treatment protocols recommended by the Hawai‘i Ant Lab (<https://littlefireants.com/wp-content/uploads/2020-Management-of-Pest-Ants-in-Nurseries-min.pdf>).
2. All work vehicles, machinery, and equipment should follow steps 1 and 2 in the “Invasive Species Biosecurity Protocol” for (1) cleaning and treatment and (2) inspection for invasive ants prior to entering a project site.
3. Any machinery, vehicles, equipment, or other supplies found to be infested with ants (or other invasive species) must not enter the project site until it is properly treated (<https://littlefireants.com/how-to-treat-for-little-fire-ants-for-homeowners/#recommended-bait-products>) and re-tested. Infested vehicles must be treated following recommendations by the Hawai‘i Ant Lab (<https://littlefireants.com/resource-center/>) or another ant control expert and in accordance with all State and Federal laws. Treatment is the responsibility of the equipment or vehicle owner. Ultimately however, it is the responsibility of the action agency to ensure that all project materials, vehicles, machinery, and equipment follow the appropriate protocol(s).

4. General Vehicle Ant Hygiene: Even the cleanest vehicle can pick up and spread little fire ant. Place MaxForce Complete Brand Granular Insect Bait (1.0 percent Hydramethylnon; https://labelsds.com/images/user_uploads/Maxforce%20Complete%20Label%201-5-18.pdf) into refillable tamper resistant bait stations. An example of a commercially available refillable tamper resistant bait station is the Ant Café Pro (<https://www.antcafe.com/>). Place a bait station (or stations) in the vehicle and note that larger vehicles, such as trucks, may require multiple stations. Monitor bait stations frequently (every week at a minimum) and replace bait as needed. If the bait station does not have a sticker to identify the contents, apply a sticker listing contents to the station.
5. Gravel, building materials, or other equipment such as portable buildings should be baited using MaxForce Complete Brand Granular Insect Bait (1.0 percent Hydramethylnon; https://labelsds.com/images/user_uploads/Maxforce%20Complete%20Label%201-5-18.pdf) or AmdroPro (0.73 percent Hydramethylnon; <https://connpest.com/labels/AMDROPRO.pdf>) following label guidance.
6. Storage areas that hold field tools, especially tents, tarps, and clothing should be baited using MaxForce Complete Brand Granular Insect Bait (1.0 percent Hydramethylnon; https://labelsds.com/images/user_uploads/Maxforce%20Complete%20Label%201-5-18.pdf) or AmdroPro (0.73 percent Hydramethylnon; <https://connpest.com/labels/AMDROPRO.pdf>) following label guidance.
7. Vehicles that have entered a project site known or thought to overlap with areas infested with LFA should subsequently be tested for LFA with baiting in accordance with protocol recommended by the Hawai'i Ant Lab (<https://littlefireants.com/survey-your-home-for-lfa/>).
8. If LFA are detected, please report it to 808-643-PEST (Hawai'i), 671-475-PEST (Guam), or 684-699-1575 (American Samoa). Please visit <https://littlefireants.com/identification-of-little-fire-ants/> for assistance in identifying LFA.

Avoidance, Minimization, and Conservation Measures for listed plants in the Pacific Islands

Project activities may affect listed plant species by causing physical damage to plant parts (roots, stems, flowers, fruits, seeds, etc.) as well as impacts to other life requisite features of their habitat which may result in reduction of germination, growth and/or reproduction. Cutting and removal of vegetation surrounding listed plants has the potential to alter microsite conditions (e.g., light, moisture, temperature), damaging or destroying the listed plants and also increasing the risk of invasion by nonnative plants which can result in higher incidence or intensity of fire. Activities such as grazing, use of construction equipment and vehicles, and increased human traffic (i.e. trails, visitation, monitoring), can cause ground disturbance, erosion, and/or soil compaction which decrease absorption of water and nutrients and damage plant root systems and may result in reduced growth and/or mortality of listed plants. Soil disturbance or removal has the potential to negatively impact the soil seed bank of listed plant species if such species are present or historically occurred in the project area.

In order to avoid or minimize potential adverse effects to listed plants that may occur on the proposed project site, we recommend minimizing disturbance outside of existing developed or otherwise modified areas. When disturbance outside existing developed or modified sites is proposed, conduct a botanical survey for listed plant species within the project action area, defined as the area where direct and indirect effects are likely to occur. Surveys should be conducted by a knowledgeable botanist with documented experience in identifying native Hawaiian and Pacific Islands plants, including listed plant species. Botanical surveys should optimally be conducted during the wettest part of the year (typically October to April) when plants and identifying features are more likely to be visible, especially in drier areas. If surveys are conducted outside of the wet season, the Service may assume plant presence.

The boundary of the area occupied by listed plants should be marked with flagging by the surveyor. To avoid or minimize potential adverse effects to listed plants, we recommend adherence to buffer distances for the activities in the **Table below**. Where disturbed areas do not need to be maintained as an open area, restore disturbed areas using native plants as appropriate for the location. Whenever possible we recommend using native plants for landscaping purposes. The following websites are good resources to use when choosing landscaping plants: Landscape Industry Council of Hawai'i Native Plant Poster (<http://hawaiiscape.wpengine.com/publications/>), Native Hawaiian Plants for Landscaping, Conservation, and Reforestation (<https://www.ctahr.hawaii.edu/oc/freepubs/pdf/of-30.pdf>), and Best Native Plants for Landscapes (<https://www.ctahr.hawaii.edu/oc/freepubs/pdf/OF-40.pdf>).

If listed plants occur in a project area, the avoidance buffers are recommended to reduce direct and indirect impacts to listed plants from project activities. However, where project activities will occur within the recommended buffer distances, additional consultation is required. The impacts to the plants of concern within the buffer area may be reduced by placing temporary fencing or other barriers at the boundary of the disturbance, as far from the affected plants as practicable.

The above guidelines apply to areas outside of designated critical habitat. If project activities occur within designated critical habitat unit boundaries, additional consultation is required.

All activities, including site surveys, risk introducing nonnative species into project areas. Specific attention needs to be made to ensure that all equipment, personnel and supplies are properly checked and are free of contamination (weed seeds, organic matter, or other contaminants) before entering project areas. Quarantines and or management activities occurring on specific priority invasive species proximal to project areas need to be considered or adequately addressed. This information can be acquired by contacting local experts such as those on local invasive species committees (Kauai: <https://www.kauaiisc.org/>; Oahu: <https://www.oahuisc.org/>; Maui Nui: <https://mauiinvasive.org/>; and Hawaii: <https://www.biisc.org/>

Table 1. Recommended buffer distances to minimize and avoid potential adverse impacts to listed plants from activities listed below.

Action	Buffer Distance (feet (meters)) - Keep Project Activity This Far Away from Listed Plant	
	Grasses/Herbs/Shrubs and Terrestrial Orchids	Trees and Arboreal Orchids
Walking, hiking, surveys	3 ft (1 m)	3 ft (1 m)
Cutting and Removing Vegetation By Hand or Hand Tools (e.g., weeding)	3 ft (1 m)	3 ft (1 m)
Mechanical Removal of Individual Plants or Woody Vegetation (e.g., chainsaw, weed eater)	3 ft up to height of removed vegetation (whichever greater)	3 ft up to height of removed vegetation (whichever greater)
Removal of Vegetation with Heavy Equipment (e.g., bulldozer, tractor, "bush hog")	2x width equipment + height of vegetation	820 ft (250 m)

Use of Approved Herbicides (following label)	Ground-based Spray Application; hand application (no wand applicator; spot treatment)	10 ft (3 m)	Crown diameter
	Ground-based Spray Application; manual pump with wand, backpack	50 ft (15 m)	Crown diameter
	Ground-based Spray Application; vehicle-mounted tank sprayer	50 ft (15 m)	Crown diameter
	Aerial Spray (ball applicator)	250 ft (76 m)	250 ft (76 m)
	Aerial Application – herbicide ballistic technology (individual plant treatment)	100 ft (30 m)	Crown diameter
	Aerial Spray (boom)	Further consultation required	Further consultation required
Use of Insecticides (pollinators, seed dispersers)		Further consultation required	Further consultation required
Ground/Soil Disturbance/Outplanting/Fencing (Hand tools, e.g. shovel, `ō`ō; Small mechanized tools, e.g., auger)		20 ft (6 m)	2x crown diameter
Ground/Soil Disturbance (Heavy Equipment)		328 ft (100 m)	820 ft (250 m)
Surface Hardening/Soil compaction	Trails (e.g., human, ungulates)	20 ft (6 m)	2x crown diameter
	Roads/Utility Corridors, Buildings/Structures	328 ft (100 m)	820 ft (250 m)
Prescribed Burns		Further consultation required	Further consultation required
Farming/Ranching/Silviculture		820 ft (250 m)	820 ft (250 m)

Definitions (Wagner *et al.* 1999)

Crown: The leafy top of a tree.

Herb: A plant, either annual, biennial, or perennial, with the non-woody stems dying back to the ground at the end of the growing season.

Shrub: A perennial woody plant with usually several to numerous primary stems arising from or relatively near the ground.

Tree: A woody perennial that usually has a single trunk

References Cited

- USFWS. 2010. Endangered and threatened wildlife and plants; determination of endangered status for 48 species on Kauai and designation of critical habitat. Federal Register 75: 18960–19165.
- . 2012. Endangered and threatened wildlife and plants; endangered status for 23 species on Oahu and designation of critical habitat for 124 species; final rule. Federal Register 77: 57648–57862.
- . 2013a Endangered and threatened wildlife and plants; determination of endangered status for 38 species from Molokai, Lanai, and Maui. Federal Register 78: 32014–32065.
- . 2013b. Endangered and threatened wildlife and plants; determination of endangered species status for 15 species on Hawaii Island. Federal Register 78: 64638–64690.
- . 2016. Endangered and threatened wildlife and plants; determination of endangered status for 49 species from the Hawaiian Islands. Federal Register 81: 67786–67860.
- . 2016. USFWS Rare plant database. Unpublished.
- Wagner, W.L., Sohmer, S., and D.R. Herbst. 1999. Manual of the flowering plants of Hawaii, revised edition. Honolulu, Hawaii. University of Hawaii and Bishop Museum Press. 1,919 pp.

U.S. Fish and Wildlife Service Recommended Standard Best Management Practices

The U.S. Fish and Wildlife Service (USFWS) recommends the following measures to be incorporated into project planning to avoid or minimize impacts to fish and wildlife resources. Best Management Practices (BMPs) include the incorporation of procedures or materials that may be used to reduce either direct or indirect negative impacts to aquatic habitats that result from project construction-related activities. These BMPs are recommended in addition to, and do not over-ride any terms, conditions, or other recommendations prepared by the USFWS, other federal, state or local agencies. If you have questions concerning these BMPs, please contact the USFWS Aquatic Ecosystems Conservation Program at 808-792-9400.

1. Authorized dredging and filling-related activities that may result in the temporary or permanent loss of aquatic habitats should be designed to avoid indirect, negative impacts to aquatic habitats beyond the planned project area.
2. Dredging/filling in the marine environment should be scheduled to avoid coral spawning and recruitment periods, and sea turtle nesting and hatching periods. Because these periods are variable throughout the Pacific islands, we recommend contacting the relevant local, state, or federal fish and wildlife resource agency for site specific guidance.
3. Turbidity and siltation from project-related work should be minimized and contained within the project area by silt containment devices and curtailing work during flooding or adverse tidal and weather conditions. BMPs should be maintained for the life of the construction period until turbidity and siltation within the project area is stabilized. All project construction-related debris and sediment containment devices should be removed and disposed of at an approved site.
4. All project construction-related materials and equipment (dredges, vessels, backhoes, silt curtains, etc.) to be placed in an aquatic environment should be inspected for pollutants including, but not limited to; marine fouling organisms, grease, oil, etc., and cleaned to remove pollutants prior to use. Project related activities should not result in any debris disposal, non-native species introductions, or attraction of non-native pests to the affected or adjacent aquatic or terrestrial habitats. Implementing both a litter-control plan and a Hazard Analysis and Critical Control Point plan (HACCP – see <https://www.fws.gov/policy/A1750fw1.html>) can help to prevent attraction and introduction of non-native species.
5. Project construction-related materials (fill, revetment rock, pipe, etc.) should not be stockpiled in, or in close proximity to aquatic habitats and should be protected from erosion (*e.g.*, with filter fabric, etc.), to prevent materials from being carried into waters by wind, rain, or high surf.
6. Fueling of project-related vehicles and equipment should take place away from the aquatic environment and a contingency plan to control petroleum products accidentally spilled during the project should be developed. The plan should be retained on site with the person responsible for compliance with the plan. Absorbent pads and containment booms should be stored on-site to facilitate the clean-up of accidental petroleum releases.
7. All deliberately exposed soil or under-layer materials used in the project near water should be protected from erosion and stabilized as soon as possible with geotextile, filter fabric or native or non-invasive vegetation matting, hydro-seeding, etc.

July 18, 2022

Via Email: Melissa_cady@fws.gov

Melissa Cady
 United States Department of the Interior
 Fish and Wildlife Service
 Pacific Islands Fish and Wildlife Office
 P. O. Box 653
 Hilo, Hawai'i 96721

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i, Project Code: 2022-0041414

Dear Ms. Cady:

Thank you for your email dated April 26, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

Thank you for providing The Pacific Islands Fish and Wildlife Office (PIFWO) instructions for obtaining an official species lists, including threatened and endangered species, designated critical habitat, and avoidance and minimization measures for the proposed project. An official species list was obtained from the Information for Planning and Consultation (IPaC) portal. The official species list consists of 29 threatened, endangered, or candidate species that may occur within the proposed project boundary or may be affected by project related actions and are listed in the table below:

Official Species List for the Pu'unani Homestead Subdivision Water Tank

Scientific Name	Common Name/Hawaiian Name	Federal Status
Mammals		
<i>Lasiurus cinereus semotus</i>	Hawaiian Hoary Bat/'Ōpe'ape'a	Endangered
Birds		
<i>Oceanodroma castro</i>	Band-rumped Storm-petrel	Endangered
<i>Loxops coccineus</i>	Hawai'i 'Ākepa	Endangered
<i>Anas wyvilliana</i>	Hawaiian Duck/Koloa	Endangered
<i>Fulica americana alai</i>	Hawaiian Coot/'Alae kea	Endangered

Scientific Name	Common Name/Hawaiian Name	Federal Status
<i>Branta (=Nesochen) sandvicensis</i>	Hawaiian Goose/Nēnē	Threatened
<i>Himantopus mexicanus knudseni</i>	Hawaiian Stilt/Ae'o	Endangered
<i>Puffinus auricularis newelli</i>	Newell's Townsend's Shearwater	Threatened
Reptiles		
<i>Chelonia mydas</i>	Green Sea Turtle	Threatened
Insects		
<i>Manduca blackburni</i>	Blackburn's Sphinx Moth	Endangered
Flowering Plants		
<i>Hibiscus brackenridgei</i>	Native Yellow Hibiscus/Ma'o hau	Endangered
<i>Nothoecstrum latifolium</i>	'Aiea	Endangered
<i>Pseudognaphalium sandwicense</i> <i>var. molokaiense</i>	'Ena'ena	Endangered
<i>Bonamia menziesii</i>	No common name	Endangered
<i>Panicum fauriei var. carteri</i>	Carter's Panicgrass	Endangered
<i>Gouania hillebrandii</i>	No common name	Endangered
<i>Gardenia brighamii</i>	Hawaiian Gardenia/Na'u	Endangered
<i>Portulaca villosa</i>	'Ihi	Endangered
<i>Bidens micrantha ssp. kalealaha</i>	Ko'oko'olau	Endangered
<i>Abutilon menziesii</i>	Ko'oloa'ula	Endangered
<i>Santalum haleakalae var. lanaiense</i>	Lanai Sandalwood/'Iliahi	Endangered
<i>Sesbania tomentosa</i>	'Ōhai	Endangered
<i>Achyranthes splendens var. rotundata</i>	Round-leaved Chaff-flower	Endangered
<i>Schiedea salicaria</i>	No common name	Endangered
<i>Spermolepis hawaiiensis</i>	No common name	Endangered
<i>Tetramolopium remyi</i>	No common name	Endangered
<i>Mezoneuron kavaiense</i>	Uhiuhi	Endangered
<i>Vigna o-wahuensis</i>	No common name	Endangered
<i>Isodendron pyriformium</i>	Wahine noho kula	Endangered

We have additionally consulted the PIFWO website regarding recommended conservation measures to avoid or minimize adverse effects to federally protected species and Best Management Practices (BMPs) to minimize and avoid sedimentation and erosion impacts to water quality. As such, the following conservation measures and BMPs will be forwarded to the project team for incorporation into the project, as applicable, to avoid or minimize adverse effects to protected species that may occur in the project area and to avoid or minimize sedimentation and erosion impacts to water quality:

Hawaiian hoary bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*)

- Do not disturb, remove, or trim woody plants greater than 15 feet tall during the bat birthing and pup rearing season (June 1 through September 15).

- Do not use barbed wire for fencing.

Hawai'i 'akepa (*Loxops coccineus*)

- Prevent the spread or survival of non-native or invasive species.
- Decrease mosquito populations by removing or preventing stagnant water habitat.
- Reduce wildfire threat to montane forest habitats.
- Restrict the removal of tree cover during the peak breeding season between January 1 and June 30.

Hawaiian stilt or ae'o, (*Himantopus mexicanus knudseni*), Hawaiian coot or 'alae kea, (*Fulica alai*), and the Hawaiian duck or koloa, (*Anas wyvilliana*)

- In areas where waterbirds are known to be present, post and enforce reduced speed limits, and inform project personnel and contractors about the presence of endangered species onsite.
- Incorporate the Service's Best Management Practices for Work in Aquatic Environments into the project design.
- Have a biological monitor that is familiar with the species' biology conduct Hawaiian waterbird nest surveys, where appropriate habitat occurs within the vicinity of the proposed project site, prior to project initiation. Repeat surveys again within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest).
- If a nest or active brood is found:
 - Contact the Service within 48 hours for further guidance.
 - Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.
 - Have a biological monitor that is familiar with the species' biology present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.

Hawaiian goose or nēnē (*Branta sandvicensis*)

- Do not approach, feed, or disturb nēnē.
- If nēnē are observed loafing or foraging within the project area during the breeding season (September through April), halt work and have a biologist familiar with the nesting behavior of nēnē survey for nests in and around the project area prior to the resumption of any work. Repeat surveys after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest).

- Cease all work immediately and contact the Service for further guidance if a nest is discovered within a radius of 150 feet of proposed work, or a previously undiscovered nest is found within said radius after work begins.
- In areas where nēnē are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.

Band-Rumped Storm-Petrel (*Oceanodroma castro*) and the threatened Newell's shearwater or 'a'o (*Puffinus auricularis newelli*)

- Fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Install automatic motion sensor switches and timer controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.
- Avoid night time construction during the seabird fledging period, September 15 through December 15.

Green Sea Turtle (*Chelonia mydas*)

- No vehicle use on, or modification of, the beach/dune environment during the sea turtle nesting or hatching season, or on beaches where sea turtles are known to bask.
- Do not remove or destroy native dune vegetation.
- Incorporate applicable Best Management Practices for Work in Aquatic Environments into the project design.
- Have a biologist familiar with sea turtles conduct a visual survey of the project site to ensure no basking sea turtles are present. If a basking sea turtle is found within the project area, cease all mechanical or construction activities within 100 feet until the animal voluntarily leaves the area.
- Cease all activities between the basking turtle and the ocean.
- Remove any project-related debris, trash, or equipment from the beach or dune if not actively being used.
- Do not stockpile project-related materials in the intertidal zone, reef flats, or stream channels.
- Avoid night time work during the nesting and hatching season.
- Minimize the use of lighting and shield all project-related lights so the light is not visible from any beach. If lights can't be fully shielded or if headlights must be used, fully enclose the light source with light filtering tape or filters.
- Incorporate design measures into the construction or operation of buildings adjacent to the beach to reduce ambient outdoor lighting such as:
 - tinting or using automatic window shades for exterior windows that face the beach;

Melissa Cady
July 18, 2022
Page 5

- reducing the height of exterior lighting to below 3 feet and pointed downward or away from the beach; and
- minimize light intensity to the lowest level feasible and, when possible, include timers and motion sensors.

Blackburn's sphnix moth (*Manduca blackburni*)

- Remove any tree tobacco less than 3 feet tall.
- Monitor the site every 4-6 weeks for new tree tobacco growth before, during and after the proposed ground-disturbing activity.
- Monitoring for tree tobacco can be completed by any staff, such as groundskeeper or regular maintenance crew, provided with picture placards of tree tobacco at different life stages.

Further, we thank you for providing the recommended Biosecurity Protocol to avoid the introduction of invasive species, the Aquatic Best Management Practices, and the avoidance and minimization measures for listed plants. These recommendations and best management practices have also been forwarded to the project team for review and implementation in the proposed project, as applicable.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC
Robert Hobdy, Environmental Consultant
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APR 29 2022

DAVID Y. IGE
GOVERNOR



CURT T. OTAGURO
COMPTROLLER
AUDREY HIDANO
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)22.066

APR 26 2022

Yukino Uchiyama, AICP, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Uchiyama:

Subject: Chapter 343, Hawaii Revised Statutes Early Consultation Request for the Proposed Department of Hawaiian Home Lands' Puunani Homestead Subdivision Water System Storage Improvements Waikapu, Maui, Hawaii
TMK: (2) 3-5-002: 003 (por)

Thank you for the opportunity to comment on the subject project. We have no comments to offer at this time as the proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities.

If you have any questions, your staff may call Ms. Gayle Takasaki of the Planning Branch at (808) 586-0584.

Sincerely,

A handwritten signature in blue ink, appearing to read "CK", with a long horizontal flourish extending to the right.

CHRISTINE L. KINIMAKA
Public Works Administrator

GT:mo
c: MDO

July 18, 2022

Christine L. Kinimaka, Public Works Administrator
State of Hawai'i
Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawai'i 96810

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Ms. Kinimaka:

Thank you for your comment letter dated April 26, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we thank you for confirming that the proposed project does not impact any of the Department of Accounting and General Services projects or existing facilities.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF FACILITIES AND OPERATIONS

April 29, 2022

Yukino Uchiyama, AICP
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Re: Chapter 343 Hawaii Revised Statutes Early Consultation Request for the Proposed Department of Hawaiian Home Lands Puunani Homestead Subdivision Water System Storage Improvements, Waikapu, Maui, Hawaii

Dear Ms. Uchiyama:

Thank you for your letter dated April 14, 2022. The Hawaii State Department of Education (Department) has the following early consultation comments for the proposed Puunani Subdivision water system improvements (Project).

Based upon the information provided, the proposed Project will not impact Department facilities.

Thank you for the opportunity to comment. Should you have questions, please contact Robyn Loudermilk, School Lands and Facilities Specialist with the Facilities Development Branch, Planning Section, at (808) 784-5093 or by email at robyn.loudermilk@k12.hi.us.

Sincerely,

A handwritten signature in blue ink, appearing to read "Roy Ikeda".

Roy Ikeda
Interim Public Works Manager
Planning Section

RI:rl

c: Facilities Development Branch

July 18, 2022

Roy Ikeda, Interim Public Works Manager
Planning Section
State of Hawai'i
Department of Education
P.O. Box 2360
Honolulu, Hawai'i 96804

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Mr. Ikeda:

Thank you for your comment letter dated April 29, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we thank you for confirming that the proposed project will not impact the State of Hawai'i, Department of Education facilities.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

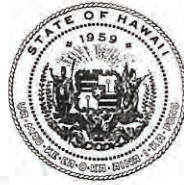


Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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STATE OF HAWAII
DEPARTMENT OF HEALTH
Maui District Health Office
54 South High St. Rm. #301
Wailuku, HI 96793

Lorin W. Pang, M.D., M.P.H.
District Health Officer

May 10, 2022

Ms. Yukino Uchiyama, AICP
Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793
{Via Email: planning@munekiyohiraga.com}

Dear Ms. Uchiyama:

Subject: Chapter 343, Hawaii Revised Statutes Early Consultation Request for the Proposed Department of Hawaiian Home Lands' Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapu, Maui, Hawaii
TMK: (2) 3-5-002:003

Thank you for the opportunity to comment on this project. We have no comments to offer.

It is strongly recommended that you review the department's website at <https://health.hawaii.gov/epo/landuse/> and contact the appropriate program that concerns your project.

Should you have any questions, please contact me at 808 984-8230 or email me at patricia.kitkowski@doh.hawaii.gov.

Sincerely,

A handwritten signature in blue ink that reads "Patti Kitkowski".

Patti Kitkowski
District Environmental Health Program Chief

c Joanna Seto, EMD Administrator {Via Email}

July 18, 2022

Patti Kitkowski, District Environmental Health Program Chief
State of Hawai'i
Department of Health
Maui District Health Office
8654 South High Street, Room 301
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i, Reference: (TMK (2)3-5-002:003)

Dear Ms. Kitkowski:

Thank you for your comment letter dated May 10, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we acknowledge that Maui District Health Office has no comments to offer at this time.

We appreciate your recommendation to review the department's website to contact additional State of Hawai'i, Department of Health (DOH) branches. We will consult with appropriate DOH branches as part of the future consultation process for the Draft Environmental Assessment (EA).

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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DAVID Y. IGE
GOVERNOR OF HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

May 17, 2022

Munekiyo Hiraga
Attention: Ms. Yukino Uchiyama
305 High Street, Suite 104
Wailuku, Hawaii 96793

via email: planning@munekiyohiraga.com

Dear Ms. Uchiyama:

SUBJECT: Early Consultation Request for the Proposed **DHHL's Pu'unani Homestead Subdivision Water System Storage Improvements** located at Waikapu, Island of Maui; TMK: (2) 3-5-002: 003 por. on behalf of the State DHHL

Thank you for the opportunity to review and comment on the subject matter. The Land Division of the Department of Land and Natural Resources (DLNR) distributed or made available a copy of your request pertaining to the subject matter to DLNR's Divisions for their review and comments.

At this time, enclosed are comments from the Engineering Division on the subject matter. Should you have any questions, please feel free to contact Darlene Nakamura at (808) 587-0417 or email: darlene.k.nakamura@hawaii.gov. Thank you.

Sincerely,

Russell Tsuji

Russell Y. Tsuji
Land Administrator

Enclosure
cc: Central Files



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Apr 25, 2022

MEMORANDUM

FROM: TO: **DLNR Agencies:**
 ___ Div. of Aquatic Resources
 ___ Div. of Boating & Ocean Recreation
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
 ___ Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
 ___ Office of Conservation & Coastal Lands
X Land Division – Maui District (daniel.i.ornellas@hawaii.gov)

TO: FROM: Russell Y. Tsuji, Land Administrator *Russell Tsuji*
 SUBJECT: Early Consultation Request for the Proposed **DHHL's Pu'unani Homestead Subdivision Water System Storage Improvements**
 LOCATION: Waikapu, Island of Maui; TMK: (2) 3-5-002: 003 por.
 APPLICANT: Munekiyo Hiraga on behalf of the State DHHL

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **May 13, 2022**.

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at darlene.k.nakamura@hawaii.gov. Thank you.

- BRIEF COMMENTS:**
- () We have no objections.
 - () We have no comments.
 - () We have no additional comments.
 - (✓) Comments are included/attached.

Signed: *C. S. Chang*
 Print Name: Carty S. Chang, Chief Engineer
 Division: Engineering Division
 Date: May 17, 2022

Attachments
cc: Central Files

**DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION**

LD/Russell Y. Tsuji

**Ref: Early Consultation Request for the Proposed DHHL's Pu'unani Homestead
Subdivision Water System Storage Improvements**

Location: Waikapu, Island of Maui

TMK(s): (2) 3-5-002: 003 por.

Applicant: Munekiyo Hiraga on behalf of the State DHHL

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high-risk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR, Chapter 1, Subchapter B, part 60 reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM). The official FIRMs can be accessed through FEMA's Map Service Center (msc.fema.gov). Our Flood Hazard Assessment Tool (FHAT) (<http://gis.hawaiiinfip.org/FHAT>) could also be used to research flood hazard information.

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7139.
- Kauai: County of Kauai, Department of Public Works (808) 241-4896.

The applicant should include water demands and infrastructure required to meet project needs. Please note that all State projects requiring water service from their local Department/Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

The applicant is required to provide water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update projections.

Signed: 
CARTY S. CHANG, CHIEF ENGINEER

Date: May 17, 2022

July 18, 2022

Russell Y. Tsuji, Land Administrator
State of Hawai'i
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai'i 96809

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i

Dear Mr. Tsuji:

Thank you for your comment letter dated May 17, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

ENGINEERING DIVISION

1. According to the Flood Hazard Assessment Tool (FHAT), the subject property is located within Flood Zone X, outside of the 0.2 percent annual chance flood plain. As such, the proposed project does not fall within the Special Flood Hazard Area.
2. Water demands and calculations for the DHHL Pu'unani Homestead Subdivision for which the proposed water storage tank improvements project will serve has been provided in the Final Environmental Assessment (EA) for the DHHL Pu'unani Homestead Subdivision which was published in November 2020. The DHHL had previously proposed to connect the Pu'unani Homestead Subdivision to the existing Department of Water Supply (DWS) infrastructure. However, the DHHL was informed by DWS that water system storage improvements would be necessary to increase storage capacity so that the DWS could adequately supply water to the subdivision. It is noted that the DNLR Engineering Division was consulted during the preparation of the Pu'unani Homestead Subdivision EA.

Thank you for providing the County National Flood Insurance Program (NFIP) contacts. Should there be questions regarding local flood ordinances, the County of Maui, Department of Planning shall be contacted.

Russell Y. Tsuji, Land Administrator
July 18, 2022
Page 2

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC
Darren Unemori, Warren S. Unemori, Engineering, Inc.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

May 12, 2022

VIA EMAIL: planning@munekiyohiraga.com

Ms. Yukino Uchiyama, AICP, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Uchiyama:

Subject: Early Consultation for Draft Environmental Assessment (EA)
Puunani Homestead Water Storage Tank
Honoapiilani Highway
Tax Map Key: (2) 3-5-002: 003 - Waikapu, Maui

Thank you for your letter dated April 14, 2022, requesting for our early consultation to your upcoming Draft EA required by Chapter 343, Hawaii Revised Statutes, due to the use of State lands and State funds. The upcoming Draft EA will disclose and identify environmental impacts that may be triggered by the proposed water storage system. A Final EA has been determined as a Finding of No Significant Impact status in November 2020 for the Puunani Homestead Subdivision and has been reviewed by the Hawaii Department of Transportation (HDOT) related to our letter STP 8.2933, dated June 17, 2020.

The proposed project on a 1.3-acre land involves the construction of a 500,000-gallon water tank, fencing, miscellaneous equipment, grading and drainage work. The proposed tank will be connected to the existing Kehalani Mid-Level Distribution System and will be dedicated to the Department of Water Supply.

A portion of the site is bordered by the State Honoapiilani Highway (Route 30) to the east and Kuikahi Drive, county roadway to the north. It is not confirmed at this time where the primary or secondary access points are located.

Ms. Yukino Uchiyama, AICP, Senior Associate
May 12, 2022
Page 2

HWY-PS 2.8351

The HDOT has the following comments:

1. Based on the proposed work and the location, it is anticipated that the project does not appear to generate significant impacts onto the nearby state highway facility.
2. A Use and Occupancy permit application should be submitted to the HDOT Highways Division for the use of any portion of the right-of-way, including construction staging or ingress/egress purposes along the State Honoapiilani Highway. A traffic control plan may also be required for the permit request.

If you have any questions, please contact Jeyan Thirugnanam, Systems Planning Engineer, Highways Division, Planning Branch at (808) 587-6336 or by email at Jeyan.Thirugnanam@hawaii.gov. Please reference file review number PS 2022-077.

Sincerely,



JADE T. BUTAY
Director of Transportation

July 18, 2022

Jade T. Butay, Director
State of Hawai'i
Department of Transportation
869 Punchbowl Street
Honolulu, Hawai'i 96813-5097

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i, Reference: DIR 0414 HWY-PS 2.8351

Dear Mr. Butay:

Thank you for your comment letter dated May 12, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

1. We acknowledge that the proposed project does not appear to generate significant impacts on the nearby State highway facility, Honoapi'ilani Highway.
2. We confirm that a Use and Occupancy permit will be submitted to the State of Hawai'i, Department of Transportation Highways Division should any portion of the State right-of-way (ROW) be used for construction staging or ingress and egress purposes. In addition, we acknowledge that a traffic control plan may be required for this permit request. It is noted that construction and maintenance access to the project site is anticipated to be via an existing paved driveway on Kuikahi Drive, and as such, the use of the State ROW is not anticipated.

Jade T. Butay, Director
July 18, 2022
Page 2

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,

A handwritten signature in cursive script that reads "Yukino Uchiyama".

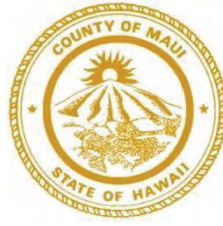
Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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MICHAEL P. VICTORINO
Mayor
BRADFORD K. VENTURA
Fire Chief
GAVIN L.M. FUJIOKA
Deputy Fire Chief



DEPARTMENT OF FIRE & PUBLIC SAFETY
FIRE PREVENTION BUREAU
COUNTY OF MAUI
313 MANEA PLACE
WAILUKU, HI 96793

April 26, 2022

VIA EMAIL: planning@munekiyohiraga.com

Munekiyo Hiraga
Attn: Yukino Uchiyama
305 High Street, Suite 104
Wailuku, Hawaii 96793

SUBJECT: EARLY CONSULTATION REQUEST FOR THE PROPOSED DEPARTMENT OF HAWAIIAN HOME LANDS' PUUNANI HOMESTEAD SUBDIVISION WATER SYSTEM STORAGE IMPROVEMENTS

Dear Kari,

Thank you for the opportunity to review your project. At this time Fire Prevention Bureau has no comments.

Our office does reserve the right to review and comment on future building permit application when detailed plans for this project are routed to our office for review.

If there are any questions or comments, please feel free to contact our office at (808) 876-4690 or by email at fire.prevention@mauicounty.gov.

Sincerely,

Plans Review - Fire Prevention Bureau

July 18, 2022

Fire Prevention Bureau
Attention: Plans Review Section
County of Maui
Department of Fire and Public Safety
313 Manea Place
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Sir or Madam:

Thank you for your comment letter dated April 26, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we acknowledge that the County of Maui, Fire Prevention Bureau has no comments to offer at this time.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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MICHAEL P. VICTORINO
Mayor

LORI TSUHAKO
Director

LINDA R. MUNSELL
Deputy Director



DEPARTMENT OF HOUSING
& HUMAN CONCERNS
COUNTY OF MAUI
2200 MAIN STREET, SUITE 546
WAILUKU, MAUI, HAWAII 96793
PHONE: (808) 270-7805

April 22, 2022

Yukino Uchiyama, AICP, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Uchiyama:

**SUBJECT: CHAPTER 343, HAWAII REVISED STATUTES EARLY
CONSULTATION REQUEST FOR THE PROPOSED
DEPARTMENT OF HAWAIIAN HOME LANDS' PUUNANI
HOMESTEAD SUBDIVISION WATER SYSTEM STORAGE
IMPROVEMENTS; WAIKAPU, MAUI, HAWAII**

The Department has reviewed the information submitted for the above subject project. Based on our review, we have determined that the project is not subject to Chapter 2.96, Maui County Code, and does not require a residential workforce housing agreement. At the present time, the Department has no additional comments to offer.

Please contact Mr. Buddy Almeida, Housing Administrator, at (808) 270-7351 if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Lori Tshako".

LORI TSUHAKO, LSW, ACSW
Director of Housing and Human Concerns

cc: Buddy Almeida, Housing Administrator

July 18, 2022

Lori Tsuhako, LS, ACSW, Director
County of Maui
Department of Housing and Human Concerns
2220 Main Street, Suite 546
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Ms. Tsuhako:

Thank you for your comment letter dated April 22, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we thank you for confirming that the project is not subject to Chapter 2.96 of the Maui County Code and does not require a residential workforce housing agreement.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

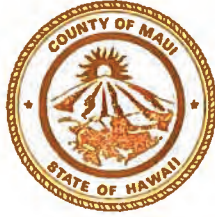
cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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MICHAEL P. VICTORINO
Mayor

KARLA H. PETERS
Director

SAMUAL A. MARVEL
Deputy Director



DEPARTMENT OF PARKS AND RECREATION

700 Hali'a Nako'a Street, Unit 2, Wailuku, Hawai'i 96793
Main Line (808) 270-7230 / Facsimile (808) 270-7942

April 20, 2022

Yukino Uchiyama, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Uchiyama:

SUBJECT: CHAPTER 343, HAWAI'I REVISED STATUTES EARLY CONSULTATION REQUEST FOR THE PROPOSED DEPARTMENT OF HAWAIIAN HOME LANDS' PU'UNANI HOMESTEAD SUBDIVISION WATER SYSTEM STORAGE IMPROVEMENTS; WAIKAPU, MAUI, HAWAI'I TMK (2) 3-5-002:003 (POR.)

Thank you for the opportunity to review and comment on the subject project. In accordance with Maui County Code 18.16.320 Parks and Playgrounds, this project is exempt from park assessment fees. The Department of Parks and Recreation has no further comments at this time.

Should you have any questions, please feel free to contact me or Kris Baptist, Acting Chief of Planning and Development, at kristofer.baptist@co.maui.hi.us or (808) 270-6158.

Sincerely,

A handwritten signature in black ink, appearing to read "K. Peters".

KARLA H. PETERS
Director of Parks and Recreation

c: Kris Baptist, Acting Chief of Planning and Development

KHP:KB:csa

July 18, 2022

Karla H. Peters, Director
County of Maui
Department of Parks and Recreation
700 Hali'a Nakoa Street, Unit 2
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Ms. Peters:

Thank you for your comment letter dated April 20, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we thank you for confirming that the proposed project is exempt from park assessment fees in accordance with Maui County Code 18.16.320.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC
K:\DATA\DDC\Puunani Water Tank\Applications\EC\Responses\DPR.docx

Subject: FW: Early Consultation Request - DHHL Water Tank Construction

-----Original Message-----

From: Paul Fasi <Paul.Fasi@co.maui.hi.us>

Sent: Monday, June 20, 2022 12:13 PM

To: Yukino Uchiyama <Yukino@munekiyohiraga.com>

Subject: Fwd: Early Consultation Request - DHHL Water Tank Construction

>>> Paul Fasi 6/20/2022 12:11 PM >>>

Ms. Yukino Uchitma:

At this time, the Department has no comment on the above matter. As a FONSI was published in 2020, the Department feels the matter is a DWS concern. Thank you.

Paul Fasi
Planner

July 18, 2022

Michele Chouteau McLean, AICP, Director
County of Maui
Attention: Paul Fasi, Planner
Department of Planning
One Main Plaza
2200 Main Street, Suite 619
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i, (TMK (2)3-5-002:003(por.))

Dear Ms. McLean:

Thank you for your email dated June 20, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we acknowledge that County of Maui, Department of Planning has no comments on the proposed water tank. We acknowledge that a Finding of No Significant Impact (FONSI) determination was issued for the DHHL Pu'unani Homestead Subdivision in 2020 and note that the DHHL is coordinating with the County of Maui, Department of Water Supply (DWS) on the proposed water tank storage improvements.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

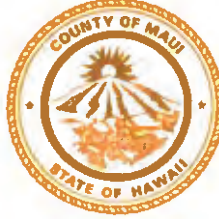
cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

K:\DATA\DDC\Puunani Water Tank\Applications\EC\EC Response\Planning_Dept.docx

MICHAEL P. VICTORINO
Mayor

MARC I. TAKAMORI
Director

MICHAEL B. DU PONT
Deputy Director



DEPARTMENT OF TRANSPORTATION
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

TELEPHONE: (808) 270-7511
FAX: (808) 270-7505

May 16, 2022

Yukino Uchiyama, AICP, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, HI 96793
Email: planning@munekiyohiraga.com

SUBJECT: Chapter 343, Hawai'i Revised Statutes Early Consultation Request for the Proposed Department of Hawaiian Home Lands' Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i

Dear Ms. Uchiyama,

Thank you for the opportunity to review and comment on the subject project. The Department of Transportation has no comment at this time.

Please feel free to contact me should you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to be "MT" or similar initials.

Marc Takamori
Director

July 18, 2022

Marc Takamori, Director
County of Maui
Department of Transportation
200 South High Street
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i, (TMK (2)3-5-002:003(por.))

Dear Mr. Takamori:

Thank you for your comment letter dated May 16, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we acknowledge that County of Maui, Department of Transportation has no comments to offer at this time.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

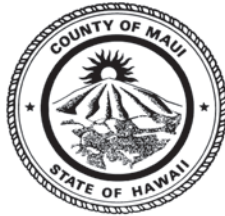
cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

K:\DATA\DDC\Puunani Water Tank\Applications\EC\Responses\County DOT.docx

MICHAEL P. VICTORINO
Mayor

HELENE KAU
Acting Director

SHAYNE R. AGAWA, P.E.
Deputy Director



DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793
<http://www.mauicounty.gov/water>

April 28, 2022

Yukino Uchiyama, AICP, Senior Associate
MUNEKIYO HIRAGA
via email: planning@munekiyohiraga.com

Dear Yukino Uchiyama:

SUBJECT: PU'UNANI HOMESTEAD SUBDIVISION – Early Consultation Request
Water System Storage Improvements
TMK: (2) 3-5-002:003, Wailuku, Maui

Thank you for the opportunity to comment on the subject project, involving the construction of a 500,000-gallon concrete water storage tank to supply the required domestic use, irrigation use and fire protection for the proposed 161-lot DHHL Pu'unani Homestead Subdivision.

The Department has been working with DHHL as to the tank location and configuration, which is indicated in the figures provided with the early consultation request letter. We will continue to review the details of the proposed tank with DHHL.

If you have any questions, please contact Tammy Yeh at (808) 270-7682 or at tammy.yeh@co.maui.hi.us. Engineering Division's main office number is (808) 270-7835.

Sincerely,

WENDY TAOMOTO, P.E.
Engineering Program Manager

TY

July 18, 2022

Wendy Taomoto, P.E., Engineering Program Manager
County of Maui
Department of Water Supply
200 South High Street
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Ms. Taomoto:

Thank you for your comment letter dated April 28, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we thank you for confirming that the County of Maui, Department of Water Supply will continue to review the details of the proposed water tank with DHHL.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

K:\DATA\DDC\Puunani Water Tank\Applications\EC\Responses\DWS.docx

Subject: FW: Proposed Department of Hawaiian Home Lands' Pu'unani Homestead Subdivision Water System Storage Improvements - Early Consultation Letter

From: HT-Plan Reviews <HT-PlanReviews@hawaiiantel.com>

Sent: Wednesday, April 20, 2022 9:46 AM

To: HT-Plan Reviews <HT-PlanReviews@hawaiiantel.com>; Yolanda Poouahi <yolanda@munekiyohiraga.com>; Farah Rajap <farah.rajap@hawaiiantel.com>

Cc: Emily Murai <emily@munekiyohiraga.com>; Karlynn Fukuda <karlynn@munekiyohiraga.com>; Yukino Uchiyama <Yukino@munekiyohiraga.com>; Gerry Sagucio <Gerry.Sagucio@hawaiiantel.com>

Subject: RE: Proposed Department of Hawaiian Home Lands' Pu'unani Homestead Subdivision Water System Storage Improvements - Early Consultation Letter

Aloha All,

Per Farah, we have no comments on the plans right now. Please, let us know if there are any changes or if you have any follow-up questions. Thank you!

Greg Kawachi

Specialist – Structure Engineer

O: 808.546.7666

C: 808.779.8324



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From: HT-Plan Reviews <HT-PlanReviews@hawaiiantel.com>

Sent: Monday, April 18, 2022 11:03 AM

To: Yolanda Poouahi <yolanda@munekiyohiraga.com>; Farah Rajap <farah.rajap@hawaiiantel.com>

Cc: Emily Murai <emily@munekiyohiraga.com>; Karlynn Fukuda <karlynn@munekiyohiraga.com>; Yukino Uchiyama <Yukino@munekiyohiraga.com>; HT-Plan Reviews <HT-PlanReviews@hawaiiantel.com>; Gerry Sagucio <Gerry.Sagucio@hawaiiantel.com>

Subject: RE: Proposed Department of Hawaiian Home Lands' Pu'unani Homestead Subdivision Water System Storage Improvements - Early Consultation Letter

Aloha All,

Thank you for your email. This has been assigned to Farah for review. Please, let us know if there are any updates or if you have any questions. Thank you!

Greg Kawachi

Specialist – Structure Engineer

O: 808.546.7666

C: 808.779.8324



NOTICE: This message is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged information. If you are not the intended recipient, any review, retransmission, dissemination, copying or other use of this message is strictly prohibited. If you received this message in error, please contact the sender immediately by reply email, delete this message from all computers, and destroy any printed copies.

July 18, 2022

via email: HT-PlanReviews@hawaiiantel.com

Greg Kawachi
Specialist - Structure Engineer
Hawaiian Telcom

SUBJECT: Response to Early Consultation Comments Regarding the Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Mr. Kawachi:

Thank you for your email dated April 20, 2022 regarding the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we acknowledge that Hawaiian Telcom has no comments to offer at this time.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,




Yukino Uchiyama, AICP
Senior Associate


YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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LETTERS RECEIVED DURING
THE DRAFT ENVIRONMENTAL
ASSESSMENT REVIEW PERIOD
AND RESPONSES TO
SUBSTANTIVE COMMENTS



X. LETTERS RECEIVED DURING THE DRAFT ENVIRONMENTAL ASSESSMENT REVIEW PERIOD AND RESPONSES TO SUBSTANTIVE COMMENTS

The Draft Environmental Assessment (EA) for the subject action was filed and published with the Office of Planning and Sustainable Development on July 23, 2022. The following agencies were sent a copy of the Draft EA. Comments on the Draft EA were received during the 30-day public comment period. Letters received as well as responses to substantive comments are included in this Chapter.

FEDERAL AGENCIES

1. Acting State Conservationist
Natural Resources Conservation Service
U.S. Department of Agriculture
300 Ala Moana Boulevard, Suite 4-118
Honolulu, HI 96850
2. Linda Speerstra, Chief
U.S. Department of the Army, Regulatory
Branch
U.S. Army Engineer District, Honolulu
Regulatory Branch, Building 230
Fort Shafter, HI 96858-5440
via email: CEPOH-RO@usace.army.mil
3. Cade London, Acting Island Team Leader
U. S. Fish and Wildlife Service
300 Ala Moana Blvd., Rm. 3-122
Honolulu, HI 96850
6. Keith Hayashi, Superintendent
State of Hawai'i
Department of Education
P.O. Box 2360
Honolulu, HI 96804
7. Dr. Elizabeth Char, Director
State of Hawai'i
Department of Health
1250 Punchbowl St., Room 325
Honolulu, HI 96813
8. Patti Kitkowski, Director
State of Hawaii
Department of Health
54 South High Street, #301
Wailuku, HI 96793

STATE AGENCIES

4. Curt Otaguro, Comptroller
State of Hawai'i
Department of Accounting and General
Services
1151 Punchbowl Street, #426
Honolulu, HI 96813
5. Phyllis Shimabukuro-Geiser, Chair
State of Hawai'i
Department of Agriculture
1428 South King Street
Honolulu, HI 96814-2512
9. Suzanne Case, Chairperson
State of Hawai'i
Department of Land and Natural Resources
P. O. Box 621
Honolulu, HI 96809
10. Jade Butay, Director
State of Hawai'i
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813
11. Sylvia Hussey, Chief Executive Officer
State of Hawai'i
Office of Hawaiian Affairs
560 N. Nimitz Highway, Suite 200
Honolulu, HI 96817

12. Mary Alice Evans, Director
State of Hawai'i
Office of Planning and Sustainable
Development
P. O. Box 2359
Honolulu, HI 96804

MAUI COUNTY AGENCIES

13. Eric Nakagawa, Director
County of Maui
Department of Environmental Management
200 South High Street
Wailuku, HI 96793

14. Brad Ventura, Chief
County of Maui
Department of Fire and Public Safety
200 Dairy Road
Kahului, HI 96732

15. Lori Tsuhako, Director
County of Maui
Department of Housing and Human
Concerns
2200 Main Street, Suite 546
Wailuku, HI 96793

16. Karla Peters, Director
County of Maui
Department of Parks and Recreation
700 Halia Nako Street, Unit 2F
Wailuku, HI 96793

17. Michele Chouteau McLean, Director
County of Maui
Department of Planning
2200 Main Street, Suite 315
Wailuku, HI 96793

18. Jordan Molina, Director
County of Maui
Department of Public Works
200 South High Street
Wailuku, HI 96793

19. Marc Takamori, Director
County of Maui
Department of Transportation
110 Ala'ihī Street, Suite 210
Kahului, HI 96732

20. Helene Kau, Director
County of Maui
Department of Water Supply
200 South High Street, 5th Floor
Wailuku, HI 96793

21. Herman Andaya, Emergency
Management Officer
County of Maui
Emergency Management Agency
200 South High Street
Wailuku, HI 96793

22. John Pelletier, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, HI 96793

23. Alice Lee, Council Chair
Maui County Council
200 South High Street
Wailuku, HI 96793

MAUI COUNTY ORGANIZATIONS

24. Blossom Feteira
Maui Mokuuni Council
via email: blossom96708@yahoo.com

25. Hawaiian Telcom Plan Review Department
via email: HT-PlanReviews@hawaiiantel.com

26. Michael Grider, Manager, Engineering
Maui Electric Company, Ltd.
P.O. Box 398
Kahului, HI 96733

27. Clyde Kahalehau, Po'o
Aha Moku O Wailuku
via email: ahamokuowailuku@yahoo.com

28. Travis Polido, President
Waikapu Community Association
via email: waikapuca@gmail.com

29. Glenn Adolpho
Waikapu Gardens Homeowners Association
via email: gncadolpho@hawaiiantel.net

30. Wailuku Heights Extension Unit I
Community Association
P.O. Box 698
Wailuku, HI 96793

31. Wailuku Heights Extension Unit II
Community Association
c/o Hawaiiana Management Co.
140 Hoohana Street, Suite 208
Kahului, HI 96732
(Mail Returned)

32. Joseph G. Blackburn, II
Waiolani Community Association
P.O. Box 1067
Wailuku, HI 96793

33. Joseph G. Blackburn, II
Waiolani Elua Community Association
P.O. Box 1067
Wailuku, HI 96793

34. Joseph G. Blackburn, II
Waiolani Mauka Community Association
P.O. Box 1067
Wailuku, HI 96793

35. Scott Matsuura, President
Kehalani Community Association
P. O. Box 1530
Wailuku, HI 96793

DHHL HOMESTEAD ASSOCIATIONS

36. Ahahui Aina Hoopulapula o Waiohuli

37. Ka Ohana O Kahikinui, Inc.

38. Keokea Homestead Farm Lots Association

39. Paukukalo Hawaiian Homestead Commtty
Association

40. Pa'upena Community Development
Corporation

41. Villages of Leialii Phase 1A Association

42. Waiehu Kou Community Homestead
Association

43. Waiehu Kou Residence Lots, Phase II
Association Inc.

44. Waiehu Kou Phase 3 Association, Inc.

45. Waiehu Kou Phase 4 Association, Inc.

46. Waiohuli Hawaiian Homesteaders Inc.

47. Keokea Waiohuli Undivided Lessees

48. Maui Mokuuni Council

LIBRARIES

49. State of Hawai'i
Department of Education
Hawai'i State Library
Hawai'i Documents Center
478 South King Street
Honolulu, Hawai'i 96813

50. Wailuku Public Library
251 South High Street
Wailuku, Hawai'i 96793

Subject: FW: USFWS Comments on Draft EA Proposed Pu'ualani Homestead Subdivision Water System Storage Improvements, Waikapu, Maui
Attachments: USFWS_Comments_08052022_2022-07-23-MA-DEA-Puunani-Homestead-Subdivision-Water-System-Storage-Improvements(1).pdf

From: Asman, Lindsay <Lindsay_Asman@fws.gov>
Sent: Wednesday, August 10, 2022 10:09 AM
To: General eMail <planning@munekiyohiraga.com>
Subject: USFWS Comments on Draft EA Proposed Pu'ualani Homestead Subdivision Water System Storage Improvements, Waikapu, Maui

Aloha,

Thank you for reaching out to us for assistance. We received your request for preliminary comments on your preparation of a Draft EA for the proposed project. We have provided comments related to federally listed species that may be affected (comments are in attached document).

Please let us know if we can be of any further assistance. We appreciate your continued commitment to protecting the environment and species of Hawai'i and we look forward to working with you.

Lindsay Asman
Island Team Manager for Hawai'i Island and Maui Nui
Pacific Islands Fish and Wildlife Office
U.S. Fish and Wildlife Service
300 Ala Moana Blvd., Room 3-122, Honolulu, HI 96850
Phone 808-792-9490
<https://www.fws.gov/pacificislands/>

From: Wolfe, Matthew J <matthew_wolfe@fws.gov> on behalf of PIFWO_Admin, FW1 <pifwo_admin@fws.gov>
Sent: Tuesday, July 26, 2022 2:17 PM
To: Asman, Lindsay <Lindsay_Asman@fws.gov>
Cc: Polhemus, Dan <dan_polhemus@fws.gov>
Subject: Fw: Draft EA Proposed Pu'ualani Homestead Subdivision Water System Storage Improvements, Waikapu, Maui

Hi All,

The Admin staff has not created a project record in ECOSphere or uploaded anything into the e-Chron folders.

Until a Correspondence Manager's is hired and trained, your staff should perform an ECOSphere search to determine if the project is new or already exists in ECOSphere. If a new project record needs to be created, please enter the appropriate information into ECOSphere to generate a new project number. I also ask that your

staff upload any appropriate documents into a corresponding folder (that your staff will have to create) in the e-Chron.

Please let me know if you have any questions, and I will do my best to provide an accurate response.

Thank you in advance for your understanding.

Very Respectfully,

Matthew J.Y.M. Wolfe

Office Assistant

Pacific Islands Fish & Wildlife Office

U.S. Fish & Wildlife Service

Department of the Interior

300 Ala Moana Blvd, Room 3-122

Honolulu, HI 96850

Work: 808-792-9438

fws.gov

From: PIFWO_ESFrontDesk_Printer@fws.gov <PIFWO_ESFrontDesk_Printer@fws.gov>

Sent: Tuesday, July 26, 2022 1:14 PM

To: PIFWO_Admin, FW1 <pifwo_admin@fws.gov>

Subject: Draft EA Proposed Pu'uialani Homestead Subdivision Water System Subdivision Storage Improvements, Waikapu, Maui

Please open the attached document. It was sent to you from the USFWS ES Office in Honolulu.

Attachment File Type: pdf, Multi-Page

Multifunction Printer Location: Front Desk

Multifunction Printer Name: IFW1PIE-PR-ESCO1

For more information on Xerox products and solutions, please visit

<https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.xerox.com%2F&data=05%7C01%7Cpif>

wo_admin%40fws.gov%7Cfa4e5c48a044499fc05e08da6f5cacff%7C0693b5ba4b184d7b9341f32f400a5494%7C0%7C0%7C637944741244894251%7CUnknown%7CTWFpbGZsb3d8eyJWljojMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikk1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=D4Pz%2BDq1I1Q7wi9FiUzPI0Wnx47aDNqN%2Fzk4K0m4k%2BQ%3D&reserved=0

significant adverse impacts associated with floods, tsunamis, and sea level rise are not anticipated.

6. **Streams and Wetlands**

a. **Existing Conditions**

There are no streams or wetlands located within the project site. A natural, typically dry drainageway (gully), Kaiapaokaʻilio Stream, that originates in the West Maui Mountains traverses through the TMK parcel and into the northernmost portion of the property. See **Figure 8**. Kaiapaokaʻilio Stream ultimately empties into a dry overflow basin in the Waiʻale Reservoir.

As further discussed in Section A.8., Archaeological Resources, of this chapter, there are a number of old ditches located in the vicinity, but not within the project site, including Waiheʻe Ditch and Waikapū Ditch, which are considered to be part of a network of old irrigation systems for the sugar cane industry. Wailuku Water Reservoir No. 10 that connects to the Waiheʻe Ditch and the 1.5 million gallon (MG) Kehalani Mid-Level Storage Tank that serves the Kehalani Subdivision is located immediately to the west of the project site. Refer to **Figure 8**.

b. **Potential Impacts and Mitigation Measures**

The project site is located in the midst of existing County water system infrastructure and residential developments in Waikapū and Wailuku and does not contain any streams or wetlands. Appropriate BMPs will be used during construction and applicable drainage detention methods will be employed. DHHL will make every effort to ensure that the project will not have a direct impact upon the natural drainageway or any other waterbody in the region.

7. **Flora and Fauna**

a. **Existing Conditions**

A flora and fauna survey was conducted for the proposed Kuʻikahi Village Project by Robert W. Hobdy, environmental consultant, in June 2020 which is planned to be located on the same parcel, immediately east of the proposed Puʻunani Water System Storage Tank.

The objectives of the survey were to document what plant and animal species occur on the property, document the status and abundance of each

Summary of comments: USFWS _Comments_08052022_2022-07-23-MA-DEA-Puunani-H omestead-Subdivision-Water-System-Storage-Improvements(1).pdf

Page:29

Number: 1 Author: lwright Subject: Highlight Date: 2022-08-10 10:02:31

Is this a suitable time to survey for plants in this area? Surveys for plants should always occur during the time when detection rate is most reasonable for the area, otherwise we expect many plants would not be identifiable.



Figure 8

Pu'unani Homestead Subdivision Water System Storage Improvements Streams and Wetlands Map



Prepared for: State of Hawai'i, Department of Hawaiian Home Lands



species, determine the presence of any native flora and fauna, particularly that are federally listed as threatened or endangered, and, if such occur, identify what features of the habitat may be essential for these species, and to determine if the project area contains any special habitats, which if lost or altered, might result in a significant negative impact on the flora and fauna in the vicinity of the project.

A walk-through botanical survey was conducted to identify all plant species, distribution, and abundance at the project site. The vegetation in the project area was dominated by tall, dense grass. Plant diversity was low and many species were heavily grazed by goats and deer. A total of 30 plant species were recorded during the survey. One (1) species of Guinea grass was abundant throughout the project area, two (2) other species were common, koa haole and glycine. The remaining 27 plant species were either uncommon or rare. There were no native plants found during the survey.

In conjunction with the botanical survey, a walk-through fauna survey was also conducted. Additionally, field observations were made with the aid of binoculars and by listening to vocalizations. An evening visit was made to the area to record crepuscular activities and vocalization and to see if there was any evidence of occurrence of the endemic and endangered Hawaiian hoary bat in the area. Signs of presence of two (2) species of non-native mammals were observed in the project area during two (2) site visits, domestic goats and axis deer. An evening survey using a bat-detecting device was made in the project area to determine any presence of the Hawaiian hoary bat. No bat activity was detected with the use of this device. Other nonnative mammals that would likely use this project area, but which were not seen, include rats, mice, and domestic cats. Bird diversity and total numbers were low in the project area. Only six (6) widespread non-native bird species were observed during the two (2) site visits. One (1) species was uncommon, the zebra dove, while the remaining five (5) species were all of rare occurrence. A few other nonnative bird species would likely utilize this habitat occasionally, but this dry, nearly monotypic grassland is not suitable for Hawai'i's native forest birds, sea birds, water birds or nēnē, and none were seen. Similarly, insect species and total numbers were likewise sparse in the project area. Six (6) non-native insects were recorded during the two (2) site visits. One (1) species was uncommon, the long-tailed blue butterfly. The remaining five (5) insect species were of rare occurrence. No native insects were seen, and no host plants for any rare native insects were seen.

All mammal, bird and insect species recorded in this project area were nonnative species. Heavy grazing and browsing by domestic and wild

This methodology is inadequate to determine whether Hawaiian hoary bats are present. If vegetation taller than 15 ft tall would be removed, we recommend it occur outside the breeding season (June 1 through Sept. 15) as young bats may be unable to flee and can be injured or killed.

animals has reduced plant species to only the hardiest and least edible components. This in turn has resulted in low numbers of all other animal species at the project area.

In addition, the U.S. Fish and Wildlife Service (USFWS) provided an early consultation comment via email on April 24, 2022, and requested the project to utilize its online portal to develop an official species list for the project. The official species list downloaded from the USFWS Information for Planning and Consultation portal is included herein as **Appendix “B”**. The list includes a total of 29 threatened, endangered, or candidate species which may be present in the area of the proposed action. See **Table 1**.

Table 1. U.S. Fish and Wildlife Service Official Species List

Scientific Name	Common Name/Hawaiian Name	Federal Status
Mammals		
<i>Lasiurus cinereus semotus</i>	Hawaiian Hoary Bat/‘Ōpe‘ape‘a	Endangered
Birds		
<i>Oceanodroma castro</i>	Band-rumped Storm-petrel	Endangered
<i>Loxops coccineus</i>	Hawai‘i ‘Ākepa	Endangered
<i>Anas wyvilliana</i>	Hawaiian Duck/Koloa	Endangered
<i>Fulica americana alai</i>	Hawaiian Coot/‘Alae kea	Endangered
<i>Branta (=Nesothen) sandwicensis</i>	Hawaiian Goose/Nēnē	Threatened
<i>Himantopus mexicanus knudseni</i>	Hawaiian Stilt/Ae‘o	Endangered
<i>Puffinus auricularis newelli</i>	Newell’s Townsend’s Shearwater	Threatened
Reptiles		
<i>Chelonia mydas</i>	Green Sea Turtle	Threatened
Insects		
<i>Manduca blackburni</i>	Blackburn’s Sphinx Moth	Endangered
Flowering Plants		
<i>Hibiscus brackenridgei</i>	Native Yellow Hibiscus/Ma‘o hau	Endangered
<i>Nothoestrum latifolium</i>	‘Aiea	Endangered
<i>Pseudognaphalium sandwicense var. molokaiense</i>	‘Ena‘ena	Endangered
<i>Bonamia menziesii</i>	No common name	Endangered
<i>Panicum fauriei var. carteri</i>	Carter’s Panicgrass	Endangered
<i>Gouania hillebrandii</i>	No common name	Endangered
<i>Gardenia brighamii</i>	Hawaiian Gardenia/Na‘u	Endangered
<i>Portulaca villosa</i>	‘Ihi	Endangered
<i>Bidens micrantha ssp. kalealaha</i>	Ko‘oko‘olau	Endangered
<i>Abutilon menziesii</i>	Ko‘olua‘ula	Endangered

Number: 1 Author: Iwright Subject: Highlight Date: 2022-08-10 10:03:21

Absent rigorous detection methodologies, it is extremely unlikely that if bats were present that they would be detected. To avoid injury or mortality of young nonvulant (unable to fly) pups, we recommend any vegetation taller than 15 ft tall be removed outside the pupping season, which extends June 1 through Sept. 15. If the contractor/project proponent were to call us, as suggested, these would be our recommendations. Otherwise, we would recommend they acquire an incidental take permit for bats in compliance with a Habitat Conservation Plan.

Number: 2 Author: Iwright Subject: Highlight Date: 2022-08-05 09:15:05

This does not provide clarity on whether outdoor nighttime lighting would be avoided. Please clarify whether nighttime outdoor lighting would occur and if so whether the lighting will be adequately shielded to avoid causing seabird fallout. If nighttime lighting would be used and would not be shielded or implement the previously recommended avoidance and minimization measures we recommend attaining an incidental take permit in compliance with a Habitat Conservation Plan for seabirds.

Scientific Name	Common Name/Hawaiian Name	Federal Status
<i>Santalum haleakalae</i> var. <i>lanaiense</i>	Lanai Sandalwood/'Iliahi	Endangered
<i>Sesbania tomentosa</i>	'Ōhai	Endangered
<i>Achyranthes splendens</i> var. <i>rotundata</i>	Round-leaved Chaff-flower	Endangered
<i>Schiedea salicaria</i>	No common name	Endangered
<i>Spermolepis hawaiiensis</i>	No common name	Endangered
<i>Tetramolopium remyi</i>	No common name	Endangered
<i>Mezoneuron kawaiense</i>	Uhiuhi	Endangered
<i>Vigna o-wahuensis</i>	No common name	Endangered
<i>Isodendron pyrifolium</i>	Wahine noho kula	Endangered

b.

Potential Impacts and Mitigation Measures

As discussed above, the flora and fauna present at the project site were entirely represented by non-native species of no environmental concern.

While the Hawaiian hoary bat was not detected at the project site, the flora and fauna report noted that the bats are highly mobile and appear to migrate around in response to flushes in insect activity, wherever it may occur. As such, there is a likelihood that these bats may utilize the habitat on the subject property at some time during the year. The report recommended that should these bats be present, the USFWS will be consulted on how to proceed so that these bats are not harmed or killed.

Furthermore, while not seen at the site, there are two (2) native seabirds, the endangered Hawaiian petrel (*Pterodroma sanwicensis*) and the threatened Newell's shearwater (*Puffinus newelli*), that fly over lowlands during the evenings on their way to their burrows high in the mountains and then fly out to the ocean early in the morning during the summer and fall months. These seabirds, and especially their young fledglings, are attracted to bright lights and can be disoriented and crash. They are then vulnerable to injury, vehicle strikes or predators. The flora and fauna report recommended that any significant outdoor lighting be shielded to direct the light downward.

In addition, the USFWS' official species list includes a total of 29 threatened, endangered, or candidate species which may be present in the area of the proposed action. Refer to **Table 1**. The official species list and USFWS' recommended conservation measures have been forwarded to the project team and will be implemented, as may be applicable.

With implementation of the above-noted mitigation measures, the development of the proposed project is not anticipated to result in a significant negative impact on native fauna or habitats in this part of Maui.¹

8. **Archaeological Resources**

a. **Existing Conditions**

A previous Archaeological Inventory Survey (AIS) was conducted in 2005 for two (2) parcels totaling 215.8 acres (TMK Nos. (2)3-5-002:002 and 003), which included the project area. The AIS was conducted by Scientific Consultant Services, Inc. (SCS) and was composed of historic background settlement pattern research, a complete pedestrian survey of the survey area, and subsurface testing via backhoe and reporting. The State Historic Preservation Division (SHPD) accepted the AIS by letter dated November 18, 2005. See **Appendix “C”** and **Appendix “C-1”**.

The literature research review involved a review of all previous archaeological work conducted in the surrounding area. The fieldwork involved the execution of a complete pedestrian survey of the subject area, as well as lands beyond for the purpose of site inventory and limited subsurface testing to evaluate the significance of any subsurface deposits. Laboratory work consisted of analysis of any subsurface deposits found during the field work.

During the field inspection, seven (7) historical sites related to the former use of the area for sugar cane cultivation were identified. The sites were determined significant under Criterion “D” as having the potential to yield information important to understanding the history of the region and were determined to be adequately documented by SHPD. Refer to **Appendix “C”**. The sites included Waihe‘e Ditch (State Site 50-50-04-5197), Waikapū Ditch (State Site 50-50-04-5493), an unnamed lesser ditch (State Site 50-50-04-5729), another unnamed lesser ditch (State Site 50-50-04-5726), a larger unnamed reservoir (State Site 50-50-04-5727), a series of 14 sugar canefield erosion-control soil berms (State Site 50-50-04-5728), and Old Waikapū Road (State Site 50-50-04-5730). All seven (7) sites are located outside of the project area. See **Figure 9**. These sites revealed a network of irrigation systems in the form of ditches and a reservoir, erosion-control berms, and a historic dirt road and were a part of the turn-of-the century sugar industry in Hawai‘i. No burial features or human remains were identified during the pedestrian surveys or subsurface testing.

The DEA determination of no significant negative impact would depend on implementing USFWS avoidance and minimization measures for the following (otherwise, if listed species were present we expect adverse effects may occur):

- 1) plant surveys should occur during the time of year when plant detection is highest (not during the dry season when listed plants are unlikely to be detectable)
- 2) vegetation taller than 15ft tall should not be removed during the Hawaiian hoary bat pupping season (from June 1 through Sept. 15)
- 3) any nighttime outdoor lighting use should be avoided or if required, shielded and facing the ground to avoid seabird fallout.

October 8, 2022

Lindsay Asman, Island Team Manager
U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Blvd., Room 3-122
Honolulu, Hawai'i 96850

**SUBJECT: Response to Draft Environmental Assessment Comments
Regarding Proposed Department of Hawaiian Home Lands,
Pu'unani Homestead Subdivision Water System Storage
Improvements; Waikapū, Maui, Hawai'i**

Dear Ms. Asman:

Thank you for your comments dated August 10, 2022, regarding the Proposed Department of Hawaiian Home Lands (DHHL), Draft Environmental Assessment (EA) for the Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

- It is not anticipated that another survey during the wet season would reveal any additional native or endangered plants. The project area has been plowed, burned and harvested for over a hundred years as part of a former sugar cane plantation, and has been heavily grazed by deer and goats in recent years. If a wet season survey is conducted, it is anticipated that some additional weedy plants which are of no concern would be identified.
- Clearing of vegetation taller than 15 feet tall will be avoided during the 'Ōpe'ape'a breeding season (June 1 through September 15), as practicable.
- Outdoor lighting is not proposed as part of this project. However, should outdoor lighting be required, it will be adequately shielded to avoid causing seabird fallout.

Lindsay Asman, Island Team Manager
October 8, 2022
Page 2

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF FACILITIES AND OPERATIONS

August 12, 2022

Yukino Uchiyama, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Re: Draft Environmental Assessment for the Proposed Puunani Homestead Subdivision
Water System Storage Improvements; Waikapu, Maui, TMK (2)3-5-002:003(por.)

Dear Ms. Uchiyama:

Thank you for your letter dated July 21, 2022. The Hawaii Department of Education previously provided comments on the Project by letter dated April 29, 2022 and has no additional comments.

Thank you for the opportunity to comment. Should you have any questions, please contact Cori China of the Facilities Development Branch, Planning Section, at (808) 784-5080 or via email at cori.china@k12.hi.us.

Sincerely,

A handwritten signature in blue ink, appearing to read "Roy Ikeda".

Roy Ikeda
Interim Public Works Manager
Planning Section

RI:ctc

c: Facilities Development Branch

October 8, 2022

Roy Ikeda, Interim Public Works Manager
State of Hawai'i
Department of Education
P.O. Box 2360
Honolulu, Hawai'i 96804

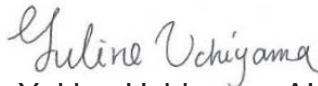
SUBJECT: Response to Draft Environmental Assessment Comments
Regarding Proposed Department of Hawaiian Home Lands,
Pu'unani Homestead Subdivision Water System Storage
Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Mr. Ikeda:

Thank you for your letter dated August 12, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we acknowledge that the Department of Education (DOE) has no additional comments to offer at this time. We also acknowledge that the DOE previously provided comments on this project on April 29, 2022 and had indicated that it will not impact DOE facilities.

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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From: Cab General <Cab.General@doh.hawaii.gov>
Sent: Thursday, August 4, 2022 5:54 AM
To: steward.t.matsunaga@hawaii.gov; General eMail
Subject: Pu'unani Homestead Subdivision Water System Storage Improvements -- Draft EA (AFNSI)

Aloha,

Thank you for the opportunity to provide comments on the subject project. Based on review of Pu'unani Homestead Subdivision Water System Storage Improvements Draft EA, CAB has the following comments:

- Department of Health, Administrative Rule: Title 11, Chapter 26, Vector Control, Section 11-26-35, Rodents; Demolition of Structures and Clearing of Sites and Vacant Lots, requires that:
 - No person, firm or corporation shall demolish or clear any structure, site, or vacant lot without first ascertaining the presence or absence of rodents which may endanger the public health by dispersal from such premises.
 - Should such inspection reveal the presence of rodents, the person, firm, or corporation shall eradicate the rodents before demolishing or clearing the structure, site, or vacant lot.
 - The Department may conduct an independent inspection to monitor compliance, or request a written report.

Please see our standard comments at:

<https://health.hawaii.gov/cab/files/2022/05/Standard-Comments-for-Land-Use-Reviews-Clean-Air-Branch-2022-1.pdf>

Please let me know if you have any questions or concerns.

Kristen Caskey, EHS
Kristen.caskey@doh.hawaii.gov
Clean Air Branch
Hawaii State Department of Health

October 8, 2022

[via email: kristen.caskey@doh.hawaii.gov](mailto:kristen.caskey@doh.hawaii.gov)

Kristen Caskey, EHS
State of Hawai'i
Department of Health, Clean Air Branch
2827 Waimano Home Road, #130
Pearl City, Hawai'i 96782

SUBJECT: Response to Draft Environmental Assessment Comments Regarding Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i

Dear Ms. Caskey:

Thank you for your email dated August 4, 2022, regarding the Proposed Department of Hawaiian Home Lands (DHHL), Draft Environmental Assessment (EA) for the Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

- We confirm that any site clearing will comply with the State of Hawai'i, Department of Health (DOH), Administrative Rule: Title 11, Chapter 26, Vector Control, Section 11-26-35, Rodents. We note that demolition of structures is not anticipated as part of this project.
- We note that a flora and fauna survey conducted for the project area did not identify the presence of rodents. However, should rodents be present in the project site, they will be eradicated prior to any site clearing.
- We acknowledge that the State of Hawai'i, Department of Health (DOH) may conduct an independent inspection to monitor compliance, or request a written report.
- Lastly, thank you for providing a list of DOH Clean Air Branch standard comments. These comments have been forwarded to the project team for review and incorporation into the project, as practicable.

Kristen Caskey, EHS
October 8, 2022
Page 2

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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AUG 24 2022

DAVID Y. IGE
GOVERNOR OF HAWAII



ELIZABETH A. CHAR, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
Maui District Health Office
54 South High St. Rm. #301
Wailuku, HI 96793

Lorin W. Pang, M.D., M.P.H.
District Health Officer

August 22, 2022

Ms. Yukino Uchiyama, AICP
Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii, 96793

Dear Ms. Uchiyama:

Subject: Draft Environmental Assessment for the Proposed Pu'unani Homestead
Subdivision Water System Storage Improvements, Waikapu, Maui
TMK: (2) 3-5-002:003 (por.)

Thank you for the opportunity to review this project. We have no comments to offer.

It is strongly recommended that you review the department's website at
<https://health.hawaii.gov/epo/landuse/> and contact the appropriate program that concerns your
project.

Should you have any questions, please contact me at 808 984-8230 or email me at
patricia.kitkowski@doh.hawaii.gov.

Sincerely,

A handwritten signature in blue ink that reads "Patti Kitkowski".

Patti Kitkowski
District Environmental Health Program Chief

c Joanna L. Seto, EMD Chief {Via Email}

October 8, 2022

Patti Kitowski, District Environmental
Health Program Chief
State of Hawai'i, Department of Health
Maui District Health Office
54 South High Street, Room 301
Wailuku, Hawai'i, 96793

**SUBJECT: Response to Draft Environmental Assessment Comments
Regarding Proposed Department of Hawaiian Home Lands,
Pu'unani Homestead Subdivision Water System Storage
Improvements; Waikapū, Maui, Hawai'i**

Dear Ms. Kitowski:

Thank you for your letter dated August 22, 2022 with comments regarding the Proposed Department of Hawaiian Home Lands (DHHL), Draft Environmental Assessment (EA) for the Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

- Thank you for the recommendation to review the State of Hawai'i, Department of Health (DOH) website to contact the appropriate program concerning this project.
- The DOH website has been consulted and as a water tank system storage project for a residential subdivision, the Safe Drinking Water Branch (SDWB) standard comments for Draft EAs available at: <https://health.hawaii.gov/sdwb/files/2020/11/SDWBStdCmts2020.docx-signed.pdf> have been forwarded to the project team for review and incorporation into the project, as applicable.
- We also note that the DOH Clean Air Branch (CAB) has provided comments on the Draft EA for the project which will be included in the Final EA.

Patti Kitowski, District Environmental
Health Program Chief
October 8, 2022
Page 2

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC
Darren Unemori, Warren S. Unemori Engineering, Inc.

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DAVID Y. IGE
GOVERNOR OF HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Aug 18, 2022

Munekiyo Hiraga
Attention: Ms. Yukino Uchiyama
305 High Street, Suite 104
Wailuku, Hawaii 96793

via email: planning@munekiyohiraga.com

Dear Ms. Uchiyama:

SUBJECT: Draft Environmental Assessment for the Proposed **Pu'unani Homestead Subdivision Water System Storage Improvements** located at Waikapu, Island of Maui; TMK: (2) 3-5-002:003 por. on behalf of Department of Hawaiian Home Lands

Thank you for the opportunity to review and comment on the subject matter. The Land Division of the Department of Land and Natural Resources (DLNR) distributed or made available a copy of your request pertaining to the subject matter to DLNR's Divisions for their review and comments.

At this time, enclosed are comments from the (a) Engineering Division, (b) Division of Forestry & Wildlife, and (c) Land Division-Maui District on the subject matter. Should you have any questions, please feel free to contact Darlene Nakamura at (808) 587-0417 or email: darlene.k.nakamura@hawaii.gov. Thank you.

Sincerely,

Russell Tsuji

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Jul 29, 2022

MEMORANDUM

FROM: TO:

DLNR Agencies:

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division** (DLNR.ENGR@hawaii.gov)
- Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
- Div. of State Parks
- Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
- Office of Conservation & Coastal Lands
- Land Division – Maui District (daniel.i.ornellas@hawaii.gov)

TO: **FROM:** Russell Y. Tsuji, Land Administrator *Russell Tsuji*
SUBJECT: Draft Environmental Assessment for the Proposed **Pu'unani Homestead Subdivision Water System Storage Improvements**
LOCATION: Waikapu, Island of Maui; TMK: (2) 3-5-002:003 por.
APPLICANT: Munekiyo Hiraga on behalf of Department of Hawaiian Home Lands


Transmitted for your review and comment is information on the above-referenced subject matter. The DEA was published on July 23, 2022, by the State Environmental Review Program (formerly the Office of Environmental Quality Control) at the Office of Planning and Sustainable Development in the periodic bulletin, The Environmental Notice, available at the following link:

[https://files.hawaii.gov/dbedt/erp/The Environmental Notice/2022-07-23-TEN.pdf](https://files.hawaii.gov/dbedt/erp/The_Environmental_Notice/2022-07-23-TEN.pdf)

Please submit any comments by **August 19, 2022**. If no response is received by this date, we will assume your agency has no comments. Should you have any questions, please contact Darlene Nakamura directly via email at darlene.k.nakamura@hawaii.gov. Thank you.

BRIEF COMMENTS:

- () We have no objections.
- () We have no comments.
- (✓) We have no additional comments.
- () Comments are included/attached.

Signed: 
Print Name: Carty S. Chang, Chief Engineer
Division: Engineering Division
Date: Aug 15, 2022

Attachments
cc: Central Files



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Jul 29, 2022

MEMORANDUM

TO: **DLNR Agencies:**
___ Div. of Aquatic Resources
___ Div. of Boating & Ocean Recreation
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
___ Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
___ Office of Conservation & Coastal Lands
X Land Division – Maui District (daniel.l.ornellas@hawaii.gov)

FROM: Russell Y. Tsuji, Land Administrator *Russell Tsuji*
SUBJECT: Draft Environmental Assessment for the Proposed **Pu'unani Homestead Subdivision Water System Storage Improvements**
LOCATION: Waikapu, Island of Maui; TMK: (2) 3-5-002:003 por.
APPLICANT: Munekiyo Hiraga on behalf of Department of Hawaiian Home Lands

Transmitted for your review and comment is information on the above-referenced subject matter. The DEA was published on July 23, 2022, by the State Environmental Review Program (formerly the Office of Environmental Quality Control) at the Office of Planning and Sustainable Development in the periodic bulletin, The Environmental Notice, available at the following link:

https://files.hawaii.gov/dbedt/erp/The_Environmental_Notice/2022-07-23-TEN.pdf

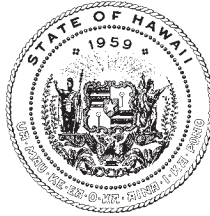
Please submit any comments by **August 19, 2022**. If no response is received by this date, we will assume your agency has no comments. Should you have any questions, please contact Darlene Nakamura directly via email at darlene.k.nakamura@hawaii.gov. Thank you.

BRIEF COMMENTS:

- () We have no objections.
- () We have no comments.
- () We have no additional comments.
- () Comments are included/attached.

Signed: *Lainie Berry*
Print Name: LAINIE BERRY, Wildlife Program Mgr.
Division: Division of Forestry and Wildlife
Date: Aug 4, 2022

Attachments
cc: Central Files



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET, ROOM 325
HONOLULU, HAWAII 96813

August 4, 2022

MEMORANDUM

Log no. 3767

TO: RUSELL Y. TSUJI, Land Administrator
Land Division

FROM: LAINIE BERRY, Wildlife Program Manager
Division of Forestry and Wildlife

SUBJECT: **Division of Forestry and Wildlife Comments for a Draft Environmental Assessment (DEA) for the Pu'unani Homestead Subdivision Water System Storage Improvements on Maui**

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your request for comments for DEA regarding the proposed Pu'unani Homestead Subdivision water system storage improvements project located in Waikapū, on the island of Maui, TMK: (2) 3-5-002:003 (por.). The proposed project consists of building a 0.5 million gallon concrete water system storage tank of 23 feet in height and 70 feet in diameter on approximately 1.26 acres of land. Related improvements include the development of a subsurface drainage sump, inflow and outflow lines to interconnect with the existing distribution main, and the installation of fencing around the new tank expansion lot, grading, paving, and other miscellaneous equipment for the proposed tank.

DOFAW concurs with the mitigation measures included in the DEA intended to avoid construction and operational impacts to State-listed species such as the Hawaiian Hoary Bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*), and seabirds. For illustrations and guidance related to seabird-friendly light styles that also protect the dark, starry skies of Hawai'i please visit <https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf>. We also appreciate the measures outlined to minimize the movement of plant and soil material to prevent the spread of invasive species. DOFAW provides the following additional comments regarding the potential for the proposed work to affect listed species in the vicinity of the project area.

We concur with mitigation measures included in the DEA for State-listed waterbirds such as the Hawaiian stilt (*Himantopus mexicanus knudseni*), Hawaiian coot (*Fulica alai*), and Hawaiian Goose (*Branta sandvicensis*), which could potentially occur at or in the vicinity of the proposed project site. We would also like to add that if a nest is discovered at any point, please contact the Maui Branch DOFAW Office at (808) 984-8100.

We concur with mitigation measures included in the DEA for the State listed Blackburn's Sphinx Moth (*Manduca blackburni*) or BSM, which could potentially occur at or in the vicinity of the proposed project area that falls within its historical range. We would like to add that the larvae of BSM feed on many nonnative hostplants that include tree tobacco (*Nicotiana glauca*), which grows in disturbed soil. We recommend contacting the Maui Branch DOFAW office at (808) 984-8100 for further information about where BSM may be present and whether a vegetation survey should be conducted to determine the presence of plants preferred by BSM. DOFAW recommends removing plants less than one meter in height or during the dry time of the year to avoid harm to BSM. If you intend to either remove tree tobacco over one meter in height or to disturb the ground around or within several meters of these plants, they must be thoroughly inspected by a qualified biologist for the presence of BSM eggs and larvae.

DOFAW recommends using native plant species for landscaping that are appropriate for the area (i.e., climate conditions are suitable for the plants to thrive, historically occurred there, etc.). Please do not plant invasive species. DOFAW also recommends consulting the Hawai'i-Pacific Weed Risk Assessment website to determine the potential invasiveness of plants proposed for use in the project (<https://sites.google.com/site/weedriskassessment/home>). Please refer to www.plantpono.org for guidance on the selection and evaluation of landscaping plants.

We appreciate your efforts to work with our office for the conservation of our native species. These comments are general guidelines and should not be considered comprehensive for this site or project. It is the responsibility of the applicant to do their own due diligence to avoid any negative environmental impacts. Should the scope of the project change significantly, or should it become apparent that threatened or endangered species may be impacted, please contact our staff as soon as possible. If you have any questions, please contact Paul Radley, Protected Species Habitat Conservation Planning Coordinator at (808) 295-1123 or paul.m.radley@hawaii.gov.

Sincerely,

Lainie Berry

LAINIE BERRY
Wildlife Program Manager



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Jul 29, 2022

MEMORANDUM

TO: **DLNR Agencies:**
 ___ Div. of Aquatic Resources
 ___ Div. of Boating & Ocean Recreation
 X Engineering Division (DLNR.ENGR@hawaii.gov)
 X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
 ___ Div. of State Parks
 X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
 ___ Office of Conservation & Coastal Lands
 X Land Division – Maui District (daniel.i.ornellas@hawaii.gov)

FROM: Russell Y. Tsuji, Land Administrator *Russell Tsuji*
 SUBJECT: Draft Environmental Assessment for the Proposed **Pu'unani Homestead Subdivision Water System Storage Improvements**
 LOCATION: Waikapu, Island of Maui; TMK: (2) 3-5-002:003 por.
 APPLICANT: Munekiyo Hiraga on behalf of Department of Hawaiian Home Lands

Transmitted for your review and comment is information on the above-referenced subject matter. The DEA was published on July 23, 2022, by the State Environmental Review Program (formerly the Office of Environmental Quality Control) at the Office of Planning and Sustainable Development in the periodic bulletin, The Environmental Notice, available at the following link:

https://files.hawaii.gov/dbedt/erp/The_Environmental_Notice/2022-07-23-TEN.pdf

Please submit any comments by **August 19, 2022**. If no response is received by this date, we will assume your agency has no comments. Should you have any questions, please contact Darlene Nakamura directly via email at darlene.k.nakamura@hawaii.gov. Thank you.

BRIEF COMMENTS:

- We have no objections.
- We have no comments.
- We have no additional comments.
- Comments are included/attached.

Signed:
 Print Name: Daniel Ornellas
 Division: MDLO
 Date: 8/3/22

Attachments
cc: Central Files

October 8, 2022

Russell Y. Tsuji, Land Administrator
State of Hawai'i
Department of Land and Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawai'i 96809

SUBJECT: Response to Draft Environmental Assessment Comments
Regarding Proposed Department of Hawaiian Home Lands,
Pu'unani Homestead Subdivision Water System Storage
Improvements; Waikapū, Maui, Hawai'i

Dear Mr. Tsuji:

Thank you for your letter dated August 18, 2022, with comments regarding the Proposed Department of Hawaiian Home Lands (DHHL), Draft Environmental Assessment (EA) for the Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

ENGINEERING DIVISION

- Thank you for confirming that the State of Hawai'i, Department of Land and Natural Resources (DLNR) Engineering Division has no additional comments to provide at this time.

DIVISION OF FORESTRY AND WILDLIFE

- Thank you for providing guidance on seabird-friendly light styles that also protect dark, starry skies. We note that the project does not propose outdoor lighting. However, should outdoor lighting be required, it will be shielded and downward facing.
- Should any State-listed waterbird nests be discovered, the DLNR Division of Forestry and Wildlife (DOFAW) Maui Office will be contacted.
- We acknowledge that the larvae of the Blackburn's Sphinx Moth feed on many nonnative hostplants that include tree tobacco and appreciate the recommendation to contact the DOFAW Maui office for information on the

Blackburn's Sphinx Moth. A flora and fauna survey conducted for the project site did not reveal the presence of Blackburn's Sphinx Moth or tree tobacco. However, removal of tree tobacco will be avoided, if present.

- Thank you for the recommendation to use native plants for landscaping. We note that landscaping is not proposed as part of the water system storage improvements.

LAND DIVISION- MAUI DISTRICT

- We acknowledge that the Land Division does not have comments to offer at this time.

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

JADE T. BUTAY
DIRECTOR

Deputy Directors
ROSS M. HIGASHI
EDUARDO P. MANGLALLAN
EDWIN H. SNIFFEN

IN REPLY REFER TO:
DIR 0724
HWY-PS 2.9256

August 5, 2022

VIA EMAIL: planning@munekiyohiraga.com

Ms. Yukino Uchiyama, AICP, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Uchiyama:

Subject: Draft Environmental Assessment (EA)
Puunani Homestead Subdivision Water System
Storage Improvements
Honoapiilani Highway
Waikapu, Maui
Tax Map Key: (2) 3-5-002: 003 (portion)

Thank you for your letter dated July 21, 2022, requesting State Department of Transportation (HDOT) comments on the subject Draft EA.

The Department of Hawaiian Home Lands (DHHL) proposes developing a new water system storage tank and related improvements that will be incorporated into the existing County of Maui, Department of Water Supply (DWS) system. There is an existing DWS water tank adjacent to the proposed tank. The DWS requested the improvements to support the anticipated water demand of the proposed 161 residential units of the DHHL Puunani Homestead Subdivision in Waikapu, Maui. The new facilities will be dedicated to DWS for operation and maintenance.

Access to the new water tank site is from Kuikahi Drive (County jurisdiction), an east-west road that intersects with Honoapiilani Highway (State Route 30) to the east. The Puunani Subdivision is also east of the new water tank and its eastern boundary is adjacent to Honoapiilani Highway.

The HDOT comments relevant to state highways are as follows:

1. No operational impact to state highways is anticipated.

Ms. Yukino Uchiyama, AICP, Senior Associate

HWY-PS 2.9256

August 5, 2022

Page 2

2. The facility maps of the Draft EA do not extend east to Honoapiʻilani Highway. The final EA text and figures should describe the presence or absence of any infrastructure improvements within or adjacent to the state right-of-way (ROW).
3. A Use and Occupancy permit application should be submitted to the HDOT Highways Division for the use of any portion of the ROW. A traffic control plan may also be required for the permit request. If applicable, please add this permit to the Final EA Section VIII List of Permits and Approvals.

If you have any questions, please contact Jeyan Thirugnanam, Systems Planning Engineer, Highways Division, Planning Branch at (808) 587-6336 or by email at jeyan.thirugnanam@hawaii.gov. Please reference file review number PS 2021-134.

Sincerely,



JADE T. BUTAY
Director of Transportation

October 8, 2022

Jade T. Butay, Director
State of Hawai'i
Department of Transportation
869 Punchbowl Street
Honolulu, Hawai'i 96813-5097

SUBJECT: Response to Draft Environmental Assessment Comments Regarding Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i; DIR 0724 HWY-PS 2.9256

Dear Mr. Butay:

Thank you for your comment letter dated August 5, 2022, regarding the Proposed Department of Hawaiian Home Lands (DHHL), Draft Environmental Assessment (EA) for the Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

1. Thank you for confirming that no operational impacts to State highways are anticipated.
2. We confirm that the Final EA will identify the absence of infrastructure improvements within and adjacent to the State right-of-way (ROW).
3. The project will not utilize the State ROW and, therefore, it is not anticipated that a Use and Occupancy permit will be required.

Jade T. Butay, Director
October 8, 2022
Page 2

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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MICHAEL P. VICTORINO
Mayor

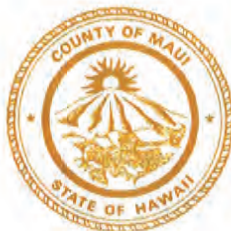
ERIC A. NAKAGAWA, P.E.
Director

ROBERT SCHMIDT
Deputy Director

MICHAEL KEHANO, P.E.
Solid Waste Division

SCOTT R. ROLLINS, P.E.
Wastewater Reclamation Division

TAMARA L. FARNSWORTH
Environmental Protection &
Sustainability Division



**COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT**
2145 KAOHU STREET, SUITE 102
WAILUKU, MAUI, HAWAII 96793

August 3, 2022

Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

**SUBJECT: PU'UNANI HOMESTEAD SUBDIVISION
WATER SYSTEM STORAGE IMPROVEMENTS
DRAFT ENVIRONMENTAL ASSESSMENT
TMK (2) 3-5-002:003 (POR.), WAILUKU**

We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:
 - a. None.
2. Wastewater Reclamation Division (WWRD) comments:
 - a. The County does not have sewer system in the immediate area of the subject project.

If you have any questions regarding this letter, please contact Robert Schmidt at 270-8230.

Sincerely,

Digitally signed by Eric A. Nakagawa, P.E.
DN: cn=Eric A. Nakagawa, P.E., o=County
of Maui, ou=Director of Environmental
Management,
email=eric.nakagawa@co.maui.hi.us,
c=US
Date: 2022.08.08 14:44:04 -10'00'

ERIC A. NAKAGAWA, Director
Department of Environmental Management

October 8, 2022

Eric A. Nakagawa, Director
County of Maui
Department of Environmental Management
200 South High Street
Wailuku, Hawai'i 96793

**SUBJECT: Response to Draft Environmental Assessment Comments
Regarding Proposed Department of Hawaiian Home Lands,
Pu'unani Homestead Subdivision Water System Storage
Improvements; Waikapū, Maui, Hawai'i**

Dear Mr. Nakagawa:

Thank you for your letter August 3, 2022 dated with comments regarding the Proposed Department of Hawaiian Home Lands (DHHL), Draft Environmental Assessment (EA) for the Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

Solid Waste Division

- We acknowledge that the Solid Waste Division has no comments at this time.

Wastewater Reclamation Division

- Thank you for confirming that there is no County sewer system in the immediate area of the subject property. No wastewater improvements are proposed for the project.

Eric A. Nakagawa, Director
October 8, 2022
Page 2

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

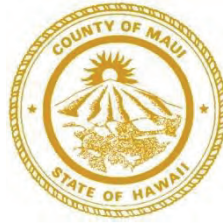
cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC
Darren Unemori, Warren S. Unemori Engineering, Inc.

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MICHAEL P. VICTORINO
Mayor

BRADFORD K. VENTURA
Fire Chief

GAVIN L.M. FUJIOKA
Deputy Fire Chief



DEPARTMENT OF FIRE & PUBLIC SAFETY
FIRE PREVENTION BUREAU
COUNTY OF MAUI
313 MANEA PLACE
WAILUKU, HI 96793

August 12, 2022

VIA EMAIL: planning@munekiyohiraga.com

Munekiyo Hiraga
Attn: Yukino Uchiyama
305 High Street, Suite 104
Wailuku, Hawaii 96793

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED PUUNANI
HOMESTEAD SUBDIVISION WATER SYSTEM STORAGE IMPROVEMENTS**

Dear Yukino,

Thank you for the opportunity to review your project. At this time Fire Prevention Bureau has no comments to at the draft environmental assessment for proposed Puunani Homestead Subdivision Water System Storage Improvements.

Our office does reserve the right to review and comment on future building permit application when detailed plans for this project are routed to our office for review.

If there are any questions or comments, please feel free to contact our office at (808) 876-4690 or by email at fire.prevention@mauicounty.gov.

Sincerely,

Plans Review - Fire Prevention Bureau

OV:jn

October 8, 2022

County of Maui
Department of Fire & Public Safety
Attention: Plans Review - Fire Prevention Bureau
313 Manea Place
Wailuku, Hawai'i 96793

SUBJECT: Response to Draft Environmental Assessment Comments
Regarding Proposed Department of Hawaiian Home Lands,
Pu'unani Homestead Subdivision Water System Storage
Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Sir/Madame:

Thank you for your letter dated August 12, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we acknowledge that the Fire Prevention Bureau has no comments to offer at this time. We understand that the Bureau may provide comments during the building permit review process.

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC
Darren Unemori, Warren S. Unemori Engineering, Inc.

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MICHAEL P. VICTORINO
Mayor

LORI TSUHAKO
Director

LINDA R. MUNSELL
Deputy Director



**DEPARTMENT OF HOUSING
& HUMAN CONCERNS**
COUNTY OF MAUI
2200 MAIN STREET, SUITE 546
WAILUKU, MAUI, HAWAII 96793
PHONE: (808) 270-7805

August 11, 2022

Yukino Uchiyama, AICP
Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Uchiyama:

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED
PU'UNANI HOMESTEAD SUBDIVISION WATER SYSTEM STORAGE
IMPROVEMENTS; WAIKAPU, MAUI, TMK (2) 3-5-002:003 (POR.)**

The Department has reviewed the information submitted for the above subject project. Based on our review, we have determined that the project is not subject to Chapter 2.96, Maui County Code, and does not require a residential workforce housing agreement. At the present time, the Department has no additional comments to offer.

Please contact Mr. Buddy Almeida, Housing Administrator, at (808) 270-7351 if you have any questions.

Sincerely,

LORI TSUHAKO, LSW, ACSW
Director of Housing and Human Concerns

xc: Buddy Almeida, Housing Administrator

October 8, 2022

Lori Tsuhako, LSW, ACSW, Director
County of Maui
Department of Housing and Human Concerns
2200 Main Street, Suite 546
Wailuku, Hawai'i, 96793

SUBJECT: Response to Draft Environmental Assessment Comments
Regarding Proposed Department of Hawaiian Home Lands,
Pu'unani Homestead Subdivision Water System Storage
Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Ms. Tsuhako:

Thank you for your letter dated August 11, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we acknowledge that the Department of Housing and Human Concerns (DHHC) has determined that the project is not subject to Chapter 2.96, Maui County Code, and does not require a residential workforce housing agreement. We also acknowledge that DHHC has no additional comments to offer at this time.

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

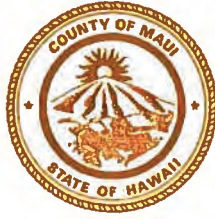
cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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MICHAEL P. VICTORINO
Mayor

KARLA H. PETERS
Director

SAMUAL A. MARVEL
Deputy Director



DEPARTMENT OF PARKS AND RECREATION

700 Hali'a Nako'a Street, Unit 2, Wailuku, Hawai'i 96793
Main Line (808) 270-7230 / Facsimile (808) 270-7942

August 23, 2022

Yukino Uchiyama, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Uchiyama:

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED
PU'UNANI HOMESTEAD SUBDIVISION WATER SYSTEM
STORAGE IMPROVEMENTS; WAIKAPU, MAUI, HAWAII,
TMK (2) 3-5-002:003 (POR.)**

Thank you for the opportunity to review and comment on the subject project. In accordance with Maui County Code 18.16.320 Parks and Playgrounds, this project is exempt from park assessment fees. The Department of Parks and Recreation has no further comments at this time.

Should you have any questions, please feel free to contact me or Kris Baptist, Acting Chief of Planning and Development, at kristofer.baptist@co.maui.hi.us or (808) 270-6158.

Sincerely,

A handwritten signature in black ink, appearing to read "K. Peters".

KARLA H. PETERS
Director of Parks and Recreation

c: Kris Baptist, Acting Chief of Planning and Development

KHP:KB:csa

October 8, 2022

Karla H. Peters, Director
County of Maui
Department of Parks and Recreation
700 Hali'a Nakoia Street, Unit 2
Wailuku, Hawai'i 96793

SUBJECT: Response to Draft Environmental Assessment Comments Regarding Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i (TMK (2) 3-5-002:003 (por.))

Dear Ms. Peters:

Thank you for your letter dated August 23, 2022, regarding the Draft Environmental Assessment (EA) for the Proposed Department of Hawaiian Home Lands (DHHL), Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we thank you for confirming that the project is exempt from park assessment fees. We acknowledge that the Department of Parks and Recreation has no further comments to offer at this time.

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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MICHAEL P. VICTORINO
Mayor
MICHELE CHOUTEAU MCLEAN, AICP
Director
JACKY TAKAKURA
Deputy Director



DEPARTMENT OF PLANNING
COUNTY OF MAUI
ONE MAIN PLAZA
2200 MAIN STREET, SUITE 315
WAILUKU, MAUI, HAWAII 96793
August 30, 2022

Mr. William Aila, Jr., Chairman & Director
State of Hawaii Department of Hawaiian Homes Lands
91-5420 Kapolei Parkway
Kapolei, Hawaii 96707

Dear Mr. Aila, Jr.:

SUBJECT: COMMENTS ON DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR PU'UNANI HOMESTEAD SUBDIVISION WATER SYSTEM STORAGE IMPROVEMENTS, WAILUKU, ISLAND OF MAUI, HAWAII; TMK: (2) 3-5-002:003 (POR.) (EAC2022-00002)

The Department of Planning (Department) is in receipt of the above-referenced Draft EA for the Pu'unani Homestead Subdivision Water System Storage Improvements. For preparation of the Final EA, the Department provides the following comment:

1. Please doublecheck the various tables showing the relationship of the proposed project to the various State and County plans. Some are 'Applicable' and the boxes are checked 'Not Applicable,' and vice versa.

Thank you for the opportunity to comment. Please include the Department on the distribution list for the new Final EIS. Should you require further clarification, please contact Staff Planner Tara Furukawa at tara.furukawa@mauicounty.gov or at (808) 270-7520.

Sincerely,

A handwritten signature in black ink, appearing to read "Michele McLean".

MICHELE MCLEAN, AICP
Planning Director

xc: Ann T. Cua, Planning Program Administrator (PDF)
Jordan Hart, Planning Program Administrator, Zoning Administration & Enforcement Division (PDF)
Pam Eaton, Planning Program Administrator, Long-Range Division (PDF)
Kathleen Aoki, Planning Program Administrator, Plan Implementation Division (PDF)
Tara K. Furukawa, Staff Planner (PDF)
Yukino Uchiyama, Munekiyo Hiraga (PDF)
Emily Murai, Munekiyo Hiraga (PDF)
Project File

MCM:TKF:rma

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October 8, 2022

Michele McLean, AICP, Director
County of Maui
Department of Planning
2200 Main Street, Suite 315
Wailuku, Hawai'i 96793

**SUBJECT: Response to Draft Environmental Assessment Comments
Regarding Proposed Department of Hawaiian Home Lands,
Pu'unani Homestead Subdivision Water System Storage
Improvements; Waikapū, Maui, Hawai'i**

Dear Ms. McLean:

Thank you for your letter dated August 30, 2022 with comments regarding the Proposed Department of Hawaiian Home Lands (DHHL), Draft Environmental Assessment (EA) for the Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

- We note your comment regarding the tables showing the relationship of the proposed project to the various policy plans. These tables were prepared according to our best judgment relative to the proposed water system improvement project. It is noted that because of the DHHL's unique status, some of DHHL's projects may not align with the County or other agencies' policy plans.

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC

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POLICE DEPARTMENT
COUNTY OF MAUI



MICHAEL P. VICTORINO
MAYOR

OUR REFERENCE
YOUR REFERENCE

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411

JOHN PELLETIER
CHIEF OF POLICE

CHARLES L. HANK III
DEPUTY CHIEF OF POLICE

August 25, 2022

Ms. Yukino Uchiyama, AICP
Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793


**Re: Draft Environmental Assessment for the Proposed Puunani
Homestead Subdivision Water System Storage Improvements;
Waikapu, Maui, TMK: (2) 3-5-002:003 (por.)**

Dear Ms. Murai:

This is in response to your letter dated July 21, 2022 requesting comments on the Draft Environmental Assessment for the proposed Puunani Homestead Subdivision Water System Storage Improvements project.

In review of the submitted documents, we have no objections to the upcoming construction project if it meets the minimal standards set forth by county codes and state laws. We also suggest efforts be made to minimize noise, dust, and debris so not to inhibit those whose health and well-being may be affected. Thank you for giving us the opportunity to comment on this project.

Sincerely,


Assistant Chief Reid Pursley
for: JOHN PELLETIER
Chief of Police

October 8, 2022

John Pelletier, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, Hawai'i 96793

SUBJECT: Response to Draft Environmental Assessment Comments Regarding Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i

Dear Chief Pelletier:

Thank you for your letter dated August 25, 2022 with comments regarding the Proposed Department of Hawaiian Home Lands (DHHL), Draft Environmental Assessment (EA) for the Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

- We confirm that the project will meet the minimal standards set forth by the County code and State laws, as applicable to DHHL.
- We also confirm that appropriate Best Management Practices (BMPs) will be incorporated to minimize potential noise, dust, and debris impacts from project construction. These include periodic watering of exposed surfaces, installation of dust screens, and regular maintenance of construction equipment. In addition, the State Department of Health construction noise limits will be adhered to mitigate noise impacts caused by construction activities.

John Pelletier, Chief
October 8, 2022
Page 2

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn

cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC
Darren Unemori, Warren S. Unemori Engineering, Inc.

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Subject: FW: Letter from Munekiyo Hiraga re Proposed Pu'unani Homestead Subdivision Water System Storage Improvements

From: Wayne Hedani <wnhedani@gmail.com>

Sent: Tuesday, August 23, 2022 1:59 PM

To: Carolyn F. Nakagawa <cnakagawa@carlsmith.com>

Cc: Trent Kyono <tmkyono@gmail.com>; Michael Williams <mike@valleyislebuildingproducts.com>; Colin Yamamoto <svarsity@gmail.com>; Nelson Wayne <nelson.we@gmail.com>; Joshua Ching <chingjos@gmail.com>; Kathleen Stout <kstout808@live.com>; JOYCELYN M VICTORINO <joycelynmv@aim.com>; Karlynn Fukuda <karlynn@munekiyohiraga.com>

Subject: Re: Letter from Munekiyo Hiraga re Proposed Pu'unani Homestead Subdivision Water System Storage Improvements

Directors:

I would support any infrastructure improvement which leads to more affordable housing for our people. Especially more so for Hawaiian Homelands which is finally trying to deliver benefits to their rightful beneficiaries. Minimizing visual impact would be my only concern making it as low and unobtrusive as possible. I am no longer on the Board and these are my comments as an individual resident of WHECA Phase I.

Karlynn:

Joshua Ching is the current President of WHECA Phase I. Future correspondence should be addressed to him along with the Board.

Mahalo,

Wayne N. Hedani

Resident

WHECA Phase I

On Tue, Aug 23, 2022 at 1:46 PM Carolyn F. Nakagawa <cnakagawa@carlsmith.com> wrote:

Hi all,

Please see attached letter from Munekiyo Hiraga dated July 21, 2022. Please note: This was received late due to the wrong P.O. Box. Attached is a copy of the returned envelope.

Best regards,

Carolyn

CAROLYN F. NAKAGAWA
Office Manager/Legal Secretary | Carlsmith Ball LLP

Carlsmith Ball LLP

A LIMITED LIABILITY LAW PARTNERSHIP

2200 Main Street, Suite 400
Wailuku, HI 96793
Tel: 808.243.4535 Fax: 808.244.4974
Honolulu · Hilo · Kona · **Maui**

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October 8, 2022

via Email: wnhedani@gmail.com

Wayne Hedani

SUBJECT: Response to Draft Environmental Assessment Comments Regarding Proposed Department of Hawaiian Home Lands, Pu'unani Homestead Subdivision Water System Storage Improvements; Waikapū, Maui, Hawai'i

Dear Mr. Hedani:

Thank you for your email dated August 23, 2022, with comments regarding the Proposed Department of Hawaiian Home Lands (DHHL), Draft Environmental Assessment (EA) for the Pu'unani Homestead Subdivision Water System Storage Improvements. On behalf of the DHHL, we offer the following information in response to the comments received.

- We acknowledge that you support infrastructure improvements that can lead to the availability of more affordable housing, especially for DHHL beneficiaries.
- We acknowledge your concerns regarding visual impacts from the proposed project and note that the height of the proposed tank will be consistent with the adjacent existing 1.5 million gallon (MG) Kehalani Mid Level Storage Tank, while the diameter will be smaller. Potential visual impacts of the proposed water tank are anticipated to be mitigated by the line-of-sight obstruction provided by the County's existing 1.5 MG Kehalani Mid Level Storage Tank when viewed from the north (i.e., from Ku'ikahi Drive), and the makai embankment of the existing irrigation reservoir when viewed from the west (i.e., from Wailuku Heights). In addition, the DHHL will coordinate with the Department of Water Supply to select a neutral paint color for the proposed water tank that will complement its surroundings.

Wayne Hedani
October 8, 2022
Page 2

Thank you again for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Final EA being prepared for this project. Should you have any questions or require additional information, please feel free to contact me at (808) 983-1233.

Very truly yours,



Yukino Uchiyama, AICP
Senior Associate

YU:tn


cc: Stewart Matsunaga, Department of Hawaiian Home Lands
Darren Okimoto, DDC LLC
Darren Unemori, Warren S. Unemori Engineering, Inc.

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XI



XI. REFERENCES

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PRELIMINARY
ENGINEERING
REPORT

APPENDIX

A



Established 1969

Preliminary Engineering Report

PU`UNANI HOMESTEAD WATER STORAGE TANK

Wailuku, Maui, Hawaii
TMK: (2) 3-5-002: 003

Prepared For:

State of Hawaii
Department of Hawaiian Home Lands
91-5420 Kapolei Parkway
Kapolei, HI 96707



WARREN S. UNEMORI ENGINEERING, INC.
Civil and Structural Engineers – Land Surveyors
Wells Street Professional Center – Suite 403
2145 Wells Street
Wailuku, Maui, Hawaii 96793

April 28, 2022

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**Preliminary Engineering Report
for
Pu'unani Homestead Water Storage Tank**

1. INTRODUCTION

1.1 Purpose

The State of Hawaii Department of Hawaiian Home Lands (DHHL) needs to construct additional water storage capacity to support the development of its proposed Pu'unani Homestead subdivision.¹ Potable water supplied to the service area in which Pu'unani Homestead subdivision is located is stored in the Maui County Department of Water Supply's (DWS) existing 1.5 million gallon (MG) capacity Kehalani Mid-Level water tank located on the south side of Kuikahi Drive at elevation 670 feet. The capacity of the existing 1.5 MG tank has been fully allocated to prior developments within the service area; consequently, DHHL must construct a second tank to supply the needs of its subdivision.

This report describes the existing water system infrastructure and drainage conditions in the area and identifies the improvements needed to support construction of the proposed Pu'unani Homestead Water Storage Tank.

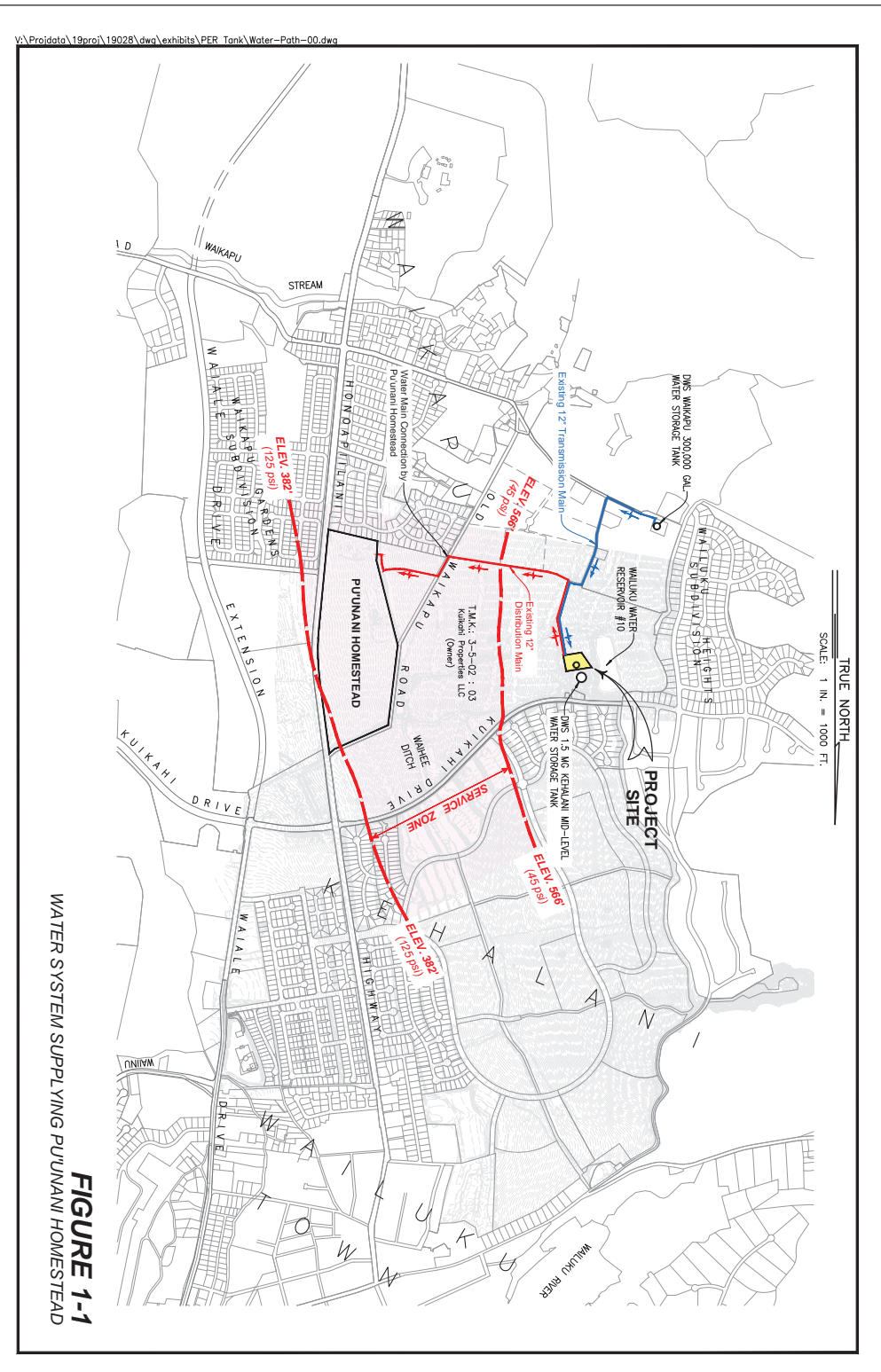
¹ Pu'unani Homestead is a 161-lot single-family residential subdivision being developed by DHHL. Its development application is currently being processed by the Maui County Dept. of Public Works as Subdivision File No. 3.2416.

1.2 Project Location and Description

The proposed Pu'unani Homestead Water Storage Tank will be located south of Kuikahi Drive in Wailuku, Maui, adjacent to DWS' existing 1.5 MG Kehalani Mid-Level storage tank located at elevation 670 feet. The project site is a 1.3 acre portion of an undeveloped 148-acre land parcel at Tax Map Key 3-5-002: 003.²

The project will involve grading, construction of a new 0.5 MG concrete water storage tank, pipe connections, and drainage improvements necessary to integrate it into DWS' existing 1.5 MG Kehalani Mid-Level storage facility. (See Figure 1-1)

² The 148.012 acre project site is Lot 4-A of the *Wailuku Heights Extension Subdivision* which was approved by the Maui County Department of Public Works as DSA Subdivision No. 3.2099.



2. WATER SYSTEM

2.1 Existing Infrastructure

Maui County Dept. of Water Supply's existing 1.5MG Mid-Level storage reservoir is a secure, unmanned facility which operates automatically and is remotely monitored by DWS. Its 1.5 MG tank at elevation 670 feet is filled from DWS' Waikapu Well and Tank at elevation 764 feet via a 12-inch transmission main. The 1.5 MG storage tank, in turn, supplies water to customers in Kehalani and Waikapu located within a service band between elevations 566 and 382 feet.

2.2 Proposed Improvements

Site Improvements

The tank expansion site will be graded to accommodate the proposed Pu'unani Homestead Water Storage Tank. Construction of the new tank will consist of several associated improvements including onsite drainage improvements, paved access, and a perimeter fence around the expansion lot.

A paved connection will be constructed between the new and existing tank sites to provide vehicular access to the proposed 0.5 MG tank. The existing paved driveway on Kuikahi Drive will serve as the main access to both the new and existing tanks. Access to the new tank site will be infrequent and limited to maintenance visits by the Department of Water Supply personnel; therefore, the presence of a new 0.5 MG concrete water tank is not expected to generate additional traffic. (See Figures 2-1 and 2-2)

Reservoir Storage Capacity

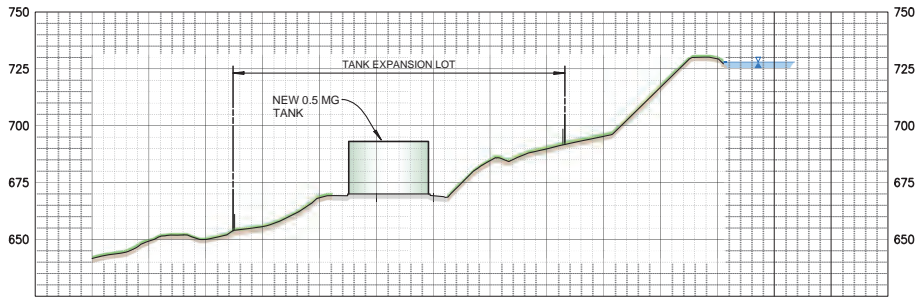
The minimum storage capacity needed by Pu'unani Homestead subdivision is approximately 161,000 gallons under the Maui County Code Section 14.05.020.A.1.³ The new 0.5 MG storage tank will add its capacity to the existing 1.5 MG Kehalani Mid-Level storage tank to increase the total volume of water that can be stored to sufficiently supply the proposed Pu'unani Homestead subdivision.

Distribution System

A new inflow waterline will be extended to the proposed 0.5 MG storage tank from the existing 12-inch inflow line currently supplying water to the 1.5 MG storage tank. The proposed outflow waterline will be extended to the 0.5 MG storage tank from the existing 12-inch distribution main located along the east border of the site which conveys water to the Waikapu service area.

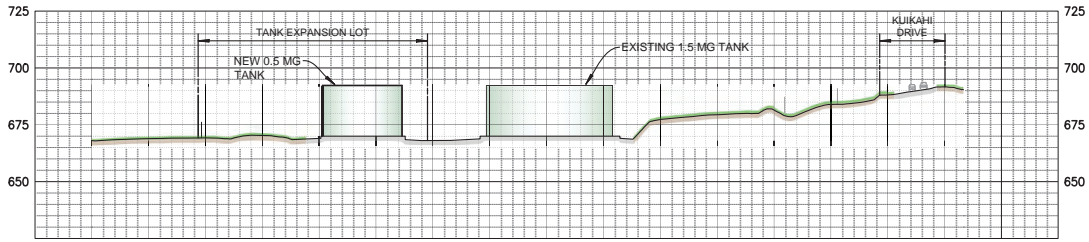
The new 0.5 MG storage tank will also consist of underground piping, control valves, and telemetry equipment which will be interconnected to the flow control system currently in place for the existing 1.5 MG Kehalani Mid-Level storage tank allowing the new and existing storage tanks to work in parallel. (See Figure 2-3)

³ Water storage calculations may be found in Appendix B-1.



PROFILE - CROSS SECTION "A"- "A"

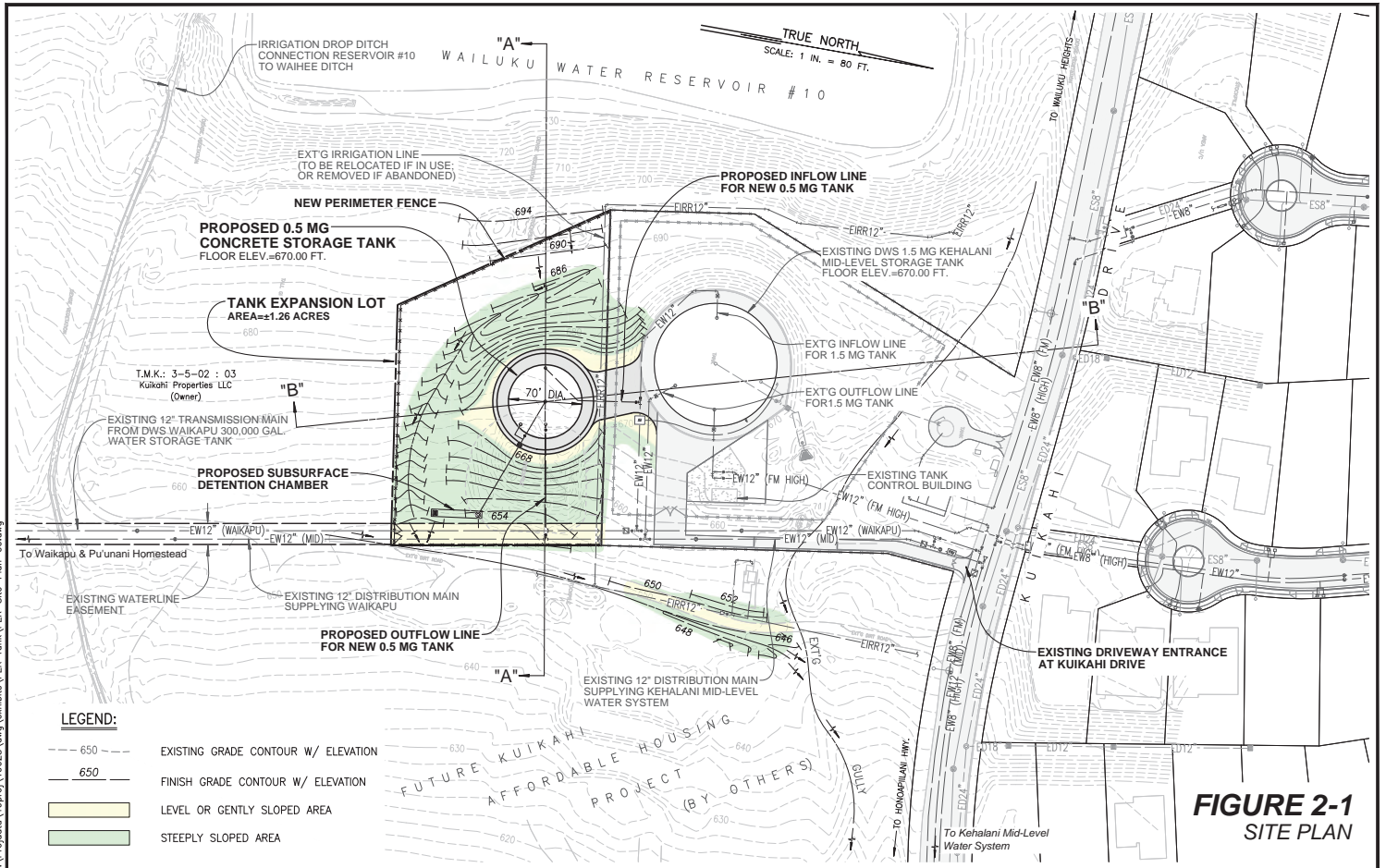
SCALE: HORIZ. 1" = 80'
VERT. 1" = 40'



PROFILE - CROSS SECTION "B"- "B"

SCALE: HORIZ. 1" = 80'
VERT. 1" = 40'

FIGURE 2-2
SITE CROSS SECTIONS



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3. DRAINAGE

3.1 Existing Conditions

3.1.1 Topography and Soils

The 1.3-acre project site was once used for cultivating sugar cane and pineapple; however, the land currently lies fallow and is no longer in productive agricultural use.

The existing terrain slopes steadily downward across the site from west to east at a grade of approximately 15 percent. Elevation ranges from 694 feet at the northwestern corner of the site, to 652 feet at its southeastern corner. An existing dirt access road bounds its eastern side and DWS' existing 1.5 MG Kehalani Mid-Level storage facility is located along its northern border.

The USDA Natural Resources Conservation Service identifies Iao Clay (IcC) as the predominant soil types found on the project site. (See Figure 3-1) These Iao clay soils are reported to produce a medium amount of runoff and represent a moderate erosion hazard.⁴

⁴ United States Department of Agriculture, Soil Conservation Service, *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*, August 1972, pp. 46, Maps 99-100.

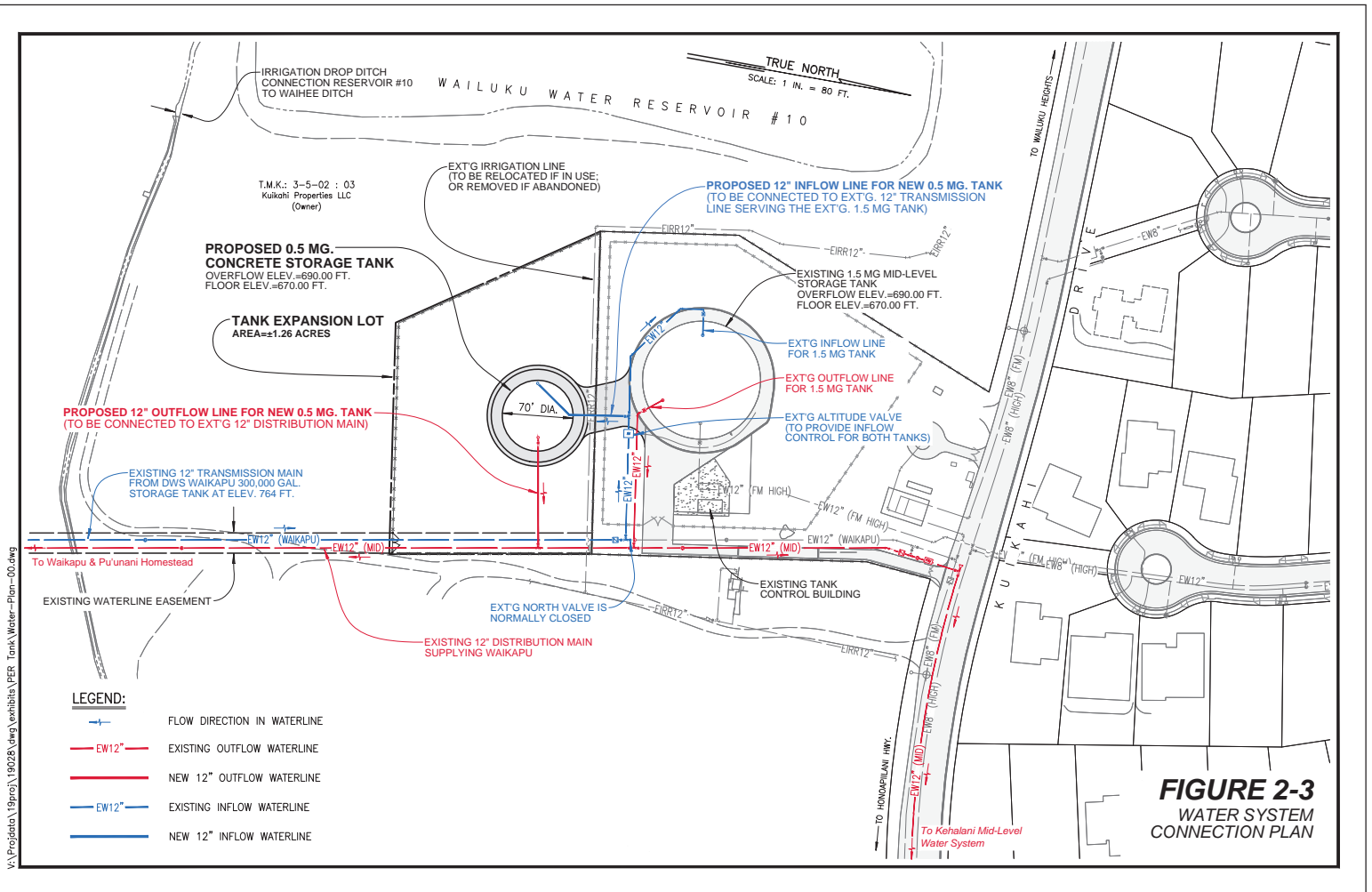


FIGURE 2-3
WATER SYSTEM
CONNECTION PLAN

3.1.2 Flood and Tsunami Zone

FEMA's Flood Insurance Rate Map for Maui County locates the project site within Zone X, outside of both the 500-year floodplain and tsunami zone.⁵ Appendix A-1 contains a current DLNR Flood Hazard Assessment Report for the parcel.

3.1.3 Existing Drainage Condition

Onsite Storm Flows

Surface runoff generated by the undeveloped 1.3-acre project site sheet flows eastward toward an existing dirt road, where it concentrates and flows northward toward an existing drainage gully which will convey the runoff west toward Honoapiilani Highway. The runoff then passes through two existing drainage culverts under Honoapiilani Highway and Waiale Road on its way to the Waiale irrigation reservoir⁶ where it is impounded. (See Figures 3-2 and 3-3) The 10-year 1-hour peak flow rate generated by the project site in its current, undeveloped state is estimated to be 1.4 cubic feet per second (cfs).⁷

⁵ U.S. Department of Homeland Security, Federal Emergency Management Agency, Flood Insurance Rate Map, Maui County, Hawaii, Community-Panel Numbers 150003 0391E, September 25, 2009, and 150003 0393F, November 04, 2015.

⁶ TMK 3-8-046: 020, owned by Mahi Pono entity MP CPR LLC.

⁷ Supporting calculations may be found in Appendix A-2.

Offsite Storm Flows

The majority of the offsite surface runoff is captured and conveyed into the existing irrigation reservoir, Wailuku Water Reservoir #10, located on the western (makai) side of the proposed project site. Approximately 0.6 cfs of the offsite storm runoff originating from 0.5 acres downstream of Wailuku Water Reservoir #10 drains eastward toward the project site which commingle with the onsite flows and continue along the same drainage path.

3.2 Drainage Plan

3.2.1 Projected Increase in Runoff

The Pu'unani Homestead Water Storage Tank site is expected to produce a peak runoff volume of 2.0 cfs from a 10-year 1-hour storm once it has been fully developed.⁸ This represents a net increase of approximately 0.6 cfs attributable to development of the project area. A comparative summary of pre-development and post-development runoff is presented in Table 3-1 below:

**TABLE 3-1
Increase in Runoff Attributable to Development
(10 yr. - 1 hr. storm)**

Pre-Development Flow	Post-Development Flow Before Mitigation	Net Change
1.4 cfs	2.0 cfs	+0.6 cfs

⁸ See Appendix A-3 for supporting calculations.

3.2.2 Proposed Improvements

Onsite Storm Flows and Peak Flow Mitigation

Surface runoff generated by the new tank and paved access within the project site will be directed to a drain inlet located on the east (makai) side of the new tank. The collected runoff will then be conveyed by an underground drainage pipe to a subsurface stormwater detention chamber located near the southeast corner of the expansion lot which, in turn, will discharge in a drainage swale and eventually be conveyed north toward the existing drainage gully as it does presently. (See Figure 3-4) This subsurface stormwater detention chamber, whose capacity will be at least 0.12 acre-feet,⁹ will fully mitigate the expected increase in peak flow by limiting the downstream release of stormwater to a flow rate which does not exceed pre-development levels in compliance with Maui County storm drainage standards.¹⁰

Offsite Storm Flows

The offsite runoff will continue to drain onto the site. The new onsite diversion swale will intercept the offsite runoff and convey it eastward toward the existing dirt road continuing along the same drainage path as it does presently.

⁹ The subsurface detention chamber will be sized to route the 50-year 1-hour design storm with a downstream release not exceeding the 10-year 1-hour pre-development peak discharge of 1.4 cfs. Detention basin sizing calculations can be found in Appendix A-4.

¹⁰ County of Maui, Department of Public Works and Waste Management, "Rules for the Design of Storm Drainage Facilities in the County of Maui," Title MC-15, Chapter 4, November 2, 1995.

Water Quality Measures

Maui County requires the implementation of water quality control measures to reduce water pollution from stormwater runoff.¹¹ A "detention based" treatment approach will be employed to mitigate stormwater-related water pollution associated with the developed site. This will involve providing additional storage volume in the detention chamber to facilitate sediment removal in addition to peak flow mitigation.¹²

3.2.3 Post-Development Runoff After Application of Mitigation Measures

The proposed stormwater detention chamber will fully mitigate the increase in peak flow attributable to development while simultaneously providing water pollution control. Table 3-2 summarizes the storage capacity within the stormwater detention chamber needed to achieve both of these objectives.

TABLE 3-2
Stormwater Detention Chamber Capacity
(Detention Storage Sized for 50 yr. - 1 hr. storm)

Storage Capacity Required to Meet Water Quality Criteria	Additional Storage Capacity Required to Mitigate Peak Flow	Total Storage Capacity to be Provided
0.02 Ac.-ft.	0.10 Ac.-ft.	0.12 Ac.-ft.

¹¹ County of Maui, Department of Public Works, "Rules for the Design of Storm Water Treatment Best Management Practices," Title MC-15, Chapter 111, November 15, 2012.

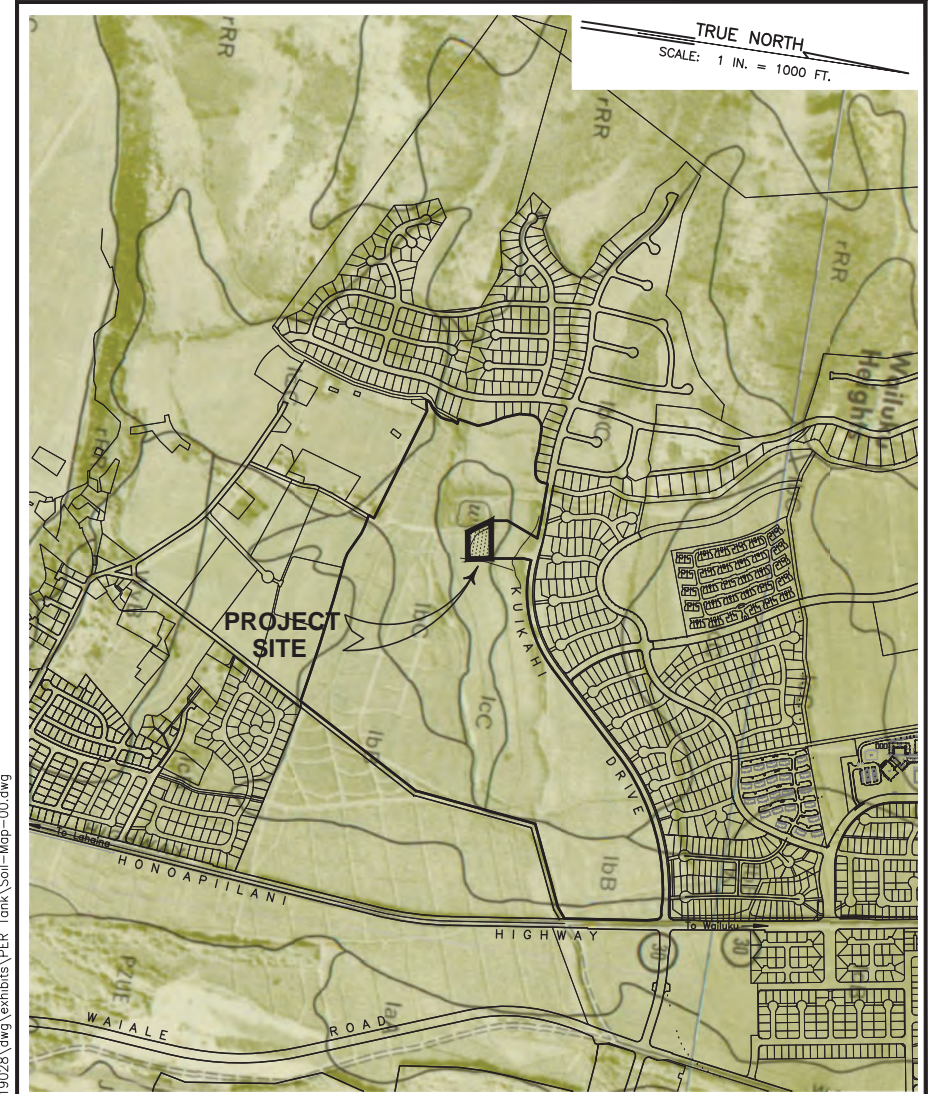
¹² 0.02 acre-feet of storage capacity will be provided below the overflow-type outlet to provide the volume for sedimentation required by County storm water quality rules. The calculation of this required volume can be found in Appendix A-4.1.

Once the detention chamber is in place, the hydrologic impact on downstream properties resulting from the proposed development of the project site will be fully mitigated, as summarized in Table 3-3.

TABLE 3-3
Result of Onsite Peak Runoff Mitigation
(10 yr. - 1 hr. storm)

Pre-Development Peak Flow	Post-Development Peak Flow Before Mitigation	Post-Development Peak Flow After Mitigation	Net Change in Peak Runoff
1.4 cfs	2.0 cfs	1.4 cfs	0 cfs

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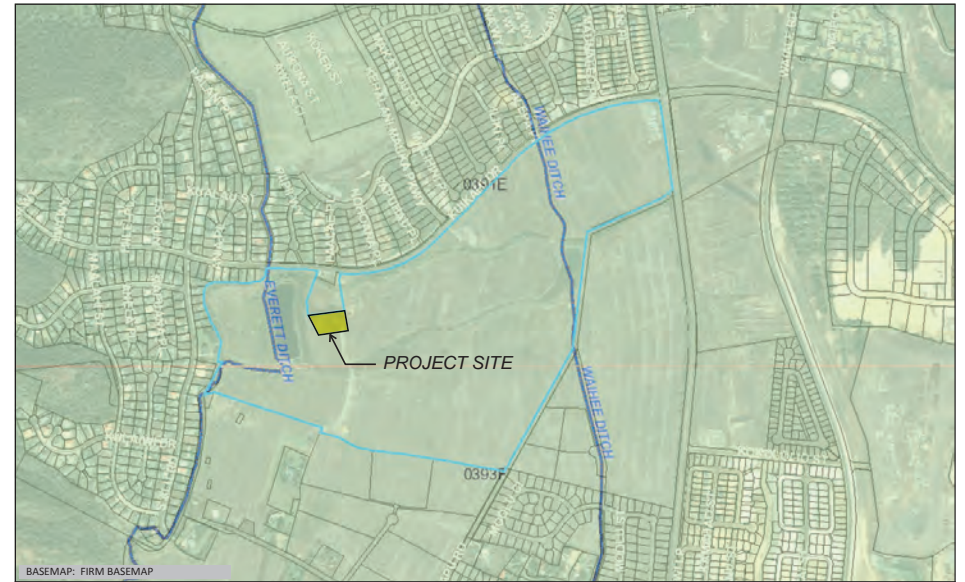


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Source:
 U.S. Department of Agriculture, Soil Conservation Service, "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii", 1972, Map Sheets 99-100.

FIGURE 3-1
 Soil Survey Map

APPENDIX A-1
DLNR Flood Hazard Assessment Report for TMK 3-5-002: 002



BASEMAP: FIRM BASEMAP



Flood Hazard Assessment Report

www.hawaiiinfip.org

PU'UNANI HOMESTEAD WATER STORAGE TANK

Property Information

COUNTY: MAUI
 TMK NO: (2) 3-5-002:003
 WATERSHED: IAO
 PARCEL ADDRESS: KUIKAHI DRIVE
 WAILUKU, HI 96793

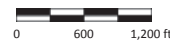
Notes:

Flood Hazard Information

FIRM INDEX DATE: NOVEMBER 04, 2015
 LETTER OF MAP CHANGE(S): NONE
 FEMA FIRM PANEL - EFFECTIVE DATE: 1500030391E - SEPTEMBER 25, 2009
 1500030393F - NOVEMBER 04, 2015

THIS PROPERTY IS WITHIN A TSUNAMI EVACUATION ZONE: NO
 FOR MORE INFO, VISIT: <http://www.scd.hawaii.gov/>

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: YES (MA-0151)
 FOR MORE INFO, VISIT: <http://dlnrng.hawaii.gov/dam/>



Disclaimer: The Hawaii Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use, accuracy, completeness, and timeliness of any information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR, its officers, and employees from any liability which may arise from its use of its data or information.

If this map has been identified as "PRELIMINARY", please note that it is being provided for informational purposes and is not to be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.

FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND
 (Note: legend does not correspond with NFHL)

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD - The 1% annual chance flood (100-year), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. SFHAs include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- Zone A:** No BFE determined.
- Zone AE:** BFE determined.
- Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA - An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- Zone XS (K shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase applies, but coverage is available in participating communities.

APPENDIX A-2
Pre-Development Surface Runoff (10-yr./1-hr.)



Warren S. Unemori Engineering, Inc.
Civil & Structural Engineers - Land Surveyors
Wells Street Professional Center
2145 Wells Street, Suite 403
Wailuku, Maui, HI 96793

HYDROLOGIC CALCULATIONS - Surface Runoff

Project Name: Pu'unani Homestead Water Storage Tank
Project No.: 19028
Engineer: Clarissa S. Ong
Date: 4/13/2022

Area

Description: Offsite surface runoff draining onto project site.

Area (A): 0.5 acres

Runoff Coefficient

Infiltration:	[Medium]	→	0.07
Relief:	[Rolling]	→	0.03
Vegetal Cover:	[Good]	→	0.03
Development:	[Agricultural]	→	0.15
Composite Runoff Coefficient:			0.28

Time of Concentration

Runoff Length:	167 ft.
Start Elevation:	731 ft. M.S.L.
End Elevation:	686 ft. M.S.L.
Average Slope:	26.9 %
Time of Concentration (T _c):	12 minutes

Intensity

Project Location:	Wailuku, Maui, Hawaii
Design Storm:	10-year recurrence interval, 1-hour duration
Rainfall Depth:	2.00 in.
Intensity (I):	3.95 in./hr.

Flow Rate

$$Q = C \cdot I \cdot A$$
$$= 0.6 \text{ ft.}^3/\text{sec.}$$



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Civil & Structural Engineers - Land Surveyors
Wells Street Professional Center
2145 Wells Street, Suite 403
Wailuku, Maui, HI 96793

HYDROLOGIC CALCULATIONS - Surface Runoff

Project Name: Pu'unani Homestead Water Storage Tank
Project No.: 19028
Engineer: Clarissa S. Ong
Date: 4/13/2022

Area

Description: Pre-development onsite surface runoff

Area (A): 1.5 acres

Runoff Coefficient

Infiltration:	[Medium]	→	0.07
Relief:	[Rolling]	→	0.03
Vegetal Cover:	[Good]	→	0.03
Development:	[Agricultural]	→	0.15
Composite Runoff Coefficient:			0.28

Time of Concentration

Runoff Length:	361 ft.
Start Elevation:	694 ft. M.S.L.
End Elevation:	652 ft. M.S.L.
Average Slope:	11.6 %
Time of Concentration (T _c):	20 minutes

Intensity

Project Location:	Wailuku, Maui, Hawaii
Design Storm:	10-year recurrence interval, 1-hour duration
Rainfall Depth:	2.00 in.
Intensity (I):	3.30 in./hr.

Flow Rate

$$Q = C \cdot I \cdot A$$
$$= 1.4 \text{ ft.}^3/\text{sec.}$$

APPENDIX A-3

Post-Development Surface Runoff (10-yr./1-hr.)



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Civil & Structural Engineers - Land Surveyors
Wells Street Professional Center
2145 Wells Street, Suite 403
Wailuku, Maui, HI 96793

HYDROLOGIC CALCULATIONS - Surface Runoff

Project Name: Pu'unani Homestead Water Storage Tank
Project No.: 19028
Engineer: Clarissa S. Ong
Date: 4/13/2022

Area

Description: Post-development onsite surface runoff

Open Area:	1.3 acres
Impervious Area:	0.2 acres
Area (A):	1.5 acres

Runoff Coefficient

Infiltration:	[Medium]	→	0.07
Relief:	[Rolling]	→	0.03
Vegetal Cover:	[Good]	→	0.03
Development:	[Agricultural]	→	0.15
Composite Runoff Coefficient:			0.28

Impervious Runoff Coefficient: 0.95

Weighted Runoff Coefficient (C): 0.37

Time of Concentration

Runoff Length:	394 ft.
Start Elevation:	694 ft. M.S.L.
End Elevation:	652 ft. M.S.L.
Average Slope:	10.7 %
Time of Concentration (T _c):	17 minutes

Intensity

Project Location: Wailuku, Maui, Hawaii
Design Storm: 10-year recurrence interval, 1-hour duration
Rainfall Depth: 2.00 in.
Intensity (I): 3.55 in./hr.

Flow Rate

$$Q = C \cdot I \cdot A$$
$$= 2.0 \text{ ft.}^3/\text{sec.}$$

APPENDIX A-4 Detention Storage Sizing Calculations (50-yr./1-hr.)

APPENDIX A-4.1
Storage Capacity Needed to Meet Water Quality Requirements



Warren S. Unemori Engineering, Inc.
Civil & Structural Engineers · Land Surveyors
Wells Street Professional Center
2145 Wells Street, Suite 403
Wailuku, Maui, HI 96793

HYDROLOGIC CALCULATIONS - Storm Water Treatment

Project Name: Pu'unani Homestead Water Storage Tank
Project No.: 19028
Engineer: Clarissa S. Ong
Date: 4/13/2022

Purpose: To determine the required basin volume to meet the County of Maui, Department of Public Works' "Rules for the Design of Storm Water Treatment Best Management Practices"

Calculations: The required design volume for detention based control is computed by the MCC §15-111-5.a.1.C formula:

$$WQDV = C \cdot 1" \cdot A \cdot 3630$$

where, WQDV = water quality design volume in cubic feet

C = EPA volumetric runoff coefficient

A = gross area of the site in acres = 1.5 ac.

1" = design storm for detention based water quality system

3630 = conversion factor

The EPA volumetric runoff coefficient, C, calculated from the formula given in MCC §15-111-5.a.1.A is:

$$C = 0.05 + (0.009) \cdot (IMP)$$

where, IMP = percentage of impervious area

$$= (\text{impervious area}) / (\text{gross area}) \cdot 100$$

$$= (0.2 \text{ ac.}) / (1.5 \text{ ac.}) \cdot 100$$

$$= 13$$

Since IMP = 13, the value of C is:

$$C = 0.05 + (0.009) \cdot (13)$$

$$= 0.17$$

Compute the required design volume for a 1" storm with C = 0.17:

$$\begin{aligned} WQDV &= C \cdot 1" \cdot A \cdot 3630 \\ &= 0.17 \cdot 1" \cdot 1.5 \cdot 3630 \\ &= 926 \text{ ft}^3 \\ &= 0.02 \text{ Ac.-ft.} \end{aligned}$$

APPENDIX A-4.2
Detention Storage Inflow/Outflow Hydrograph

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Friday, 04 / 15 / 2022

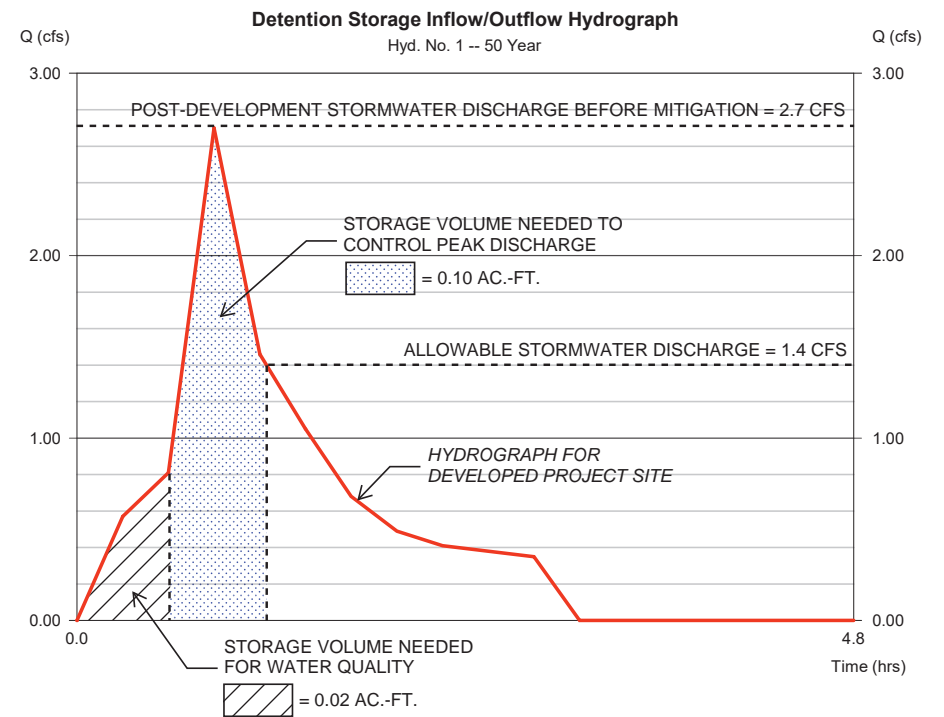
Hyd. No. 1

Detention Storage Inflow/Outflow Hydrograph

Hydrograph type	= Manual	Peak discharge	= 2.700 cfs
Storm frequency	= 50 yrs	Time to peak	= 0.85 hrs
Time interval	= 17 min	Hyd. volume	= 0.208 acft

NOTES:

- TOTAL REQUIRED STORAGE VOLUME =  +  = 0.12 AC.-FT. (SEE BELOW GRAPH)
- HYDROGRAPH DEPICTS 50-YR., 1-HR. STORM FOR WAILUKU, HI (DEPTH = 2.75 IN.)





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HYDROLOGIC CALCULATIONS - Surface Runoff

Project Name: Pu'unani Homestead Water Storage Tank
Project No.: 19028
Engineer: Clarissa S. Ong
Date: 4/13/2022

Area

Description: Pre-development onsite surface runoff

Area (A): 1.5 acres

Runoff Coefficient

Infiltration:	[Medium]	→	0.07
Relief:	[Rolling]	→	0.03
Vegetal Cover:	[Good]	→	0.03
Development:	[Agricultural]	→	0.15
Composite Runoff Coefficient:			0.28

Time of Concentration

Runoff Length:	361 ft.
Start Elevation:	694 ft. M.S.L.
End Elevation:	652 ft. M.S.L.
Average Slope:	11.6 %
Time of Concentration (T _c):	20 minutes

Intensity

Project Location:	Wailuku, Maui, Hawaii
Design Storm:	50-year recurrence interval, 1-hour duration
Rainfall Depth:	2.75 in.
Intensity (I):	4.50 in./hr.

Flow Rate

$$Q = C \cdot I \cdot A$$

$$= 1.9 \text{ ft.}^3/\text{sec.}$$



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HYDROLOGIC CALCULATIONS - Surface Runoff

Project Name: Pu'unani Homestead Water Storage Tank
Project No.: 19028
Engineer: Clarissa S. Ong
Date: 4/13/2022

Area

Description: Post-development onsite surface runoff

Open Area:	1.3 acres
Impervious Area:	0.2 acres
Area (A):	1.5 acres

Runoff Coefficient

Infiltration:	[Medium]	→	0.07
Relief:	[Rolling]	→	0.03
Vegetal Cover:	[Good]	→	0.03
Development:	[Agricultural]	→	0.15
Composite Runoff Coefficient:			0.28

Impervious Runoff Coefficient: 0.95

Weighted Runoff Coefficient (C): 0.37

Time of Concentration

Runoff Length:	394 ft.
Start Elevation:	694 ft. M.S.L.
End Elevation:	652 ft. M.S.L.
Average Slope:	10.7 %
Time of Concentration (T _c):	17 minutes

Intensity

Project Location:	Wailuku, Maui, Hawaii
Design Storm:	50-year recurrence interval, 1-hour duration
Rainfall Depth:	2.75 in.
Intensity (I):	4.80 in./hr.

Flow Rate

$$Q = C \cdot I \cdot A$$

$$= 2.7 \text{ ft.}^3/\text{sec.}$$

APPENDIX B
Potable Water Calculations

APPENDIX B-1
Potable Water Storage Calculation

PU'UNANI HOMESTEAD

Required Storage Capacity Based Upon *Fire Flow Demand*

<u>Land Use</u>	<u>Fire Flow Duration</u>	<u>Fire Flow Rate¹</u>	<u>Needed Storage Capacity</u>
Single-Family Residential	2 hours	x 1,000 gals/min. ==>	120,000 gals.

Source:

¹ Fire flow rate taken from Water System Standards, Department of Water Supply, County of Maui, State of Hawaii, 2002, Table 100-19, p. 111-4.

PU'UNANI HOMESTEAD

Reservoir Sizing Based on MCC §14.05.020 Criteria

Minimum Capacity Required by MCC §14.05.020.A.1

<u>Basis</u>	<u>Needed Storage Capacity</u>
Fire Flow	120,000 gals.
Maximum Daily Demand	153,825 gals.
1,000 Gallons Per Lot	161,000 gals. <== Controlling Value

Minimum Storage Tank Size Per DWS Standards

Minimum required tank size determined by rounding needed storage capacity up to the next standard tank size specified in Section 105.10.A of DWS' *Water System Standards*.

∴ Minimum required tank size ≥ 0.2MG

PU'UNANI HOMESTEAD

Required Storage Capacity Based Upon 1,000 Gallons Per Lot

Land Use	Basis	Storage Demand ¹	Needed Storage Capacity
Single-Family Residential	161 lots x	1,000 gal. / lot ==>	161,000 gal.

Sources:

¹ Residential district storage demand of 1,000 gallons per lot prescribed by Maui County Code Section 14.05.020.A.1 (Reservoirs/Storage Tanks).

PU'UNANI HOMESTEAD

Required Storage Capacity Based Upon Maximum Daily Demand

Land Use	Basis	Average Daily Consumption Rate ¹	Average Daily Demand	Peaking Factor ²	Max. Daily Demand and Needed Storage Capacity
Single-Family Houselots	161 D.U. x	600 gals/D.U. ==>	96,600 gpd	x 1.5 ==>	144,900 gpd
Irrigated Open Space	3.5 Ac. x	1,700 gals/Ac ==>	5,950 gpd	x 1.5 ==>	8,925 gpd
Total			102,550 gpd		153,825 gpd

Sources:

¹ Rate taken from Water System Standards, Department of Water Supply, County of Maui, State of Hawaii, 2002, Table 100-18, p. 111-3


² Max. daily demand factor taken from Water System Standards, Department of Water Supply, County of Maui, State of Hawaii, 2002, Table 100-20, p. 111-5.



U.S. FISH AND WILDLIFE
SERVICE OFFICIAL
SPECIES LIST

APPENDIX

B





United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish And Wildlife Office
300 Ala Moana Boulevard, Box 50088
Honolulu, HI 96850-5000
Phone: (808) 792-9400 Fax: (808) 792-9580



In Reply Refer To:

Project Code: 2022-0041414

Project Name: Pu'unani Homestead Subdivision Water Tank

May 11, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened and endangered species, as well as designated critical habitat that may occur within the boundary of your proposed project and that may be affected by project related actions. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Please contact the Service's Pacific Islands Fish and Wildlife Office (PIFWO) at 808-792-9400 if you have any questions regarding your IPaC species list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may adversely affect threatened and endangered species and/or designated critical habitat.

Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a Biological

05/11/2022

2

Evaluation, similar to a Biological Assessment, be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment or Biological Evaluation are described at 50 CFR 402.12.

Due to the significant number of listed species found on each island within PIFWO's regulatory jurisdiction, and the difficulty in accurately mapping ranges for species that we have limited information about, your species list may include more species than if you obtained the list directly from a Service biologist. We recommend you use the species links in IPaC to view the life history, habitat descriptions, and recommended avoidance and minimization measures to assist with your initial determination of whether the species or its habitat may occur within your project area. If appropriate habitat is present for a listed species, we recommend surveys be conducted to determine whether the species is also present. If no surveys are conducted, we err on the side of the species, by regulation, and assume the habitat is occupied. Updated avoidance and minimization measures for plants and animals, best management practices for work in or near aquatic environments, and invasive species biosecurity protocols can be found on the PIFWO website at: <https://www.fws.gov/office/pacific-islands-fish-and-wildlife/library>.

If a Federal agency determines, based on the Biological Assessment or Biological Evaluation, that a listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <http://www.fws.gov/endangered/esa-library/index>.

Non-federal entities can also use the IPaC generated species list to develop Habitat Conservation Plans (HCP) in accordance with section 10(a)(1)(B) of the Act. We recommend HCP applicants coordinate with the Service early during the HCP development process. For additional information on HCPs, the Habitat Conservation Planning handbook can be found at <https://www.fws.gov/midwest/endangered/permits/hcp/hcpmanual>.

Please be aware that wind energy projects should follow the Service's wind energy guidelines (<http://www.fws.gov/windenergy>) for minimizing impacts to migratory birds. Listed birds and the Hawaiian hoary bat may also be affected by wind energy development and we recommend development of a Habitat Conservation Plan for those species, as described above. Guidance for minimizing impacts to migratory birds for projects including communications towers can be found at:

- <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers>
- <http://www.towerkill.com>
- <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow>

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation actions that benefit threatened and endangered species into their project planning to further the purposes of the Act in accordance with section 7(a)(1). Please include the Consultation Tracking Number associated with your IPaC species list in any

request for consultation or correspondence about your project that you submit to our office. Please feel free to contact us at PIFWO_admin@fws.gov or 808-792-9400 if you need more current information or assistance regarding the potential impacts to federally listed species and federally designated critical habitat.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

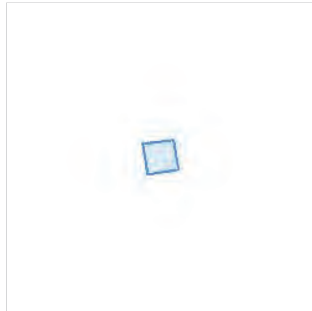
Pacific Islands Fish And Wildlife Office
300 Ala Moana Boulevard, Box 50088
Honolulu, HI 96850-5000
(808) 792-9400

Project Summary

Project Code: 2022-0041414
 Event Code: None
 Project Name: Pu'unani Homestead Subdivision Water Tank
 Project Type: Water Supply Facility - New Constr
 Project Description: The State of Hawai'i, Department of Hawaiian Home Lands (DHHL) is proposing to develop a new water system storage tank on a portion of an approximately 148-acre parcel, identified by Tax Map Key (TMK) No. (2)3-5-002:003 and owned by the Kuikahi Properties, LLC, in Waikapū, Maui, Hawai'i.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@20.865686750000002,-156.51206340778768,14z>



Counties: Maui County, Hawaii

Endangered Species Act Species

There is a total of 29 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Hawaiian Hoary Bat <i>Lasiurus cinereus semotus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/770 General project design guidelines: https://ipac.ecosphere.fws.gov/project/AGUJQJFLU5ERDER6P5NA246RLE/documents/generated/6477.pdf	Endangered

Birds

NAME	STATUS
<p>Band-rumped Storm-petrel <i>Oceanodroma castro</i></p> <p>Population: USA (HI) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1226 General project design guidelines: https://ipac.ecosphere.fws.gov/project/AGUJQIFLU5ERDER6P5NA246RLE/documents/generated/6939.pdf</p>	Endangered
<p>Hawaii Akepa <i>Loxops coccineus</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5714 General project design guidelines: https://ipac.ecosphere.fws.gov/project/AGUJQIFLU5ERDER6P5NA246RLE/documents/generated/6938.pdf</p>	Endangered
<p>Hawaiian (=koloa) Duck <i>Anas wyvilliana</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7712 General project design guidelines: https://ipac.ecosphere.fws.gov/project/AGUJQIFLU5ERDER6P5NA246RLE/documents/generated/6934.pdf</p>	Endangered
<p>Hawaiian Coot <i>Fulica americana alai</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7233 General project design guidelines: https://ipac.ecosphere.fws.gov/project/AGUJQIFLU5ERDER6P5NA246RLE/documents/generated/6934.pdf</p>	Endangered
<p>Hawaiian Goose <i>Branta (=Nesochen) sandvicensis</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1627 General project design guidelines: https://ipac.ecosphere.fws.gov/project/AGUJQIFLU5ERDER6P5NA246RLE/documents/generated/6925.pdf</p>	Threatened
<p>Hawaiian Stilt <i>Himantopus mexicanus knudseni</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2082 General project design guidelines: https://ipac.ecosphere.fws.gov/project/AGUJQIFLU5ERDER6P5NA246RLE/documents/generated/6934.pdf</p>	Endangered
<p>Newell's Townsend's Shearwater <i>Puffinus auricularis newelli</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2048 General project design guidelines: https://ipac.ecosphere.fws.gov/project/AGUJQIFLU5ERDER6P5NA246RLE/documents/generated/6939.pdf</p>	Threatened

Reptiles

NAME	STATUS
<p>Green Sea Turtle <i>Chelonia mydas</i></p> <p>Population: Central North Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199 General project design guidelines: https://ipac.ecosphere.fws.gov/project/AGUJQIFLU5ERDER6P5NA246RLE/documents/generated/6929.pdf</p>	Threatened

Insects

NAME	STATUS
<p>Blackburn's Sphinx Moth <i>Manduca blackburni</i></p> <p>There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4528 General project design guidelines: https://ipac.ecosphere.fws.gov/project/AGUJQIFLU5ERDER6P5NA246RLE/documents/generated/6926.pdf</p>	Endangered

Flowering Plants

NAME	STATUS
(=native Yellow Hibiscus) Ma`o Hau Hele <i>Hibiscus brackenridgei</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4075	Endangered
`aiea <i>Nothocestrum latifolium</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1061	Endangered
`ena`ena <i>Pseudognaphalium sandwicensium var. molokaiense</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5993	Endangered
Bonamia menziesii There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2503	Endangered
Carter's Panicgrass <i>Panicum fairiei var. carteri</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5578	Endangered
Gouania hillebrandii There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3464	Endangered
Hawaiian Gardenia (=na`u) <i>Gardenia brighamii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6853	Endangered
Ihi <i>Portulaca villosa</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4886	Endangered
Ko`oko`olau <i>Bidens micrantha ssp. kalealaha</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7697	Endangered
Ko`olua`ula <i>Abutilon menziesii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3268	Endangered
Lanai Sandalwood (=`iliahii) <i>Santalum haleakalae var. lanaiense</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3282	Endangered
Ohai <i>Sesbania tomentosa</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8453	Endangered
Round-leaved Chaff-flower <i>Achyranthes splendens var. rotundata</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4709	Endangered


NAME	STATUS
Schiedea salicaria There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3354	Endangered
Spermolepis hawaiiensis There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1670	Endangered
Tetramolopium remyi There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1173	Endangered
Uhi Uhi <i>Mezoneuron kavaense</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7129	Endangered
Vigna o-wahuensis There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8445	Endangered
Wahine Noho Kula <i>Isodendrion pyriform</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2235	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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ARCHAEOLOGICAL
INVENTORY SURVEY
FOR TMK NOS.
(2)3-5-002:002 AND 003

APPENDIX

C



**ARCHAEOLOGICAL INVENTORY SURVEY REPORT
ON 215.800 ACRES LOCATED IN
WAIKAPU AHUPUA`A, WAILUKU DISTRICT,
MAUI ISLAND, HAWAII
[TMK (2) 3-5-02: 02 and 03]**

Prepared by:
Jon Wilson, B.A.
and
Michael F. Dega, Ph.D.
October 2005

Prepared for:
Towne Development of Hawaii
and
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Association of II Wai Hui, LP

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ABSTRACT

Scientific Consultant Services, Inc. (SCS) conducted Archaeological Inventory Survey on two parcels totaling 215.800 acres, which form one large land tract within Waikapu (and partially Wailuku) Ahupua`a, Wailuku District, Maui Island, Hawaii`i [TMK (2) 3-5-02: 02 and 03]. Towne Development of Hawaii is developing the "Pu`unani" project in conjunction with Endurance Investors, LLC and the Association of II Wai Hui, LP.

Seven historic sites were documented during this Inventory Survey, two of which were previously recorded in the State Index of Historic Places (SIHP). All seven sites relate to historic sugarcane agriculture; the project area is 100 percent covered by abandoned cane land. Sites include two major concrete irrigation ditches; two lesser, more localized ditches; a reservoir; erosion-control earthen berms; and a cane-haul dirt road.

State Site Number 50-50-04-5197 represents the previously recorded Waihee Ditch, and State Site Number 50-50-04-5493 represents the previously recorded Waikapu Ditch. Five new sites were added to the SIHP during Inventory Survey. State Site Number 50-50-04-5729 represents a lesser, un-named, rock and mortar ditch. Likewise, State Site Number 50-50-04-5726 represents a second lesser, un-named, earthen ditch/drainage. Site 50-50-04-5727 is a large, un-named reservoir—the terminus of Waikapu Ditch. State Site Number 50-50-04-5728 is a sugar field erosion-control site comprised of 14 cross-slope, earthen berms of varying length that are positioned regularly throughout the project area. Finally, State Site Number 50-50-04-5730 represents "Old Waikapu Road", a cane-haul transport, dirt road that spans the border of parcels 02 and 03.

Excavation consisted of twenty-one backhoe-dug stratigraphic trenches evenly spread across the project area. Extensive pedestrian survey and this representative subsurface testing did not yield artifacts or cultural deposits.

All seven sites (all representing historic period sugarcane agriculture activities) were assessed as significant under Criterion D of Hawaii`i's State Historic Preservation criteria. Based on the results of this project and depth of documentation, all seven sites have yielded all potential information important to this historic period and no additional archaeological mitigation is recommended within this project area.

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INTRODUCTION

Scientific Consultant Services, Inc. (SCS) conducted Archaeological Inventory Survey on two parcels totaling 215.800 acres, which form one large land tract within Waikapu (and partially Wailuku) Ahupua`a, Wailuku District, Maui Island, Hawai`i [TMK (2) 3-5-02: 02 and 03]. Towne Development of Hawaii is developing the “Pu`unani” project in conjunction with Endurance Investors, LLC and the Association of II Wai Hui, LP. The Inventory Survey included historic background research and settlement pattern analysis prior to fieldwork, a complete pedestrian survey of the project area, representative subsurface testing via backhoe, and reporting (Figures 1 and 2).

Fieldwork, primarily consisting of systematic pedestrian survey, recordation, and representative subsurface backhoe testing, was conducted between August 16, 2005 and August 25, 2005 by SCS personnel Ian Bassford, B.A.; Randolph Ogg, B.A.; and Jon Wilson, B.A. The Principle Investigator for this project was Michael Dega, Ph.D.

Archaeological Inventory Survey of the project area was conducted to determine the presence/absence of archaeological deposits in surface and subsurface contexts through complete systematic survey and representative subsurface testing. The ultimate goals were to determine if historically significant archaeological sites occurred on the parcel and to provide recommendations to the State Historic Preservation Division (SHPD) concerning site mitigation during future land use of the project area.

ENVIRONMENTAL SETTING

LOCATION

The large survey area lies between coastal flats to the east and more mountainous terrain to the west along the medial reaches of the Maui isthmus between Wailuku and Mā`alaea (Figure 3). The project area is located between Wailuku (2 km north) and Waikapu to the south. Roughly ten percent of the project area (the northeast corner) lies within Wailuku Ahupua`a; the remainder is in the *ahupua`a* to the south—Waikapu (see Figure 1). The project area is composed of two adjacent parcels: TMK parcel 02 is located in the southeast quadrant of the project area and is less than half the size of parcel 03. The eastern perimeter of the project area abuts Honoapi`ilani Highway as it traverses from Wailuku toward Waikapu across the central Maui isthmus. The western border is defined by Wailuku Heights, an existing residential neighborhood. The northern boundary of the survey area is the curving Kuikahi Drive; the southern boundary is an arbitrary TMK line through abandoned cane lands (Figure 4).

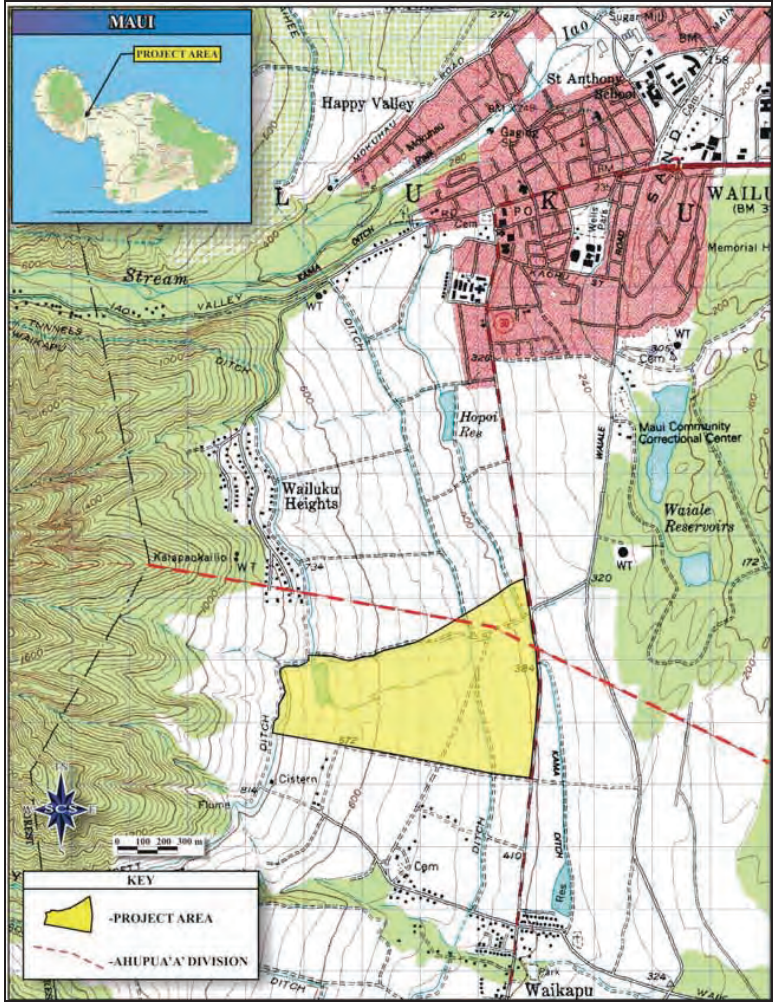


Figure 1: USGS Wailuku Quadrangle Map.

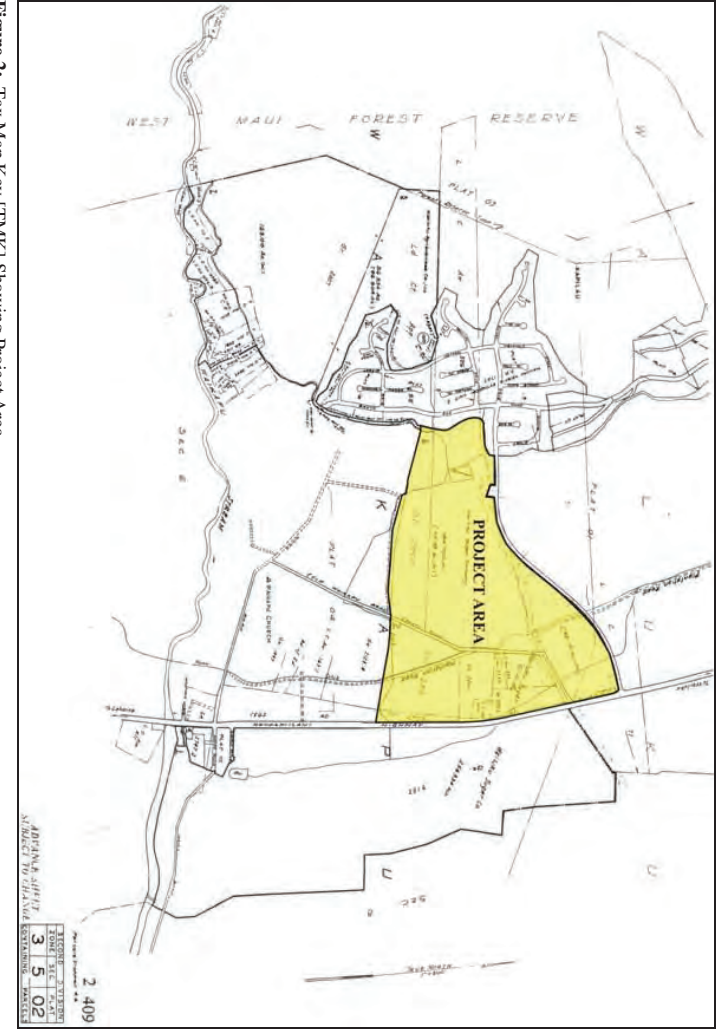


Figure 2: Tax Map Key [TMK] Showing Project Area.



Figure 3: 1977 Aerial Photo of the Wailuku Region.

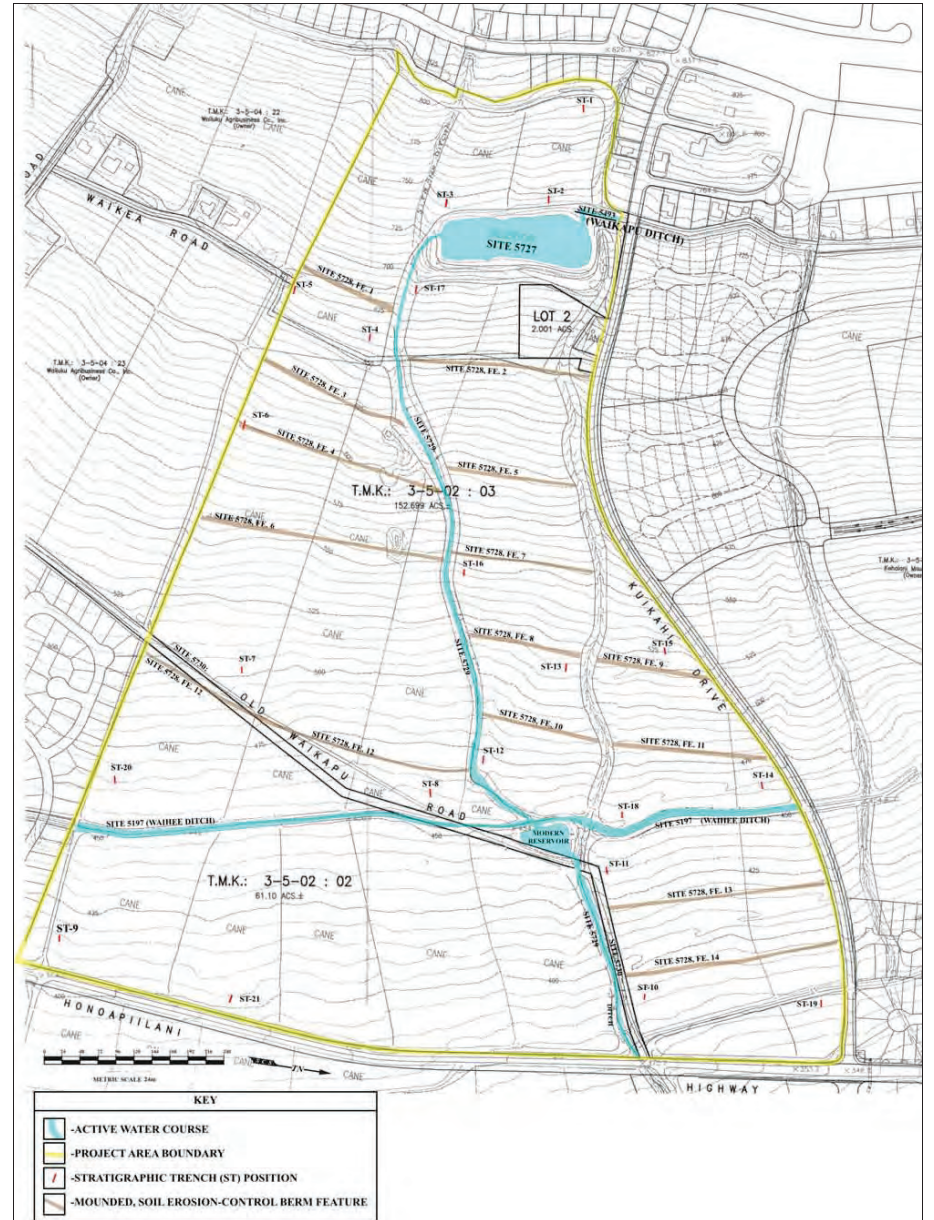


Figure 4: Plan View Map of the Project Area.

PROJECT AREA LANDFORM

Both archeological field survey and a review of geotechnical reports for the parcel reveal that the slightly sloping project area lies in locations previously utilized for the cultivation of now-abandoned sugar cane. According to Cavanaugh (1995:2), who conducted geotechnical studies on the 450-acre Kehalani Mauka Subdivision (the parcel that borders Kuikahi Drive to the north), “site topography slopes down moderately toward the east at a gradient of 10 percent.” This accurately describes the slope of the current project area, which is steeper at its western (*mauka*) perimeter, and relatively flat near Honoapiʻilani Highway (Figure 5). Ground elevations range from approximately 115 meters (380 feet) above mean sea level (amsl) to 200 meters (660 feet) amsl. Various historic and modern dirt roads transect the surveyed area. As is discussed more below, project area exclusively consists of tilled zone, fill, and alluvial sediments. To the east, near the Maui Lani development, sandy matrices were identified. Sandy matrices were not identified in the current study area. Likewise, neither archaeological nor geotechnical subsurface testing detected any sandy matrices in areas immediately to the east of Honoapiʻilani Highway (Monahan 2003) or north of Kuikahi Drive during the Kehalani Mauka Subdivision (Dega 2004).



Figure 5: Distant Photograph of Project Area (lighter colored grass at center roughly defines boundaries). View to West.

Hydrology within the relatively dry project area is mostly in the form of historic irrigation modifications. Some of these modifications were the creation of a larger web of water conduits, drainages, and reservoirs, some built as early as 1905. No perennial streams run directly through the project area, and thus artificial ones had to be created for proper irrigation. By comparison, ʻĪao Stream runs west-east to the north of the proposed development while Waikapu Stream runs west-east to the south of the project area. Being located near these two major streams appears to have been beneficial for cultivation on the present parcel, at least during historic times. Several still-utilized irrigation ditches (*i.e.*, Waihee Ditch, Site -5197) transect the project area, and a still-active larger reservoir is linked to one of these ditches. The remnant irrigation ditches and reservoir not only point to massive landscape modification in the area during historic times but also strongly infer the aridness of the area, which required large-scale water importation. The water table was not encountered in any of the 21 stratigraphic trenches excavated within the project area (maximum depth of 2.60 meters). Soil borings conducted during geotechnical analyses in a nearby project area failed to reveal the presence of the area’s water table to at least 25 feet below the surface (Shimamoto 1995:4).

The project area has seen significant modern activity. A 25 meter high cinder/ soil pile has been consistently mined (or imported) via truck traffic into the western half of the project area from a dirt road linking Kuikahi Drive. Modern rubbish is scattered over the surface of each quadrant; nearly a dozen abandoned cars are located in the southeast quadrant. Land owners have a construction trailer and small, dirt parking lot at the northeast corner of parcel 03. Consistent, daily vehicle traffic across the parcel indicates the modern maintenance efforts related to the irrigation systems (necessary to serve locations outside of the project area).

VEGETATION AND SOILS

Vegetation in the project area is dominated by the presence abandoned cane that has been overtaken by non-native secondary growth shrubs and various introduced grasses (Figure 6). Several ironwood trees (*Casuarina glauca*) dot the landscape. *Haole koa* (*Leucaena leucocephala*) are fairly common especially bordering the eastern highway perimeter and near irrigation conduits. Native vegetation was not documented within the project area.

According to Foote *et al.* (1972:46–47, 100), soils in the project area fall into four sub-classifications of the ʻĪao soil series. These soils consist of well-drained soils on valley fill and alluvial fans that have developed from igneous rock and are nearly level to moderately sloping. The ʻĪao Series derivatives are similar to each other, yet primarily differ by the slope of the surface layer and inclusions of a higher content of cobblestones, such as in ʻĪao cobbly silty clay



Figure 6: Project Area Vegetation and Topography. View to Northeast.

(classified as both IbB and IbC). The IbC soil (7 to 15 percent slopes) is distributed along the Kuikahi Drive area; whereas the IbB soil forms the central region. Also occurring within the project area (in roughly equal percentages) are ʻĀao clay, on lesser slopes (IcB), and ʻĀao clay on steeper slopes (IcC). Figure 7 shows the project area distribution of these derivatives.

The presence of these soil types was confirmed through geotechnical studies in bordering parcels and archaeological testing during the current project. Important to emphasize again, no sandy sediment was identified in the project area. Sandy sediment (sand dunes) and mixed coastal-terigenous sediments occur to the east of the current parcel (*i.e.*, Maui Lani).

The fairly homogenous nature of soils in the project area does provide contrast to soil regimes occurring more to the east (coastal-terigenous and coastal) and to the north and south (dynamic stream valleys). The current project area occurs in a medial or intermediate environmental zone, both on a north-south and east-west axis. Along a north-south axis, the property lies in a very dry, open area between two perennial streams (ʻĀao and Waikapu). On an east-west axis, the project parcel lies above the influence of the coastal plain and below the wetter uplands. The current parcel thus lies in a fairly non-dynamic environmental zone that is practically surrounded on all sides by contrastingly vibrant areas (see Figure 5). That this

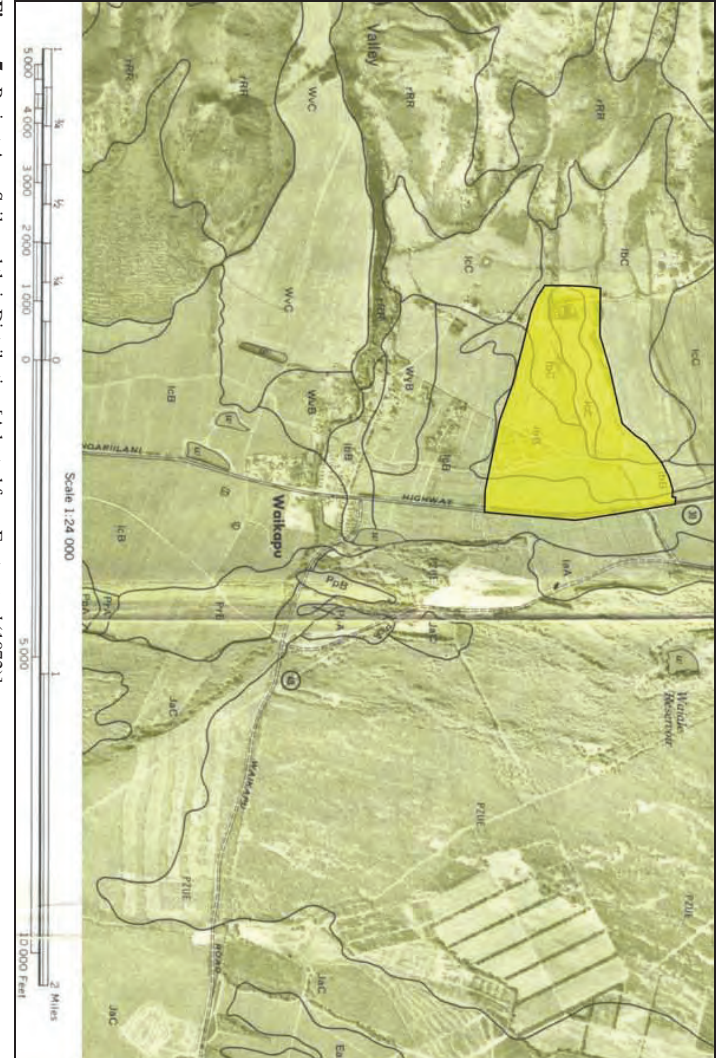


Figure 7: Project Area Soils and their Distribution [Adapted from Foote *et. al* (1972)].

intermediate area, occurring between more dynamic zones, required artificial controls is well-observed throughout the project area in the form of irrigation ditches and reservoirs.

CLIMATE

Rainfall in this intermediate environment is very modest. The project area receives an average annual rainfall of only 33 to 44 centimeters (Price 1983:63), with much of this rainfall occurring during the winter months (November–April). Seasonal variation in rainfall amount follows normal orographic patterns for leeward-type areas of Maui. The project area occurs just to the south of what may be considered the leeward-windward boundary. At higher elevations within Wailuku Ahupua`a, the amount of rainfall doubles and triples that of the project area. To the north, from `Iao Stream Valley area toward Waihee Valley, rainfall is much more intensive, with combined rainfall and geographic patterns being more conducive to traditional types of agricultural cultivation (*i.e.*, *lo`i*, sweet potato). The rainfall in this gently sloping project area drains downhill to the east and provides an additional water source for traditional Hawaiian agriculture in the lowland flats to the east of the project area (see Handy and Handy 1972).

TRADITIONAL AND HISTORIC SETTING

Wailuku District inhabits the eastern side of the West Maui Mountains (Mauna Kahalawai) and occupies the isthmus through the center of the island to coastal reaches in Kahukui and Mā`alaea. Wailuku, together with Waikapū, Waihee, and Waiehu, is one of the *Na Wai `Ehā*, or “the four waters,” known for the occupancy of chiefly individuals (Kame`eleihiwa 1992; Pukui and Elbert 1992; and Creed 1993). Wailuku District and Wailuku Ahupua`a are frequently mentioned in historical texts and oral traditional accounts as being politically, ceremonially, and geographically important areas during traditional times (Cordy 1981, 1996; Kirch 1985). Wailuku was considered a “chiefly center” (Sterling 1998:90) with many of the chiefs and much of the area’s population residing near or within portions of `Iao Valley and lower Wailuku. The many *heiau* constructed in the Wailuku area point to its ceremonial and religious importance during pre-Contact times. During historic times, after numerous battles in the area, the large concentration of Land Commission Awards granted in Wailuku, particularly in lower `Iao Valley, also attest to a sizeable population base and the importance of the lands for cultivation through time. More recent land use in the area included sugar cane cultivation and use of the land for pasture.

THE TRADITIONAL SETTING OF WAILUKU

Archaeological settlement data indicates that initial colonization and occupation of the Hawaiian Islands first occurred on the windward sides of the main islands, with populations

eventually settling into drier leeward areas at later periods (Kirch 1985). Archaeological dates for initial occupation of the Hawaiian Islands far pre-dates accepted ranges gleaned from palynological data. A more secure estimate for initial occupation of the islands is the A.D. 9th century (Athens 1997), if one is to lay more credibility with the pollen record than the archaeological record. In the Waihee and Waiehu areas of Wailuku, Kirch (1985:87) notes that “a number of coastal dune midden sites have been reported, and at least one of these contained pearl-shell fishhooks similar to those from the Bellows Site, eroding from the wave-cut midden.” (The Bellows site, located on the windward coast of O`ahu, has yielded dates of occupation, albeit controversial, from A.D. 300 to 600 [Pearson *et al.* 1971], one of the earliest dated sites in the Hawaiian Islands. For the most part, these dates have now been diagnosed as very problematical and are no longer valid.) More recent research within Wailuku Ahupua`a indicates that the area was likely settled between *c.* A.D. 1100 (Kirch 1985:142) and A.D. 1200 (Fredericksen and Fredericksen 1996).

To the north of the current project area lies `Iao Valley, one of the most important locations in the area for prehistoric activity. Connolly (1974:5) states that the pre-Contact valley [`Iao] had a large population base with “most people residing in a settlement near `Iao Needle,” just north of the project area. Supposedly, the subsistence base of this population consisted of fish and taro, with Kahului Harbor and the coast close by and *lo`i* systems lining `Iao Valley’s stream banks. Prehistoric ditches or *auwai* were utilized in taro cultivation (Connolly 1974:5). Sterling (1998:86) adds that two *auwai* within the valley:

have existed immemorially and were evidently constructed for the purpose of irrigating *kalo* on the plains which stretch away to the northward and southward of the [`Iao] river. Several minor *auwai* have, since ancient times, tapped the river at different points lower down and spread the water through the lands in the gulch on either side of the river bed.

Handy in Sterling (1998:63) further notes that “From Waihee and Wailuku Valley, in ancient times, was the largest continuous area of wet taro cultivation in the islands.” Cheever (1851:124) writes: “the whole valley of Wailuku, cultivated terrace after terrace, gleaming with running waters and standing pools, is a spectacle of uncommon beauty to one that has a position a little above it.”

Recent archaeological research (Fredericksen and Fredericksen 1996:52) has revealed that habitation sites along what is now Lower Main Street in Wailuku, “are associated with the

rich taro producing lands in the Lower `Īao River flood plain, and the extensive cultivation systems present in `Īao Valley." These habitation sites have been dated to the A.D. 15th through 17th centuries. The `Īao Valley area was not only renowned for its agricultural base during prehistoric times but its ceremonial and political base as well (see also Cordy 1996; Donham 1996).

No discussion of Wailuku is complete without mentioning the important *heiau* complex above `Īao Valley near its seaward terminus. During the mid to late 18th century, the Halekii-Pihana *heiau* complex was supposedly designed by a Hawaiian named Kiha (Sterling 1998:89). These monuments, designated as State Site Number 50-50-04-522 and occurring along the northwest flank of the current project area, are described as very important *heiau* within Hawaiian history. Yent (1983:7) notes the life cycle of the *ali`i* was represented here. It was the place where Kamehameha I's wife was born, Kahekili lived, and Kekaulike died. Thrum (1909:46) reported that Kamehameha I evoked his war god at Pihana Heiau after his warriors defeated Kalanikupuli's forces during the Battle of `Īao in 1790. The two *heiau* are primarily associated with Kahekili, who is connected with the Halekii-Pihana complex between c. A.D. 1765 and 1790, and Kamehameha, during his conquering of Maui in 1792 (Yent 1983:18). Halekii and Pihana Heiau are the only remaining pre-Contact Hawaiian structures of religious and historical importance in the Wailuku-Kahului area that are easily accessible to the public (Estioko-Griffin and Yent 1986:3). As stated, the area within and adjacent to the current project is known not only for its religious and/or ceremonial significance, but for its political prominence as well.

The Fredericksens' (1996:52) report states that politically, Wailuku [village] was known as a central settlement for high ranking chiefs and their retinue. The Wailuku area was also witness to many battles, from the Battles of `Īao and Sand Hills to the Battles of Kepaniwai and Kakanilua. The most famous battle was that of Kepaniwai where Kamehameha I, in July 1790, finally wrested control of Maui Island. Kamehameha I and his warriors landed at the Kawela portion of Kahului Bay and proceeded up `Īao and other valleys to score a decisive victory. Wailuku, meaning water of destruction, succinctly describes the area in which many of these major battles occurred. Of additional note is that in the Kauhāhea area of `Īao Valley (southeast of `Īao Stream below Pihana Heiau-supposedly within the current project area), warriors apparently dwelt and were "trained in war skills and there was a boxing site in the time of Kahekili" (Sterling 1998:89).

TRADITIONAL SETTING OF THE PROJECT AREA

Creed (1993) has written extensively on the traditional background of the Waikapu area, much of which directly applies to the open landscape of the current project area just to the north of Waikapu. Many classes of sites are found or may have existed in the Waikapu-Wailuku area during traditional times. Creed (1993:19–21) provides an extensive list, including some site types that would not apply to the current parcel due to its distance from major drainages, the coastline, and its open land classification. Traditional sites that would apply include agricultural sites (*kula* lands, *wauke* patches, *hala* trees, pigs, and potato patches), boundary walls, burials (sometimes located in habitation terraces), feather gathering areas (particularly in the mountains to the west), habitation loci, and *pohaku* (an adze stone marks the border between Wailuku and Waikapu). While populations were predominantly centered in `Īao Valley and Waikapu Valley, there was agricultural and habitation activity in the open grasslands of the current project area above the coastal flats. Much evidence for such activities has not yet been found through archaeological means, a situation that places much culpability on historic land use that may have erased or scattered this evidence. As such, there is much more evidence for historic activities occurring in the area.

HISTORIC SETTING OF THE PROJECT AREA

Current project area lands were first assigned to the district formerly known as Kula. Taken literally, *Kula* refers to open land or plains (Pukui and Elbert 1992:70). Kula District is known for its dry, arid lands being vacant of perennial streams. Kula was always an arid region, throughout its long, low seashore, vast stony *kula* lands, and broad uplands. There are exceptions in Wailuku as one proceeds along `Īao Stream Valley and further to the west/northwest past Waihee and Waiehu. However, even the vast stony *kula* lands were utilized during traditional and historic times. Most evidence for such land utilization has come in the form historic records.

THE GREAT MĀHELE

In 1848, during the late historic period, commissioners of the Great Māhele instigated an extreme modification to traditional land tenure on all islands that resulted in a division of lands and a system of private ownership. The Māhele was based upon the principles of western law. While a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kamehameha III (Kamehameha III) was forced to establish laws changing the traditional Hawaiian society to that of a market economy (Kuykendall Vol. I 1938:145 footnote 47 *et passim*; Daws 1968:111; Kame`eleihiwa 1992:169–170, 176). The dramatic shift from a redistributive economy to a market economy resulted in drastic changes to land tenure, among

other things. Case in point, foreigners demanded private ownership of land to ensure their investments (Kuykendall Vol. I 1938: 145 *et passim*; Kame`eleihiwa 1992:178; Kelly 1998:4).

Once lands were made available and private ownership was instituted, native Hawaiians, including the *maka`ānana* (commoners), were able to claim land plots upon which they had been cultivating and living. Oftentimes, foreigners were simply just given lands by the *ali`i*. However, in the case of commoners, they would only make claims only if they had first been made aware of the foreign procedures (*kuleana* lands, land commission awards). These claims could not include any previously cultivated or currently fallow land, *okipu*, stream fisheries, or many other natural resources necessary for traditional survival (Kame`eleihiwa 1992:295; Kirch and Sahlins 1992). Awarded parcels were labeled as Land Commission Awards (LCAs). If occupation could be established through the testimony of witnesses, the petitioners were issued a Royal Patent number and could then take possession of the property. Commoners claiming houselots in Honolulu, Hilo, and Lāhianā were required to pay commutation to the government before obtaining a Royal Patent for their awards (Chinen 1961:16).

Wailuku District was declared Crown Land during the Great Māhele and numerous Land Commission Awards, approximately 180, were awarded within Wailuku Ahupua`a while approximately 100 were awarded for Waikapu Ahupua`a (Creed 1993). A handful of foreigners (*i.e.*, Anthony Catalena, James Louzada, E. Bailey) gained control of large parcels of lands that would later be used for mass cultivation of sugarcane. Significantly, the majority of LCAs were awarded to Hawaiians, a gauge that can be used to measure pre-Contact settlement, since there was little overall change in traditional land use among Hawaiians prior to 1853 (Creed 1993:38).

During the Great Māhele of 1848, a total of three land claims were awarded in the current project area (Waihona `Aina 2005): LCA 433, 3201, and 3525—all of which are located in parcel 02, in the central area of the eastern border near Honoapi`ilani Highway (Figure 8). Table 1 summarizes archival research of these three LCAs.

Table 1: LCA and Land Grant Data for [TMK:(2) 3-5-02: 02].¹

LCA No.	Awardee	Land Use	Comments
00433	William Crowningburgh and wife Maile	lo`i – 21 `apana – 4	Stream also on property. Crowningburgh surrounded this land with a fence and raised animals on the property. Plot of land was referred to as <i>Pili Pili</i> at the time.
03201	Wm. A. McLane	`apana – 2	One ditch on piece of land. Plot of land was referred to as <i>Awakamanu</i> at the time.
03525	Keliiolelo	lo`i – 3 `apana – 3 House lot – 1	Stream on property. Plot of land was referred to as <i>Awakamanu</i> at the time.

¹ Source: Waihona Aina website (www.waihona.com), information obtained in September, 2005.

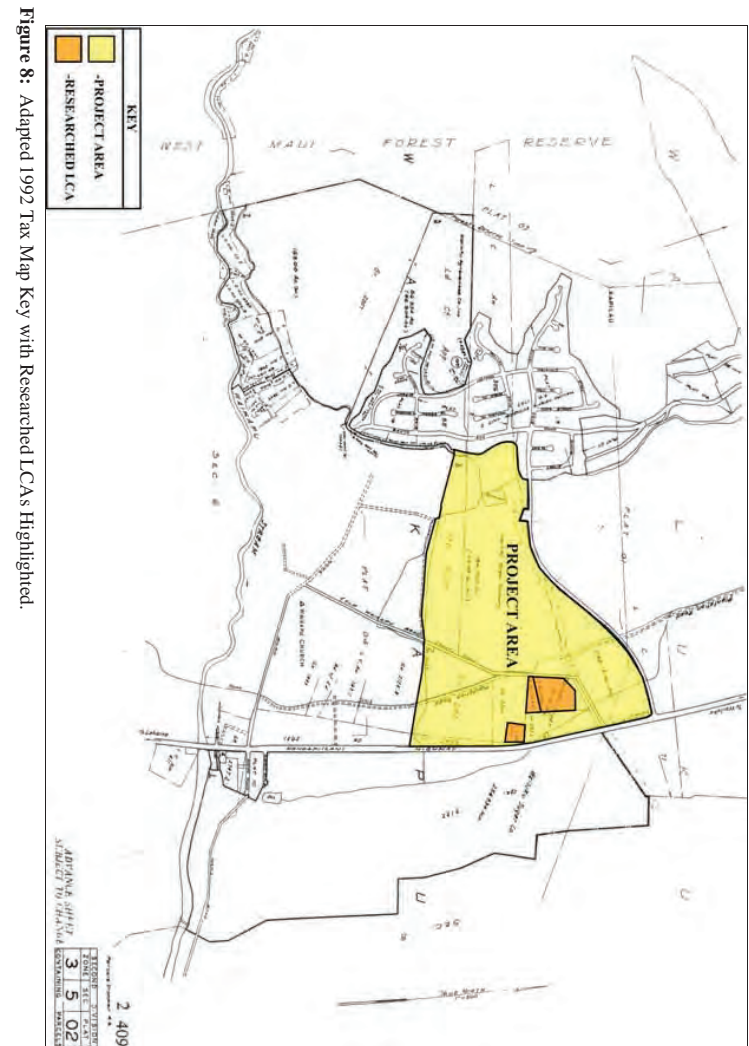


Figure 8: Adapted 1992 Tax Map Key with Researched LCAs Highlighted.

This LCA record keeps with the overall LCA pattern of the Waikapu-Wailuku area intimating taro cultivation in association with permanent residences. Such a pattern is historically documented from 1848, but likely extended deeper into the past. *Lo`i* (irrigated taro patches or planted terraces) and evidence of smaller, private land plot divisions, *`apana*, are no longer detectable within this surface or subsurface landscape.

Similarly, the Wailuku Ahupua`a parcel north of Kuikahi Drive predominantly lists among its LCA records 'property for raising cattle' and 'pasture grounds for cattle' (Dega 2004). There also is some mention of stone walls, *kalo* patches, and *lauhala* trees on the landscape. Perhaps the most significant structures on this adjacent land were built by the American Board of Commissioners for Foreign Missions (A.B.C.F.M.) which consisted of two house lots with adobe walls. The lots occurred "near pasture land," a common theme for the area (Waihona `Aina 2005). In Waikapu, to the south, the LCAs reflect *lo`i* cultivation, *kula* lands, and house sites. However, much or all of the evidence related to such settlement of the Waikapu area has been effaced by late-historic and modern cultivation. The current project area is a prime example of this trend.

Land use in Wailuku and Waikapu Ahupua`a in the mid 19th and early 20th century was largely devoted to the sugar industry. During the 1860s, the sugar business was growing, with plantations and mills at Wailuku, Waihe`e, Waikapu, and Haiku. Many of the plantation camps associated with these mills were centered in the Pu`unene, Kahului, and Wailuku area (see Denham *et al.* 1992:16). Historic utilization of the Waikapu-Wailuku landscape within and near the project area focused on industrial-levels of cultivating sugar cane and pineapple. Water was channeled from traditional sources (*e.g.*, Waikapū Stream, western aquifers or springs) through plantation lands. Both local and imported workers operated on these plantation lands and the area maintained fair population density. Evidence for expansive landscape modifications to accommodate the industrial-level of production is very evident across the current subject parcel in the form of the north-south oriented known historic ditches. The significant amount of plastic and tubing and sheeting found within Layer I of excavations attests to even more recent utilization of the open landscape for cultivation. These former sugarcane lands are now being reclaimed through residential developments.

PREVIOUS ARCHAEOLOGY

IMMEDIATE VICINITY OF PROJECT AREA

Intensive research within the State Historic Preservation Division (SHPD) archives concluded that no previous archaeological study was conducted within the present project area. However, of primary importance for the present study are the results from three projects recently conducted within and bordering the 348-acre subdivision to the north (Figure 9). First, Archaeological Inventory Survey was conducted on approximately 100 acres of land that included five separate lots and a proposed road corridor in the Kehalani Mauka Subdivision (Dega 2003). Three historic sites were documented during this Inventory Survey. State Site Number 50-50-04-5473 has been assigned to Hopoi Reservoir. This reservoir predates Hopoi Camp and was present at least by 1922 (see Dega 2003). Occurring to the immediate east of Hopoi Reservoir and running north-south to Waikapu is Kama Ditch (State Site No. 50-50-04-5474), a water conduit carrying the precious commodity to dry southern lands. A single basalt adze (Site 50-50-04-5478) was recovered from the northern flank of Lot 21 along the eastern flank of the parcel. Extensive survey and testing in the area of the isolated find failed to produce additional artifacts or cultural deposits. Representative subsurface testing (18 trenches) on the lots only revealed highly homogenous soil matrices across the open, barren intermediate area.

A second SCS Inventory Survey Report dealing with these same Kehalani Mauka lands (Dega 2004) documented lots not surveyed in the first study. This survey recorded six additional sites, all historic. Similar to the present project area, a series of un-named, lesser ditches was found within Kehalani Mauka, represented by State Site Numbers 50-50-04-5490 and 50-50-04-5493. Waihee Ditch (Site -5197) flows from this former SCS project area into the present project area. Historic-modern roadways (50-50-04-5489), a historic surface artifact scatter (50-50-04-5491), and several plantation-era clearing mounds (50-50-04-5492).

In summary, the results of the Kehalani Mauka Subdivision Inventory Survey roughly duplicate the present project area's findings. Aside from a lone traditional artifact (an adze)—which could remain despite a century of cultivation—larger traditional sites were destroyed during the sugar-era.

An Archaeological Assessment Report was published based on a negative results survey on Kehalani lands just to the east of Honoapi`ilani Highway (Monahan 2003). This survey did not produce any structures or artifact scatters. Trench excavation demonstrated a fairly consistent subsurface stratigraphy with a thick layer of dark brown silt (Layer II) inclusive of historical

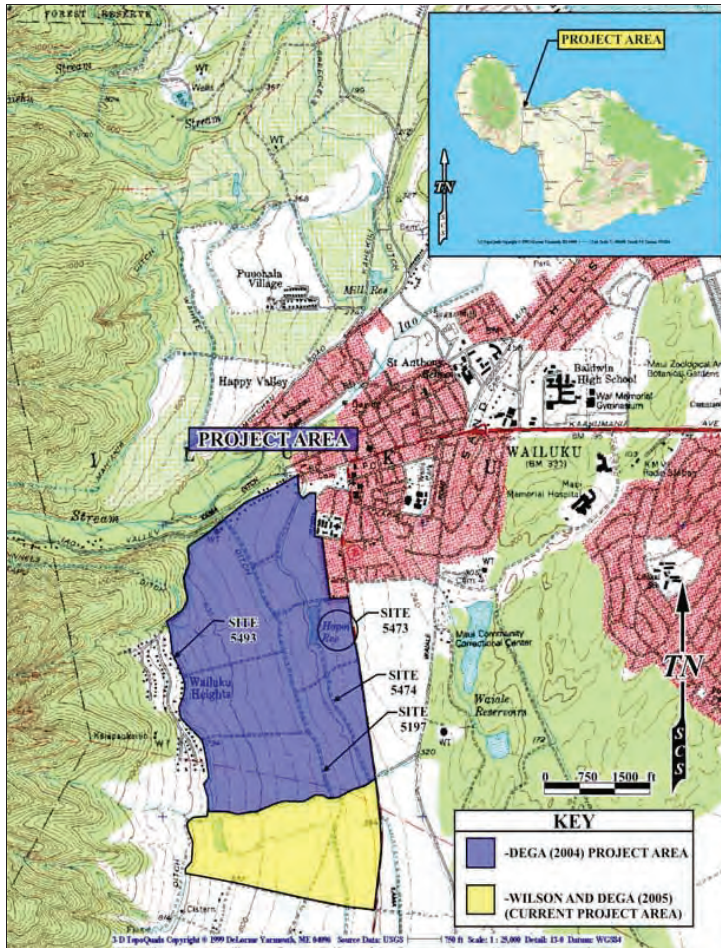


Figure 9: USGS Wailuku Quadrangle Map Showing Adjacent Areas of Archaeological Study.

garbage (*i.e.*, black plastic and rubber tubing, white plastic irrigation pipes, and black plastic sheeting) over an undisturbed very dark grayish-brown silty clay subsurface (Layer III). A dark brown, silty root mat-layer (Layer I) was present in some units. No undisturbed sandy deposits were encountered, although a few trenches close to the eastern boundary of the project area did contain thin lenses of yellowish-brown sand. These sand lenses were clearly introduced as recent fill.

GENERAL WAIKAPU AREA

In terms of general projects in the Wailuku-Waikapu environs, the earliest archaeological endeavors on Maui were undertaken by Thrum (1909), Stokes (1918), Emory (1921), and Walker (1931). None of their archaeological finds directly pertain to the current project area; however, their data allows for a deeper understanding of the traditional use of the Wailuku-Waikapu area.

In an area south of the project area, within open lands similar to what is being researched herein, Thrum mentions that two *heiau* may have possibly existed within the *ahupua`a* of Waikapū, but evidence of the two sites no longer remains (1909–1918:59). A group of approximately 45 house and shelter sites (State Sites 50-50-09-1441, the McGregor Point C-shaped structures, and 50-50-09-1287, the Mā alaea Complex) was identified by Walker (1931) to the west of Mā alaea. Chronology for these sites has yet to be determined (Creed 1993). Walker (1931:58) also described a *koa*, or fishing shrine, and two petroglyph fields with an associated *heiau* (State Site numbers 50-50-09-1169 and -1199) at Mā alaea. The *koa* was not assigned a State Site number, nor has it been relocated.

Recent archaeological work in Waikapū Ahupua`a (Kennedy 1988, 1989; Folk and Hammatt 1989; Haun 1989; Brisbin *et al.* 1991; Donham 1991; Titchenal 1996) has revealed a low density of sites ranging in function from habitation to agriculture. Radiocarbon dating results in these studies have produced dates ranging from the A.D. 1100s to modern times. Together, their collective data suggests a “general trend toward development of large, densely settled populations between A.D. 1200 and about 1800, and the expansion and intensification of dryland field systems, particularly during the latter two centuries of this period” (Creed 1993:33).

Other recent archaeological work just to the south and/ or east of the current project area has been limited to two field inspections (Donham 1991, 1995) and near the eastern boundary line of the current project location, two archaeological Inventory Survey-level investigations

(Kennedy 1988, 1989; Buffum and Dega 2001). The conclusions offered by these few projects primarily indicate that any surface and/or subsurface features of cultural value that were once present within the area have most likely since been destroyed by intensive agricultural use of the land (*i.e.*, sugar cane and/or pineapple cultivation); this pattern was also confirmed by subsurface examination. As such, a broader background for Wailuku District is offered herein (see below).

WAILUKU DISTRICT OVERVIEW

The following section provides a brief overview of archaeological research in Wailuku District itself and is presented in two arbitrary sections: Upper Wailuku and Lower Wailuku District. Upper Wailuku is considered to be the lands above Kuihelani Highway while Lower Wailuku encompasses the lands below Kuihelani Highway and extends to Mā`alaea Bay in Waikapu Ahupua`a. The following district-specific research appears in its entirety as first published in Dega (2004).

UPPER WAILUKU DISTRICT

The majority of archaeological work is associated with the Pu`u One region in the northern most section of Wailuku District. Prior archaeological work in the Pu`u One region indicates an emerging pre-Contact settlement pattern for this region. SCS (Dunn and Spear 1995) conducted research at the intersection of Nanihoa and Waiale Roads where habitation features and a cultural layer interspersed with hearth and pit features were identified during a monitoring project. These features all occurred in sandy substrate. Radiocarbon dates submitted from these features yielded dates ranging from A.D. 1434 to A.D. 1807, dates suggesting pre-Contact sites and early historic land use. SCS (Burgett and Spear 1995) conducted Archaeological Inventory Survey in the sand hills along lower Main Street. One habitation site (50-50-04-4004) located in a remnant of a once larger cultural deposit was identified. Radiocarbon samples dated the site to A.D. 1420 and A.D. 1640, or to the early to mid-prehistoric time range.

SCS (Morawski and Spear 2001) conducted Archaeological Monitoring during the installation of a water pipeline and fire hydrants on Nanihoa, Helenani, Leilani, Kainani, Naniluna, and Ka`ahumanu Highway roads with the town of Wailuku. During the research, a historic refuse dump was discovered, as were the remains of previously disturbed human burials. SCS (Buffum and Spear 2001; Zachman and Spear 2002) conducted Archaeological Monitoring at the Maui Medical Center. Due to extensive landscape modifications, no archaeological or traditional materials were identified during excavation.

Pantaleo and Sinoto (1996) conducted archaeological work at the Maui Lani Development to the east of the present project area. As of the 1996 publication, only one concentration of multiple burials was discovered while the remainder were isolated individual burials at the tip of the dune (at the highest elevations). A more contemporary report documenting additional burial finds at Maui Lani should aid in clarifying the overall results of that project. Research conducted by Fredericksen and Fredericksen (1997) indicated that this section of dunes was primarily used during prehistoric times as an interment area, a contention easily supported by the previous year's study. Habitation sites (several with associated burials) have been found mostly in the dune area associated with the Lower Main Street/Waiale Road Corridor. Conversely, studies east of this corridor have yielded only human burials (Fredericksen and Fredericksen 1998). Fredericksen and Fredericksen (1998) lists many of the archaeological studies conducted in the Lower Main Street/Waiale Road Corridor and Central Maui area.

LOWER WAILUKU DISTRICT

A limited number of archaeological projects have been conducted in this particular land section, much of which was disturbed during the massive sugar cane cultivation. The fair amount of archaeological work conducted along Lower Main Street is summarized elsewhere (see Morawski and Dega 2003). In comparison, Sinoto and Pantaleo (1992) conducted Archaeological Inventory Survey of a proposed location for the Kihei Gateway complex, on the *makai* side of the Piilani-Mokulele Highway junction. One historic site, the remains of concrete footings from a bridge across Waiakoa stream, was identified (Site 50-50-09-31).

SCS (Burgett and Spear 1997) conducted large-scale Archaeological Inventory Survey of the Puunene Bypass/Mokulele Highway improvements stretching across the majority of Wailuku District. Although no sites were identified, this absence may account for the lack of archaeological remains: extensive disturbance associated with prior sugar cane cultivation, highway and private construction activities, and little or no prehistoric occupation of the area. However, *lo`i* cultivation was reported to be intensively cultivated in this area (Handy and Handy 1972). The replacement of *lo`i* with sugar cane during historic times would be the most likely cause for the destruction of all traditional sites related to prehistoric cultivation in the area.

Fredericksen and Fredericksen (1998) conducted archaeological research on 232 acres northeast of Puunene Avenue stretching to Haleakala Highway. No formalized traditional or prehistoric sites were discovered. Several sites consisting of volcanic-glass surface scatters were identified in the former sugar cane fields along with a historic irrigation ditch.

SETTLEMENT PATTERN

Archaeological investigations within the currently studied portion of Wailuku-Waikapū have revealed relatively little regarding traditional settlement patterns due to the dearth of supporting empirical evidence. Archival research and analyses of the generalized settlement pattern for Wailuku District have been the foremost sources for discerning an established settlement pattern for the current project area.

Archaeological evidence suggests that early settlement in the Hawaiian Islands occurred along windward shoreline areas between the A.D. 4th and 11th centuries. Pollen evidence suggests a settlement date of the A.D. 9th century (see Athens 1997). For the most part, these populations used local resources and seldom ventured into upland valleys. Cordy (in Creed 1993) suggests, however, that upper valley areas on windward coasts were likely populated before the A.D. 1100s. Coastal settlement was still dominant, but populations began exploiting and living in more upland *kula* zones. Greater population expansion to inland areas did not occur until the c. A.D. 12th century but continued through the 16th century. Large scale or intensive agricultural endeavors were implemented in association with habitation. Coastal lands were used for settlement and taro was cultivated in near-coastal reaches and in the uplands. Upland areas of Maui such as the Waiohuli-Kula area contained large garden enclosures, ceremonial structures, and permanent habitation sites by c. A.D. 1600.

Nearer the coast in intermediate lands such as the current project area (c. 60–85 meters amsl), taro was cultivated along stream courses, dryland taro was grown on *kula* lands such as the project area, and populations were settled. It is possible that the *kalo* patches described in the aforementioned LCA accounts originated during the “Expansion Period” of A.D. 1400 to 1600, perpetuating through historic times (Kirch 1985). However, most of the LCAs for the area describe almost no cultivation occurring in the area during the 1850s as pasture land and sugar cane cultivation were already dominating the use of the land (Creed 1993:74). Primary settlement and resource zones lay outside the current medial environmental zone in Wailuku proper, near perennial water sources (‘Īao Valley, Waihee, Waiehu). The only substantial settlement along this medial isthmus zone between 300 and 600 feet amsl was at Waikapu, to the south of the current project area, near the base of Waikapu Stream Valley (see Creed 1993). As the current project area does not contain a perennial water source and is primarily open grassland, the area is considered to lie at the periphery of the more resource-rich zones in Wailuku.

Historic utilization of the Wailuku-Waikapu landscape was dominated by the cash cropping of sugar cane and pineapple, made possible by water channeled from traditional sources (e.g., Waikapu Stream) through plantation lands. Historic features associated with this period are represented as water features in the form of reservoirs (Hopoi Reservoir) and water channels (Waikapu Ditch, Waihee Ditch). This area was also an important transportation corridor linking both the south and north flanks of the Maui isthmus, with Honoapi‘ilani Highway having been demarcated as a Government Road on area maps by 1882 (Creed 1993:20).

PROJECT AREA EXPECTATIONS

Prior to commencing archaeological fieldwork, a review of archival resources and the results of previous archaeological work conducted in the area was undertaken to assess possible findings during fieldwork. Based on previous archaeological work—primarily north and east of this intermediate landscape—and on LCA information, site patterns prior to intensive historic land alteration activities show systematic use of the terrain as taro planting areas, limited habitation, and divisions of pastureland. Previous archaeological investigations within this portion of the Wailuku-Waikapū corridor have revealed very little data to confirm these patterns, this not surprising considering the impact that long and intensive agricultural exploitation has had on the surface of the area and subsurface strata. Traditional site components expected prior to these land-altering activities consist of dryland taro patches, associated agricultural components such as *‘auwai* and/or terracing, house sites, boundary walls, and pasture walls. Expectations for identifying such data sets were low, however, due to the aforementioned historic land uses.

Traditional sites that may once have been present within the current project area were not expected to remain unaltered. Given LCA testimony and general settlement patterns for this inland, intermediate area, land use patterns for the current project area were thought to be most obviously related to historic-period settlement and cultivation—but on a very limited scale. At present, an empirically-based chronology of this area has yet to be provided, given intensive historic land modifications and the lack of datable archaeological evidence. According to Creed (1993:77):

... we have no carbon dates to indicate the possible beginnings for this wetland agriculture in Waikapū Valley. Moreover, this area has been in constant use for crops and habitations at least since the time of the *Māhele*, if not long before and modern uses may have destroyed all traces of prehistoric uses. However, the LCA records and early maps document the extent of the *lo‘i* agriculture in the

1850s. The stream valley in its upper reaches may have some remnants of these *Māhele* period *lo'i* or *'auwai*.

Expectations for this project area rested on several assumptions, some of which were proven valid at the end of fieldwork. First, the project area, lying in an open, intermediate zone containing hard soil composed of silty clay with cobbles was not intensively occupied during traditional times. Traditional and early historic-period populations were focused elsewhere in areas such as Waikapu, ʻĀao Valley, Waihee Valley, and Waiehu Valley. Thus, there were low expectations for identifying larger, intact sites or deposits; they simply were not constructed in this area. Secondly, there was the possibility that sand sediment could be present along the eastern flank of the project area. The association of sand and traditional/historic burials and cultural deposits has been well documented (see Kirch 1985). Thus, if sandy deposits did occur along the eastern flank, cultural deposits could be present. Third, the area was heavily modified for industrial cultivation. Remnants of such modifications, such as fill strata, excavated areas, reservoirs, and earth mounds/ berms were expected throughout the project area. A cursory study of the USGS Wailuku Quadrangle Map showed that irrigation ditches crossed the current project area. Finally, based on the primarily negative results from other archaeological projects conducted along the intermediate Wailuku-Waikapu corridor, there were limited expectations for identifying intact traditional-period architectural structures or intact cultural deposits lying beneath the tilled surface. However, historic structures related to irrigation and were likely, considering they were previously documented near the parcel (see Dega 2003). In all, some of these expectations were met during the current study.

METHODOLOGY

FIELD METHODS

Fieldwork consisted of systematic pedestrian survey of the entire 215.800 acre parcel and mechanical subsurface testing across representative portions of the parcel. Written and photographic documentation occurred during each phase of research. First, 100 percent systematic pedestrian survey was conducted to assess the presence/absence of surface features and artifacts as well as to assess soil deposits amenable to testing. As visibility was moderate within fifty percent of the project area (*makai* half), and low-to-moderate in the *mauka* half, 100 percent surface survey was conducted by two to three crewmembers spaced closely together (5 meters apart), walking parallel along north-south transects. When any structures, artifacts, or intriguing topographical changes were identified, they were plotted on an overall site map and flagged. Surface artifact assemblages, surface features, or anomalies were assigned temporary

site numbers. Temporary site numbers were converted to State Site Numbers upon a cursory project review by SHPD following the completion of fieldwork.

After survey, the crew returned to each flagged location to fully investigate the area and assess excavation potential. Representative areas were demarcated for subsurface testing. All subsurface testing was done mechanically by backhoe. Following excavation each trench was thoroughly documented via stratigraphic layer profiles, soil analysis, photography, and location plotting on a project area map (see Figure 4). A vast area was tested with these intermittent trenches, however, excavation produced negative results in terms of subsurface cultural material of interest to the archaeological record.

While no cultural materials were collected from any trench, soil samples were taken from each trench and analyzed in the field. The results revealed a fairly homogenous soil matrix. None of the excavated soil was screened, but all trench walls were thoroughly inspected. Photographs were taken first of trench locations prior to excavation, secondly of at least one profile (or multiples) of each trench, and thirdly, overview shots were taken of the respective trench at the base of excavation. Representative photographs are offered in Appendix A.

LABORATORY METHODS

As the results of survey and excavation were negative in terms of collected artifact classes and samples, laboratory work was not necessary. Because none of the soils analyzed in the field were deemed to be associated with past habitation surfaces, traditional agricultural levels, or cultural deposits, no samples were submitted for specialized analysis (*e.g.*, radiocarbon, pollen, phytolith analysis). Subsurface charcoal was an extremely rare commodity, and when found it was in association with modern debris from modern agricultural activity or dumping. Drafting of stratigraphic profiles, mapping illustration, and section drawings, were the primary components to laboratory work. All field notes, maps, photographs, and artifacts pertaining to this project are being curated at the SCS laboratory in Honolulu.

ARCHAEOLOGICAL INVENTORY SURVEY RESULTS

A 100-percent pedestrian survey of the project area revealed the presence of a network of historic-period surface structures that are represented as the seven sites described below. The previously documented (Dega 2004) Waikapu Ditch (State Site No. 50-50-04-5493) and Waihee Ditch (State Site No. 50-50-04-5197) were subject to additional documentation during this survey. No traditional Hawaiian cultural material was found.

DITCHES

Four ditches are present within the project area. All four ditches originate outside of the project area and/ or extend beyond the project area's limits; no ditch exists as a segment contained strictly within the project area. Two of these ditches are of a larger historic context within Maui's sugarcane era. These are named ditches and some limited information regarding their construction and use appears within the historic record. It is important to note that up to as recently as 1983 (the publication of one series of USGS maps) two more of these significant, longer range water courses flowed into the project area. The Everett Ditch and Kama Ditch, however, have since been diverted or destroyed and no longer appear within the project area. Additionally, two lesser ditches served a more localized role within the project area. Only one lesser ditch, a possibly historic drainage from upslope, did not flow consistently at the time of survey.

State Site Number 50-50-04-5197 (Waihee Ditch)

FORM	Concrete water-course
FUNCTION:	Sugarcane irrigation
AGE:	Historic (1905–1907 construction)
DIMENSIONS:	Length: 960.00 m; Width: 2.40m; Depth: 1.70 m (within P. Area)
CONDITION:	Good
SURFACE ARTIFACTS:	None
EXCAVATION:	None
DESCRIPTION:	The Waihee Ditch is a flowing, concrete water conduit. Within the project area, the ditch is U-shaped, having two vertical concrete sides, an open top, and a flat concrete bottom (Figure 10). Concrete cross-braces reinforce the relatively thin (0.10 m) concrete sides. The curving ditch flows into the project area from the north and roughly keeps a north-south orientation as it transects parcels 03 then 02 (see Figure 4). A smaller ditch (Site - 5729) that serviced only the locality of the project area, flows into the Waihee ditch from the west (pictured in Figure 10).

Modern alterations and maintenance to the Waihee Ditch are evidenced within the project area in the form of fortifications, a watergate near a modern reservoir, and foot and car bridges over the ditch. Additionally, nearby surface deposits of freshwater clam shells and *kukui* nuts are evidence of modern maintenance in the form of regular cleaning of the ditch. These finds are also a testament to the Waihee Ditches length and volume (Figure 11), as neither of these species exists within the project area; they traveled here via the ditch from environments north and *mauka*. In terms of historic information regarding a single project area site, the most available for



Figure 10: Waihee Ditch (50-50-04-5197). View to South.

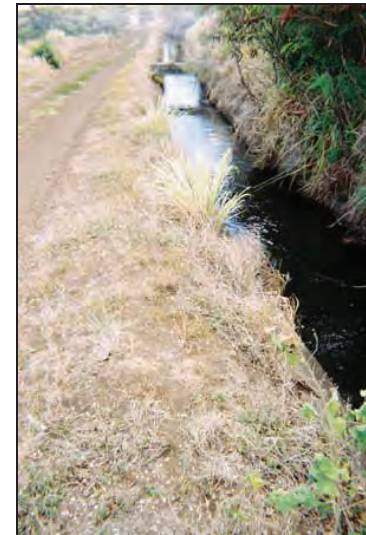


Figure 11: Waihee Ditch (50-50-04-5197) paralleling Old Waikapu Road (50-50-04-5730). View to South.

the area pertains to Waihee Ditch. This history is worth noting in detail as it lends to an understanding of project area utilization around the turn of the century.

According to Wilcox’s *Sugar Water: Hawai`i’s Plantation Ditches* (1996:124), the Waihee “Canal” was started in June 1905 and was completed in May 1907. The entire canal cost \$160,000 to construct and was used by Wailuku Sugar Company (founded 1862) and HC&S. The Waihee Canal was built under the leadership of an engineer named James T. Taylor. The canal, or ditch as it is now known, represents a monumental effort to carry water to dry areas of Maui. Wilcox’s research emphasizes this display of manpower for the purpose of sugar irrigation:

this 50-mgd-capacity ditch tapped the Waihee stream at the 650 foot elevation, just below the Aliele falls. . . . Its 10.62 miles included twenty-two tunnels totaling 16,539 feet; thirty-nine flumes totaling 2764 feet; 35,549 feet of open, cement-lined ditch; and a 1253-foot-long, 3-foot-diameter siphon to cross Iao Valley. Ditch grade averaged 2/5 feet per 1000. The longest tunnel (2246 feet) was especially challenging, as much of it went through hard close-grained rock and it required compressed air and percussion drills. This tunnel took eighteen months to cut. The contract price for the labor ranged from 85 cents to \$5 per foot, depending on the material cut, the location, and the length of the tunnel. (1996:124)

The Waihee Ditch represents the oldest securely dated site on the project area landscape. Three other ditches are also located within the project area: two lesser, more localized ditches run from west to east; the Waikapu Ditch parallels the Waihee Ditch as it enters the project area from the north.

State Site Number 50-50-04-5493 (Waikapu Ditch)

FORM:	Concrete water-course
FUNCTION:	Sugarcane irrigation
AGE:	Historic (in use by 1913)
DIMENSIONS:	Length: 61.00 m; Width: 1.70m; Depth: 1.00 m (within P. Area)
CONDITION:	Good
SURFACE ARTIFACTS:	None
EXCAVATION:	None
DESCRIPTION:	The Waikapu Ditch is a flowing, concrete water conduit that taps the Iao Stream at upper elevations within Iao Valley. Within the project area, the ditch is U-shaped, having two vertical concrete sides, an open top, and a flat concrete bottom (Figure 12)



Figure 12: Waikapu Ditch (50-50-04-5493) at point where it enters Project Area. View to South.

—and is very similar in appearance to Waihee ditch. The concrete sides of the ditch measure 0.20 m thick. The curving ditch flows into the *mauka* fifth of the project area from the north and roughly keeps a north-south orientation. Unlike, the Waihee Ditch, the Waikapu Ditch does not transect the project area, rather it enters and then ceases.

The Waikapu Ditch flows into the Site -5727 reservoir where it terminates (although this may not have been the historic termination point of this ditch). The out-flow of this reservoir is a smaller, localized ditch that runs *makai* (Site -5729) and does not resemble the Waikapu ditch. Modern alterations and maintenance to the Waikapu Ditch are evidenced within the project area in the form of fortifications and a car bridge over the ditch. Wilcox (1996:124-125) notes that the ditch was in use prior to 1913 and was built by Wailuku Sugar Company.

State Site Number 50-50-04-5729 (un-named ditch)

FORM:	Rock and concrete mortar water-course
FUNCTION:	Sugarcane irrigation
AGE:	Likely historic
DIMENSIONS:	Length: 1200.00 m; Width: 0.90m; Depth: 0.75 m (within P. Area)
CONDITION:	Fair

SURFACE ARTIFACTS: None
EXCAVATION: None
DESCRIPTION: This un-named, flowing ditch was almost certainly built after Waihee and Waikapu Ditch construction. Site -5729 serves as a *mauka-makai* link between these two major sources of imported water. Site -5729 is constructed of basalt rock walls, specifically small boulders that are often welded together with concrete mortar (Figures 13 and 14). The walls of this U-shaped ditch are four to six courses high, and average 0.20 m thick. The bottom of the ditch is a concave, roughly-molded concrete basin. This construction material is an indicator of a localized irrigation effort, as the cost of labor and materials was a significantly smaller undertaking than the major ditches flowing in from the north. The origin of the Site -5729 ditch is the outflow of the Site -5727 reservoir (which gathers its water from the Waikapu Ditch terminus). Site -5929 then flows into the Waihee Ditch (Figure 15). The Site -5729 ditch is controlled by modern mechanisms in its flow into and out of the modern, smaller reservoir, and eventually downslope toward Honoapi ilani Highway and out of the project area.



Figure 13: Site 50-50-04-5729 Ditch. View to West.



Figure 14: Site 50-50-04-5729 Ditch, Showing Rock and Mortar Construction of Side Walls. View to Northwest.



Figure 15: Site 50-50-04-5729 Ditch (at center) flowing into Waihee Ditch (50-50-04-5197). View to West.

State Site Number 50-50-04-5726 (un-named ditch)

FORM: Earthen berm ditch
FUNCTION: Sugarcane irrigation
AGE: Possibly historic
DIMENSIONS: Length: 215.00 m; Width: 7.00m; Depth: 2.50 m (within P. Area)
CONDITION: Fair
SURFACE ARTIFACTS: None
EXCAVATION: None
DESCRIPTION: This un-named, intermittently flowing ditch was possibly

constructed within the historic sugar era. It is a wider U-shape than the other ditches, and is choked with thick introduced grasses that stand over two meters tall. Like the Site -5729 ditch, this is a localized irrigation effort. The possibility exists that this is not a sugar cane agriculture feature, but a modern widening of a natural watershed drainage. However, its earthen berm sides resemble the historic, machine-created berms (Site -5728) constructed on the project area as erosion control during the sugar era. This ditch / drainage runs downslope, approximately west to east.

State Site Number 50-50-04-5727 (un-named reservoir)

FORM: Rectangular reservoir
FUNCTION: Sugarcane irrigation
AGE: Likely historic
DIMENSIONS: Length: 229.00 m; Width: 76.00m; Depth: undetermined
CONDITION: Excellent (currently maintained)
SURFACE ARTIFACTS: None
EXCAVATION: None
DESCRIPTION: This un-named, large reservoir is currently active and maintained

by modern pumping equipment and fencing (Figure 16). It is surrounded by machine-created earthen berms of the same construction seen elsewhere on the project area in association with historic agriculture. Waikapu Ditch flows from the north and empties into Site -5727 (see Figure12). Everett Ditch, flowing downslope from the *mauka* West Maui Mountains, also once terminated at this reservoir (however, this ditch no longer exists within the project area). The out-flow for Site -5727 is the Site -5729 localized, lesser ditch. The length of this reservoir is oriented north-south.

The size, construction, elevation, position, and shape of Site -5727 resembles that of Hopoi Reservoir (State Site 50-50-04-5473), a documented sugar era irrigation site. Hopoi Reservoir is located 1 kilometer northeast of the Site -5727 reservoir and the latter is likely of the same construction period as the former. Hopoi Reservoir, although empty and abandoned during



Figure 16: Site 50-50-04-5727 Reservoir. View to North.

initial recordation (see Dega 2004), also was a collection point of a known major water course (Kama Ditch, Site 50-50-04-5474).

Note: A smaller, modern reservoir is located within the *makai* third of the project area (Figure 17). A 1977 aerial map of the Kahului isthmus (see Figure 3) clearly shows the Site -5727 reservoir, and also shows that this smaller reservoir was not yet constructed.

State Site Number 50-50-04-5728 (erosion-control berms)

FORM: Earthen berms (n = 14)
FUNCTION: Sugarcane field erosion control
AGE: Likely historic
DIMENSION RANGE: Length: 132 to 456 m; Width: 5.0 to 17.0 m; Height: 1.0 to 1.8 m
CONDITION: Fair
SURFACE ARTIFACTS: None
EXCAVATION: ST-6
DESCRIPTION: Fourteen soil berms comprise Site -5728 (Figure 18). This historic method of machine-piled earthen mounds was used within cane fields to prevent topsoil erosion. As depicted by Figure 4, the positions of the fourteen berm segments vary slightly from a general north-south orientation. What is consistent, however, is that the position of each individual



Figure 17: Modern Reservoir at center of Project Area's Eastern Half.



Figure 18: Site 50-50-04-5728, Feature 13 (Erosion-control Berm). The contour of the berm running cross-slope can be seen as a mound in the dirt road. View to Northeast.

segment runs perpendicular to the sloping terrain within that specific locality of the project area. The mounded soil acted to block rainwater runoff, preserving both moisture and topsoil. To a lesser degree, it is possible that the berms also prevented some wind blown soil erosion, as some of the berms were mounded to a height of 1.80 m. State Site Number 50-50-04-5522 provides a documented case of such berms in the nearby former cane fields of Waiehu, Maui (Wilson and Dega 2004).

Stratigraphic Trench 6

One stratigraphic trench (ST-6) was backhoe excavated through a single soil berm segment of Site -5728. The Feature 4 berm ran north-south at the center of the project area's south perimeter (see Figure 4). ST-6 perpendicularly transected the Feature 4 berm with the intent to explore its interior construction and subsurface depth. A cross sectional profile of ST-6 (Figures 19 and 20) indicates Site -5728 berms are 100 percent made up of naturally occurring soils that have been machine mounded in the past. No imported rock or other substance was used in the construction of these berms. The soil disturbance extends into Layer II (to a maximum depth of 50 cmbs) as evidenced by the mounded subsurface contour in shown in Figure 20. This simply means that the plow mechanism that created these berms cut deeper into the natural landscape in this berm building effort than was generally used when tilling the surrounding fields. (The surrounding fields consistently display an undisturbed Layer II.) Subsurface content is explored further under the heading "Subsurface Testing."

State Site Number 50-50-04-5730 (Old Waikapu Road)

FORM	Dirt road
FUNCTION:	Probable cane-haul route
AGE:	Likely historic
DIMENSIONS:	Length: 945.00 m; Width: 3.50m
CONDITION:	Good
SURFACE ARTIFACTS:	None
EXCAVATION:	None
DESCRIPTION:	A dirt road that enters the project area from the eastern perimeter (Honoapiʻilani Highway)—and then turns southwest before crossing the southern perimeter—forms the boundary between parcels 02 and 03. On a 1992 Tax Map Key the following words are printed in association with this road: "(Old Waikapu Road) County Road". At the time of survey, this road continued to see infrequent pedestrian and vehicle traffic—reserved for those transecting this undeveloped swath of land as a possible shortcut between paved roads. For this reason, this dirt road remains free of vegetation (Figure 21).



Figure 19: ST-6 (Photograph of North Wall) Profile Shows Subsurface Contour of Machine-mounded Site -5728, Feature 4 Berm. View to North.

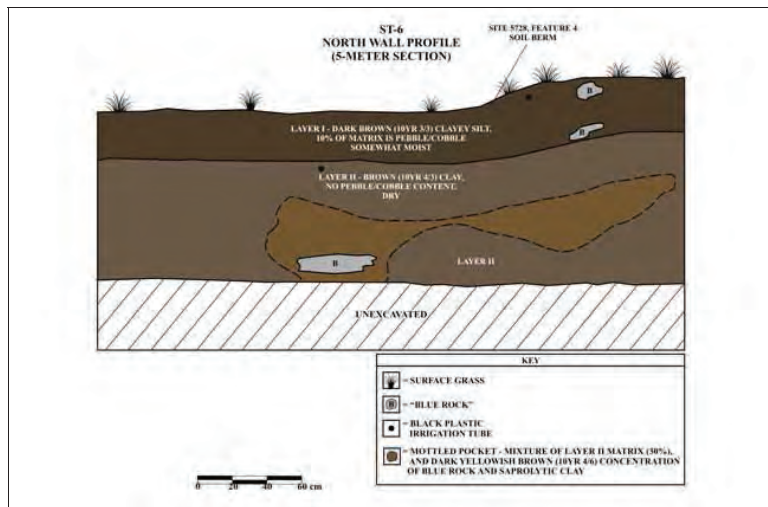


Figure 20: ST-6 Stratigraphic Profile.



Figure 21: "Old Waikapu Road" (50-50-04-5730). View to Southwest.

Exactly how old "Old" Waikapu Road is difficult to determine precisely. However it is safe to assume that this newly recorded State Site Number (50-50-04-5730) originated in the same sugar period as the other six sites within the project area. A Cultural Impact Assessment (CIA) within the same project area provides further detail backing a historic origin to the Old Waikapu Road. Author of the CIA, Kalei Tsuha, interviewed a local resident who, as a child in 1922, remembers traveling across the project area on this same road by horse (K. Tsuha, personal communication 9/25/05).

SUBSURFACE TESTING

Twenty-one stratigraphic trenches (STs) were mechanically excavated by backhoe to test for the presence/absence of subsurface cultural deposits in a variety of project area locations. Excavation took place over a three-day period, August 22–24, 2005. Of these trenches, only one (the previously described ST-6) revealed any kind of subsurface cultural material. ST-6 was placed through an existing soil berm in order to document construction technique of these historic agricultural features. ST-6 documented the subsurface extent of the Site -5728, Feature 4 soil berm (the base of which does extend into the otherwise undisturbed Layer II matrix) (see

Figure 20). None of the 21 trenches revealed any type of artifact, charcoal deposit, or midden deposit.

Testing was spread evenly across the project area with the intent of documenting soil stratigraphy trends by project area location. In total, 21 stratigraphic trenches (ST-1 through ST-21) were excavated and documented. The trenches averaged 7.86 m long, 0.70 m wide, and 1.58 m deep.

Calculating the above averages, an approximate area of 155 m² and volume of 183 m³ of soil was excavated during testing. These sampling figures are primarily indicative of the limited positive results achieved for each trench; if significant cultural resources were documented during the project, it is likely that less geographic space would have been excavated as documentation and sampling of such cultural resources would have been more time consuming. In the amount of time allowed for the project, testing was geared toward obtaining the most information available to assess the presence/absence of subsurface cultural deposits (as it was fairly quickly determined that all surface sites were historic).

STRATIGRAPHIC TRENCH LAYER ANALYSIS

As expected, excavation within the former sugarcane fields resulted in a consistent stratigraphy of culturally sterile soils. Trenching revealed no more or less than two distinct layers in each ST. The variation between trenches was even less than expected, as in each, Layer I represented soil that had been disturbed by historic and modern agricultural practices, and Layer II represented undisturbed soil. The minimal variation between trenches was threefold: the thickness of Layer I varied by 41 centimeters at most; the soil color and qualities variety slightly in among some trenches; and the pebble, cobble, and or saprolytic rock content within Layer II somewhat varied. Otherwise, the project area is extremely homogenous in subsurface content. This can be credited primarily the effects of decades of agricultural use, and also the fact that the Iao Series soils existing here show only minor variation. The following two examples, ST-7 and ST-9, display the typical slight range of stratigraphic variation within the project area (Figure 22).

ST-9 is the standard project area stratigraphy. Layer I has a surface cover of thick, dried grass. Layer I is 65 cm deep and consists of a moderately moist, very dark grayish-brown (10YR 3/2) clayey silt, of which less than ten percent is pebble/ cobble. Layer I contains evidence of the modern agricultural practices in the form of plastics. Only two of the 21 STs excavated did not



Figure 22: ST-9 and ST-7 Profiles Display Typical Subsurface Stratigraphy within Project Area.

contain either drip line irrigation tubing or black plastic weed-control sheeting in Layer I (see Appendix A). In the majority of STs, Layer I contained both of these plastics at varying depths.

Layer II, as evidenced in ST-9, was often a very compact, moderately dry, dark brown (10YR 3/3) clay, of zero pebble or cobble content. Often, however, a pocket of saprolytic (decomposing) rock or “blue” rock could be found in Layer II (as shown in the ST-7 profile). Layer II thickness remains undetermined as this layer proved too deep to find bedrock, even with the reach of a large backhoe. ST-20 was excavated to a maximum depth of 2.60 m in an unsuccessful attempt to reach bedrock. It is safe to assume that Layer II of the project area is at least 2.00 m thick, but probably much thicker.

DISCUSSION AND CONCLUSIONS

Scientific Consultant Services, Inc. (SCS) conducted Archaeological Inventory Survey on two parcels totaling 215.800 acres, which form one large land tract within Waikapu (and partially Wailuku) Ahupua`a, Wailuku District, Maui Island, Hawai`i [TMK (2) 3-5-02: 02 and 03]. Inventory Survey included archival research, systematic pedestrian survey of the project area, and representative subsurface testing. While the landscape did not yield traditional Hawaiian archaeological sites, it did reveal a network of irrigation systems in the form of ditches and a reservoir, erosion-control berms, and a historic dirt road—forming seven sites. Five of these sites are new additions to the State’s rich historic record of turn-of-the century sugar industry in Hawai`i.

WATER CIRCUITRY

In his 2004 Inventory Survey Report of the Kehalani Mauka Development lands Dr. M. Dega initiated three hypotheses regarding historic water circuitry within this Wailuku / Waikapu landscape. Aside from the small area of land covered by the pre-existing Kuikahi Drive that acts to separate the two surveys—the 348.613 acres in Dega’s study and the 215.800 to the south (the present survey) may be viewed as 564.413 contiguous acres for the archaeological record. This is not an arbitrary relationship, as the *ahupua`a* division separating these fields did not individualize their historic utilization. The following text is from *An Intermediate Zone Archaeology Inventory Survey [TMK (2) 3-5-001:portion of 001]* (Dega 2004:41–42):

Several intriguing patterns emerge as one focuses upon the empirical, historic-period evidence at hand. One of these patterns is the direction in which the historic ditches have been constructed and utilized across the parcel. Case in

point: three main ditches or canals run north-south, or [*perpendicular*] to the slope, across the project area and beyond. Waihee Ditch, Kama Ditch, and the westernmost ditch of Site T-24 (Site -5493) [*Waikapu Ditch*] are the most well-constructed on the parcel. These ditches were water conduits across these dry zones. Typically they could be used to water areas along their course or would simply empty into large retention basins (reservoirs) at selected points.

However, there is also a network of ditches, mostly earthen berms and small channels, that run [*parallel*] to the slope on a west (upslope)-east (downslope) axis. These ditches are commonly non-formalized like the north-south ditches and tend to be more localized. Site T-16 (Site -5490), built on an east-west axis for instance, runs a total of 1,000 meters while the north-south Waihee Ditch runs for more than 16 kilometers. The important point is that there is a functional difference between the north-south oriented ditches and the east-west coursing ditches. The more formalized [and costly] north-south ditches are actually water conduits wherein water may be carried long distances to irrigate such water-poor locales as the present project area. The less conventional ditches situated on an east-west axis are simply drainages and do not fulfill an irrigation role on these dry parcels. These smaller ditches appear to be more naturally formed by erosion and were simply modified to accommodate excess water and sediment flow so as not to interfere with the main purpose of cultivation. This pattern appears valid for the present project area but requires additional information from other locales to be proven, negated, or amended.

Thus, we propose two hypotheses that remain to be examined:

1. All north-south canals or ditches along central Maui that run [*perpendicular*] to the slope are water conduits and inherently contain an irrigation function.
2. All east-west bearing canals or ditches along Central Maui that run [*parallel*] to the slope are only drainages that do not disseminate water for irrigation purposes but function to remove overflow so as not to curtail cultivation potential.

DISCUSSION POINTS

The current study provides a second example within the archaeological record confirming Dega’s first hypothesis. Both the Waihee Ditch and Waikapu Ditch (numbered, but not named in Dega 2004) were identified as running north to south. These major irrigation conduits continue this flow direction into the current project area. These are large, long, costly, historic structures that were designed to carry stream waters great distances. These ditches run cross-slope within the project area.

The current project area findings expand upon, but do not necessarily confirm Dega's second hypothesis. Two lesser, localized ditches do indeed follow the same orientation as those in the Kehalani lands. Both of these lesser ditches run with the slope contour (perpendicularly linking the major ditches, at times). However, the hypothesis of a functional difference is not soundly reinforced. The Site -5726 ditch is a subtle, earthen feature that may have filled a drainage role rather than an irrigation role. But there is no proof that the more elaborately constructed Site -5729 ditch (stacked basalt boulders that are mortared with concrete) did not in fact serve as a *mauka* to *makai* irrigation artery. This ditch may have served as an outlet to the reservoir's (Site 5727) spill-over, however, this function should not exclude a dual purpose of localized irrigation.

Finally, like in Dega's (2004) study, four points contribute to the current project's lack of traditional Hawaiian cultural material. First, and most obviously for this location, historic impacts have dramatically altered the landscape so much as to erase larger archaeological traces of traditional-period activities. Second, the lack of traditional-period evidence suggests that these open lands were probably not intensively utilized during prehistoric times. The current project area may have not been selected as a habitation zone as it is an open area without perennial water resources—and more preferable lands were readily available. Third, the types of traditional activities conducted within and near the project area may not have left archaeological signatures. Fourth, as is the case for all archaeological projects, testing may have not coincided with the existing subsurface cultural materials. This is unlikely but always a possibility as 100 percent of any parcel is rarely ever fully excavated.

SIGNIFICANCE ASSESSMENT AND RECOMMENDATIONS

Seven archaeological sites were documented in the project area: Waihee Ditch (50-50-04-5197); Waikapu Ditch (50-50-04-5493); an un-named, lesser ditch (50-50-04-5729); a second un-named, lesser ditch (50-50-04-5726); a large, un-named reservoir (50-50-04-5727); a series of fourteen sugarcane-field erosion-control, soil berms (50-50-04-5728); and a County dirt road named "Old Waikapu Road" (50-50-04-5730).

These sites have been evaluated for significance according to the criteria established for the Hawai'i State Register of Historic Places. The five criteria are classified below:

Criterion A: Site is associated with events that have made a significant contribution to the broad patterns of our history

Criterion B: Site is associated with the lives of persons significant to our past

Criterion C: Site is an excellent site type; embodies distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual construction

Criterion D: Site has yielded or has the potential to yield information important in prehistory or history

Criterion E: Site has cultural significance to an ethnic group; examples include religious structures, burials, major traditional trails, and traditional cultural places

All seven of these historic sites have been assessed as significant under Criterion D.

Based upon the results of this Inventory Survey and the results of archaeological work on adjacent parcels that have also produced primarily negative results (see Dega 2003, 2004; Monahan 2003; Buffum and Dega 2001), it appears as though additional archaeological research on the subject parcels would not contribute a significant volume of additional data to the interpretation of the area or region, or to Hawaiian prehistory/history. Archaeological Monitoring is not recommended during construction within the project area. The seven sites documented herein have yielded their information to the historical record and no additional archaeological work is recommended.

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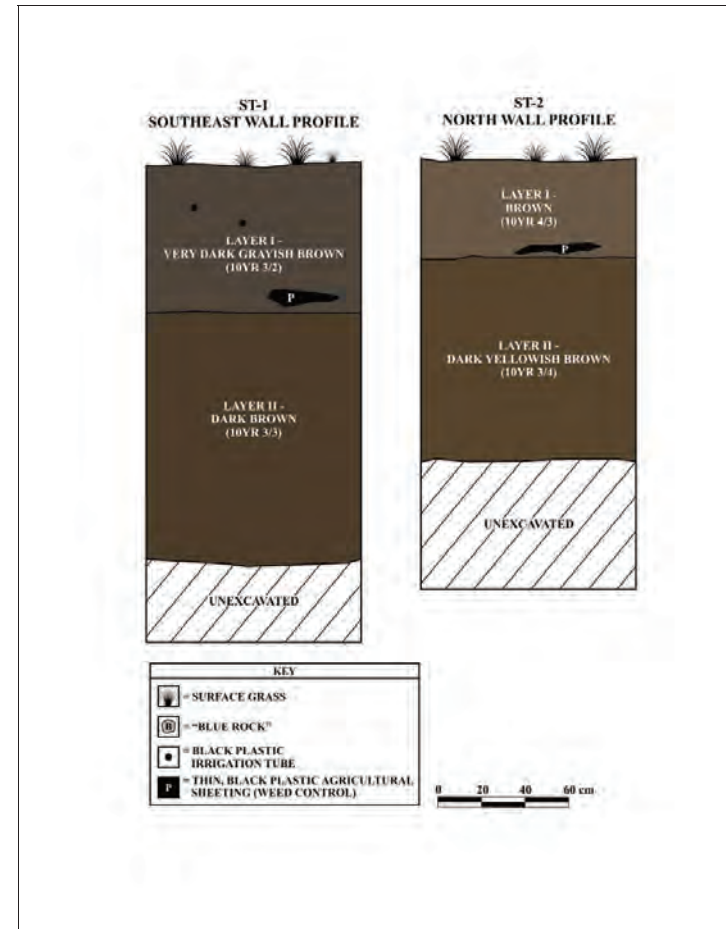
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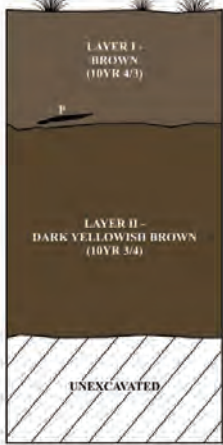
APPENDIX A: STRATIGRAPHIC PROFILES

A

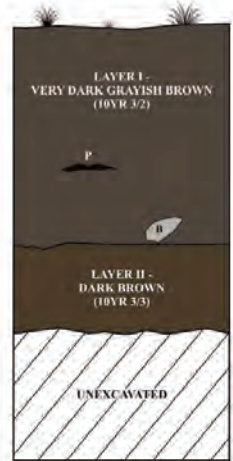


A: 1

**ST-3
NORTH WALL PROFILE**



**ST-4
NORTH WALL PROFILE**



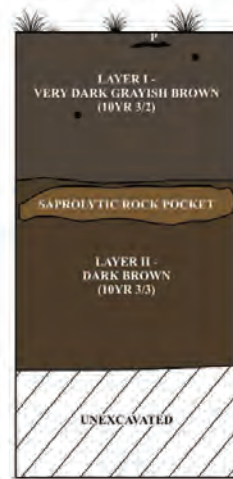
KEY	
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	= "BLUE ROCK"
	= BLACK PLASTIC IRRIGATION TUBE
	= THIN, BLACK PLASTIC AGRICULTURAL SHEETING (WEED CONTROL)



**ST-5
NORTH WALL PROFILE**

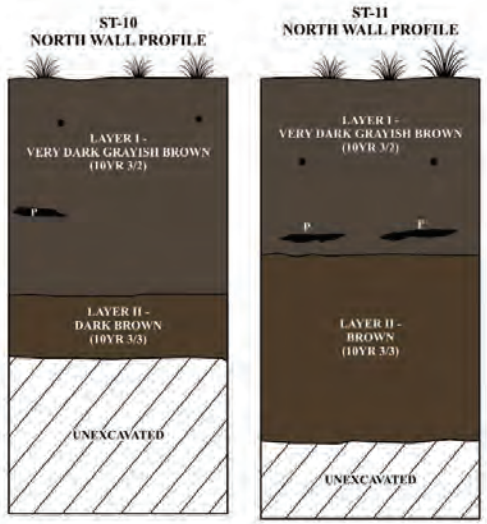


**ST-7
SOUTHWEST WALL PROFILE**



KEY	
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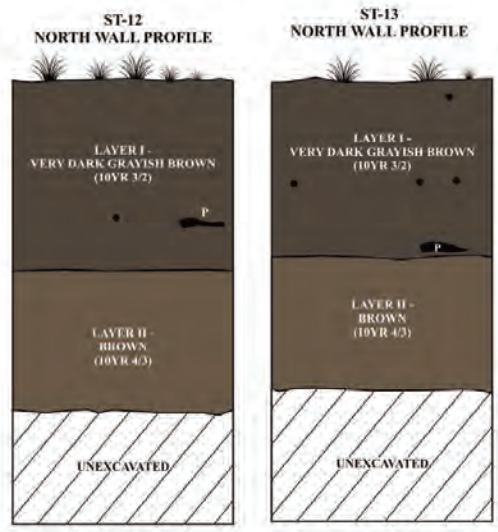




KEY	
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	= BLACK PLASTIC IRRIGATION TUBE
	= THIN, BLACK PLASTIC AGRICULTURAL SHEETING (WEED CONTROL)



A: 6



KEY	
	= SURFACE GRASS
	= "BLUE ROCK"
	= BLACK PLASTIC IRRIGATION TUBE
	= THIN, BLACK PLASTIC AGRICULTURAL SHEETING (WEED CONTROL)



A: 7

**ST-14
NORTHWEST WALL PROFILE** **ST-15
NORTHWEST WALL PROFILE**



KEY	
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	= "BLUE ROCK"
	= BLACK PLASTIC IRRIGATION TUBE
	= THIN, BLACK PLASTIC AGRICULTURAL SHEETING (WEED CONTROL)

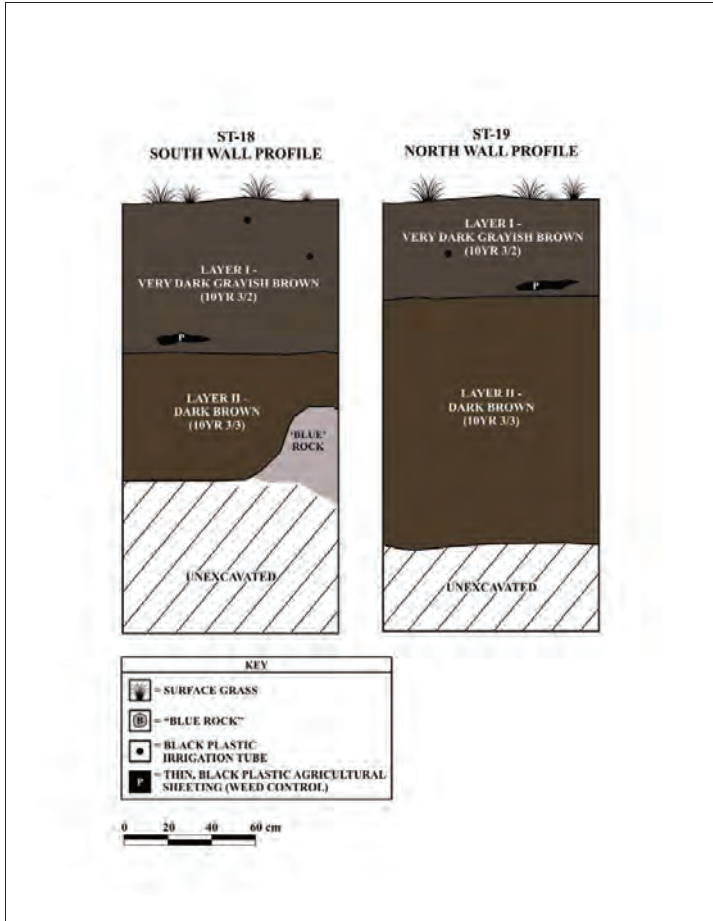


**ST-16
NORTH WALL PROFILE** **ST-17
NORTH WALL PROFILE**



KEY	
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	= "BLUE ROCK"
	= BLACK PLASTIC IRRIGATION TUBE
	= THIN, BLACK PLASTIC AGRICULTURAL SHEETING (WEED CONTROL)






A: 10



A: 11



ARCHAEOLOGICAL
INVENTORY SURVEY
ACCEPTANCE LETTER
FROM THE STATE
HISTORIC
PRESERVATION
DIVISION DATED
NOVEMBER 18, 2005

APPENDIX

C-1



LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCES MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR - LAND

DEAN NAKANO
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
HAWAII AND OCEAN RECREATION
BUREAU OF FOREWATERS
COMMISSION ON WATER RESOURCES MANAGEMENT
CONSERVATION AND COASTAL LANDS
EDUCATION AND RESEARCH DEVELOPMENT
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAPOLAWE BEACH RESERVATION COMMISSION
LAND
STATE PARKS

November 18, 2005

Michael Dega, Ph.D.
Scientific Consultant Services
711 Kapiolani Blvd. Suite 975
Honolulu, HI 96813

LOG NO: 2005.2398
DOC NO: 0511MK22

Dear Dr. Dega:

**SUBJECT: Historic Preservation Review - 6E-42 - Archaeological Inventory Survey
On 215.800 Acres for Towne Development of Hawaii and Endurance
Investors, LLC
Waikapu Ahupua'a, Wailuku District, Maui
TMK (2) 3-5-002:002 and 003**

Thank you for the opportunity to review this report which our staff received on October 14, 2005 (Wilson and Dega 2005, *Archaeological Inventory Survey Report on 215.800 Acres Located in Waikapu Ahupua'a, Wailuku District, Maui Island, Hawaii'i [TMK (2) 3-5-02: 02 and 03]*)...Scientific Consultant Services, Inc., ms.

The background section acceptably establishes the ahupua'a settlement pattern and predicts the likely site pattern in the project area. The historical information provided summarizes the history of the post-contact period land uses. The summary of previous archaeological work in the area provides a baseline for the current work. The subject parcel has formerly been utilized for commercial agriculture, and consists 100% of abandoned cane land. Three small Land Commission Awards are situated within the subject parcel, in an area through which a stream and/or ditch formally ran.

The survey has adequately covered the project area documenting five new historic properties in the project area, and re-identifying two previously identified historic properties. Previously identified sites, SIHP 50-50-04-5197 and -5493, consist of the Waihe'e and Waikapu Ditches. Newly identified SIHP sites 50-50-5729 and -5726 represent an unnamed rock and mortar ditch and an unnamed earthen ditch/drainage. A large unnamed reservoir, SIHP 50-50-04-5727, is situated at the terminus of the Waikapu Ditch (-5493). SIHP 50-50-04-5728 is a sugar field erosion control site, incorporating 14 earthen berms cross slope. These are clearly identified topographically. One additional site, SIHP 50-50-04-5730, the

Michael Dega
Page 2

"Old Waikapu Road" was identified as spanning the border of Parcels 002 and 003. Subsurface testing (twenty-one backhoe trenches) were also negative for evidence of cultural deposits. These were distributed evenly across the project area.

We concur that all seven sites are significant under Criterion "D" and have the potential to yield information important to understanding the history of the region. The sites have been adequately documented.

We also agree that no further archaeological mitigation is necessary.


We find this report to be acceptable. The historic preservation review process is concluded. Development of the project areas will have "no effect" on significant historic sites. As always, if you disagree with our comments or have questions, please contact Dr. Melissa Kirkendall (Maui/Lana'i SHPD 243-5169) as soon as possible to resolve these concerns.

Aloha,

MELANIE A. CHINEN, Administrator
State Historic Preservation Division

MK: kf


c: Bert Ratte, DPWEM, County of Maui
Michael Foley, Director, Dept of Planning, 250 S. High Street, Wailuku, HI 96793
Maui Cultural Resources Commission, Dept. of Plng, 250 S. High St., Wailuku, HI 96793



ARCHAEOLOGICAL
FIELD INSPECTION
FOR THE PU'UNANI
HOMESTEAD
SUBDIVISION

APPENDIX

C-2





Darren Okimoto
DDC, LLC.
2005 Main Street
Wailuku, Hawaii 96793

September 9, 2020

**Archaeological Field Inspection
DHHL Pu'unani Homestead
Waikapu, Maui
Portions of TMK: (2) 3-5-002:002 & 003**

Dear Mr. Okimoto:

Thank you again for contacting Scientific Consultant Services, Inc. (SCS) regarding an archaeological field inspection for portions of the above noted parcels in Waikapu, Maui. This field inspection follows an archaeological inventory survey (AIS) of 215-acres, inclusive of the current field inspection area, in 2005 (Wilson and Dega 2005). This field inspection expressly sought to address the presence/absence of a famous Pōhāko'i stone, noted by many kupuna of the area and more recently, by Mr. Hōkūao Pellegrino, a descendant of the area. DDC, LLC. contacted SCS to conduct field survey in an attempt to locate the stone. The following presents background on the stone and the results of the survey.

Mr. Pellegrino, a cultural practitioner and cultural descendent of Waikapu Ahupua'a, Wailuku Moku, was interviewed about Waikapu in general and also about this important stone for the Cultural Impact Assessment (CIA). His excerpted script from the CIA interview is presented here:

Near the Old Government Road that is adjacent to the western and northern boundaries of the project area, near the northwest corner of the current project area, there once was located a very important stone called Pōhāko'i. Pōhāko'i was first and foremost a hoana, or grinding stone used to file and finish ko'i (adzes – stone tool used for cutting and carving wood). Secondly, it was a commonly known palena 'āina (boundary marker) for the northern end of the Waikapū ahupua'a.

Mr. Pellegrino says that Pōhāko'i is shown on approximately 60 historic maps of Waikapū. Some maps reference that site as the location of Pōhāko'i (the stone), but, adjacent to where the stone is located, there is reference to a Pōhāko'i as an 'ili also. However, Land Grant 2952, to David Crowningburg, and Land Commission Award 433, to William Crowningburg, both specified the ahupua'a boundary, as well as the 'ili, as Pōhāko'i. So, it was an important cultural site, not just for being a boundary marker and a grinding stone, but also for being a place name (i.e., the name of an 'ili). Pōhāko'i is such a significant site; it has been mentioned in mele [songs], in oli [chants], and historical mo'olelo [legends]. The exact location of Pōhāko'i (the stone) is not known and it is not known if Pōhāko'i remains in situ, or if it has been relocated. Pōhāko'i (the stone) is shown on almost every historic map of Waikapū [see Figure 8]. Pōhāko'i (the stone) is shown on most maps as on the Waikapū Ahupua'a boundary and sometimes it is shown more within Waikapū Ahupua'a, more along that William Crowningburg property boundary in the 'Ili of Pōhāko'i. So, if there is any archaeological work conducted in the, that would be a critical thing to look for in addition to former agricultural and irrigation sites.

ARCHAEOLOGICAL FIELD INSPECTION

Fieldwork was conducted on August 24, 2020 by SCS archaeologist Ian Bassford, B.A. and yourself, under the direction of project principal investigator Dr. Michael Dega. Fieldwork occurred over a large swath of the landscape to assess the presence/absence of the Pōhāko'i. The approximate survey area is shown in Figures 1, 2, and 3.

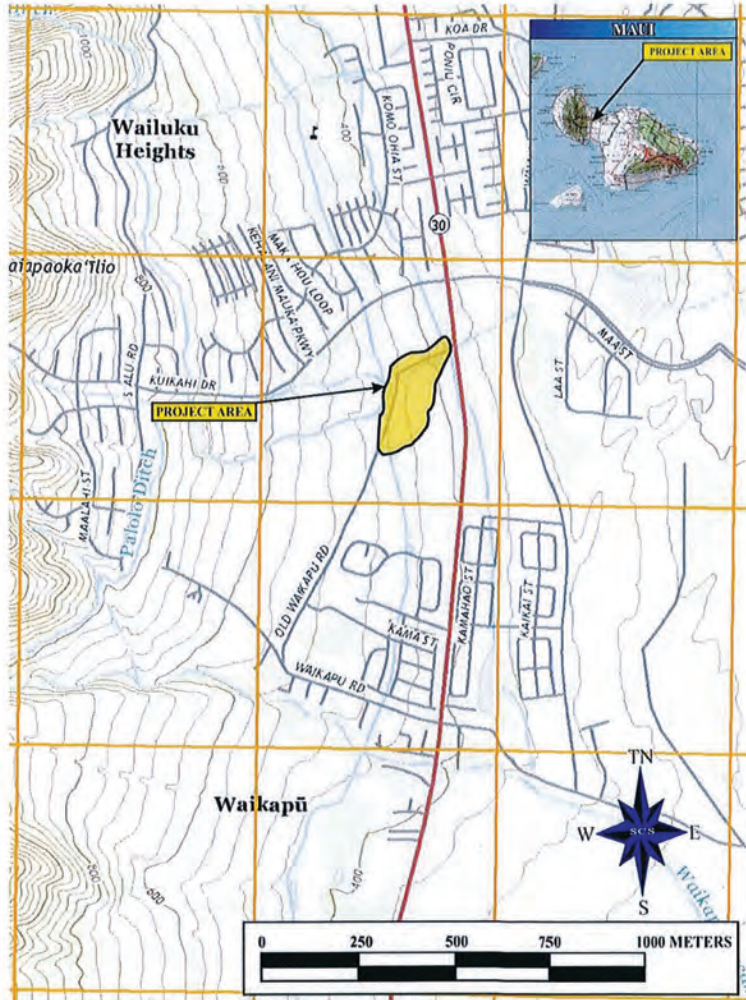


Figure 1. USGS Map Showing Field Inspection Area.

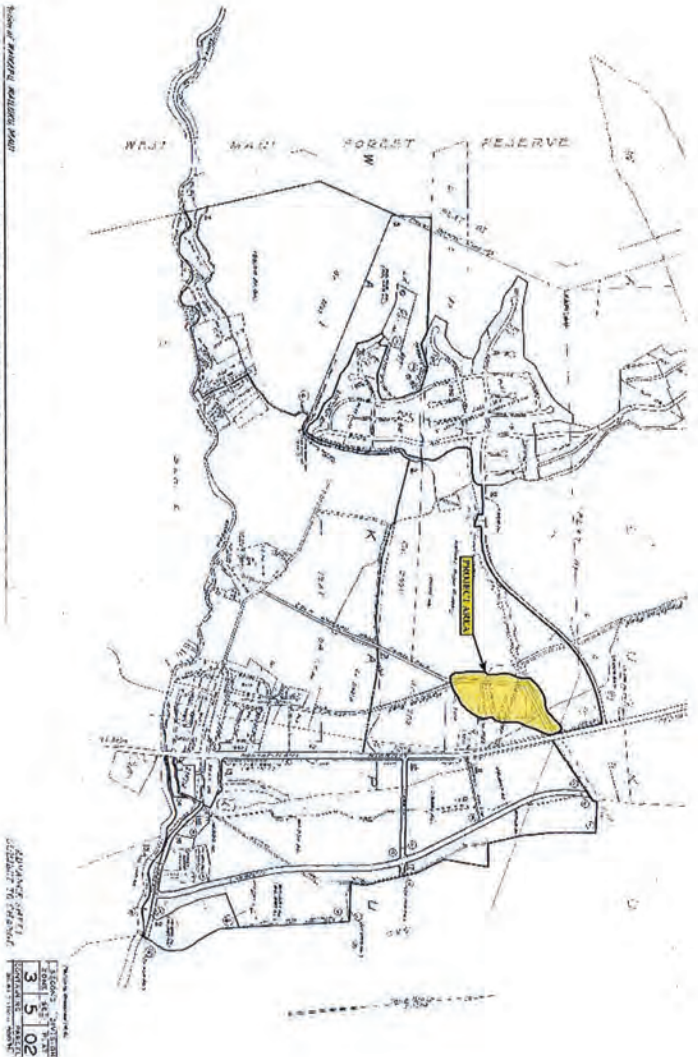


Figure 2. TMK Map Showing Field Inspection Location.



Figure 3: Aerial Photograph of Field Inspection Location.

Currently, the survey area is being utilized for small scale cattle ranching activities. Prior to current times, the area was subject to industrial-level sugar cane cultivation. Extensive modern agricultural clearing of this area has drastically altered the composition of the landscape. Clearing berms with rock stockpiles were apparent and various throughout the northern and central portions of the parcel. Rocks had been mechanically stockpiled from this entire area, thus creating a highly modified surface. Photographs provided at the end of this letter show the current state of the project area.

The survey area was entered from the south access point and proceeded along the west boundary of the property adjacent to an existing, active historic ditch (Waikapu Ditch). As the survey progressed to the north, more rock stockpiles were readily apparent. As the survey approached the northwest corner of the property, a retention basin was observed as well as a large, modern diversion ditch drainageway running mauka/makai. It was apparent that the area has been grubbed and graded several times in the past and historic mechanized clearing was extremely prevalent.

Inspection of the various rock embedded mounds associated with both the retention basin and well as diversion ditch failed to produce any evidence for the Pōhāko'i. There was no evidence for the rock among the rock piles or anywhere on the ground surface.

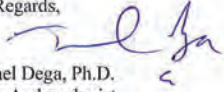
CONCLUSION

Both the AIS conducted of this survey area (2005; Wilson and Dega) and re-survey of this area in August 2020 did not reveal the presence of the Pōhāko'i stone. This is not surprising considered the massive landscape modifications that previously occurred in the survey area and surrounding environment. If the Pōhāko'i is present in this general area, it may have been previously relocated from its original position as noted by Mr. Pellegrino.

Future efforts at locating this important stone will occur during archaeological monitoring of the project area during any future ground altering activities associated with proposed development. Monitoring provides another avenue in hopes of potentially relocating, recovering, and preserving this potentially lost valuable cultural feature.

Thank you again for the opportunity to provide archaeological consultation on your project. Please feel free to contact me at (808) 597-1182 (mike@scshawaii.com) if you have any questions about this field inspection or the recommendations forwarded herein.

Best Regards,



Michael Dega, Ph.D.
Senior Archaeologist
Scientific Consultant Services, Inc.
1347 Kapiolani Blvd, Suite 408
Honolulu, HI 96814


PHOTOGRAPHS SHOWING FIELD INSPECTION SURVEY AREA











ARCHAEOLOGICAL
FIELD INSPECTION FOR
THE PROPOSED
PU'UNANI HOMESTEAD
SUBDIVISION WATER
SYSTEM STORAGE
IMPROVEMENTS

APPENDIX
C-3



Susan A. Lebo, PhD, Archaeology Branch Chief
Andrew McCallister, Maui Lead Archaeologist
State Historic Preservation Division
Department of Land and Natural Resources
Kakuhihewa Building, Suite 555
Kapolei, HI 96707
(808) 692-8019

April 27, 2022

Re: Archaeological Field Inspection for the Pu'unani Homestead Subdivision Water System Storage Improvements Project in Waikapu Ahupua`a, Wailuku District, Island of Maui TMK: (2) 3-5-002:003 por.

Dear Dr. Lebo and Mr. McCallister:

This field inspection letter is being written as a supplement to a previous archaeological inventory survey (AIS) conducted on a larger parcel in Waikapu, Maui and will be presented within the Environmental Assessment (EA) for the Water System Storage Improvements Project. This brief letter presents a project overview as well as the results of the field inspection. Recommendations are presented at the terminus of the letter.

The current project involves the construction of a new 500,000-gallon concrete water system storage tank on approximately 1.3 acres of land that is owned by Kuikahi Properties, LLC. The new proposed tank will occur just to the south of the existing County of Maui, Department of Water Supply's (DWS) 1.5-million gallon water tank. The new tank has been requested as a necessary improvement by DWS in order to supply water to the proposed 161-lot DHHL Pu'unani Homestead Subdivision, the residences which will be located approximately 0.5 mile east of this tank site area. Proposed improvements at the new tank site, within the 1.3 acres, include minor grading and drainage improvements, construction of the proposed 500,000-gallon tank to supplement the existing tank, construction of a new inflow line to connect the proposed tank to the existing tank, construction of a new outflow line to connect the new tank to the existing Kehalani Mid-Level Distribution System, and installation of fencing around the new tank expansion area and other miscellaneous equipment. These improvements will all be dedicated to the DWS.

An EA was previously prepared for the Pu'unani Homestead Subdivision and a Finding of No Significant Impact (FONSI) determination was made in 2020. However, since publication of the final EA and FONSI, the DWS requested this additional tank to be placed near the existing tank site, as described above. A new EA is currently being prepared for this new tank site, with this field inspection letter composing a portion of the submittal.

Importantly, an archaeological inventory survey (AIS) was completed (Wilson and Dega 2005) of a larger area (215.80 acres) that included this 1.3-acre portion for the water system improvements. The AIS was accepted by SHPD on November 18, 2005

(Log No:2005.2398; Doc No:0511MK22). A total of seven historic properties were documented in the greater 216-acre area (see below) but none were identified within the current project area. In addition, twenty-one trenches were excavated throughout the greater 216-acre AIS project area, with Trench 17 occurring just to the south of this proposed water system area. All twenty-one trenches were sterile, exhibiting both disturbed and naturally, rocky sterile sediment.

The current project area, and larger region encompassing the former 216-acre AIS area, consists of fallow agricultural fields. The proposed water tank area is currently being utilized as an operational goat farm (see photo below). Disturbance from former cultivation in the area is massive, the landscape being heavily modified by machines during cultivation cycles, as well as in place utilities related to the County's existing 1.5-million gallon water tank.

Field Inspection

An archaeological field inspection was conducted by SCS (Ian Bassford, B.A.) on March 2, 2022. The archaeologist conducted a pedestrian survey of the entire extent of the project area to again assess the presence/absence of sites. Photographs taken during the field inspection are provided below. Overall, the field inspection did not lead to the identification of any historic properties. No surface architecture or even isolated artifacts or ecofacts were identified. The surface (and subsurface contexts, via the former AIS) were heavily modified, both from former cultivation and construction/use of the existing County water tank system.

Given the location of the property, results of the former AIS, and associated soil series, burials in this area would be extremely unlikely. As discussed with the Aha Moku o Wailuku for the nearby Kuikahi affordable development in March 2022, burials would be more common to the east and north, at least several kilometers away from this area, and associated with the Puuone sand complex series. All sites identified in this portion of Waikapu have been related to Historic-era cultivation, in the forms of irrigation ditches, reservoirs, and bermed planting areas. As shown via the AIS trenching, subsurface contexts are entirely sterile.

Recommendations

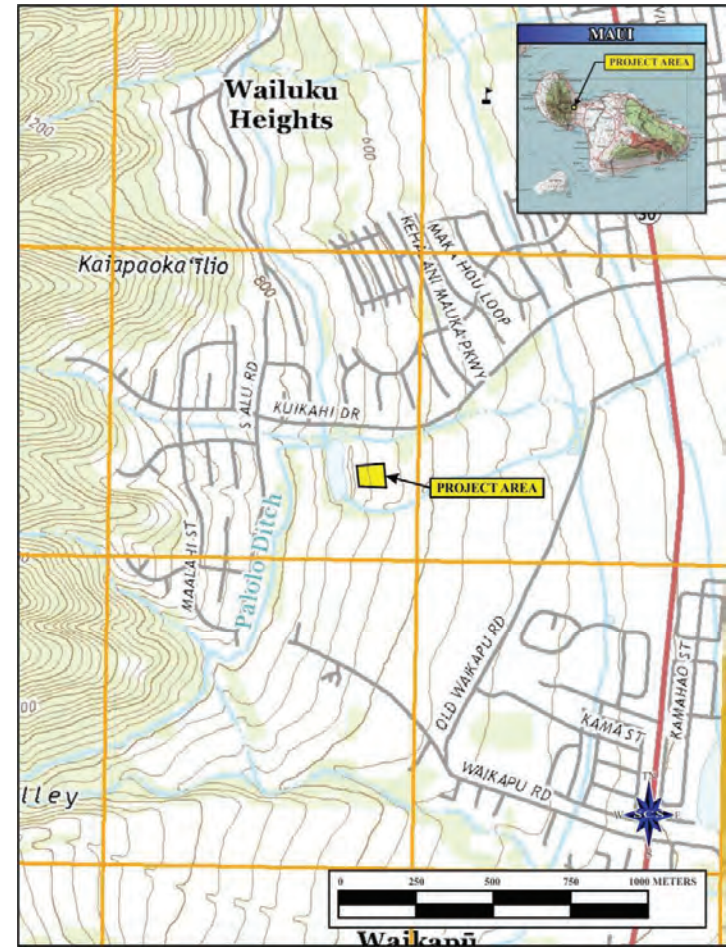
Given the results of the former, accepted AIS (Wilson and Dega 2005) which encompassed the current project area, as well as this field inspection, there is a very low probability that historic properties would be adversely affected by the proposed water system addition for the DWS. There currently is an approved archaeological monitoring plan (AMP) for the subdivision (Stankov and Dega 2021) and if required, the current water system area could be incorporated into that monitoring area.

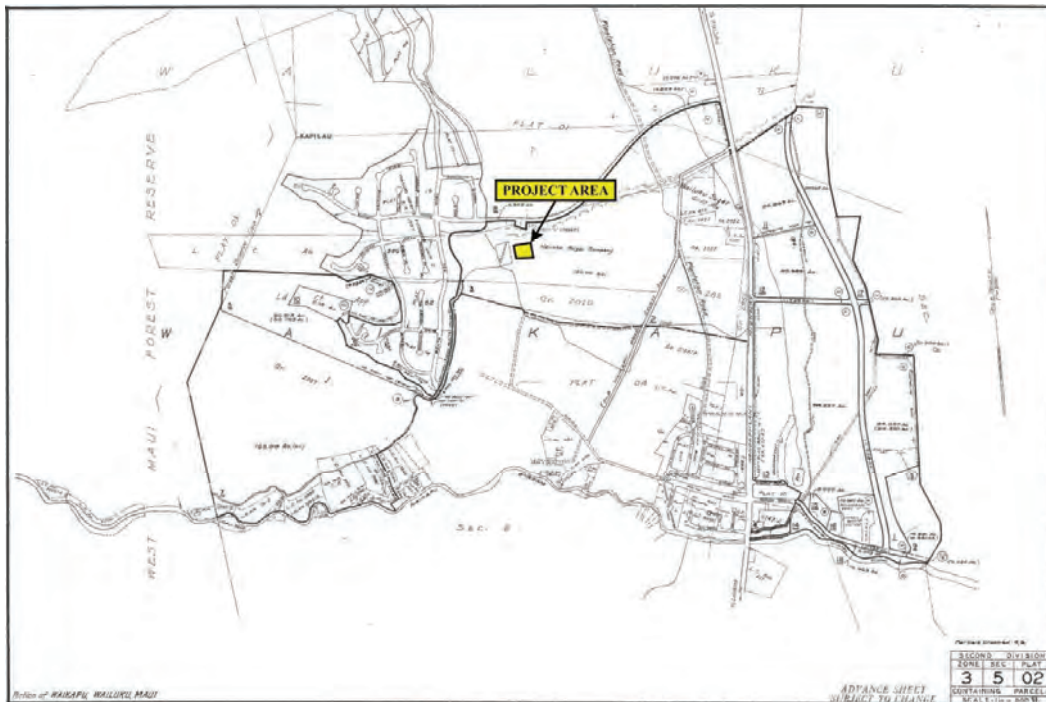
Thank you and please do not hesitate to contact me (808-597-1182; mike@scshawaii.com) if you have any questions about this letter or require an update on the project.

Best Regards,



Michael Dega, Ph.D.
Senior Archaeologist
Scientific Consultant Services, Inc. (SCS)
1357 Kapiolani Blvd., Suite 850
Honolulu, HI 96814
(808) 597-1182 tel
(808) 597-1193 fax
mike@scshawaii.com







Entrance to site, view to south-west

LAT 20°51'59.9960" NORTH
LONG 156°30'41.4005" WEST



Existing County DWS 1.5-million Gallon Water Tank.




Overview of tank site, point taken on existing water valve box

LAT 20°51'58.9528" NORTH
LONG 156°30'41.4964" WEST



Overview of Goat farm, point taken from Water valve manhole


LAT 20°51'53.4381" NORTH
LONG 156°30'41.2334" WEST



ARCHAEOLOGICAL
DETERMINATION
RECONFIRMATION
LETTER FOR THE
PU'UNANI HOMESTEAD
SUBDIVISION DATED
MARCH 27, 2020

APPENDIX

C-4



DAVID Y. IGE
GOVERNOR
STATE OF HAWAII

JOSHI GREEN
LT. GOVERNOR
STATE OF HAWAII

RECEIVED
LAND DEVELOPMENT
DIVISION

2020 APR 23 PM 12: 20



WILLIAM J. AHA, JR.
CHAIRMAN
HAWAIIAN HOME LANDS COMMISSION

TYLER I. GOMES
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

P. O. BOX 1877
HONOLULU, HAWAII 96825

March 27, 2020

RECEIVED
2020 APR - 8 AM 9: 17
DEPT OF LAND
& NATURAL RESOURCES
STATE OF HAWAII

Ms. Suzanne D. Case, Chairperson
Department of Land and Natural Resources
1151 Panchbowl St.
Honolulu, Hawaii 96813

Dear Chairperson Case:

Subject: Pu'unani Homestead Subdivision
TMK: (2) 3-5-002:002(por.) and (2) 3-5-001:064(por.)

SHPD acceptance of *Archaeological Inventory Survey Report on 215,800 acres located in Waikapu Ahupua'a Wailuku District, Maui Island, Hawaii'i [TMK (2) 3-5-002: 02 and 03]* (Wilson and Dega, October 2005) with SHPD Letter dated November 18, 2005, (SHPD Log Number 2005.2398) and *Archaeological Assessment Report for a 15.0 acre parcel located along Waiale Road in Wailuku Ahupua'a and District, Pū'ali Komohana Moku, Island of Maui [TMK (2) 3-5-001:064]* (O'Claray-Nu et al., May 2017) with SHPD Letter dated October 18, 2017 (SHPD Log No. 2017.02039)

TMK: (2) 3-5-002:002(por.)

The Department of Hawaiian Home Lands (DHHL) acknowledges State Historic Preservation Division's (SHPD) November 18, 2005, letter regarding SHPD's review of the report entitled *Archaeological Inventory Survey Report on 215,800 acres located in Waikapu Ahupua'a Wailuku District, Maui Island, Hawaii'i [TMK (2) 3-5-002: 02 and 03]* (Wilson and Dega, October 2005). This AIS covered both the parcel for DHHL's Pu'unani Homestead Subdivision and the 148 acre mauka parcel, owned by others. DHHL concurs with SHPD's previous project effect determination under the HRS 6E jurisdiction as described below:

- The AIS documented 7 historic properties within the project area/area of potential effect (APE), as confirmed in the November 18, 2005 SHPD Letter. In accordance with HAR§13-275-6, all 7 sites are significant under Criterion d. No further work is recommended for the 7 sites as these sites have been adequately documented.

Chairperson Case
March 27, 2020
Page 2

- DHHL's HRS 6E project effect determination is "No Historic Properties Affected" pursuant to HAR §13-275-7(a)(1). The proposed project will have no effect on significant historic properties.
- Based on SHPD's November 18, 2005, letter, SHPD has accepted the AIS (Wilson and Dega, October 2005), the historic preservation review process is concluded, and no further archaeological mitigation is necessary.
- DHHL requests SHPD's updated concurrence with DHHL's HRS 6E project effect determination of "No Historic Properties Affected."
- A Native Hawaiian organization may enter into an agreement with SHPD. DHHL acknowledges that the development of a memorandum of agreement (MOA) with SHPD and other signatories could be mutually beneficial to the parties involved. DHHL will work with SHPD upon updated acceptance of the AIS and concurrence with 6E project effect determinations to assess if a MOA should be developed.

TMK: (2) 3-5-001:064(por.)

DHHL acknowledges SHPD's October 18, 2017, letter regarding SHPD's review of the report entitled *Archaeological Assessment Report for a 15.0 acre parcel located along Waiale Road in Wailuku Ahupua'a and District, Pū'ali Komohana Moku, Island of Maui [TMK (2) 3-5-001:064]* (O'Claray-Nu et al., May 2017). DHHL's work within the portion of TMK (2) 3-5-001:064 will be limited to only sewerline improvements. DHHL concurs with SHPD's previous project effect determination under the HRS 6E jurisdiction as described below:

- SHPD's determination is no historic properties affected pursuant to HAR§13-284-7 and no historic properties have been identified within the project area. However, SHPD recommends archaeological monitoring for identification purposes.
- SHPD anticipates receiving for review and acceptance an archaeological monitoring plan that satisfies the requirements of HAR§13-279-4.
- DHHL's HRS 6E proposed commitment is archaeological monitoring for identification purposes during all DHHL project-related ground disturbances within the portion of TMK (2) 3-5-001:064.
- DHHL requests SHPD's concurrence with DHHL's HRS 6E project effect determination of "No Historic Properties Affected."

Michael Dega
Page 2

"Old Waikapu Road" was identified as spanning the border of Parcels 002 and 003. Subsurface testing (twenty-one backhoe trenches) were also negative for evidence of cultural deposits. These were distributed evenly across the project area.

We concur that all seven sites are significant under Criterion "D" and have the potential to yield information important to understanding the history of the region. The sites have been adequately documented.

We also agree that no further archaeological mitigation is necessary.

We find this report to be acceptable. The historic preservation review process is concluded. Development of the project areas will have "no effect" on significant historic sites. As always, if you disagree with our comments or have questions, please contact Dr. Melissa Kirkendall (Maui/Lana'i SHPD 243-5169) as soon as possible to resolve these concerns.

Aloha,


MELANIE A. CHINEN, Administrator
State Historic Preservation Division

MK: kf

c: Bert Ratte, DPWEM, County of Maui
Michael Foley, Director, Dept of Planning, 250 S. High Street, Wailuku, HI 96793
Maui Cultural Resources Commission, Dept. of Plng. 250 S. High St., Wailuku, HI 96793



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
KAKUHEHEWA BUILDING
601 KAMUKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

SEDAVIC C. CARR
COMMISSIONER
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSIONER OF WATER RESOURCE MANAGEMENT
TIMOTHY H. MALINA
DEPUTY COMMISSIONER
JEFFREY L. BEATSON, P.E.
DEPUTY DIRECTOR - WATER
ADRIAN BRONKHORST
WATER AND OCEAN RESOURCES
OFFICE OF CONSTRUCTION
COMMISSIONER OF NATURAL RESOURCE MANAGEMENT
CONSERVATION AND RESTORATION
ENGINEER
ROBERT AND WILEY
NATIVE PLANTS SECTION
LANDSCAPE ARCHITECTURE
2016 2016

October 18, 2017

Bagoyo Development Consulting Group
1500 Kilinoo Place
Wailuku, Maui, Hawaii 96793
vbagoyo-devgroup@hawaii.rr.com

Dear Mr. Bagoyo,

SUBJECT: Chapter 6E-42 Historic Preservation Review –
Archaeological Assessment Report for a 15.0 Acre Parcel Located Along Waiale Road
Wailuku Ahupua'a, Wailuku District, Island of Maui
TMK: (2) 3-5-001:064

IN REPLY REFER TO:
Log No. 2017.02039
Doc No. 1710MBF07
Archaeology
History & Culture

Thank you for the opportunity to review the subject submittal titled, *Draft Archaeological Assessment Report for a 15.0 Acre Parcel Located Along Waiale Road in Wailuku Ahupua'a and District Pa'ah Kamehameha Moku Island of Maui; TMK: (2) 3-5-001:064* (O'Clary-Nu et al., May 2017). The draft archaeological inventory survey (AIS) reported as an archaeological assessment (AA) was received by the State Historic Preservation Division (SHPD) as part of a draft environmental assessment (EA) on September 15, 2017. An associated archaeological monitoring plan (AMP) was submitted concurrently in advance of SHPD review of the subject project. This submittal for historic preservation review does not follow Hawaii Administrative Rules (HAR) §13-284-3.

An AIS was conducted on a 15.0-acre parcel proposed for affordable residential development. Reportedly, the entire project area has been extensively altered, including a retention trench for drainage improvements on the western portion of the parcel; as well as, sugar cane cultivation and past sand mining activities, where no inland sand dunes are presently extant. A pedestrian survey was conducted over 100 percent of the project area and a total of 11 backhoe trenches were excavated across the parcel. All subsurface testing produced negative results. Evidenced by the random trenches, the subsurface in some areas of the project area is disturbed from 0.60 meters below surface (mbs) to 1.85 mbs. Bedrock was encountered from 1.6 mbs to 2.30 mbs.

The project area is in a culturally-sensitive area. In proximity to the area there are: burial features, including Sites 50-50-04-2916, 50-50-04-5965, 50-50-04-5966, 50-50-04-5680, 50-50-04-6561 and 50-50-04-6573; Historic period sites included a road bed, Site 50-50-04-5963, a sugarcane flume, Site 50-50-04-5967, and Kama Ditch, Site 50-50-04-5474.

An effect determination is not presented in the subject documentation or the associated EA. However, based on available information, SHPD's determination is no historic properties affected pursuant to HAR §13-284-7; no historic properties have been identified within the project area. The SHPD does not concur with the recommendation of no further archaeological work. Due to the inherent imprecision of random mechanical trenching over large culturally-sensitive areas, there is a high probability of encountering cultural resources during the proposed large-scale earthmoving activities associated with the subject project. Therefore, SHPD recommends archaeological monitoring for identification purposes.

In the future, please include the agency point of contact (POC) on all correspondence with the SHPD, and do not submit unsolicited historic preservation review materials to the SHPD, including monitoring plans, they will not be reviewed.

Mr. Vines Bagoyo
October 18, 2017
Page 2

You may contact Dr. Matthew Barker Faries at matthew.b.faries@hawaii.gov, or by phone at (808) 243-4626, for questions regarding this letter.

Aloha,



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ARCHAEOLOGICAL
MONITORING PLAN
FOR THE PU'UNANI
HOMESTEAD
SUBDIVISION

APPENDIX

C-5



ARCHAEOLOGICAL MONITORING PLAN FOR THE
PU‘UNANI HOMESTEAD SUBDIVISION,
WAIKAPŪ AHUPUA‘A,
WAILUKU DISTRICT,
ISLAND OF MAUI, HAWAII
[TMK (2) 3-5-002:002 por. and 3-5-001:064 por.]

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Revised
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FINAL

Prepared for
Department of Hawaiian Home Lands

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INTRODUCTION

At the request of DDC LLC, Scientific Consultant Services, Inc. (SCS) has prepared this archaeological monitoring plan (AMP) for the projected Department of Hawaiian Home Lands Pu'unani Homesteads development. It is projected to take place over about 51 acres of vacant land between Old Waikapu Road and Honoapi'ilani Highway in Waikapū, Waikapū Ahupua'a, Wailuku (Pū'ali Komohana) District, Maui Island, Hawaii [TMK: (2) 3-5-002:002 por. and 3-5-001:064 por.]. The property is owned by the State of Hawai'i, Department of Hawaiian Home Lands (DHHL), and is located on the isthmus of Maui between the town of Wailuku to the north and Mā'alaea Bay to the south. The project area is shown on a portion of the 2017 U.S. Geological Survey map, a TMK map, and a 2020 Google aerial photograph (Figures 1 through 3).

The proposed project will include up to 161 lots (137 turn-key single-family residences and 24 vacant single-family improved lots) in addition to appurtenances and improvements such as construction of internal roadways, sidewalks, drainage detention basin, frontage road upgrades, and sewer line improvements. The main ground disturbances anticipated include (approximate area and depth of disturbance): grubbing and grading for roadways, lots, and drainage detention basin (47 acres; 14 ft depth), excavation and trenching for utilities and related appurtenances (16 acres; 18 ft depth), and excavation for house footings (9 acres; 3 ft depth). These areas may overlap.

The State Historic Preservation Division (SHPD) concurred with DHHL's determination of "No Historic Properties Affected" in a letter dated March 27, 2020 (Appendix A). SHPD has accepted the earlier archeological inventory survey (AIS) and agreed with expert opinion in Wilson and Dega (2005) that no further archeological mitigation is necessary and that the proposed project will have no effect on significant historic properties. DHHL has nonetheless decided to perform archeological monitoring during ground altering activities on the site of the projected Pu'unani Homesteads development.

The current AMP is created in compliance with HRS §6E-8, HAR §13-279, and HAR §13-275. Its purpose is to account for the potential inadvertent discovery of historical cultural deposits. If human remains are encountered during subsurface work, they will be addressed in accordance with the lawful protocol concerning the Inadvertent Discovery of Human Remains (pursuant to §13-300-40, HAR). Archaeological monitoring "shall entail the archaeological observation of, and possibly intervention with, on-going activities which may adversely affect historic properties" (§13-279-4, HAR).

The following plan briefly outlines background research on the historical setting and significance of the project area. It also details appropriate field and laboratory methods and conventions to be applied during monitoring.

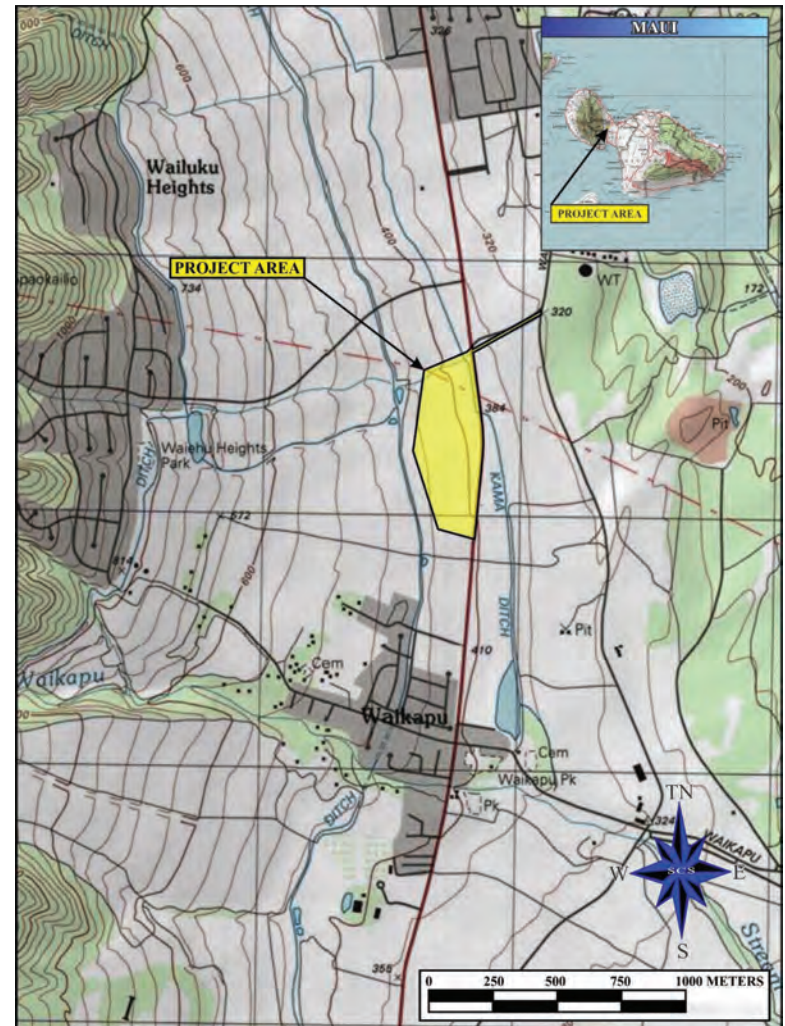


Figure 1: A portion of a 2017 USGS topographic map (Wailuku, HI quadrangle) showing the location of the project area



Figure 3: A Google Earth aerial photograph showing the location of the project area between Wailuku to the north and Waikapū to the south (imagery date: 6/15/2019)

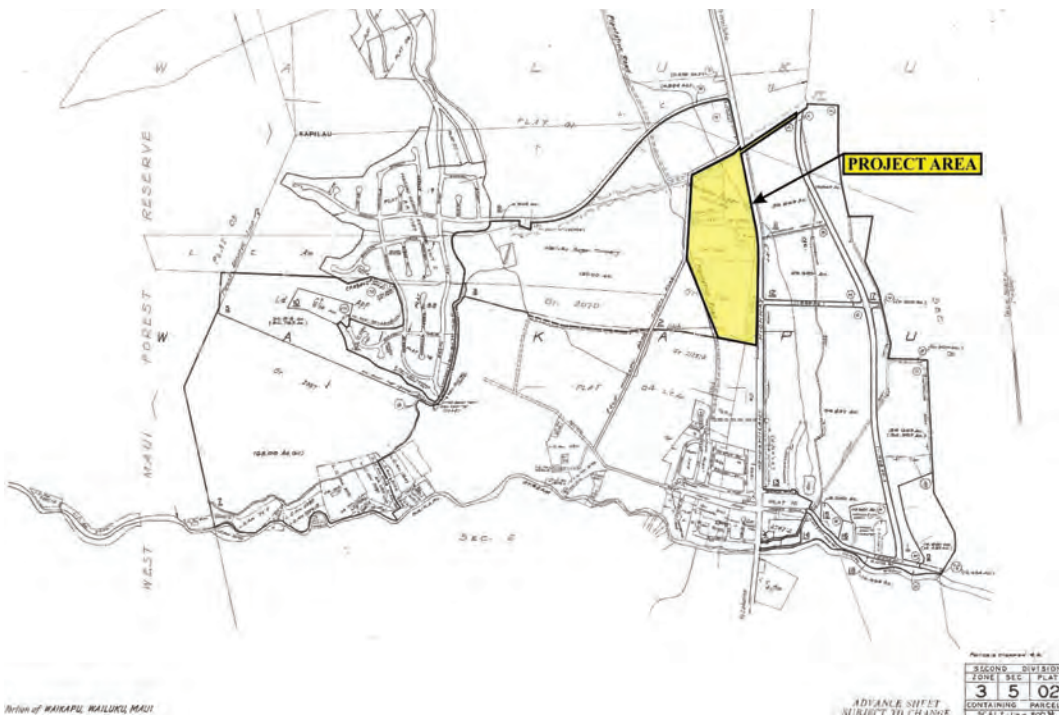


Figure 2: A portion of a TMK map showing the location of the project area in TMK: (2) 3-5-002:002 por. and 3-5-001:064 por. (County of Maui 2012)

ENVIRONMENTAL SETTING

Maui is the second largest island of the Hawaiian Archipelago. It was formed by two volcanoes, the older and extinct Pu‘u Kukui in the west and the younger dormant Haleakalā in the east, joined together by an isthmus of dry, open country. Pu‘u Kukui (from Hawaiian, “candlenut peak”), rising to 1,764 m (5,788 ft) above mean sea level (amsl), is surrounded by large, heavily eroded amphitheater valleys that support permanent streams watering the fertile agricultural lands along the coasts. The deep valleys of the West Maui Mountains (Mauna Kahālāwai) and their coastal regions have been contested and coveted lands remarkable for their productivity. Haleakalā (from Hawaiian, “house of the Sun”) is the larger of the two volcanoes, as it dominates the larger southeastern section of the island soaring 2,727 m (10,023 ft) amsl. Unlike the amphitheater valleys of West Maui, the flanks of Haleakalā are distinguished by their gentle slopes toward the isthmus. The lands in between the two orographically most prominent features of Maui are formed by erosional deposits, and are noticeably drier than their higher elevation counterparts. The low isthmus connecting east and west Maui stretches from Ma‘alaea Bay in the south to Kahului Bay in the north, and contains a large part of the island’s population, as well as the county seat Wailuku.

LOCATION

The project area is situated in the district of Wailuku (also known as Pū‘ali Komohana), between the towns of Wailuku to the north and Waikapū to the south in the lowlands of Maui’s isthmus. The very name “*pū‘ali komohana*” translates as “west isthmus,” while the names of the *ahupua‘a* “*wailuku*” and “*waikapū*” mean respectively “water of destruction” and “forbidden water” (alternatively, “water of the conch”). The project area occupies about 51 acres in TMK: (2) 3-5-002:002 por. and 3-5-001:064 por. It borders Old Waikapu Road [TMK (2) 3 5 002 999] and the undeveloped TMK (2) 3-5-002:003 to the west and north, Honoapi‘ilani Highway [TMK (2) 3 5 999 999], the larger TMKs (2) 3-5-002:011 and 3-5-002:012, the individual parcel 3-5-030:043 and West Kanamele Loop [TMK (2) 3 5 030:135] to the east, and to the south Mo‘olu Circle [TMK (2) 3-5-032:999] and the residential parcels over TMKs 3-5-032:017 to -024, 3-5-032:076 to -083, and -085 to -087. This places the project area about 2.4 miles (3.86 km) from the nearest shoreline of Kahului Bay to the north and about 4.45 miles (7.17 km) from Ma‘alaea Bay to the south. The elevation ranges from about 375 ft amsl at the parcel’s northeastern end to about 450 ft amsl at its southwestern extremity on terrain gently sloping from south to north and from west to east. The project area is bounded by the Waihee Ditch (State Site 50-80-04-5197) to the west, which had been built in Late Post-Contact times and is still partially used for irrigation. Like the rest of Waikapū, the project area is serviced by Honoapi‘ilani Highway (Hawaii Route 30), while the Old Waikapu Road is largely a dirt road.

CLIMATE AND HYDROLOGY

Characteristically of the isthmus and the leeward areas in general, Wailuku Ahupua‘a lies in a comparatively hot and dry part of Maui. The average annual temperature within the project area is approximately 23°C (73.3°F) (Giambelluca et al. 2014). August is the hottest month with an average air temperature of 25°C (77°F), while January and February are tied for the coolest at 20.9 °C (69.6°F) (Giambelluca et al. 2014).

The project area experiences a rain shadow effect as a result of its location west of Haleakalā, though that is not as pronounced as at lower elevations. The average annual rainfall is approximately 667.7 mm (or 26.27 in) (Giambelluca et al. 2013). Most of it occurs over the winter months (November through March), while the driest month is June with mean monthly rainfall of 7.6 mm (0.30 inches). Thus, seasonal variation in rainfall follows normal orographic patterns for Maui. Along with rainfall, cloud cover also increases with elevation (Giambelluca et al. 2014).

GEOLOGY, SOILS AND VEGETATION

The project area is located in the middle portion of the isthmus connecting the two parts of Maui (Figure 4). Geologically, the isthmus was created as a result of lava flow from Haleakalā against the West Maui Mountains, and today it supports a number of different soil types depending on elevation, distance from the ocean and level of ecological disturbance. The project area occupies a gently sloping landscape transitional between the plains on the isthmus and the foothills of the West Maui Mountains.

Both the U.S. Natural Resources Conservation Service (NCRS) soil map and Foote et al. (1972) identify the soils in the project area as belonging to the Iao Series (Figure 5), specifically IcB (“clay, 3 to 7 percent slopes”) transitioning into the characteristic of the foothills IbB (“cobbly silty clay, 3 to 7 percent slopes”). The Iao Series are typically well-drained, and usually develop over basic igneous rock on level or moderately sloping terrain where annual rainfall ranges from 25 to 40 inches. IcB in particular are associated with moderately slow permeability and medium runoff (Foote et al. 1972: 46). IbB has a profile similar to IcB with the difference in “the texture of the surface layer and the content of cobblestones” (Foote et al. 1972: 47). Both types of soil are used for sugarcane cultivation and homesites (Foote et al. 1972: 46–47).

Vegetation in the project area is dominated by non-native grasses, shrubs, and trees, many of which xerophytic. According to a previous report, *haole koa* (river tamarind, *Leucaena leucocephala*) is fairly common, especially along the eastern border of the parcel and near irrigation conduits, and several ironwood trees (*Casuarina equisetifolia*) dot the landscape (Wilson and Dega 2005). Other introduced species include *kiawe* trees (*Prosopis pallida*), and the abundant Guinea grass (*Megathyrsus maximus*), sourgrass (*Digitaria insularis*), balloon plant (*Asclepias physocarpa*) and glycine (*Neonotonia wightii*) (Hobdy 2019).

HISTORICAL CONTEXT

Traditionally, Maui's division into *moku* (districts) and *ahupua'a* (subdistricts) was established by a *kahuna* (from Hawaiian, "priest") named Kalaiha'ōhia during the time of *ali'i* ("chief") Kaka'alaneo (Beckwith 1940:383); Fornander places Kaka'alaneo at the end of the 15th or the beginning of the 16th century (Fornander 1916/17, Vol. 6:248). The *ahupua'a* subdivisions were meant to incorporate all of the natural resources relevant to traditional subsistence stretching from the ocean to the mountain peaks (Lyons 1875:111). These ancient divisions have remained the same and are still commonly used to locate and refer to geographical features of the islands, even though land tenure has gone through radical changes (Sterling 1998:3). The *'ili* were smaller land divisions administered by the chief who controlled the corresponding *ahupua'a* (Lyons 1875:33; Lucas 1995:40). Finally, the *mo'o* were narrow strips of land within an *'ili*. The land holding of a tenant (in Hawaiian, *hoa āina*) was called a *kuleana* (from Hawaiian, "right, privilege") (Lucas 1995:61).

The project area is located in the *ahupua'a* of Waikapū, district of Wailuku (Pū'ali Komohana). As suggested in the previous section, the isthmus of Maui is characterized by comparatively dry conditions and paucity of perennial streams. Nonetheless, because of its strategic location between the two Maui mountains on the one hand, and the convenience of the Kahului harbor on the other, Wailuku District was important in Maui's Pre-Contact history. Control over Wailuku and Kahului, the traditional seats of chiefly power in the West of Maui, necessitated control over the entire district of Wailuku. In addition, since the West Maui Mountains provide a number of perennial streams, large scale agriculture was made possible in Late Post-Contact and Modern times. As a result, the district contains substantial archeological and historical record. This section will outline in short the historical context of the project area, the settlement patterns before and after contact with the West, the agricultural practices, and the historical record associated with land ownership.

PRE-CONTACT SETTLEMENT AND ECONOMY

Archaeological data indicate that the initial settlement of the Hawaiian Islands by Polynesians occurred on the windward shores around the 10th century C.E., with populations extending into leeward areas at later periods (Kirch 2011). Thus, the 10th century would be the earliest date to which human presence could be expected in the project area and its vicinity. More likely, however, it would be traced to the early period of agricultural development, which on Maui began circa 1200-1400 C.E. (Kirch 1985:142). Despite its strategic political and military importance, the isthmus was not especially productive economically until the large-scale irrigation projects of the 19th century (Kirch 1985: 135).

Traditional Hawaiian economy was based on agricultural production, marine exploitation, and raising livestock, in addition to collecting wild plants and birds. Settlements were concentrated in river valleys most amenable to wet *kalo* (taro, *Colocasia esculenta*) cultivation which also incorporated pond fields and irrigation canals. Windward areas with higher precipitation permitted the growing of *kalo* (taro, *Colocasia esculenta*), *kō* (sugar cane, *Saccharum officinarum*) and *mai'a* (banana, *Musa spp.*). Pre-Contact populations also frequently integrated brackish and freshwater fishponds with taro (Costa-Pierce 1987: 325), and according to Handy and Handy (1972:496) the largest continuous area of wetland taro cultivation in Hawai'i extended from Waihe'e to Wailuku. Waikapū Stream also supported it into the early 20th century (Handy and Handy (1972:497).

The Wailuku District offers favorable conditions for aqua- and agricultural activity, and once supported a substantial population (see the section Previous Archeology): the settlements of Wailuku and Kahului north of the project area represented one of the only two or three Pre-Contact population centers on Maui (Cordy 1981:198-199). The environs of Wailuku from Waihe'e Stream to the north to Waikapū to the south were once known as *na wai 'ehā* (from Hawaiian, "of four waters"), referring to the four rivers that drain the eastern slopes of Mauna Kahālawai (Handy and Handy 1972). The district is frequently mentioned in historical texts and in the oral tradition as politically and ceremonially important (Cordy 1981, Kirch 1985): the town itself was considered a "chiefly center" with many of the *ali'i* and much of the district's population residing near 'Īao Valley and lower Wailuku (Sterling 1998:90).

In addition, in Pre-Contact times, a number of trails typically extended from the coast to the mountains, facilitating travel and linking communities both economically and socially. In pre-Contact times Wailuku and Kahului were linked with Lāhainā on the opposite side of the mountains, and it is likely that such lines of communication extended over the isthmus to Ma'alaea Bay and Kīhei (Handy 1940:114). Both the extended wetland taro of Wailuku and Kahului's Kanahā Pond (from Hawaiian, "the shattered") *makai* (seaward) of the project area allowed for the development of significant economic resources along the coast. Considering the concentration of population and economic resources in Wailuku and Kahului north of the project area, the scantiness of the agricultural record on the isthmus becomes less significant.

PRE-CONTACT POLITICAL HISTORY

Before the unification by the *ali'i* Pi'ilani in the late 1500s, the whole of Maui was ruled by two separate kingdoms – one centered in Hana on the windward coast and one in Wailuku. Along with consolidating power on the island, Wailuku's chief Pi'ilani also raised Maui's political status in the archipelago by ruling judiciously and using his connections with the reigning chiefly families of O'ahu and Hawai'i (Fornander 1916/1917, Vol. 2:87).

Pi'ilani's possessions were inherited by his firstborn son Lono-a-pi'ilani. According to the oral tradition, after a rift between Lono-a-pi'ilani and his younger brother Kiha-a-pi'ilani (born c. 1626), the latter took refuge from in a place known as Ke'eke'e (from Hawaiian, "zigzag") in the neighboring Kula District. Subsequently, he traveled to the island of Hawai'i, which was the kingdom of their brother-in-law Umi, and convinced him to send an army to Maui in order to avenge Kiha and dethrone Lono (Fornander 1919, Vol. 5: 178–180). The invasion was known in the oral tradition as the "expedition of numberless canoes" because according to legend the canoes stretched across the Maui channel from Kohala on Hawai'i Island, and Umi's army was able to march on them as on a bridge. According to one version, Lono was eventually captured and killed by Umi's troops in Waihe'e, to the northwest of the project area. According to Kamakau (1961:31), however, the Wailuku-based chief died of terror before the invading army reached his residence. In any case, after the successful invasion Kiha-a-pi'ilani became the sole ruler of Maui.

Kiha-a-pi'ilani became famous as a builder, especially for the construction of a stone-lined path, the Alaloe (from Hawaiian, "main road"), or "the Kiha-a-pi'ilani Trail," which finished his father's road building project and for a first time connected all parts of Maui. The chief also constructed the Mau'oni fishpond, which was in a system with Kanahā Pond (Kamakau 1961: 42), and moved the royal residence from Wailuku to eastern Maui (Kirch 2010: 102). According to Kirch, Kiha-a-pi'ilani's coming to power signifies a transition in the political tradition, as the *ali'i nui* ("great chiefs") acquired "direct control over economic production" (Kirch 2010: 102).

The 18th century was marked by the rivalry between Maui and Hawai'i Island. At the end of his reign, the ambitious but ruthless Kekaulike (c. 1700–1736) launched an expedition from his seat at Kaupō to Hawai'i. Fearful of retaliation, Kekaulike withdrew to Wailuku, but developed an acute and fatal case of what Kamakau classifies as epilepsy (1961: 69, "*ka maka huki lani*" or "eyes drawn heavenward"). His heir was Kamehameha-nui, the son of a half-sister of the Hawai'i Island chief Alapa'i. With the help of his uncle, in 1738 Kamehameha-nui defeated his older half-brother Ka'uhi and secured his rule over Maui (Kamakau 1961:74).

Maui enjoyed some time of relative peace and prosperity before the conflict returned with the wars between another of Kekaulike's sons named Kahekili II (c. 1737–1794) and Hawai'i chief Kalani'ōpu'u. Shortly before Captain Cook's arrival, Kalani'ōpu'u's armies from Hawai'i island had landed and plundered the district of Honua'ula, and then moved to Ma'alaea Bay from where the chief planned to invade Wailuku (Fornander 1916/1917, Vol. 2:147-157). After losing two battles to Kahekili II, Kalani'ōpu'u welcomed a truce, concentrating his efforts on the eastern side of Maui, protecting Hana and Kīpahulu, which were his spoils from an earlier battle in 1759 (Fornander 1916/1917, Vol. 2:147).

EARLY POST-CONTACT HISTORY

The Post-Contact Period in Maui begins on November 26, 1778, with British Explorer Captain James Cook's passing by the island on his way back from the extreme Northern Pacific (Daws 1974:8). At the time of his visit, the war between Kalani'ōpu'u and Kahekili II had not been over, and the latter was preparing for another attack (Speakman 1978:26). For a while the internal affairs on the island proceeded independently of significant Western influence. In fact, the height of Maui's political power in the archipelago was reached during the reign of the ambitious Kahekili II in 1783, just five years after the encounter with Captain Cook (Kolb et al., 1997:3). Yet, that moment of superiority proved ephemeral: by May 1790 the chief's soldiers were pushed back into 'Āao Valley by Hawai'i's Kamehameha I (1758–1819), who had enlisted the help of advisors Isaac Davis and John Young and their cannon Lopaka (Daws 1974: 35). Decades later, traveler George W. Bates suggests that the name of Wailuku town (from Hawaiian, "water of destruction") owes its origin to that devastating battle. Bates continues:

Leaving Wai-lu-ku, and passing along toward the village Kahului, a distance of three miles, the traveler passes over the old battle-ground named after the village. It is distinctly marked by moving sand-hills, which owe their formation to the action of the northeast trades. Here these winds blow almost with the violence of a sirocco, and clouds of sand are carried across the northern side of the isthmus to a height of several hundred feet. These sand-hills constitute a huge "Golgotha" for thousands of warriors who fell in ancient battles. In places laid bare by the action of the winds, there were human skeletons projecting, as if in the act of struggling for resurrection from their lurid sepulchers. In many portions of the plain who cart-loads were exposed in this way. Judging of the numbers of the dead, the contest of the old Hawaiians must have been exceedingly bloody (Bates 1854:313–314).

After Kahekili's death at Waikī in 1794, his inherently unstable realm once again succumbed to fratricidal conflicts and the mounting pressure from the powerful Kamehameha I (Daws 1974: 38). In the following years, the descendants of Pi'ilani and the chiefly Maui families were for the most part robbed of their possessions unless they surrendered to the conquerors (Fornander 1916/1917, Vol. 6:310).

Maui, along with the rest of the newly named Sandwich Isles, quickly became a stop for fur traders on their way to Canton (Guangzhou). Kauai's Ka'iana was one of the first Hawaiians to leave with the traders on a ship to China and the Philippines in 1787; he came back to the islands after a sojourn in the Pacific Northwest on December 7, 1788, when the ship *Iphigenia* captained by William Douglas arrived at Kahului Bay (Nokes 1998: 113–114). Initially loyal to Kamehameha I, Ka'iana switched sides in 1795 and joined Kahekili II's eldest son Kalanikūpule on O'ahu; he gave his last stand at the famous Battle of Nu'uuanu in May 1795 (Daws 1974: 40).

THE MĀHELE

In the 1840s, Kauhikaouli (Kamehameha III, r. 1825–1854) introduced private land ownership (Kuykendall 1938; Kelly 1983). The transition from communal to private land use is commonly called the Māhele (from Hawaiian, “division”). It set the stage for consequential changes to property possession in the islands as it introduced Western legal practices.

As early as 1841, the legislature allowed island governors to lease lands to foreigners for up to fifty years. These leases were then to be registered “in writing so that there be no misunderstandings about terms and rents” (Daws 1974: 125). The question of land reform was set aside in 1843 because of the five-month occupation of the islands by British naval officer George Paulet, but once the kingdom was stable again and Kauhikaouli felt secure at its helm it was brought back. By 1844 many chiefs were warming up to the proposal for a formal land division, and in 1845 the Board of Commissioners to Quiet Land Titles (the Land Commission), was established for “the investigation and final ascertainment or rejection of all claims of private individuals, whether natives or foreigners, to any land property” (Chinen 1958:8). The Commission had no authority to divide lands or change their tenure, but was created solely for approval of land claims (Kuykendall Vol. I, 1938: 280).

The Māhele of 1848 divided Hawaiian lands between the king, the chiefs (*ali'i* and *konohiki*), and the government, and instituted private land ownership. The subsequently awarded parcels were called Land Commission Awards (LCAs). Once lands were made available and private ownership was instituted, the *maka'āinana* (commoners) were able to claim the plots on which they had been living and which they had been cultivating through the Kuleana Act of 1850. These claims did not include any previously cultivated but presently fallow land, stream fisheries (known in Hawaiian as *okipi'i*), or many other resources necessary for traditional survival strategies (Kelly 1983; Kame'eiehiwa 1992:295; Kirch and Sahlins 1992). If occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed LCA and issued a Royal Patent after which they could take legal possession of the property (Chinen 1961:16). Commoners claiming house lots in Honolulu, Hilo, and Lāhainā were also required to pay commutation to the government before obtaining a Royal Patent for their awards.

Foreigners in Hawaii could acquire land through the Alien Landownership Act of 1850. Oftentimes, they were simply given lands by the *ali'i*. Commoners, however, would only make claims if they had first been made aware of foreign procedures such as the awarding of *kuleana* lands (from Hawaiian, “right, privilege”) and LCAs. Many of them found them unfamiliar, lengthy and costly, and as a result many Hawaiians missed an opportunity to claim for themselves the lands that had been sustaining their ancestors (Daws 1974: 127–128; Chinen 1961: 16).

LAND COMMISSION AWARDS AND LAND GRANTS

The entire district was declared Crown Lands with the Māhele. Land ownership in Wailuku Ahupua'a in particular has been historically and economically significant: after a generous gift of \$10,000, King David Kalākaua (r. 1874–1891) forced his government to allow German-born sugar magnate Claus Spreckels (1828–1908) a lease of 24,000 acres inclusive of the project area on July 8, 1878 (Daws 1974: 226–227). With some more manipulation and \$10,000 more, Spreckels managed to secure a fee simple title to the same land in 1882 with Royal Patent Grant No. 3343 (Daws 1974: 228). Although a handful of other foreigners (Anthony Catalena, James Louzada, E. Bailey, and others) gained control of parcels that would later be used for sugarcane cultivation, the majority of LCAs were awarded to Hawaiians, a statistic which can be used to measure Pre-Contact settlement (Creed 1993:38). Overall, there were over 400 *kuleana* lands awarded in the district.

The Office of Hawaiian Affairs' Kipuka Database (2020) lists five claimed LCAs overlapping with the project area (Figure 6; Table 1). In general, LCAs in the vicinity of Waikapū contain *lo'i* (“irrigated terraces”) and *kula* (“pasture”) lands, along with house sites. Thus, the pattern of wet taro cultivation and permanent residences in the vicinity of the project area is historically documented from 1848, though it likely extends further into the past.

In some cases, the Hawaiian government sold lands to generate income for the Kingdom. These transactions were referred to as “land grants.” According to the Waihona Aina Online Database (2020):

At the time of the Māhele, some of the land was the King's own land which later became known as Ceded Lands. Other lands in the possession of *ali'i* were returned to the King in exchange for Commutation of property the *ali'i* kept. Some of these returned lands became Government lands and were sold by the government to generate income for the Kingdom, since the King gave up his traditional right to collect taxes and goods following the Māhele.

The Office of Hawaiian Affairs Kipuka Database (2020) listed nine Land Grants with lands within or adjacent to the project area. These are listed in Figure 7 and Table 2 below.

The entire *ahupua'a* belonged to the government and was overseen by the Department of Education. According to Sterling (1998:95):

In 1875 the Board of Education sold at auction the “Land known as the Ahupuaa of Waikapu, saving grants hitherto made within said ahupuaa, or sales by the Board of Education,” to Henry Cornwall, the Government issuing a royal patent to the above terms without survey or statement of area. Mr. Cornwall afterward sold to Claus Spreckels and others the part known as Waikapu Commons.

Table 1: Land Commission Awards within and in the vicinity of the project area.

Claimant	LCA No.	Royal Patent No.	Year	Awarded	Acreage	‘Āpana (“portion”)	‘Ili	Use
Crowningberg, William (Wilama)	433	1111	1852	Yes	5.93	1	Pohakoi	
Humphreys, William	326	7659	1883	Yes	131.3	1	Awikiwiki, and Puhiaawaawa	
Keliiolelo	3525:2	3121	1856	Yes	1.66	1	Awakamanu	
Louzada, James	225	7658	1883	Yes	26.1	1	Pualinapao	Farmland
Manu	408	3540	1857	Yes	11.75	1	Pohakuloa	Taro <i>lo‘i</i>
McLane, William	3201:2	2775	1856	Yes	5.45	2	Kapalaalaea and Awakamanu	
Mehao	3019:2	3353	1864	Yes	0.83	2	Ohia and Pilipili	Taro <i>lo‘i</i>
Nowlein, Michael J.	71	4549	1863	Yes	303.5	3	Papakapu and Kapoi	
Pakele	2980:1	5356	1863	Yes	1.8	2	Kaaa and Olohe	Taro <i>lo‘i</i> , <i>hala</i> trees (screw pine, <i>Pandanus odoratissimus</i>), and houses.

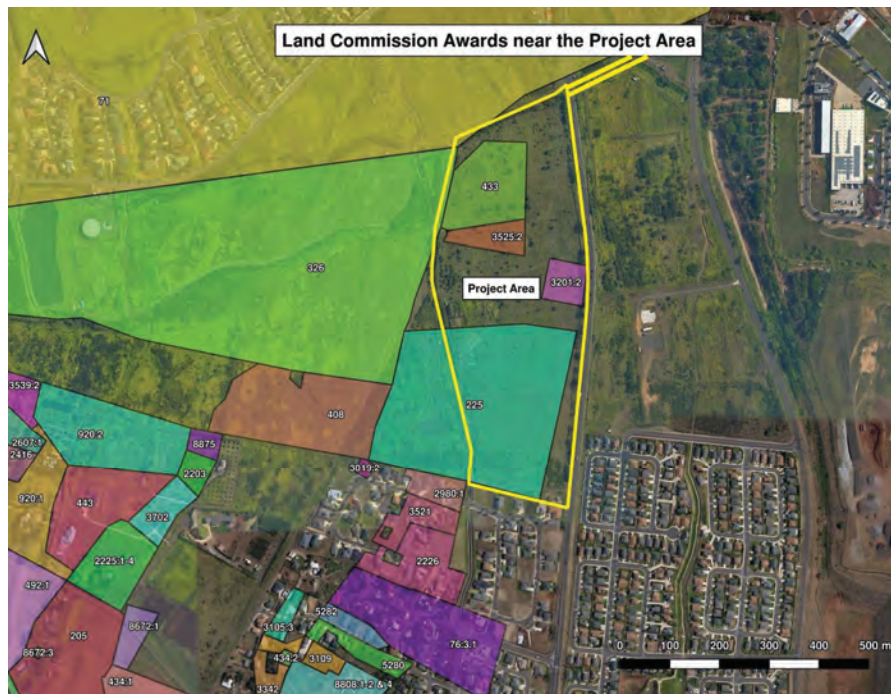


Figure 6: Aerial photograph with overlaid Land Commission Awards within and in the vicinity of the project area (Kipuka Database 2020).

Table 2: Land grants within and in the vicinity of the project area.

Grantee	Land Grant No.	Year	Acreage	'Ili near the project area
Cockett, Mrs. Beke	2108:6	1856	7.73	Ka'a'a
Cornwell, Henry	3152	1875	12,000	'Ohia
Crowningberg, David	2952	1864	7.44	
Flores, Manuel	1680:1	1855	7.07	Pilipili
Louzada, J. & Henry Cornwell	2951	1864	17.1	
Richardson, J.	2070	1856	15.1	
Ross, John	2005	1856	9.1	Awakamanu
Spreckels, Claus	3343	1882	24,000	



Figure 7: Aerial photograph with overlaid land grants within and in the vicinity of the project area (Kipuka Database 2020).

MID 19TH CENTURY TO PRESENT

As Western influence grew, the Wailuku coast and the adjacent isthmus became an important provisioning area. Europeans were living on or frequently visiting the towns north of the project area, and several churches and missionary stations were established. Thomas Hogan built the first western building, a warehouse, near the Kahului shoreline in 1863 (Clark 1980:7).

With the gradual demise of the whaling industry in the 1860s (Speakman 1978:111), the economy of the district changed to sugar cane cultivation, though the crop had been grown in Wailuku as early as 1840. Further impetus to these developments was given by the Reciprocity Treaty of 1875, which granted a duty-free market for Hawaiian sugar in the U.S. in exchange of trade privileges for American products. Soon the Wailuku Sugar Company and the Waikapu Sugar Company converted large tracts of land along the isthmus for sugar cultivation (Figure 8). As the industry developed, a number of warehouses and stores were constructed, while wheelwright and blacksmith shops opened close to Kahului harbor. A small landing was constructed in 1879 to serve Spreckels's Hawaiian Commercial Company and its complex at Spreckelsville Plantation northeast of the project area (Condé and Best 1973:208). The new industry quickly attracted foreign settlers who inadvertently assisted in the further displacement of the native population, though they maintained the population density of the Waikapū–Wailuku area.

As early as the 1860s a number of plantations and mills opened not only in Wailuku and Waikapū, but also in the neighboring Waihe'e and Ha'ikū. Many of the plantation camps associated with these mills were located on the plains surrounding Pu'unēnē to the east of the project area, while others were built closer to the water sources of the West Maui Mountains. For example, Hopoi Camp is said to have been located near Hopoi Reservoir (State Site Number 50-50-04-5473) to the north of the parcel (Figure 9); the reservoir was constructed by 1922, when references to the camp began to occur. Water was channeled both from traditional sources such as 'auwai ("ditches"), usually connected to Waikapū Stream, and from Western-style wells. Waikapū Ditch (State Site 50-50-04-5493) was built and in use by 1913, and it still remains in operation today. Despite that, sugar cultivation in the area was discontinued in 2016.

Though the vicinity of the project area has been heavily influenced by the sugar industry, it was not immune to worldwide political developments. In the wake of the Pearl Harbor attack, Kahului came under Japanese fire on January 1, 1942, when Japanese submarines shelled its harbor (Clark 1980:7). In March 1943 the Navy constructed an Air Station to serve as a central storage depot for all Maui Activities; that station has now been repurposed as Kahului Airport. Some of the WWII structures north of the project area are still extant today (Clark 1980:9). The former sugarcane and pineapple lands in the vicinity of the project area have been reclaimed through residential developments and industrial baseyards.

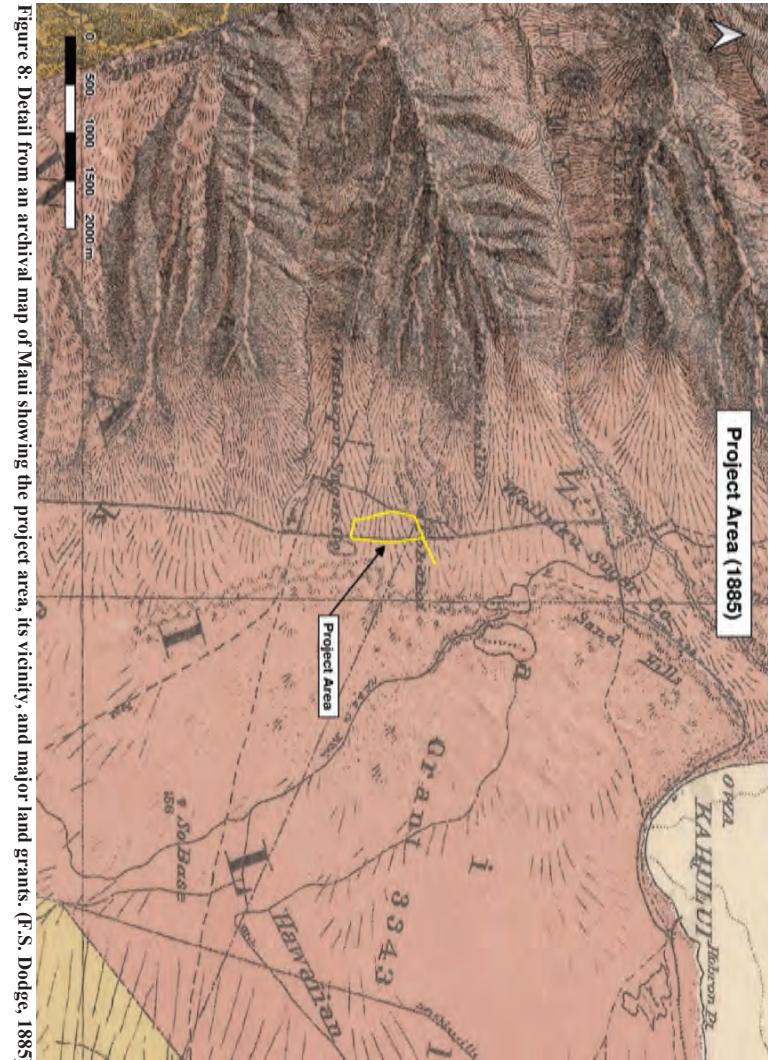
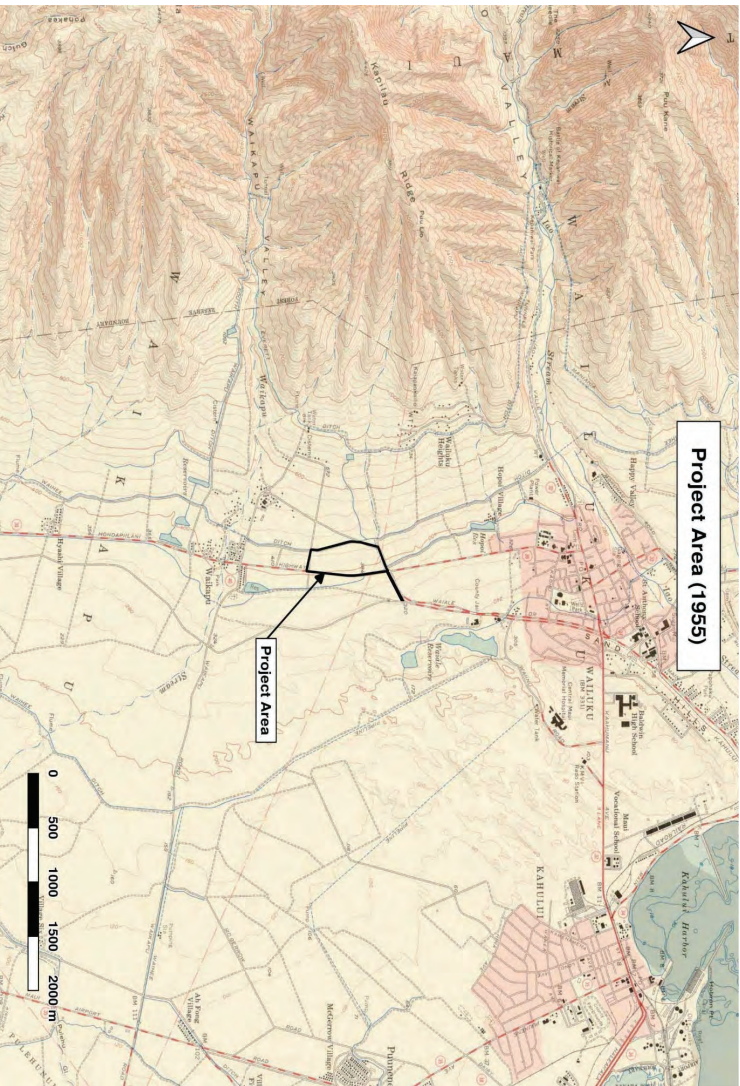


Figure 8: Detail from an archival map of Maui showing the project area, its vicinity, and major land grants. (F.S. Dodge, 1885)

Figure 9: Detail of a 1955 USGS topographic map (Wailuku, HI) depicting the project area and its vicinity in the agricultural lands between Wailuku and Waikapū.



PREVIOUS ARCHAEOLOGY

This AMP concludes with an examination of the past archaeological research in the vicinity of the project area in an effort to identify potential types of cultural practices conducted there. Previous archaeological studies on the Maui isthmus have yielded modest evidence of Pre-Contact human settlement because of the intensive agricultural use in Late Post-Contact and Modern times. Figure 10 shows the location of various archaeological projects conducted in the vicinity of the project area.

Archaeological investigations on Maui began in earnest in the early 20th century with the support of the Bernice Pauahi Bishop Museum. These were the studies of Thomas G. Thrum (1909), John F.G. Stokes (1909–1916), and Winslow M. Walker (1931). Thrum (1909:59) mentions that two *heiau* may have possibly existed in the *ahupua'a* of Waikapū south of the project area, but evidence for them may no longer exist.

Bernice Pauahi Bishop Museum (Rotunno and Cleghorn 1990) conducted a large reconnaissance survey to the east and northeast of the present project area. They identified three temporary archaeological sites, but did not designate them with State Inventory of Historic Places (SIHP) numbers. The first was a potentially modern cobble-lined path with no discernible starting or ending point. The second temporary site was originally identified as a rock wall, but subsequent analysis reclassified it as remnants of bulldozer tailings. The third site was a rock mound made of cobblestones. Rotunno and Cleghorn (1990) recommended additional archaeological work because of the dense vegetation and the possibility of encountering extant human remains in subsurface layers (Rotunno and Cleghorn 1990).

In 1992, SHPD (Donham 1992) conducted data recovery for two separate cases of inadvertently discovered human burials at the construction site of the Maui Homeless Shelter northeast of the project area. Even though some of the remains were crushed by machinery, recording and re-interment was possible. Surrounding one of the burials was a cultural layer likely associated with work on nearby access roads. The two burials were recorded as SIHP Site 50-50-04-02916, and further archaeological monitoring was recommended (Donham 1992).

Immediately to the south of Donham’s 1992 data recovery, Xamanek Researchers (Fredericksen and Fredericksen 1995) conducted an archaeological inventory survey on approximately 15 acres for the construction of a rental housing project. Neither the pedestrian survey, nor the excavations yielded any significant cultural remains. Because of the presence of sandy deposits and the proximity to SIHP Site -02916, the archaeologists recommended further monitoring (Fredericksen and Fredericksen 1995).

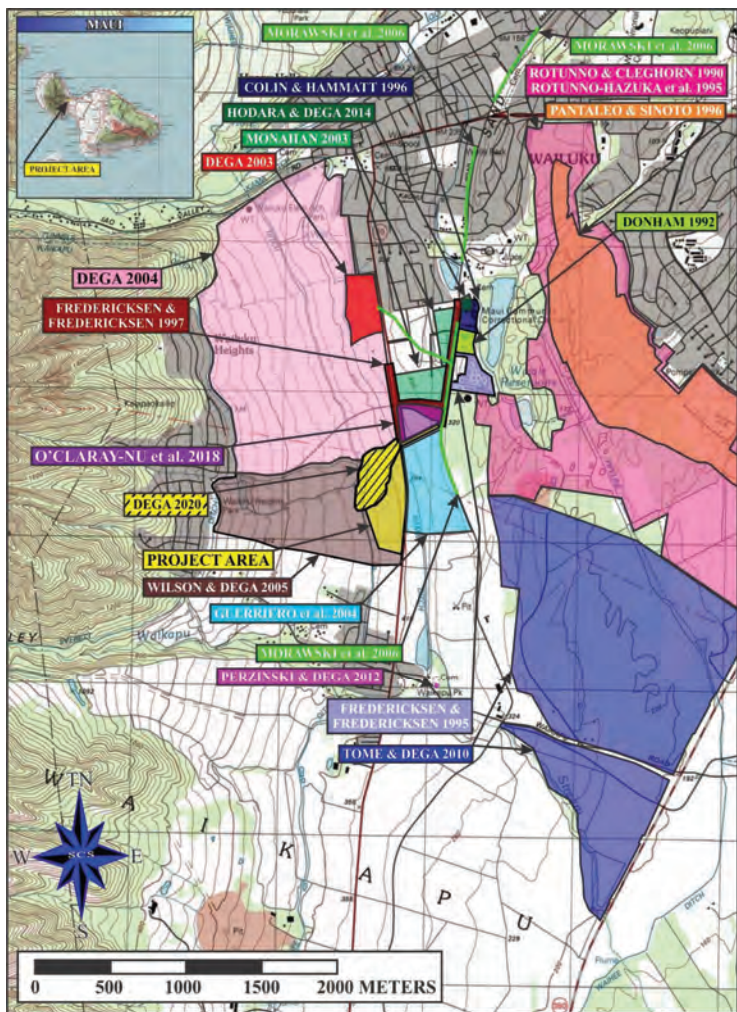


Figure 10: A portion of a USGS topographic map (Wailuku, HI) showing previous archaeology within and in the vicinity of the project area

The Bishop Museum (Rotunno-Hazuka et al. 1995) revisited the Rotunno and Cleghorn (1990) project area at the Maui Lani Development Property to conduct archaeological subsurface testing. The study identified ten Pre-Contact burial features containing at least 12 people. The site was subsequently designated as SIHP Site 50-50-04-02797. Six of the burial features were preserved *in situ*, though one set of remains had to be reinterred. This finding prompted SHPD Maui to request subsequent intensive archeological surveying of the projected development (Rotunno-Hazuka et al. 1995).

That follow-up survey was conducted by Aki Sinoto Consulting (Pantaleo and Sinoto 1996). The subsurface sampling included a total of 58 localities with 90 machine-excavated trenches, two shovel scrapes, and one manually excavated trench. Pantaleo and Sinoto identified six burials (SIHP Sites 50-50-04-04146 and -04147). Four isolated individual burials located at the highest elevation on the tip of a dune were associated with SIHP Site 50-50-04-02797. Pantaleo and Sinoto concluded that there can be no predictive method for avoiding burials, as surface features did not correlate with cultural layers containing human remains. Archeological monitoring was recommended for any further development in the area because of its high potential to contain human burials (Pantaleo and Sinoto 1996).

Cultural Surveys Hawai'i (Colin and Hammatt 1996) conducted archaeological monitoring immediately to the north of Donham's data recovery. The four field inspections revealed no previously unknown historic properties (Colin and Hammatt 1996).

In 1997, Xamanek Researchers (Fredericksen and Fredericksen 1997) conducted an archaeological inventory survey for the Mahalani Street and Wai'alaie Drive extension project, partially overlapping with and adjacent to the northeast of the current project area. Once again, neither the reconnaissance survey nor the subsurface testing revealed any historic properties. The presence of sandy substrata, however, prompted the archaeologists to recommend monitoring for any ground disturbing activity in the area (Fredericksen and Fredericksen 1997).

Scientific Consultant Services, Inc. (Dega 2003) conducted an archaeological inventory survey in Wailuku Ahupua'a north of the project area. After a complete pedestrian survey and a total of 18 representative subsurface trenches, three historic properties were documented, all of which dating to the Post-Contact Period. These are the Hopoi Reservoir (SIHP Site 50-50-04-05473), Kama Ditch (SIHP Site 50-50-04-05474), and an isolated basalt adze (SIHP Site 50-50-04-05478). The findings testify to the importance of the isthmus for sugarcane cultivation in the Late Post-Contact and Modern periods. Subsurface testing yielded negative findings (Dega 2003).

Scientific Consultant Services, Inc. (Monahan 2003) conducted an archaeological inventory survey on two undeveloped lots totaling approximately 30 acres in Wailuku Ahupua'a, north of the project area [TMK: (2) 3-5-001:061, 063, and 066; formerly 017]. After both a pedestrian survey and subsurface testing, no historic properties were identified, and as a result the report was published as an archeological assessment (Monahan 2003).

Archaeological Surveys Hawaii, LLC (Guerriero et al. 2004) conducted an archaeological inventory survey of a 50-acre parcel of land in Wailuku Ahupua'a directly east of the present project area across Honoapi'ilani Highway [TMK: (2) 3-5-002:011 and 012]. During the survey, the Kama Ditch (SIHP Site 50-50-04-05474) was reidentified (Guerriero et al. 2004).

Scientific Consultant Services, Inc. (Dega 2004) conducted an archaeological inventory survey on 348.613 acres of land composing the main land parcel of the Kehalani Mauka Subdivision, located northwest of the current project area [TMK:(2) 3-5-001: various]. Six previously undocumented archaeological sites were identified: Waihe'e Ditch (SIHP Site 50-50-04-05197), Waikapū Ditch (SIHP Site 50-50-04-05493), road segments (SIHP Site 50-50-04-05489), east-west bearing drainages (SIHP Site 50-50-04-05490), a Post-Contact artifact scatter (SIHP Site 50-50-04-05491), and several clearing mounds/push piles from the plantation era (SIHP Site 50-50-04-05492). All six were assessed as significant under Criterion D Representative subsurface testing (27 trenches) revealed mostly homogenous soil matrices, which are to be contrasted with soil profiles to the north, east and south of the studied area. According to Dega, the lack of Pre-Contact findings could be attributed to the intensive sugarcane cultivation, but it may also suggest that the isthmus was not a particularly hospitable area (Dega 2004:43).

Scientific Consultant Services, Inc. (Wilson and Dega 2005) conducted an archaeological inventory survey of 215.800 acres significantly overlapping with the current project area [TMK: (2) 3-5-02: 02 and 03]. The AIS included a 100% pedestrian survey and 21 backhoe dug stratigraphic trenches evenly spread across the project area. Five previously undocumented historic properties were identified during the survey: an unnamed rock and mortar ditch (SIHP Site 50-50-04-05729), another unnamed earthen ditch/drainage (SIHP Site 50-50-04-05726), a large unnamed reservoir (SIHP Site 50-50-04-05727) serving as a terminus of Waikapū Ditch, a sugar field erosion-control site (SIHP Site 50-50-04-05728) comprised of 14 cross-slope, earthen berms of varying length positioned regularly throughout the project area, and the Old Waikapu Road (SIHP Site 50-50-04-05730), a dirt-road serving for cane-haul transport. All of the sites were interpreted as associated with the Late Post-Contact (Plantation Era) Period and were deemed significant under Criterion D. No traditional Hawaiian cultural material was identified and no further work was recommended (Wilson and Dega 2005).

Scientific Consultant Services, Inc. (Morawski et al. 2006) conducted monitoring for the proposed Kehalani Mauka Subdivision along Wai'ale Road northeast of the project area [TMK: (2) 3-5-002:001 por. and 3-5-001:017 por.] over the course of 20 months between December 2003 and July 2005. Monitoring was conducted because of the high risk of encountering human remains in the area, as shown in previous archeological surveys in the vicinity. Morawski et al. identified five sites: a complete *in situ* human burial (SIHP Site 50-50-04-05965), two locations containing incomplete and previous disturbed burials (SIHP Sites 50-50-04-05965 and -05966), the Post-Contact roadbed of Wai'ale Road (SIHP Site 50-50-04-05963), and a portion of a sugarcane irrigation flume (SIHP Site 50-50-04-05964). More archeological monitoring was recommended (Morawski et al. 2006).

Scientific Consultant Services, Inc. (Tome and Dega 2010) conducted an archaeological inventory survey of approximately 607 acres of land southeast of the project area [TMK: (2) 3-8-005:23 por., 37 and (2) 3-8-007: 71, 101, 102, and 104]. The testing included as many as 282 backhoe- and five hand-dug trenches. Just one of those encountered a previously undocumented feature: a subsurface fire pit (*imu*) which was assigned SIHP Site 50-50-04-06578. Tome and Dega documented significant disturbance as a result of intensive Late Post-Contact and Modern agricultural activity. Further archeological monitoring was recommended for the parts of the project area containing sandy matrices because of the possibility of encountering more burials (Tome and Dega 2010).

In 2012, Scientific Consultant Services, Inc. (Perzinski and Dega 2012) conducted an archaeological inventory survey of 2.0 acres of land in Waikapū Ahupua'a, south of the project area [TMK:(2): 3-5-002:015]. Four archaeological sites were documented: the previously known, though undocumented, Waikapū Cemetery (SIHP Site 50-50-04-06808), a cistern associated with a piggery (SIHP Site 50-50-04-06809), a long-abandoned overflow ditch (SIHP Site 50-50-04-06810), and at least two Native Hawaiian burials (SIHP Site 50-50-04-06811). The community (as opposed to a municipal) cemetery contains approximately 75 marked burials and 20 unmarked burials, and was used for interment from 1900 through 1961. One of the Hawaiian burials is demarcated by a headstone and represents the resting place of Ernest Malai. A second burial, identified as that of Papia Nawa'a, is unmarked and was designated by lineal descendants. Representative subsurface testing via 11 trenches along the cemetery boundaries yielded negative results. All four sites were designated significant under Criterion D. In addition, Sites -06808 and -06811 were assessed as significant under Criterion E. No further work was recommended for Sites -06809 and -06810 (Perzinski and Dega 2012).

In 2014, Scientific Consultant Services, Inc (Hodara and Dega 2014) prepared an archeological monitoring report following the completion of groundwork associated with Maui County Correctional Center. Archeological monitoring was conducted on September 10 and 11, 2014, after the identification of a cultural layer during trenching. The cultural layer was identified as a trash pit (SIHP Site 50-50-04-08017), dated to the Post-Contact period, and found to include bovine bones. According to testimony collected by Hodara and Dega, the project area had been a cattle ranch. Other artefacts identified by Hodara and Dega were iron nails, metal rods, glass shards, various metal, concrete and coral fragments, and lithified sandstone and basalt cobbles. The site was deemed significant under Criterion D, and no further work was recommended (Hodara and Dega 2014).

In 2017, Archaeological Services Hawaii, LLC (O'Claray-Nui et al. 2018) conducted an inventory survey encompassing the sewer line corridor of the current project area and adjacent lands. A full pedestrian survey was followed by the excavation of 11 test trenches. No previously unknown historic properties were uncovered; this was attributed to the intensive agricultural use in the Late Post-Contact Period and modern construction activity (O'Claray-Nui et al. 2018).

The current AMP follows a previous archeological field inspection conducted by Scientific Consultant Services, Inc (Dega 2020). According to cultural practitioner and lineal descendant of Waikapū Ahupua'a Hōkūao Pellegrino, in the northwestern portion of the project area there once was "very important stone called Pōhāko'i." According to Pellegrino, the artifact was in the first place a grinding stone (*hoana*) for adzes (*ko'i*), and secondly a boundary marker (*palena 'āina*) for the northern end of Waikapū Ahupua'a. Land Grant 2952 (to David Crowningburg) and LCA 433 (to William Crowningburg) specify the stone as a boundary marker. According to Pellegrino, Pōhāko'i is also mentioned in traditional songs (*mele*), chants (*oli*), and legends (*mo'olelo*).

SCS archeologist Ian Bassford conducted a survey under the supervision of Michael Dega over a large segment in the northwestern portion of the project area. The land is now used for small scale cattle ranching, and the surface and landscape composition of the project area have been significantly modified by that and previous industrial-level agricultural activities. Unfortunately, Pōhāko'i was not discovered, and there was no evidence for it among the rock piles or elsewhere on the surface. Dega recommends further monitoring during the sitework ground-disturbing activities in hopes of locating the stone (Dega 2020).

MONITORING CONVENTIONS AND METHODOLOGY

Archaeological monitors will adhere to the following guidelines during monitoring as outlined in HAR §13-279-4:

1. On-site, full time archaeological monitoring will be conducted for all ground-disturbing activities during the sitework improvements.
2. If significant deposits or features are identified and additional field personnel are required, the archaeological consultants conducting the archaeological monitor will notify the contractor or representatives before additional personnel are brought to the site.
3. One archaeological monitor will be present per each piece of machinery conducting ground-altering activities within the project area.
4. If non-burial cultural deposits and/or features are identified during Monitoring, the on-site archaeologist will have the authority to temporarily suspend construction activities at the find location so the deposits or features may be identified, documented, and assessed for significance. The SHPD History and Culture Branch and the Archaeology Branch will both be consulted regarding appropriate documentation and assessment. Documentation will include collecting geospatial data via global positioning (GPS) to plot the find location, recording the GPS location on site map. Geospatial data will be collected utilizing a Trimble Geo7x for sub-meter accuracy to record identified significant historic properties. Documentation will also include, photographing with scale and north arrow and illustrating the deposits or features in planview and/or profile view (depending on nature of exposure), recording stratigraphy using USDA soil survey manual terminology and attributes and Munsell soil colors, and plotting and collection of artifacts and soil samples; stratigraphic profiles will measure a minimum of 2 m across. Construction work and/or back-filling of excavation pits or trenches will occur in the location of find only after all archaeological documentation has been completed. Former A-horizons will be sampled if archeological or historical cultural materials are observed.
5. Stratigraphy will also be recorded and photographed with north arrow and scale at selected locations to provide representative stratigraphic data across the area of potential effect. These locations will also be recorded and represented on a current USGS topographic quadrangle map. Full trench profiles will be collected from across the project area. Both vertical and horizontal scales will be recorded.
6. If sand deposits are identified during archaeological monitoring, work will proceed with a maximum of 6-inch passes, a bladed bucket will be used, and the archaeological monitoring will ensure the project will proceed at a pace to adequately allow the monitor to identify potential burial sites.
7. In the event that human remains (burial or isolated, displaced skeletal elements) are inadvertently encountered, all work in the immediate area of the find will cease, the area and human remains will be secured, and the archaeologist will immediately notify the police, SHPD (archaeologist and burial sites specialist staff), and the island burial council.

Treatment of the human remains (including archaeological documentation) shall be in accordance with Hawaii Revised Statutes §6E-43.6, Hawaii Administrative Rules §13-300-40, and SHPD directives. Work will resume in the area of the inadvertent find only following SHPD approval.

8. To ensure that contractors and the construction crew are aware of this Archaeological Monitoring Plan and possible site types to be encountered on the parcel, a brief coordination meeting will be held between the construction team and monitoring archaeologist prior to initiation of the project. The construction crew will also be informed as to the possibility that human burials and/or cultural deposits or features could be encountered and how protection and mitigation should proceed if they observe such remains.
9. The archaeologist will provide all coordination with the contractor, SHPD, and any other groups involved in the project. The archaeologist will coordinate all monitoring and sampling activities with the safety officers for the contractors to ensure that proper safety regulations and protective measures meet compliance. Close coordination will also be maintained with construction representatives in order to adequately inform personnel of the possibility that open archaeological units or trenches may occur in the project area.
10. As necessary, verbal and/or written reports will be made to SHPD and any other agencies as requested.

LABORATORY ANALYSIS

All non-burial artifacts and samples collected during the project will undergo analysis at the SCS Maui laboratory in Pukalani, Maui. Photographs, illustrations, and all paper and electronic documents accumulated during the project will be curated at the laboratory of the archaeological consultants conducting the monitoring. All collected artifacts and midden samples will be cleaned, sorted, counted, weighed (metric), and analyzed (both qualitative and quantitative data), with all data recorded on standard laboratory forms. Midden samples will be minimally identified to major class (e.g., bivalve, gastropod mollusk, echinoderm, fish, bird, and mammal). Digital photographs with scales will be taken of a representative sample of the diagnostic artifacts. Tables and text discussing the artifact and sample results will be provided in the report, along with appropriate digital photographs.

Samples (wood charcoal, shell, non-human bone, *kukui* nut) identified as potentially suitable for dating from an undisturbed context (e.g., cultural layer, pit feature) shall be considered for radiocarbon dating in consultation with SHPD and the landowner. Prior to submittal, potential wood charcoal samples shall first be submitted to International Archaeological Research Institute, Inc. (IARII) for wood taxa identification. Only samples identified as short-lived endemic or Polynesian-introduced species will be selected for dating purposes.

All stratigraphic profiles and plan view maps of identified historic properties (e.g., sites, cultural layers, features) shall be drafted for presentation in the final report. Photographs of project work,

including overviews, and of individual profiles, cultural layers, and features shall also be included in the final report.

CURATION

If requested by the landowner, all collected non-burial materials will be curated in the laboratory of the archaeological consultants conducting the monitoring until a final disposition repository location is determined in consultation with the landowner and the SHPD.

REPORTING

All historic properties (non-burial and burial) identified and/or further documented during archaeological monitoring (e.g., cultural layer, pit features, buried walls) shall be assessed for site significance per HAR §13-275-6, Criteria *a* through *e*. This information shall be included in the final report, along with an appropriate recommendation for future mitigation, if appropriate.

Within 30 days of completion of archaeological monitoring fieldwork, SCS will submit for review and acceptance a brief archaeological monitoring letter report of findings as specified in HAR §13-282-3(f)(1). Afterward, an archaeological monitoring report meeting the requirements of HAR §13-279-5 will be submitted to SHPD for review and acceptance within 60 days.

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APPENDIX A: SHPD LETTER



March 27, 2020

Ms. Suzanne D. Case, Chairperson
Department of Land and Natural Resources
1151 Punchbowl St.
Honolulu, Hawaii 96813

Dear Chairperson Case:

Subject: Pu'unani Homestead Subdivision
TMK: (2) 3-5-002:002(por.) and (2) 3-5-001:064(por.)

SHPD acceptance of Archaeological Inventory Survey Report on 215.800 acres located in Waikapu Ahupua'a Wailuku District, Maui Island, Hawai'i [TMK (2) 3-5-002: 02 and 03] (Wilson and Dega, October 2005) with SHPD Letter dated November 18, 2005, (SHPD Log Number 2005.2398) and Archaeological Assessment Report for a 15.0 acre parcel located along Waiale Road in Wailuku Ahupua'a and District, Pū'ali Komohana Moku, Island of Maui [TMK (2) 3-5-001:064] (O'Clary-Nu et al., May 2017) with SHPD Letter dated October 18, 2017 (SHPD Log No. 2017.02039)

TMK: (2) 3-5-002:002(por.)

The Department of Hawaiian Home Lands (DHHL) acknowledges State Historic Preservation Division's (SHPD) November 18, 2005, letter regarding SHPD's review of the report entitled *Archaeological Inventory Survey Report on 215.800 acres located in Waikapu Ahupua'a Wailuku District, Maui Island, Hawai'i [TMK (2) 3-5-002: 02 and 03]* (Wilson and Dega, October 2005). This AIS covered both the parcel for DHHL's Pu'unani Homestead Subdivision and the 148 acre mauka parcel, owned by others. DHHL concurs with SHPD's previous project effect determination under the HRS 6E jurisdiction as described below:

- The AIS documented 7 historic properties within the project area/area of potential effect (APE), as confirmed in the November 18, 2005 SHPD Letter. In accordance with HAR§13-275-6, all 7 sites are significant under Criterion d. No further work is recommended for the 7 sites as these sites have been adequately documented.

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& NATURAL RESOURCES
STATE OF HAWAII

Chairperson Case
March 27, 2020
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- DHHL's HRS 6E project effect determination is "No Historic Properties Affected" pursuant to HAR §13-275-7(a)(1). The proposed project will have no effect on significant historic properties.
- Based on SHPD's November 18, 2005, letter, SHPD has accepted the AIS (Wilson and Dega, October 2005), the historic preservation review process is concluded, and no further archaeological mitigation is necessary.
- DHHL requests SHPD's updated concurrence with DHHL's HRS 6E project effect determination of "No Historic Properties Affected."
- A Native Hawaiian organization may enter into an agreement with SHPD. DHHL acknowledges that the development of a memorandum of agreement (MOA) with SHPD and other signatories could be mutually beneficial to the parties involved. DHHL will work with SHPD upon updated acceptance of the AIS and concurrence with 6E project effect determinations to assess if a MOA should be developed.

TMK: (2) 3-5-001:064(por.)

DHHL acknowledges SHPD's October 18, 2017, letter regarding SHPD's review of the report entitled *Archaeological Assessment Report for a 15.0 acre parcel located along Waiale Road in Wailuku Ahupua'a and District, Pū'ali Komohana Moku, Island of Maui [TMK (2) 3-5-001:064]* (O'Clary-Nu et al., May 2017). DHHL's work within the portion of TMK (2) 3-5-001:064 will be limited to only sewerline improvements. DHHL concurs with SHPD's previous project effect determination under the HRS 6E jurisdiction as described below:

- SHPD's determination is no historic properties affected pursuant to HAR§13-284-7 and no historic properties have been identified within the project area. However, SHPD recommends archaeological monitoring for identification purposes.
- SHPD anticipates receiving for review and acceptance an archaeological monitoring plan that satisfies the requirements of HAR§13-279-4.
- DHHL's HRS 6E proposed commitment is archaeological monitoring for identification purposes during all DHHL project-related ground disturbances within the portion of TMK (2) 3-5-001:064.
- DHHL requests SHPD's concurrence with DHHL's HRS 6E project effect determination of "No Historic Properties Affected."

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Chairperson Case
March 27, 2020
Page 3

Mahalo for the opportunity to provide comments. Should you have any questions, please call me at (808) 620-9501 or Stewart Matsunaga, Acting Administrator, Land Development Division at (808) 620-9283.

Aloha,



William J. Aila, Jr., Chairman
Hawaiian Homes Commission

CONCUR – The HRS 6E project effect determination is "No Historic Properties Affected" as described herein.

Alan Downer

Suzanne D. Case, Chairperson

Enclosures – November 18, 2005, SHPD Letter (DOC NO: 0511MK22) and October 18, 2017, SHPD Letter (DOC NO: 1710MBF07)

c: Dr. Alan Downer, Administrator
State Historic Preservation Division

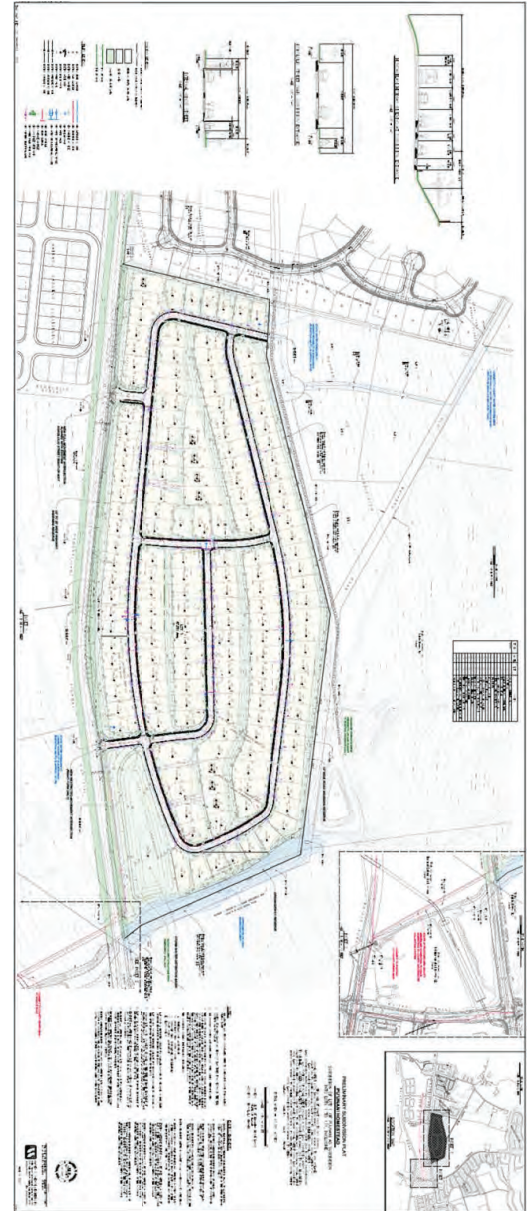
Dr. Susan Lebo, Archaeology Branch Chief
State Historic Preservation Division

County of Maui Planning Dept.
DHHL Planning Office
DHHL Maui District Office


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**APPENDIX B: PORTION OF THE PRELIMINARY CONSTRUCTION
PLANS**


B



B2



ARCHAEOLOGICAL
MONITORING PLAN
ACCEPTANCE LETTER
FROM THE STATE
HISTORIC PRESERVATION
DIVISION DATED
MAY 20, 2021 FOR THE
PU'UNANI HOMESTEAD
SUBDIVISION



APPENDIX

C-6



DAVID Y. IGE
GOVERNOR OF
HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD., STE 555
KAPOLEI, HI 96707

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

May 20, 2021

William J. Aila, Jr., Chairman
Department of Hawaiian Home Lands (DHHL)
P.O. Box 1879
Honolulu, Hawai'i, 96805
c/o stewart.l.matsunaga@hawaii.gov

Rowena Dagdag-Andaya, Director
County of Maui
Department of Public Works (DPW)
200 S. High Street
Kalana O Maui Bldg. 4th Fl
Wailuku, HI 96793
c/o lance.nakamura@co.maui.hi.us

Dear William J. Aila, Jr. and Rowena Dagdag-Andaya:

SUBJECT: **Chapter 6E-8 Historic Preservation Review –
County of Maui Permit Applications G T2021/0027 and WTP T2021/0007
DHHL Pu'unani Homesteads Project
Archaeological Monitoring Plan
Waikapū Ahupua'a, Pū'ali Komohana District, Island of Maui
TMK: (2) 3-5-002:002 por. and (2) 3-5-001:064 por.**

This letter provides the State Historic Preservation Division's (SHPD's) review of the draft archaeological monitoring plan (AMP) titled *Archaeological Monitoring Plan for the Puunani Homestead Subdivision, Waikapū Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK (2) 3-5-002:002]* (Stankov and Dega, May 2021) for the DHHL Pu'unani Homesteads Project. SHPD previously the project and agreed with archaeological monitoring for identification purposes in a letter dated March 27, 2020 (Downer 2020; Log No. 2020.00760). Subsequently, SHPD received the following submissions for the project area:

Date	Project Number	Log Number	Submission Documents
03/27/2020	2020PR32867	2020.00760	<ul style="list-style-type: none"> A cover letter from DHHL requesting the project proceed with archaeological monitoring for identification purposes. A copy of SIHPs review of the AIS report (Wilson and Dega 2005; Log No. 2005.2398, Doc. No. 0511MK22).
06/08/2020	2020PR33425	2020.01318	<ul style="list-style-type: none"> Cover letter from Munkekiyo Hiraga requesting comments on the environmental assessment (EA) report. Cover letter from DLNR Land Division with a link to the EA report and requesting comments.

IN REPLY REFER TO:
Project No.: 2021PR00251
Submission No.: 2021PR00251.001
through 2021PR00251.004
Project No.: 2020PR32867
Submission No.: 2020PR32867.001
Log No.: 2020.00760
Project No.: 2020PR33425
Submission No.: 2020PR33425.001
Log No.: 2020.01318
Doc. No.: 2105AM16
Archaeology

William J. Aila, Jr. and Rowena Dagdag-Andaya
05/20/2021
Page 2

Date	Project Number	Log Number	Submission Documents
03/01/2021	2021PR00251	N/A	<ul style="list-style-type: none"> A cover letter from the County of Maui requesting our review of permit applications G T2021/0027 and WTP T2021/0007 (Submission No. 2021PR00251.001). A copy of the construction designs (Submission No. 2021PR00251.001). A copy of the AMP (Stankov and Dega, November 2020; Submission No. 2021PR00251.001). A cover letter indicating SHPD agrees with the project proceeding with archaeological monitoring for identification purposes (Downer 2020; Submission No. 2021PR00251.002). A copy of the County of Maui Permit Application G T2021/0027 (Submission No. 2021PR00251.003). A copy of the County of Maui Permit Application WTP T2021/0007 (Submission No. 2021PR00251.003). Revised AMP version 4 (Submission No. 2021PR00251.004). Revised AMP version 5 (Submission No. 2021PR00251.005).

DHHL proposes the Pu'unani Homesteads project within a 47.4-acre project area on the subject property. The project will include the construction of 161 lots with 137 single-family residences and 24 vacant single-family improved lots. Additionally, the project will require ground disturbing work for the installation of appurtenances and improvements such as construction of internal roadways, sidewalks, drainage detention basin, and frontage road upgrades.

The draft AMP provides a scope of work, a summary of the archaeological investigations in the area, a summary of historic land use within Waikapū Ahupua'a, and stipulates the following:

- A coordination meeting will be conducted between the construction team and monitoring archaeologist prior to construction activities so the construction team is aware of the monitoring provisions detailed in the plan;
- On-site monitoring will be conducted for all ground disturbing activities. One monitor is required for each piece of ground altering machinery during this project;
- The archaeological monitor has the authority to temporarily halt all activity in the area in the event of a potential historic property being identified, or to record archaeological information for cultural deposits or features;
- If non-burial historic properties are identified, documentation shall include, as appropriate, recording stratigraphy using USDA soil descriptions, GPS point collection, recordation of feature contents through excavation or sampling of features, screening of features, representative scaled profile drawings, photo documentation using a scale and north arrow, and appropriate laboratory analysis of collected samples and artifacts. Additionally, photographs and profiles of excavations will be collected from across the project area even if no significant historic properties are encountered. Full trench soil profiles shall be recorded from across the project area and their locations shall be recorded on a USGS topographic map;
- If human remains are identified, work will cease in the vicinity and the find shall be secured, and provisions outlined within the Hawaii Revised Statutes (HRS) §6E-43 and HAR §13-300-40, and any SHPD directives, shall be followed;
- If sand deposits are identified during archaeological monitoring, work will proceed with a maximum of 6-inch passes, a bladed bucket will be used, and the archaeological monitor will ensure the project will proceed at a pace to adequately allow the monitor to identify potential burial sites.
- Collected materials not associated with burials will be temporarily stored at the archaeological firm's office/laboratory until an appropriate curation facility is selected, in consultation with the landowner and the SHPD; and
- Any changes in these provisions shall occur only with written approval from the SHPD.

William J. Aila, Jr. and Rowena Dagdag-Andaya
05/20/2021
Page 3

The plan meets the minimum requirements of HAR §13-279-4. **It is accepted.** Please submit two hard copies of the AMP, clearly labeled FINAL, along with a text-searchable pdf copy of the AMP and a copy of this acceptance letter to the SHPD Kapolei office, Attn. Library. Also submit a text-searchable PDF copy of the AMP to HICRIS Project 2021PR00251 using the Project Supplement option and a digital copy to lehua.k.soares@hawaii.gov.

SHPD hereby notifies the County and DHHL the permit issuance process may continue, and the project initiation process may continue.

SHPD requests written notification at the start of archaeological monitoring. Within 30 days of completion of archaeological monitoring fieldwork, SHPD looks forward to receiving for review and acceptance a brief archaeological monitoring letter report of findings as specified in HAR §13-282-3(f)(1). Subsequently, SHPD looks forward to receipt of an archaeological monitoring report meeting the requirements of HAR §13-279-5 for review and acceptance within 60 days of the completion of archaeological monitoring.


When completed, please submit the draft archaeological monitoring report to our office via HICRIS to Project 2021PR00251 using the Project Supplement option.

Please contact Andrew McCallister, Maui Archaeologist IV, at andrew.mccallister@hawaii.gov for matters regarding archaeological resources in this letter.

Aloha,
Alan Downer

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer


cc: Mike Dega, Scientific Consultant Services Inc., mike@scshawaii.com
Darren Okimoto, Dowling Company, Inc., darren@dowlingco.com
Michelle, Inafuku, DHHL, michelle.m.inafuku@hawaii.gov



CULTURAL IMPACT
ASSESSMENT FOR
THE PU'UNANI
HOMESTEAD
SUBDIVISION

APPENDIX

D



**A CULTURAL IMPACT ASSESSMENT REPORT IN ADVANCE OF THE
PROPOSED PU'UNANI HOMESTEAD PROJECT**

**WAIKAPŪ AHUPUA'A, WAILUKU DISTRICT
ISLAND OF MAUI HAWAI'I
TMK: (2) 3-5-002:002 and 3-5-001:064 (por.)**

Prepared by:
Cathleen A. Dagher, B.A.
September 2020

FINAL

Prepared for:
DDC LLC
2005 Main Street|
Wailuku, Maui
Hawaii 96793

SCIENTIFIC CONSULTANT SERVICES, Inc.



1347 Kapiolani Blvd., Suite 408 Honolulu, Hawai'i 96814

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INTRODUCTION

At the request of DDC LLC, Scientific Consultant Services, Inc. (SCS) has prepared a Cultural Impact Assessment (CIA) in advance of the proposed Pu'unani Homestead project. The proposed project will consist of the development of a Department of Hawaiian Home Lands (DHHL) residential subdivision comprised of a total of 161 lots (approximately 137 turn-key single-family residences and 24 vacant single-family improved lots) within the 47.4-acre project area. The Department of Hawaiian Home Lands Subdivision will be located in Waikapū Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-5-002:002 (Figures 1 through 3). The subject property is owned by the State of Hawaii, Department of Hawaiian Home Lands. Please note that DHHL, through coordination with Dowling Company, Inc., has graciously allowed the consultation reach out timeline to be extended to include the additional individuals suggested by Mr. Pellegrino (see Interview section) and that these potential interviews were going to be handled by telephone or virtual means for everyone's health and safety due to the COVID-19 pandemic.

Sewer line improvements within a portion of TMK: (2) 3-5-001:064 will be undertaken as part of the currently proposed DHHL Pu'unani Homestead project. A separate CIA report (Dagher2018) was prepared in advance of the proposed Wailuku Affordable Housing project, which was located in Wailuku and Waikapū Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-5-001:064]. Thus, the results of the Dagher (2018) consultation process are included in the Consultation section of the current CIA report.

The Hawaii State Office of Environmental Quality Control (OEQC 1997:11) states that "an environmental assessment of cultural impacts" gathers information about cultural practices and cultural features that may be affected by significant environmental effects:

Cultural impacts differ from other types of impacts assessed in environmental assessments or environmental impact statements. A cultural impact assessment includes information relating to the practices and beliefs of a particular cultural or ethnic group or groups.

The purpose of a CIA is to identify the possibility of on-going cultural activities and resources within a project area, or its vicinity, and then assess the potential for impacts on these cultural resources. The CIA is not intended to be a document of in depth archival-historical land research, or a record of oral family histories, unless these records contain information about specific cultural resources that might be impacted by a proposed project.

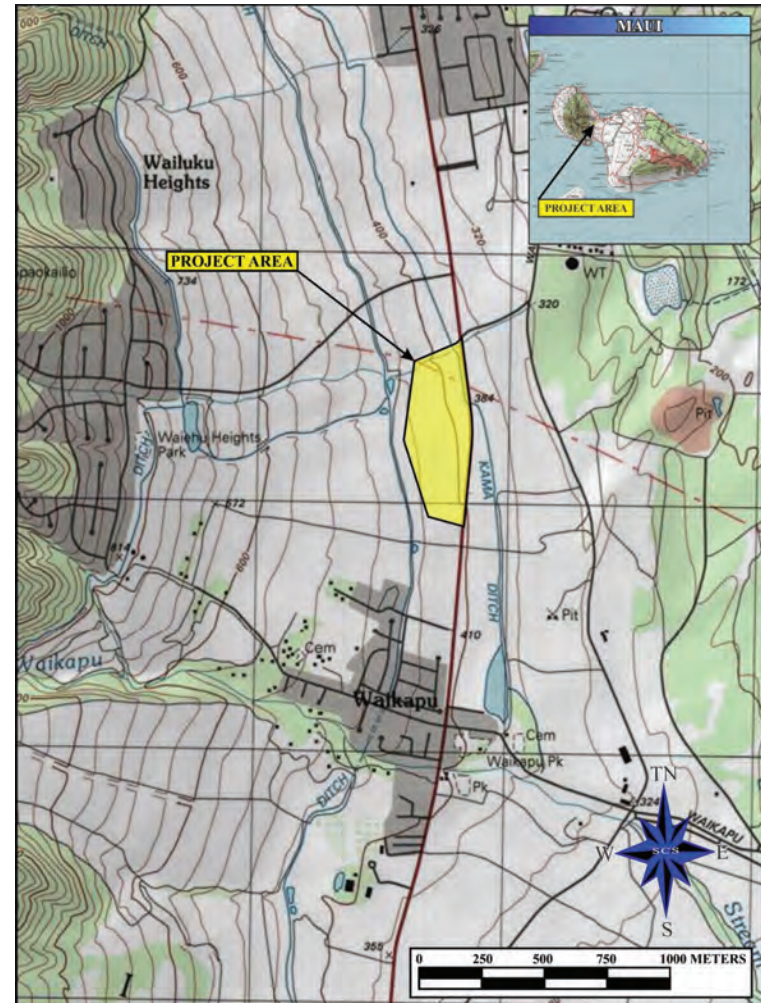


Figure 1: USGS Quadrangle (Wailuku, HI 1997; 1:24,000) Showing Project Area Location.



Figure 3: Satellite Image (Google 2018; Imagery Date 7/20/2016) Showing Project Area Location.

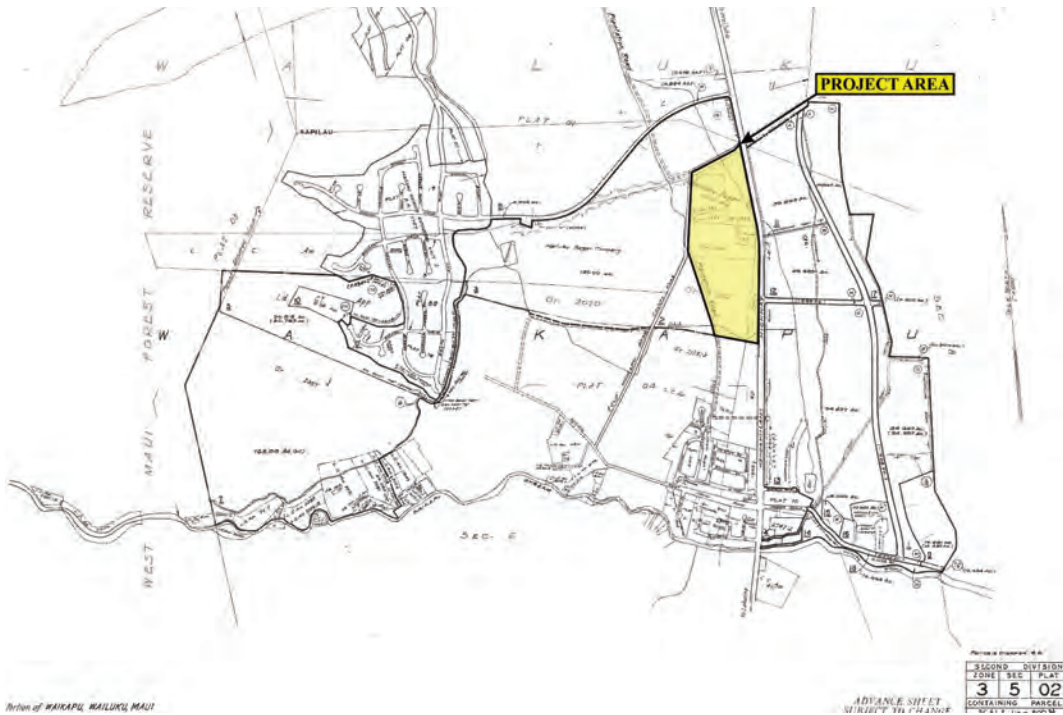


Figure 2: Tax Map Key [TMK: (2) 3-5-002] Showing Project Area Location.

CULTURAL IMPACT ASSESSMENT METHODOLOGY

The Constitution of the State of Hawai'i clearly states the duty of the State and its agencies is to preserve, protect, and prevent interference with the traditional and customary rights of native Hawaiians. Article XII, Section 7 (2000) requires the State to "protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by *ahupua'a* tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778." Additionally, Article IX and XII, of the state constitution, other state laws, and the courts of the State, impose on government agencies a duty to promote and protect cultural beliefs and practices, and resources of native Hawaiians as well as other ethnic groups.

Kamehameha III (Kauikeaouli) preserved the peoples traditional right to subsistence. As a result, in 1850, the Hawaiian Government confirmed the traditional access rights to native Hawaiian *ahupua'a* tenants to gather specific natural resources for customary uses from undeveloped private property and waterways under the Hawaiian Revised Statutes (HRS) 7-1. In 1992, the State of Hawai'i Supreme Court, reaffirmed HRS 7-1 and expanded it to include, "native Hawaiian rights...may extend beyond the *ahupua'a* in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner" [Pele Defense Fund v. Paty, 73 Haw.578, 620, 837 P.2d 1247, 1272 (1992)].

Act 50, enacted by the Legislature of the State of Hawai'i (2000) with House Bill (HB) 2895, relating to Environmental Impact Statements, proposes that:

there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawai'i's culture, and traditional and customary rights... [H.B. NO. 2895].

Act 50 also requires state agencies and other developers to assess the effects of proposed land use or shoreline developments on the "cultural practices of the community and State" as part of the HRS Chapter 343 (2001) environmental review process. It also re-defined the definition of "significant effect" to include "the sum of effects on the quality of the environment including actions that impact a natural resource, limit the range of beneficial uses of the environment, that are contrary to the State's environmental policies, or adversely affect the economic welfare, social welfare or cultural practices of the community and State." Cultural resources can include a broad range of often overlapping categories, including places, behaviors, values, beliefs, objects, records, stories, etc. (H.B. 2895, Act 50, 2000).

GEOGRAPHICAL EXTENT

As defined by the Hawaii State Office of Environmental Quality Control (OEQC 2012:11), the geographical extent should be greater than the area over which the proposed project will take place in order to ensure that cultural practices that occur outside of the project area, but which may still be affected, are included in the assessment. For example, a project that may not itself physically impact traditional gathering practices but may block access to those locations would be included within the assessment. The concept of geographical expansion is recognized by using, as an example, "the broad geographical area, e.g. district or *ahupua'a*." In some cases, the geographical extent could extend beyond the *ahupua'a* if cultural practices do so as well.

OEQC GUIDELINES FOR ASSESSING CULTURAL IMPACTS

According to the Guidelines for Assessing Cultural Impacts established by the Hawaii State Office of Environmental Quality Control (OEQC 2012:12):

The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religions 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, which support such cultural beliefs.

The meaning of "traditional" was explained by in *National Register Bulletin 38*:

"Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations', usually orally or through practice. The traditional cultural significance of a historic property then is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. . . [Parker and King 1998:1]

This CIA was prepared as much as possible in accordance with the suggested methodology and content protocol in the Guidelines for Assessing Cultural Impacts (OEQC 2012:11-13). In outlining the "Cultural Impact Assessment Methodology," the OEQC (2012:11) states that:

...information may be obtained through scoping community meetings, ethnographic interviews and oral histories...

This Cultural Impact Assessment was prepared in accordance with the Guidelines for Assessing Cultural Impacts (OEQC 2012:11-13). The Guidelines recommend that preparers of assessments analyzing cultural impacts adopt the following protocol:

- 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;
- Identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;
- Receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;
- Conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;
- Identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and
- Assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

CULTURAL IMPACT ASSESSMENT CONTENTS

The OEQC Guidelines state that an assessment of cultural impacts should address, but not be limited to the following:

- Discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained.
- Description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken.
- Ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained.
- Biographical information concerning the individuals and organizations consulted their particular expertise and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or interviewed their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area.
- Discussion concerning historical and cultural source materials consulted, the institutions and repositories searched and the level of effort undertaken. This discussion should include, if appropriate, the particular perspective of the authors, any opposing views, and any other relevant constraints, limitations or biases.
- Discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location within the broad geographical area in which the

proposed action is located, as well as their direct or indirect significance or connection to the project site.

- Discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area affected directly or indirectly by the proposed project.
- Explanation of confidential information that has been withheld from public disclosure in the assessment.
- Discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs.
- Analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.
- A bibliography of references and attached records of interviews which were allowed to be disclosed.

If on-going cultural activities and/or resources are identified within the project area, assessments of the potential effects on the cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

PROJECT METHODOLOGY

This report contains archival and documentary research, as well as communication with organizations and individuals having knowledge of the project area, its cultural resources, and its practices and beliefs. An example of the initial letter of inquiry is presented in Appendix A, copies of the posted newspaper notice and affidavit are presented in Appendix B, and an example of the follow up letter is presented in Appendix C. Signed information release forms are presented in Appendix D. This Cultural Impact Assessment was prepared in accordance with the suggested methodology and content protocol provided in the Guidelines for Assessing Cultural Impacts (OEQC 2012:13), whenever possible. The assessment concerning cultural impacts may include, but not be limited to the following items discussed below.

ARCHIVAL RESEARCH

Archival research focused on a historical documentary study involving both published and unpublished sources. These included legendary accounts of native and early foreign writers; early historical journals and narratives; historic maps, land records, such as Land Commission Awards, Royal Patent Grants, and Boundary Commission records; historic accounts, and previous archaeological reports.

Historical and cultural source materials were extensively used and can be found listed in the References Cited portion of this report. Such scholars as Samuel Kamakau, Martha Beckwith, Jon J. Chinen, Lilikalā Kame‘eleihiwa, R. S. Kuykendall, Marion Kelly, E. S. C. Handy and E.G. Handy, John Papa ‘Ī‘ī, Gavin Daws, A. Grove Day, and Elspeth P. Sterling, and Mary Kawena Puku‘i and Samuel H. Elbert continue to contribute to our knowledge and understanding of Hawai‘i, past and present.

The works of these and other authors were consulted and incorporated in this report where appropriate. Historic land use document research was supplied by the Waihona ‘Aina (2019) Database, the Office of Hawaiian Affairs Kipuka Database (2016), and the County of Maui County Real Property Assessment Division Database (2019).

INTERVIEWS

In general, interviews are conducted in accordance with Federal and State laws and guidelines when knowledgeable individuals are able to identify traditional cultural practices and/or resources procured in the project area or in the environs. If they have knowledge of traditional stories, practices and beliefs, and resources associated with a project area or if they know of historical properties within the project area, they are sought out for additional consultation and interviews. Individuals who have particular knowledge of traditions passed down from preceding generations and a personal familiarity with the project area are invited to share their relevant information concerning particular cultural resources. Often people are recommended for their expertise, and indeed, organizations, such as Hawaiian Civic Clubs, the Island Branch of Office of Hawaiian Affairs (OHA), historical societies, Island Trail clubs, and Planning Commissions are depended upon for their recommendations of suitable informants. These groups are invited to contribute their input and suggest further avenues of inquiry, as well as specific individuals to interview. It should be stressed again that this process does not include formal or in-depth ethnographic interviews or oral histories as described in the OEQC’s *Guidelines for Assessing Cultural Impacts* (2012). The assessments are intended to identify potential impacts to ongoing cultural practices, or resources, within a project area or in its close vicinity.

If knowledgeable individuals are identified, personal interviews are sometimes taped and then summarized. These draft summaries are returned to each of the participants for their review and comments. After corrections are made, each individual is to sign an information release form, making the interview available for this study. When telephone interviews occur, a summary of the information is also sent for correction and approval or dictated by the informant

and then incorporated into the document. If no cultural resource information is forthcoming and no knowledgeable informants are suggested for further inquiry, interviews are not conducted.

KA PA‘A KAI O KA‘AINA V. LAND USE COMM’N, STATE OF HAWAI‘I

The Land Use Commission (LUC) is also required to apply the analytical framework set forth by the Hawaii Supreme Court in *Ka Pa‘akai O Ka‘Aina v. Land Use Comm’n, State of Hawai‘i*, 94 Hawai‘i 31, 7 P.3d 1068 (2000) (hereinafter, “*Ka Pa‘akai*”). In this case, a coalition of native Hawaiian community organizations challenged an administrative decision by the Land Use Commission (the “LUC”) to reclassify nearly 1,010 acres of land from conservation to urban use, to allow for the development of a luxury project including upscale homes, a golf course, and other amenities. The native Hawaiian community organizations appealed, arguing that their native Hawaiian members would be adversely affected by the LUC’s decision because the proposed development would infringe upon the exercise of their traditional and customary rights. Noting that “[a]rticle XII, section 7 of the Hawaii Constitution obligates the LUC to protect the reasonable exercise of customarily and traditionally exercised rights of native Hawaiians to the extent feasible when granting a petition for reclassification of district boundaries,” the Hawai‘i Supreme Court held that the LUC did not provide a sufficient basis to determine “whether [the agency] fulfilled its obligation to preserve and protect customary and traditional rights of native Hawaiians” and, therefore, the LUC “failed to satisfy its statutory and constitutional obligations.” *Ka Pa‘akai*, 94 Hawai‘i at 46, 53, 7 P.3d at 1083, 1090.

The Hawai‘i Supreme Court in *Ka Pa‘akai* provided an analytical framework in an effort to effectuate the State’s obligation to protect native Hawaiian customary and traditional practices while reasonably accommodating competing private interests. In order to fulfill its duty to preserve and protect customary and traditional native Hawaiian rights to the extent feasible, the LUC must—at a minimum—make specific findings and conclusions as to the following:

- A. 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;
- B. the extent to which those resources--including traditional and customary native Hawaiian rights--will be affected or impaired by the proposed action; and
- C. the feasible action, if any, to be taken by the LUC to reasonably protect native Hawaiian rights if they are found to exist.

See *Ka Pa‘akai*, 94 Hawai‘i at 47, 7 P.3d at 1084.

To fulfill these purposes outlined by Ka Pa'akai, the Cultural Impact Assessment has reviewed historical research and suggestions from contacts knowledgeable about traditional cultural practices which were conducted within the project area corridor and in the surrounding environs. The potential effect of the proposed project on cultural resources, practices or beliefs, its potential to isolate cultural resources, practices or beliefs from their setting, and the potential of the project to introduce elements which may alter the setting in which cultural practices take place has been analyzed, as required by the OEQC (2012).

ENVIRONMENTAL SETTING

The Island of Maui ranks second in size of the eight main islands in the Hawaiian Archipelago (Stearns 1966:155, Handy and Handy 1972:485). Maui Island was formed by two volcanoes, Pu'u Kukui in the west and Haleakalā in the east. Pu'u Kukui stands 1,215 meters (m.) above mean sea level (amsl.) is composed of large, heavily eroded amphitheater valleys that contain well-developed permanent stream systems that watered fertile agricultural lands extending to the coast. The isthmus between the two volcanoes is primarily composed of alluvial fans made of out-washed silts and gravels overlain by coralline sands blown inland from the coast. Lower sand strata have become firmly lithified, forming a soft rock known as eolianite (Stearns 1966:10).

PROJECT AREA

The proposed project area lies between coastal flats to the east and more mountainous terrain to the west along the medial reaches of the Maui isthmus between Wailuku and Mā'ālaea (Figure 4). The project area is positioned between Wailuku (2 km north) and abuts the village of Waikapū to the south. The northern boundary of the project area is approximately 4 km inland of Kahului Harbor, while the southern boundary is approximately 8 km inland of Mā'ālaea Bay (see Figures 1 through 3). The eastern perimeter of the project area abuts Honoapi'ilani Highway as it traverses from Wailuku toward Waikapū across the central Maui isthmus. The northern boundary is formed by the Old Waikapu Road and western border is defined by the Waihee Ditch (State Site 50-80-04-5197) and an access road. The project area is currently being used for agricultural purposes such as grazing and raising cattle.



Figure 4: Distant Photograph of Project Area (lighter colored grass at center roughly defines boundaries). View to West.

PROJECT AREA LANDFORM

A review of geotechnical reports for the parcel reveal that the slightly sloping project area lies in locations previously utilized for the cultivation of now-abandoned sugar cane. According to Cavanaugh (1995:2), who conducted geotechnical studies on the 450-acre Kehalani Mauka Subdivision (the parcel that borders Kuikahi Drive to the north), "site topography slopes down moderately toward the east at a gradient of 10 percent." The current project area is similar to where the existing terrain slopes steadily downward across the project area from west to east at a typical grade of 7 to 8 percent. Ground elevations range from approximately 115 meters (380 feet) amsl. to 137 meters (450 feet) amsl. A number of dirt roads, possibly associated with the commercial cultivation of sugar cane production, transect the project area. As is discussed more below, project area exclusively consists of tilled zone, fill, and alluvial sediments. To the east, near the Maui Lani development, sandy matrices were identified. Sandy matrices were not identified in the current study area. Likewise, neither archaeological nor geotechnical subsurface testing detected any sandy matrices in areas immediately to the east of Honoapiʻilani Highway (Monahan 2003) or north of Kuikahi Drive during the Kehalani Mauka Subdivision (Dega 2004).

Hydrology within the relatively dry project area is mostly in the form of historic irrigation modifications. Some of these modifications were the creation of a larger web of water conduits, drainages, and reservoirs, some built as early as 1905. No perennial streams run directly through the project area, and thus artificial ones had to be created for proper irrigation. By comparison, ʻĪao Stream runs west-east to the north of the proposed development while Waikapū Stream runs west-east to the south of the project area. Being located near these two major streams appears to have been beneficial for cultivation on the present parcel, at least during the Historic Period. As stated elsewhere in this report, several still-utilized irrigation ditches (i.e., Waihee Ditch, State Site 50-80-04-5197) are located in close proximity to the proposed project area, and a still-active larger reservoir, to the northeast of the project area, is linked to one of these ditches. The remnant irrigation ditches and reservoir not only point to massive landscape modification in the area during the Historic Period but also strongly infer the aridness of the area, which required large-scale water importation. Soil borings conducted during geotechnical analyses in a nearby project area failed to reveal the presence of the area's water table to at least 25 feet below the surface (Shimamoto 1995:4).

CLIMATE

Rainfall in this intermediate environment is very modest. The proposed project area receives an average annual rainfall of approximately 26 inches (660 mm) (Giambelluca et al. 2013), with much of this rainfall occurring during the winter months (November through April). Seasonal variation in rainfall amount follows normal orographic patterns for leeward-type areas of Maui.

Waikapū Ahupuaʻa is known for its wind and is referred to as "Waikapu I ka makani kokololio" (Waikapu of the gusty wind) (C.M Hyde cited in Sterling 1978:4-5). These strong winds and are also referred to in the ancient Chant of the Maui Winds as "The kokolio (gusty wind) is from Waikapu" (J.H Kanepuu 1867 cited in Sterling 1978:7).

SOILS

According to Foote et al. (1972: Sheet 100; Figure 5), the project area is comprised of soils of the Iao Series, specifically Iao clay, 3 to 7 percent slopes (IcB) and Iao silty clay, 3 to 7 percent slopes (IbB). Foote et al. (1972:46) describes soils of the Iao Series as well-drained volcanic soils which formed in alluvium. The Iao soils typically occur between 100 and 500 feet amsl. in areas receiving 25 to 40 inches of rainfall annually.

The eastern portion of the project area is comprised of IcB soils. A representative profile shows these deposits consisting of a 15 inch surface layer comprised of dark brown clay overlaying 45 inches of very dark brown, dark brown, and very dark brown clay and silty clay, which overlays a substratum comprised of clayey alluvium. In general, the IcB soils exhibit medium runoff, moderately slow permeability, and a slight to moderate erosion hazard. This type of soil is used for sugarcane cultivation and residential areas (Foote et al. 1972:46).

The western portion of the project area is comprised of the IbB soils, which exhibits a similar stratigraphic profile as the IcB soils. The IbB soils exhibiting a different soil texture in the surface layer and a different cobblestone content. Like the IcB soils, the IbB soils are utilized for the cultivation of sugarcane and residential developments (Foote et al. 1972:47).

TRADITIONAL AND HISTORICAL CULTURAL CONTEXT

Traditionally, the Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various ahupua‘a. During pre-Contact times, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys provided ideal conditions for wetland *kalo* (*Colocasia esculenta*) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as kō (sugar cane, *Saccharum officinarum*) and mai‘a (banana, *Musa sp.*), were also grown and, where appropriate, such crops as ‘uala (sweet potato, *Ipomoea batatas*) were produced. This was the typical agricultural pattern seen during traditional times on all the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985).

PAST POLITICAL BOUNDARIES

Approximately 600 years ago, the Hawaiian population had expanded throughout the Hawaiian Islands to a point where large, political districts could be formed (Lyons 1903; Kamakau 1991). During the pre-Contact Period, Maui was divided into twelve districts (moku) (Sterling 1998:3). Following the Civil Code of 1859, the twelve districts were consolidated into four districts: Lāhainā, Wailuku, Makawao, and Hāna (Sterling 1998:3). Approximately 600 years ago, the Island of Maui was divided into twelve districts: Lāhainā, Kula, Honua‘ula, Kahikinui, Kaupō, Kīpahulu, Hāna, Ko‘olau, Hāmākualoa, Hāmākuapoko, Wailuku, and Kā‘anapali (Sterling 1998:3; Figure 6). The division of Maui Island lands into districts and sub-districts was performed by a kahuna (priest, expert) named Kalaiha‘ōhia, during the time of the ali‘i Kaka‘alaneo (Beckwith 1979:383; Fornander [1919-20, Vol. 6:248] places Kaka‘alaneo at the end of the 15th century or the beginning of the 16th century). Land was considered the property of the king or ali‘i ‘ai moku (the ali‘i who eats the island/district), which he held in trust for the gods. The title of ali‘i ‘ai moku ensured rights and responsibilities to the land but did not confer absolute ownership. The king kept the parcels he wanted, his higher chiefs received large parcels from him and, in turn, distributed smaller parcels to lesser chiefs. The maka‘āinana (commoners) worked the individual plots of land.



Figure 5: USDA Soil Survey (National Cooperative Soil Survey, Web Soil Survey.) Showing Soil Types within the Project Area and Surrounding Environs.

In general, several terms, such as moku, ahupua'a, 'ili or 'ili 'āina were used to delineate various land sections. A moku contained smaller land divisions (ahupua'a), which customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the ahupua'a were therefore, able to harvest from both the land and the sea. Ideally, this situation allowed each ahupua'a to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:11). The 'ili 'āina or 'ili were smaller land divisions next to importance to the ahupua'a and were administered by the chief who controlled the ahupua'a in which it was located (Lyons 1875: 33; Lucas 1995:40). The mo'ō āina were narrow strips of land within an 'ili. The land holding of a tenant or hoā āina residing in an ahupua'a was called a kuleana (Lucas 1995:61).

TRADITIONAL SETTLEMENT PATTERNS

Archaeological settlement pattern data suggests that initial colonization and occupation of the Hawaiian Islands first occurred on the windward shoreline areas of the main islands between A. D. 850 and 1100, with populations eventually settling in drier leeward areas during later periods (Kirch 2011). Although coastal settlement was dominant, native Hawaiians began cultivating and living in the upland kula (plains) zones. Greater population expansion to inland areas began around the 14th century and continued through the 16th century. Large scale or intensive agriculture was implemented in association with habitation, religious, and ceremonial activities.

In Hawai'i, much of the coastal lands were preferred for chiefly residence. Easily accessible resources such as offshore and onshore fishponds, the sea with its fishing and surfing—known as the sports of kings, and some of the most extensive and fertile wet taro lands were located in the coastal areas (Kirch and Sahlins, 1992 Vol. 1:19). Inland resources necessary for subsistence could easily be brought to the ali'i residences on the coast from nearby inland plantations. The majority of farming was situated in the lower portions of stream valleys where there were broader alluvial flat lands or on bends in the streams where alluvial terraces could be modified to take advantage of the stream flow. Dry land cultivation occurred in colluvial areas at the base of gulch walls or on flat slopes (Kirch 1985; Kirch and Sahlins 1992, Vol. 2:59).

To the northwest of the current project area lies 'Iao Valley, one of the most important locations in the area for prehistoric activity. Connolly (1974:5) states that the pre-Contact valley ['Iao] had a large population base with "most people residing in a settlement near 'Iao Needle," just north of the project area. Supposedly, the subsistence base of this population consisted of fish and taro, with Kahului Harbor and the coast close by and lo'i systems lining 'Iao Valley's

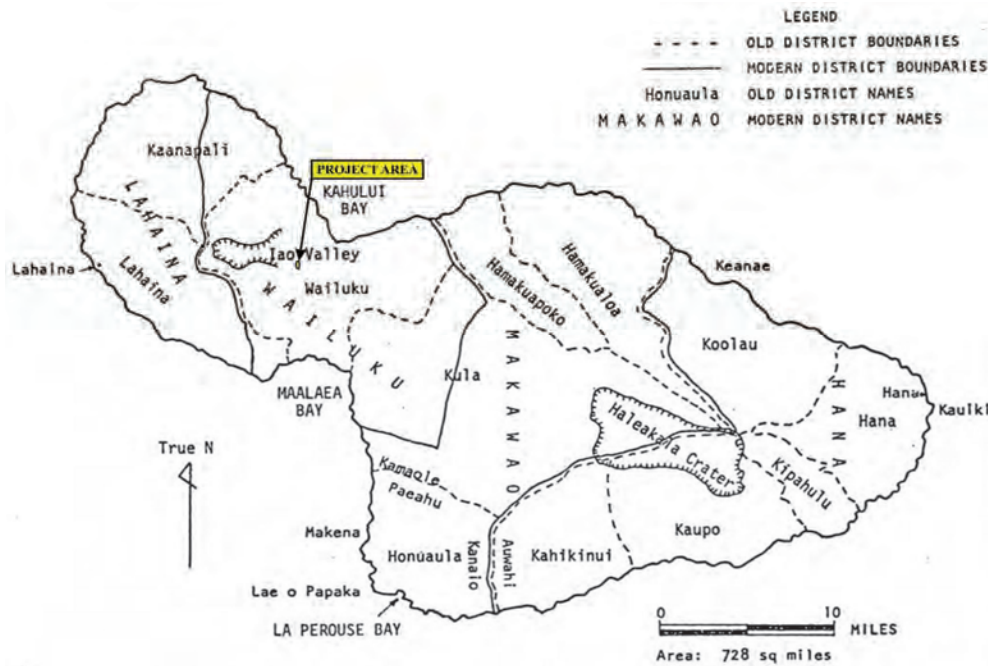


Figure 6: Traditional and Modern Districts of Maui (c. 1875; from Barrère 1975:31).

stream banks. Pre-Contact irrigation ditches or 'auwai were utilized in taro cultivation (Connolly 1974:5). Sterling (1998:86) adds that two 'auwai within the valley:

...have existed immemorially and were evidently constructed for the purpose of irrigating kalo on the plains which stretch away to the northward and southward of the [ʻĪao] river. Several minor 'auwai have, since ancient times, tapped the river at different points lower down and spread the water through the lands in the gulch on either side of the river bed.

Handy in Sterling (1998:63) further notes that "... [f]rom Waihee and Wailuku Valley, in ancient times, was the largest continuous area of wet taro cultivation in the islands." Cheever (1851:124) writes, "[t]he whole valley of Wailuku, cultivated terrace after terrace, gleaming with running waters and standing pools, is a spectacle of uncommon beauty to one that has a position a little above it."

No discussion of Wailuku District is complete without mentioning the important heiau complex above ʻĪao Valley near its seaward terminus. During the mid to late 18th century, the Halekii-Pihana heiau complex was supposedly designed by a Hawaiian named Kiha (Sterling 1998:89). These monuments designated as State Site 50-50-04-522 are described as very important heiau within Hawaiian history. Yent (1983:7) notes the life cycle of the ali'i was represented here. It was the place where Kamehameha I's wife (Keōpuolani) was born, Kahekili lived, and Kekaulike died. Thrum (1909:46) reported that Kamehameha I evoked his war god at Pihana Heiau after his warriors defeated Kalanikapuli's forces during the Battle of ʻĪao in 1790. The two heiau are primarily associated with Kahekili, who is connected with the Halekii-Pihana complex between c. A.D. 1765 and 1790, and Kamehameha, during his conquering of Maui in 1792 (Yent 1983:18).

PRE-CONTACT PERIOD (PRE-1778)

The District of Wailuku inhabits the eastern side of the West Maui Mountains (Mauna Kahalawai) and occupies the isthmus through the center of the island to the coastal reaches in Kahului, on the north, and Mā'alaea, on the south. Wailuku District is frequently mentioned in historical texts and oral traditional accounts as being politically, ceremonially, and geographically important areas during the pre-Contact Period (Cordy 1981, 1996; Kirch 1985). The number of heiau constructed in the Wailuku area point to its ceremonial and religious importance during the pre-Contact Period (pre-1778).

The history of the ahupua'a of Waikapū, Waihe'e, Waiehu, are Wailuku are quite intertwined. These four ahupua'a are collectively known as the Nā Wai 'Ehā, or "the four waters" (Handy and Handy 1972:497, Kame'elehiwa 1992; Pukui and Elbert 1986; and Creed 1993). This area is ...comprised the four great valleys [Waihe'e, Waiehu, Wailuku, and Waikapū] which cut far back into the slopes of West Maui and drain the eastward watershed of Pu'u Kukui and the ridges radiating northeastward, eastward, and southeastward from it" (Handy and Handy 1972:496). This area was the second of the traditional five major population centers on the Island of Maui (Handy and Handy 1972:272).

Traditionally, the lands of Waihe'e and Waiehu, now part of Wailuku District, "were independent of any of any *moku* and are listed in the *Book of the Mahele* as being in 'Puali Komohana,' i.e., West Isthmus" (R.D. King in J.W. Coulter 1935 cited in Sterling 1998:3). R.D. King in J.W. Coulter 1935 cited in Sterling 1998:3) further states that Wailuku and Waikapū Ahupua'a also were independent of any *moku* (district), and were referred to as Na Poko, with "...Na Poko in this case meaning a smaller division of land." W. D. Alexander (1891 cited in Sterling 1998:63) stated that the ahupua'a of Waihe'e, Waiehu, Wailuku, and Waikapū were grouped into a district in modern times. R.D. King (in J.W. Coulter 1935 cited in Sterling 1998:3) explains, "...with reference to the *ahupuaa* of Waihee, Waiehu, Wailuku, and Waikapu, on the map it was necessary to form a new district and call it Wailuku [because] Nawaiehu, 'the four waters,' [was] too cumbersome and ill understood."

Waikapū Ahupua'a once was renowned for "...its majesty and splendid living, whose native songs gather flowers in the dew and weave wreaths of ohelo berries" (S.W. Nailili in Sterling 1998:93). Waikapū is landlocked. However, during the pre-Contact Period, the abundant waters of Waikapū Stream "were diverted into *lo'i* and its overflow was dissipated on the dry plains of the broad isthmus between West and East Maui" (Handy and Handy 1972:496).

Remnants of the vast expanse of *lo'i* systems once supported by Waikapū Stream could still be seen in the 1930s at the time of E.S. Craighill Handy's initial investigation of Hawaiian horticulture (Handy and Handy 1972:496). In the 1930s, many of these areas were subsequently used by the Japanese for truck farming, to cultivate Japanese dry taro, and as ponds "planted with lotus for their edible seed" (Handy and Handy 1972:497).

Sterling (1978:242) surmises that the fishermen from the region of Kula, which was too dry for the cultivation of taro, supplemented their dietary staple of sweet potato with poi, which was made from taro produced in Waikapū and Wailuku Ahupua'a and carried "across the plain" (Sterling (1978:242). In addition to taro, Waikapū Ahupua'a was also a favorable local for the

breadfruit tree ('ulu, *Artocarpus altilis*), which grew quite abundantly between Olowalu and Waikapū (Sterling (1978:17).

THE MĀHELE

During the mid-1800s, extreme modification to traditional land tenure occurred throughout all of the Hawaiian Islands. The transition from traditional Hawaiian communal land use to private ownership and division was commonly referred to as the Māhele (Division). The Māhele of 1848 set the stage for vast changes to land holdings within the islands as it introduced the foreign (western) concept of land ownership to the Islands. Although it remains a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kamehameha III (Kamehameha III) established laws changing the traditional Hawaiian system of land tenure, which were intended to keep lands in the hands of the Hawaiians, but resulted in providing an opportunity for foreigners to obtain land (Kuykendall Vol. I, 1938:145 footnote 47, 152, 165–166, 170; Daws 1968:111; Kelly 1983:45; Kame'eleihiwa 1992:169–170, 176).

The Māhele of 1848 divided Hawaiian lands between the king, the chiefs, the government, and began the process of private ownership of lands. The subsequently awarded parcels were called Land Commission Awards (LCAs). Once lands were made available and private ownership was instituted, the maka'āinana (commoners) were able to claim the plots on which they had been cultivating and living. These claims did not include any previously cultivated but presently fallow land, stream fisheries, or many other resources necessary for traditional survival (Kelly 1983; Kame'eleihiwa 1992:295; Kirch and Sahlins 1992). If occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed LCA and issued a Royal Patent after which they could take possession of the property (Chinen 1961:16).

Once Article IV of the Board of Commissioners to Quiet Land Titles was passed in December 1845, the legal process of private land ownership was begun. The land division, called the Māhele, began in 1848. As stated above, the lands of the kingdom of Hawai'i were divided among the king (crown lands), the ali'i and konohiki, and the government.

Once lands were made available and private ownership was instituted, native Hawaiians, including the maka'āinana (commoners), were able to claim land plots upon which they had been cultivating and living, through the Kuleana Act of 1850. The process for foreigners to acquire land was through the Alien Landownership Act of 1850.

Often times, foreigners were simply just given lands by the ali'i. However, in the case of commoners, they would only make claims only if they had first been made aware of the foreign procedures (kuleana lands, land commission awards). These claims could not include any previously cultivated or currently fallow land, okipū, stream fisheries, or many other natural resources necessary for traditional survival (Kame'eleihiwa 1992:295; Kirch and Sahlins 1992). Awarded parcels were labeled as Land Commission Awards (LCAs). If occupation could be established through the testimony of witnesses, the petitioners were issued a Royal Patent number and could then take possession of the property. Commoners claiming house lots in Honolulu, Hilo, and Lāhainā were required to pay commutation to the government before obtaining a Royal Patent for their awards (Chinen 1961:16).

In January 1846, land was made available for eventual ownership to the commoners (maka'āinana). For native Hawaiians that had been cultivating and living on the lands, lengthy and costly procedures enabled them to possibly claim some of the plots. These claims could not include any previously cultivated or presently fallow land, stream fisheries or many other resources necessary for traditional survival (Kelly 1983; Kame'eleihiwa 1992:295; Kirch and Sahlins 1992). If occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed Land Commission Award (LCA), issued a Royal Patent number (RP), and could then take possession of the property (Chinen 1961: 16).

LAND COMMISSION AWARDS (LCAS)

During the Māhele, Wailuku District was declared Crown Land and numerous Land Commission Awards, approximately 100 were awarded for Waikapū Ahupua'a (Creed 1993). A handful of foreigners (i.e., Anthony Catalena, James Louzada, and E. Bailey) gained control of large parcels of lands that would later be used for mass cultivation of sugar. Significantly, the majority of LCAs were awarded to Hawaiians, a gauge that can be used to measure pre-Contact settlement (Creed 1993:38). In Waikapū, the LCAs reflect lo'i cultivation, kula lands, and house sites. These keep with the overall LCA pattern of the Waikapū-Wailuku area intimating taro cultivation in association with permanent residences. Such a pattern is historically documented from 1848, but likely extended deeper into the past.

The Waihona 'Aina Database (2019) listed a total of 138 claimed LCAs in Waikapū Ahupua'a. The Office of Hawaiian Affairs Kipuka Database (2019) listed five (5) claimed LCAs with lands within the project area are listed in Table 1 (Figure 7).



Figure 7: Aerial Photograph (Google 2018; Imagery Date 7/20/2016) Showing the Locations of Land Commission Awards within and Adjacent to the Project Area (from the OHA Kipuka Database 2019).

Table 1: Land Commission Awards within the Project Area.

Claimant	LCA/RP	Year	Awarded	Acreege	‘Āpana	‘Ili	Use
Crowningberg, William (Wilama)	433/1111	1852	Yes	5.93	1	Pohakoi	
Humphreys, William	326/7659	1883	Yes	131.3	1	Awikiwika, and Puhiawaawa	
Keliiolelo	3525:2/3121	1856	Yes	1.66	1	Awakamanu	
Louzada, James	225/7658	1883	Yes	26.1	1	Pualinapao	Farmland
Manu	408/3540	1857	Yes	11.75	1	Pohakuloa	Taro lo’i
McLane, William	3201:2/2775	1856	Yes	5.45	2	Kapalaalea and Awakamanu	
Mehao	3019:2/3353	1864	Yes	0.83	2	Ohia and Pilipili	Taro lo’i
Nowlein, Michael J.	71/4549	1863	Yes	303.5	3	Papakapu and Kapoi	
Pakele	2980:1/5356	1863	Yes	1.8	2	Kaaa and Olohe	mo’o, lo’i, hala trees, and houses.

LAND GRANTS

In some cases, the Hawaiian government sold lands to generate income for the Kingdom. These lands were referred to as land grants. According to the Waihona Aina Online Database (2019):

At the time of the Mahele, some of the land was the King’s own land which later became known as Ceded Lands. Other lands in the possession of ali’i were returned to the King in exchange for Commutation of property the ali’i kept. Some of these returned lands became Government lands and were sold by the government to generate income for the Kingdom, since the King gave up his traditional right to collect taxes and goods following the Mahele.

The Office of Hawaiian Affairs Kipuka Database (2019) listed nine (9) Land Grants with lands within or adjacent to the project area are listed in Table 2 (Figure 8 and Figure 9).

Table 2: Land Grants within and Adjacent to the Project Area.

Grantee	Land Grant	Year	Acreage	‘Ili
Cockett, Mrs. Beke	2108:6	1856	7.73	Kaaa
Cornwell, Henry	3152	1875		Ohia
Crowningberg, David	2952	1864	7.44	
Flores, Manuel	1680:1	1855	7.07	Pilipili
Louzada, Jas & H Cornwell	2951	1864	17.1	
Richardson, J	2070	1856	15.1	
Ross, John	2005	1856	9.1	Awakamanu
Spreckles, Claus	3343	1882	24,000	

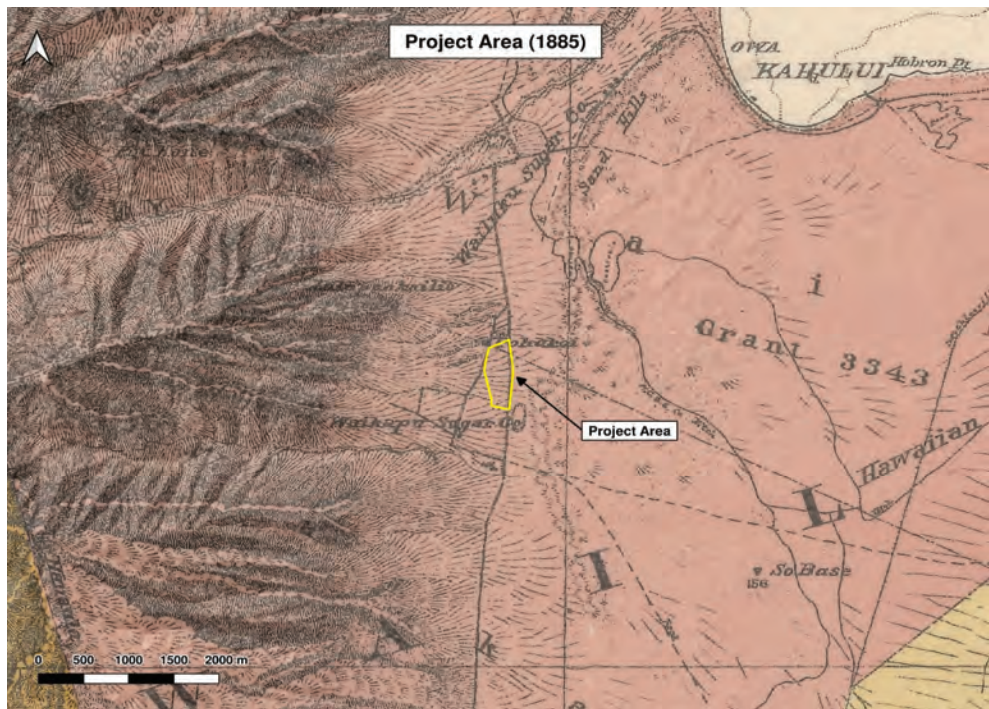


Figure 8: Historic (1885) Map Showing Land Grants within and Adjacent to the Project Area and Vicinity in the late 1800s (F.S. Dodge. Register Map No. 1779)



Figure 9: Aerial Photograph (Google 2018; Imagery Date 7/20/2016) Showing the Locations of Land Grants within or Adjacent to the Project Area (Kipuka Online Database 2019).

Historically, Waikapū Ahupua'a belonged to the government and was overseen by the Department of Education (in J.W. Coulter 1935 cited in Sterling 19978:95). According to Sterling (1998:95):

In 1875 the Board of Education sold at auction the "Land known as the Ahupuaa of Waikapu, saving grants hitherto made within said ahupuaa, or sales by the Board of Education," to Henry Cornwell, the Government issuing a royal patent to the above terms without survey or statement of area. Mr. Cornwall afterward sold to Claus Spreckels and others the part known as Waikapu Commons.

HISTORIC PERIOD (POST-1778)

Contact with the western world occurred on January 18, 1778, with the arrival of Captain James Cook in the Hawaiian Islands during his third voyage into the Pacific Ocean (Daws 1968:1). This section discusses traditional life after Cook's arrival.

As the sugar industry developed in the mid-1800s, sugar cane took over the traditional taro lands (Handy and Handy 1972:272). During this period, more and more land was leased or purchased for what had become an intensely profitable endeavor. Water was an issue, but the water from Waikapū Stream was "utilized for irrigating a great acreage of sugar cane" (Handy and Handy 1972:496). In 1876, the Hamakua Ditch Company (Alexander and Baldwin) was formed and within two years was bringing water from the streams of Haleakalā to four plantations in East Maui (Dorrance and Morgan 2000).

Also in 1876, the Reciprocity Treaty's ratification notice arrived by steamer, along with Claus Spreckles, California's sugar magnate, who viewed the sugar situation and decided two years later to turn the dry plains of Maui into a garden of cultivated cane (Van Dyke 2008). By various questionable means, he was able to acquire half interest in 16,000 acres of land in Waikapū commons and was able to lease 24,000 acres of Crown Lands on the Wailuku plains in central Maui for \$1,000 (Van Dyke 2008).

Having seen the success of the recently completed Hamakua Ditch bringing mountain water to the otherwise dry, and unproductive East Maui fields, and having lost his battle to control this ditch water, Spreckles formed the Hawaiian Commercial Company and decided to construct a ditch system of his own on East Maui above the Hamakua Ditch, for his newly acquired land (Wilcox 1996). Spreckles' Haiku Ditch extended 30 miles, from Honomanū Stream to the Kīhei boundary and the water was used to irrigate his cane lands in the central Maui plains (Wilcox 1996).

In 1882, Spreckles reorganized his company into a California corporation, called Hawaiian Commercial and Sugar Company, or HC&S (Wilcox 1996). Later he constructed another water system known as the Waihee Ditch in West Maui. It brought water from 15 miles away, starting at an elevation of 435 feet, to Kalua where it emptied into HC&S Waiale Reservoir (Wilcox 1996).

The ensuing years brought trials and tribulations between Spreckles, his associates, and the Maui sugar planters, resulting finally in the 1898 sale of his HC&S stock, at an all-time low, to James Castle in partnership with Alexander and Baldwin, and the departure of Claus Spreckles from Hawai'i (Dorrance and Morgan 2000; Wilcox 1996).

Thomas Hogan built the first western building, a warehouse, near the shoreline of Kahului in 1863 (Clark 1980). The dredging of Kahului harbor through the years filled in large sections of the ponds, eventually blocking the outlet to the sea.

As the sugar industry developed, Kahului became a cluster of warehouses, stores, wheelwright, and blacksmith shops close to the harbor. A small landing was constructed in 1879 to serve the sugar company (Clark 1980). In the late 1800s, Kahului possessed a new custom house, a saloon, Chinese restaurants, a railroad and a small population of residents. Kahului's main focus was shipping. The 1900 bubonic plague outbreak destroyed much of the town as officials decided to burn down the Chinatown area in an effort to contain the epidemic. The Chinese, Japanese and Hawaiian residents were displaced by this action. To further ensure isolation, authorities encircled the entire town with corrugated iron rat-proof fences, which ended the spread of the plague (Bartholomew and Bailey 1994). The Kahului Railroad Company built a 1,800-foot long rubble-mound breakwater in 1910 and dredging of the harbor now allowed ships with a 25-foot draft to dock at the new 200-foot wharf (Clark 1980).

Henry Baldwin and Lorrin Thurston formed the Kihei Sugar Company in 1899, to grow cane on their ranch lands in south central Maui, which included the project area (Dorrance and Morgan 2000). It was sent to the mill at Pu'unēnē to be ground, but, although production was high, it was not enough to cover the costs (Dorrance and Morgan 2000).

After the annexation in 1898, some of the planters on Maui, including Alexander and Baldwin, had decided to combine plantations to reap maximum profit. They formed the Maui Agricultural Company, a co-partnership that initially encompassed seven plantations and two mills. In 1904, five new plantations became part of the Maui Agricultural Company, as Kula Plantation Company, Makawao Plantation Company, Pulehu Plantation Company, Kailua Plantation and Kalianui Plantation Company were newly formed by carving up the unprofitable

Kihei Plantation land (Dorrance and Morgan 2000). Maui Agricultural Company merged with HC&S in 1948 (Dorrance and Morgan 2000).

Land use in Wailuku and Waikapū Ahupua'a in the mid-19th and early 20th century was largely devoted to the sugar industry. During the 1860s, the sugar business was growing, with plantations and mills at Wailuku, Waihe'e, Waikapū, and Ha'ikū. Many of the plantation camps associated with these mills were centered in the Pu'unēnē, Kahului, and Wailuku area (see Denham *et al.* 1992:16). Hopoi Camp is said to have been located near Hopoi Reservoir. Hopoi Reservoir was constructed by at least by 1922, when references to Hopoi Camp occurred on an area map. Historic utilization of the Waikapū-Wailuku landscape near the project area focused on industrial-levels of cultivating sugar cane and pineapple. Water was channeled from traditional sources (e.g., Waikapū Stream, western aquifers or springs) through plantation lands. Both local and imported workers operated on these plantation lands and the area maintained fair population density. These former sugar cane and pineapple lands are now being reclaimed through residential developments and industrial baseyards.

HAWAIIAN HOMES COMMISSION ACT

The Hawaiian Homes Commission Act was created in 1920, by Prince Jonah Kūhiō Kalaniana'ole and ratified by the U.S. Congress in 1921. The Act established a government-sponsored homesteading program for Native Hawaiians (i.e., individuals having at least 50 percent Hawaiian blood). The Act called for 200,000 acres of Crown Lands to be set aside for lease, at a rate of \$1.00 per year, to native Hawaiian for residential and agricultural use. Initially, the Act provided for a 99 year lease. In 1990, the Act amended to extend the lease to 199 years.

In 1959, at the time Hawai'i was admitted to the United States as the 50th state, the Act was incorporated as a provision in the Hawai'i State Constitution. At that time, the Department of Hawaiian Home Lands was created and the State assumed the responsibility of overseeing and administering the lands.

WAHI PANA (LEGENDARY PLACES)

"Wahi Pana" can be defined as celebrated or noted places or locations (Pukui and Elbert 1986:313, 376), and refers to legendary places or landmarks of historical significance. These places of note have distinctive features (i.e., mountain peaks, streams, wind, rain, etc.) that are given specific names through which the history of an area is passed down from generation to generation through chants, legends, and songs.

There are several legends associated with the meaning of the name “Waikapū.” According to several accounts (Handy and Handy 1972:497, Sterling 1998:93-94, and Pukui et al. 1976:223), the name “Waikapū” (Water of the Conch) refers to an ancient cave in the area where a famous conch shell (pū) was hidden until it was stolen by Puapua-lenalena (a supernatural dog).

According to W. K. Kaulililehua (*Ka Nupepa Kuokoa*, Sept 21, 1872 cited in Sterling 1998:93-94), the conch “sounded all the time, unseen by the public, but a prophet from Kauai listened for it” and came looking for it. On a cliff above the stream and opposite the cave was a dog named Puapualenalena who had also heard the conch and was searching for it. However, those that guarded the conch were very attentive and so far; the dog had not located it:

The owners of the conch did not believe, perhaps, that any supernatural being would succeed in taking it away, so they tried to be a little careless. It was not taken, but on the day that Puapualenalena did get it away, they had been utterly careless. After he took it, it sounded no more to this day. It used to be heard everywhere in these islands and was annoying to some people. From this conch, the whole of the place was named Waikapū (Water of the conch). This is the legend of how it received its name and is a place much visited by strangers who wish to see it [W. K. Kaulililehua (*Ka Nupepa Kuokoa*, Sept 21, 1872 cited in Sterling 1998:93-94).

Pukui et al. (1974:223) state “Waikapū” literally translates to “water [of] the conch.” (Pukui et al. 1974:223) further state that the meaning is associated with the following legend:

A conch in a cave here could be heard everywhere in the Hawaiian Islands until it was stolen by a supernatural dog, Puapua-lenalena, yellow tail feathers

Sterling (1998:93) offers two alternative origins of the name “Waikapū.” In one account, the area known as “Nā Wai Ehā” was renowned for the battles fought there; the name Waikapū (the water where the conch was blown) referred to a conch shell that was blown to announce the commencement of a battle (C. W. Stoddard 1894 in Sterling 1998). In another account (H. T. Cheever 1851 in Sterling 1998:63), “Waikapū” (Forbidden Water) refers to the time Kamehameha I, the Conqueror, beached his canoes at Kalepolepo and placed a kapu (taboo, restriction) on the nearest stream (Stoddard in Sterling 1998:63). Although Waikapū Stream is not the closest stream to Kalepolepo, it does drain into Keālia Pond, and it may have been the closest stream with flowing water at the time of Kamehameha’s landing (Sterling 1998:63).

Oral traditions preserved by Fornander (1969) and Kamakau (1963) contribute to our knowledge of Waikapū. According to Fornander (1969:153), the battle of Ahulau ka piipii i Kakanilua featuring the elite ‘Ālapa warriors of Kalaniopu‘u was fought in 1776 on the sand hills southeast of Wailuku:

Taking part of his forces around by water, *Kalaniopuu* landed again at Kiheipukoa, near the Kealia or salt marsh between Kalepolepo and Mā‘alaea...The detachment or regiment known as the *Alapa*, mustering eight hundred men, was selected for this hazardous expedition, and with high courage they started across the isthmus of Kamaomao, now known as the Waikapu common, determined, as the legend says, “to drink the waters of the Wailuku that day.” This regiment was considered the bravest and best of *Kalaniopuu*’s army, every man in its ranks being a member of “*la haute noblesse*” of Hawaii. They are said to have all been of equal stature and their spears of equal length; and the legend represents their appearance-with their feather cloaks-reflecting the sunshine and the plumes of their helmets tossing in the wind-as a gorgeous and magnificent spectacle...Offering no resistance to the enemy while crossing the common, *Kahekili* distributed his forces in various directions on the Wailuku side of the common, and fell upon the Hawaii *corps d’armée* as it was entering among the sandhills south-east of Kalua, near Wailuku. After one of the most sanguinary battles recorded in Hawaiian legends and deeds of valor...the gallant and devoted Alapa were literally annihilated; only two out of the eight hundred escaped alive to tell Kalaniopuu of this Hawaiian Balaclava....

In a similar version, Kamakau (1963:65–86) recounts:

The Alapa were led by Inaina, Kua‘ana, Kane-ha‘i-lua, and Keawe-hano. There were 800 of them, all expert spear-point breakers, every one of whose spears went straight to the mark, like arrows shot from a bow, to drink the blood of a victim. Across the plains of Pu‘u‘ainako and Kama‘oma‘o shone the feather cloaks of the soldiers, woven in the ancient pattern and colored like the hues of the rainbow in red, yellow, and green, with helmets on their heads whose arcs shone like a night in summer when the crescent lies within the moon...Said Ka-leo-pu‘upu‘u to Kahekili, “the fish have entered the sluice; draw in the net.” Like a dark cloud hovering over the Alapa, rose the destroying host of Ka-hekili seaward of the sandhills of Kahalu‘u, the “smoke head” (*po‘ouahi*) and the “red coconut” (*niu‘ula*) divisions. They slew the Alapa on the sandhills at the southeast of Kalua. There the dead lay in heaps strewn like *kukui* branches; the corpses lay heaped in death; they were slain like fish enclosed in a net. This great slaughter was called *Ahulau ka Pi‘ipi‘i Kakanilua*.

Although it has been said that Waikapū Valley contained “many temples and sites”, most of their locations were not recorded (Ashdown 1970:58). Thrum (1917) refers to a heiau that was reportedly located on Pu‘u Hele, but he did not confirm this. Thrum (1917) also mentions two heiau located below the road but again, they were not investigated, and their name and function had been lost (1916). One mo‘lelo recounting the origin of its name was published in *Ka Nupepa Kuokoa* in 1872:

The Wai-Ka-pū now being discussed was named by some of the ancients and it remains by this name to this day. This place, Waikapu, has a cave away up the stream, about a mile or more from the village. On the left side of the stream is a cave and in the cave was the conch. It sounded all the time, unseen by the public, but a prophet of Kauai listened for it and came to seek with the idea of finding it...

According to Manu Moses (in Sterling 1998:94), there is a legend associated with the ali'i Kihapi'ilani that refers to an "adze rock" which marked the boundary between Wailuku and Waikapū Ahupua'a:

As Kihapiilani and his wife traveled on, they saw many people filling the road. At the stream of Wailuku (Waikapu?) the people were innumerable. Said the wife to the chief, "What are the people doing who are congesting the road? Kihapiilani said, "It would seem it has something to do with adzes.

When they arrived at this place, they decided to go from the place where it was so crowded with people. There was a huge rock directly above the stream of Waikapu, mauka of the road which still passes at this time. This adze rock is the boundary between Wailuku and Waikapū Ahupuaa and it remains there to this day.

PREVIOUS ARCHAEOLOGY

Archaeological studies in the greater area began in the early 20th Century by T. Thrum (1909), J. Stokes (1909–1916), and W. M. Walker (1931), under the auspice of the Bernice Pauahi Bishop Museum. These studies are briefly discussed below, and the project locations are presented in Figure 10.

The earliest reported archaeological work conducted in the District of Lāhainā, was carried out by Winslow Walker (1931), under the auspices of the Bishop Museum, as part of an island-wide archaeological survey of Maui. Thrum (1909-1918:59) mentions that two heiau may have possibly existed within the ahupua'a of Waikapū, but evidence of the two sites no longer remains.

The Bernice Pauahi Bishop Museum (Rotunno-Hazuka et al. 1995) conducted archaeological subsurface testing at the Maui Lani Development Property which resulted in the identification of multiple traditional pre-Contact native Hawaiian burials, subsequently designated State Site 50-50-04-2797.

Aki Sinoto Consulting (Pantaleo and Sinoto 1996) conducted archaeological subsurface sampling at the Maui Lani Development. Findings included one concentration of multiple burials and isolated individual burials located at the tip of the dune (in the highest elevational locations).

Scientific Consultant Services, Inc. (Dega 2003) conducted an Archaeological Inventory Survey of 100 acres located in Wailuku Ahupua'a, Wailuku District, Maui Island, Hawai'i [TMK: (2) 3-5-001: portion of 001]. Three historic sites were documented during this Inventory Survey: State Site 50-50-04-5473, Hopoi Reservoir; State Site 50-50-04-5474, Kama Ditch; and State Site 50-50-04-5478, an isolated basalt adze. Subsurface testing yielded negative findings.

Scientific Consultant Services, Inc. (Monahan 2003) conducted an Archaeological Inventory Survey on two undeveloped lots totaling approximately 30 acres in Wailuku Ahupua'a, Wailuku District, Maui Island, Hawai'i [TMK: (2) 3-5-001:061, 063, and 066; formerly 017]. No historic properties were identified during the survey.

Archaeological Surveys Hawaii, LLC (Guerriero et al. 2004) conducted an Archaeological Inventory Survey of a 50-acre parcel of land in Wailuku and Waikapū ahupua'a, Wailuku District, Maui Island, Hawai'i [TMK: (2) 3-5-002: por. 001], located northeast of the current project area. During the survey, the Kama Ditch (State Site 50-50-04-5474) was documented. The Kama Ditch, constructed around 1905 to 1907, provided water to the sugarcane and subsequent pineapple fields.

Scientific Consultant Services, Inc. (Dega 2004) conducted Archaeological Inventory Survey on 348.613 acres of land composing the main land parcel of the Kehalani Mauka Subdivision, located northwest of the current project area, in Wailuku, Wailuku Ahupua'a, Wailuku District, Maui Island, Hawai'i [TMK:(2) 3-5-001:portion of 001]. Eight archaeological sites were documented in the project area: Kama Ditch (State Site 50-50-04-5474), the abandoned Hopoi Reservoir (State Site 50-50-04-5473), a north-south ditch (State Site 50-50-04-5493), Waihee Ditch (State Site 50-50-04-5197), road segments (State Site 50-50-04-5489), east-west bearing drainages (State Site 50-50-04-5490), a historic artifact scatter (State Site 50-50-04-5491), and several clearing mounds/push piles (State Site 50-50-04-5492).

Scientific Consultant Services, Inc. (Wilson and Dega 2005) conducted an Archaeological Inventory Survey of 215.800 acres, Waikapū (and partially Wailuku) Ahupua'a, Wailuku District, Maui Island, Hawai'i [TMK: (2) 3-5-02: 02 and 03], which included the current project area. During the survey, seven historic properties were identified: State Site 50-50-04-5197, Waihee Ditch; State Site 50-50-04-5493, Waikapu Ditch; State Site 50-50-04-5729, a lesser, un-named, rock and mortar ditch; State Site 50-50-04-5726, a lesser, un-named, earthen

ditch/drainage; State Site 50-50-04-5727, a large, un-named reservoir—the terminus of Waikapu Ditch; State Site 50-50-04-5728, a sugar field erosion-control site comprised of 14 cross-slope, earthen berms of varying length that are positioned regularly throughout the project area; and State Site 50-50-04-5730, “Old Waikapu Road”, a cane-haul transport, dirt road. All of the sites were interpreted as associated with the historic Plantation-Era.

Scientific Consultant Services, Inc. (Tome and Dega 2010) conducted an Archaeological Inventory Survey of approximately 607-acres of land in Wai‘ale, Wailuku, and Waikapū Ahupua‘a, Wailuku District Maui [TMK: (2) 3-8-005:23 (por.), 37 and (2) 3-8-007: 71, 101, 102, 104], located southeast of the current project area. During the survey, previously identified sites were relocated: State Site 50-50-04-3525, burials; State Site 50-50-04-4200, State Site 50-50-04-4201, a terrace; and State Site 50-50-04-4202, several Historic Period sites. State Site 50-50-04-6578, a subsurface firepit (imu) was newly identified. Mechanical test excavations yielded negative findings.

Scientific Consultant Services, Inc. (Perzinski and Dega 2012) conducted Archaeological Inventory Survey of 2.0 acres of arid land in Waikapū, Waikapū Ahupua‘a, Wailuku District, Maui Island, Hawai‘i [TMK:(2): 3-5-002:015]. Four Historic Period archaeological sites were documented during the Inventory Survey. State Site 50-50-04-6808 represents Waikapu Cemetery. The community cemetery, which is not a municipal cemetery, contains approximately 75 marked burials and 20 unmarked burials, and was used for interment from 1900 through 1961. State Site 50-50-04-6809 is a Historic Period cistern associated with a piggery. State Site 50-50-04-6810 represents an Historic Period overflow ditch, long since abandoned. State Site 50-50-04-6811 represents at least two traditional Native Hawaiian burials that have been identified through consultation as occurring makai or east of the historic cemetery. One Hawaiian burial is demarcated by a headstone and represents the resting place of Ernest Malai. A second burial, identified as that of Papia Nawa‘a, is unmarked and was designated by lineal descendants. Representative subsurface testing yielded negative results.

Archaeological Services Hawaii, LLC, (Guerriero et al. 2016) conducted an archaeological inventory survey within a 50-acre parcel of land in Wailuku and Waikapū Ahupua‘a, Wailuku District, Maui Island [TMK: (2) 3-5-002:011 and 012], located west of the current project area and across Honoapiilani Highway. The survey resulted in the identification of State Site 50-50-04-5474, the Kama Ditch.

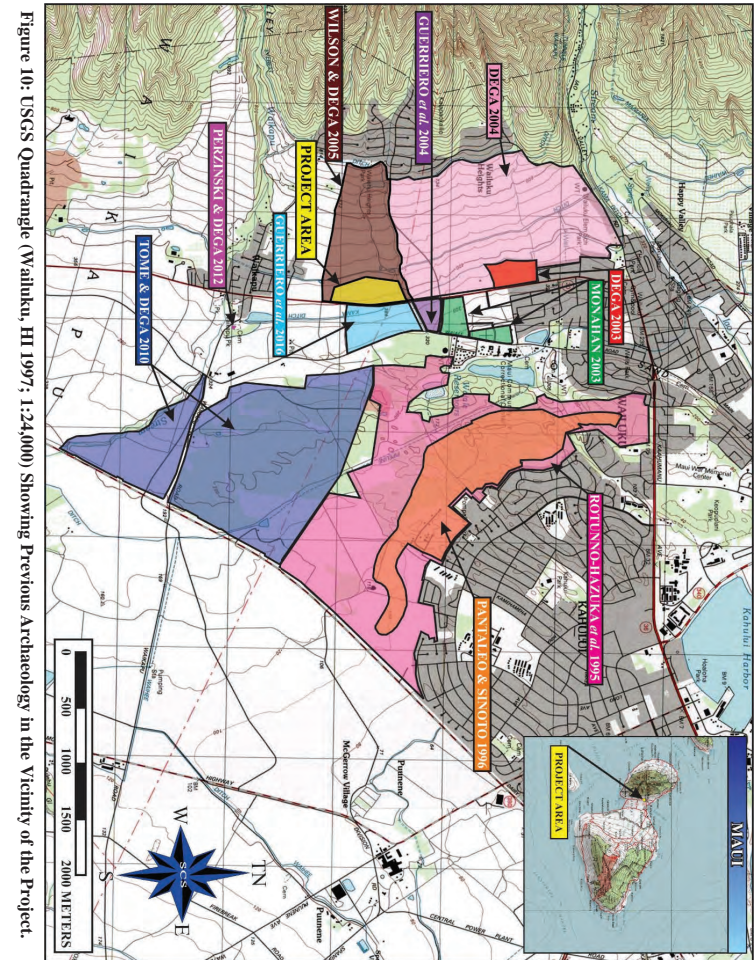


Figure 10: USGS Quadrangle (Wailuku, HI 1997; 1:24,000) Showing Previous Archaeology in the Vicinity of the Project.

CONSULTATION

The consultation process is conducted via telephone, e-mail, the U.S. Postal Service, and in-person interviews, when possible. The initial letters of inquiry, an example of which is presented in Appendix A, were mailed between July 30, 2019 and March 31, 2020. Please note that DHHL, through coordination with Dowling Company, Inc., has graciously allowed the consultation reach out timeline to be extended to include the additional individuals suggested by Mr. Pellegrino (see Interview section below) and that these potential interviews were going to be handled by telephone or virtual means for everyone's health and safety due to the COVID-19 pandemic.

Information pertaining to cultural resources and traditional cultural practices conducted within the project area or within Waikapū Ahupua'a was sought from the following twenty-five (25) individuals and organizations:

1. Hōkūāo Pellegrino, cultural practitioner and cultural and lineal descendant of Waikapū and Wailuku Ahupua'a, Wailuku Moku, Maui Island, Hawai'i
2. Rose Duey, cultural practitioner
3. Dr. Hokulani Holt-Padilla, cultural practitioner and Director, Ka Hikian O Ka Lā Hawai'i Papa o ke Ao, University of Hawaii Maui College
4. Joyclynn Costa, cultural practitioner and Hāmākualoa Moku Representative, Aha Moku O Maui
5. Kī'ope Raymond, cultural practitioner and former University of Hawaii, Maui Campus Hawaiian Language faculty member
6. Kai Markell, Compliance Manager, Office of Hawaiian Affairs
7. Thelma Shimaoka, Community Outreach Coordinator III, Office of Hawaiian Affairs
8. Leslie Kuloloio, Community member and former member Maui/Lāna'i Islands Burial Council
9. Chris "Ikaika" Nakahashi, Cultural Historian, State Historic Preservation Division
10. Andrew "Kealana" Phillips, Burial Sites Specialist, State Historic Preservation Division
11. Clifford Nae'ole, Hawaiian Cultural Advisor
12. Ke'eaumoku Kapu, CEO, Aha Moku O Maui Inc.
13. Clyde Kahalehau, Wailuku Moku Po'o, Aha Moku O Maui
14. Wally Rogers, life-long resident of Waikapū
15. Clayton Suzuki, Wailuku Sugar Company and now for the Wailuku Water Company
16. Roger Yamaoka, family comes from Waikapū

17. Blossom Feiteira, Maui Moku Council
18. Johanna Kamaunu, Wailuku District Representative, Maui/Lāna'i Islands Burial Council
19. Foster Ampong, recognized cultural descendant of inadvertent discovered iwi kupuna of Wailuku Ahupua'a, a lineal and cultural descendant of o'iwi (native Hawaiian) ancestors that lived in the Wailuku Moku
20. Kaniloa Kamaunu, member of Wailuku District, Aha Moku O Maui
21. Walette Pellegrino, mother of Hōkūāo Pellegrino, cultural practitioner, and a member of the Waikapū Community Association
22. Travis Polido, President of the Waikapū Community Association and life-long resident of Waikapū Ahupua'a
23. Nicholas Harders, life-long resident of Waikapū Ahupua'a and cultural practitioner
24. Crystal Smythe, life-long resident of Waikapū Ahupua'a
25. 'Iliahi McLean, life-long resident of Waikapū Ahupua'a

The follow-up letters of inquiry (see Appendix C) were mailed via e-mail and USPS between August 30, 2019 and December 12, 2019. Follow-up letters were mailed to all the above listed individuals and organizations, with the exception of those individuals and organizations that submitted responses to SCS.

A Cultural Impact Assessment Notice was published in the September 2019 issue of the OHA newsletter, *Ka Wai Ola* (see Appendix B). This notice stated that Scientific Consultant Services, Inc. is seeking information on cultural resources and traditional cultural activities in the area of the proposed project and the surrounding ahupua'a, and provided locational information (i.e., the ahupua'a, traditional and modern names of the District, Island, State, and property Tax Map Key designations).

RESULTS

No responses were received as a result of posting a CIA notice in the OHA newsletter, *Ka Wai Ola*. The current consultation process for the Pu'unani Homestead Project resulted in SCS receiving responses from twelve (12) individuals via e-mail and conducting two telephone interviews. Based on these responses and interviews, assessment of the potential effects on cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

WRITTEN RESPONSES

Chris (Ikaika) Nakahashi, Cultural Historian, State Historic Preservation Division

Mr. Nakahashi responded via an e-mail dated September 3, 2019:

Aloha Cathy,

Mahalo for contacting me regarding the CIA for the proposed Pu'unani Homestead Project in the ahupua'a of Waikapū, in the Moku of Wailuku, Maui. I recommend CSH to utilize the media (ex. OHA's Ka Wai Ola, Maui News, etc.) to solicit additional information for this CIA.

I recommend CSH to meet with:

- Ke'eaumoku Kapu – 'Aha Moku o Maui Inc.
- Hōkūāo Pellegrino – Hui o Nā Wai 'Eha

I recommend CSH to meet with the native tenants and people that currently live or previously lived in the ahupua'a of Paunau on Maui for information about the cultural resources and practices for this CIA.
Please let me know if I can assist with anything else.

A hui hou,

Christopher "Ikaika" Nakahashi, M.S.
Cultural Historian
Department of Land & Natural Resources
State Historic Preservation Division

Concerns: No concerns were expressed during the CIA consultation process.

Note: Scientific Consultant Services, Inc. included Ke'eaumoku Kapu in the consultation process for this CIA, via emails dated July 30, 2019; August 31, 2019; October 1, 2019; and October 28, 2019 (see Mr. Kapu's written response below). Scientific Consultant Services, Inc. contacted Hōkūāo Pellegrino via an email dated July 30, 2019 (see Mr. Pellegrino's written response below) and interviewed him December 23, 2019, via telephone. (see Interviews)

Hōkūāo Pellegrino, cultural practitioner and cultural and lineal descendant of Waikapū and Wailuku Ahupua'a, Wailuku Moku, Maui Island, Hawai'i

Mr. Pellegrino responded via an email dated August 6, 2020, indicating he would like to participate in the consultation process for this project:

Mahalo nui e Cathy for your email and mahalo for your patience as i [sic] just returned from vacation. I would very much like to partake in providing key testimony on this project as a cultural and lineal descendant of the ahupua'a of Waikapū and Wailuku. I am also cc'ing my mother who would be another important person to be interviewed for this project. Hoping we could possibly coordinate something together. Furthermore, i [sic] would strongly recommend you reach out to many others in Waikapū and the Waikapū Community Association on this project. There are many NH lineal and cultural descendants in Waikapū who should be engaged with.

na,
Hōkūāo

Mr. Pellegrino express the same sentiments in a subsequent email dated December 3, 2019:

Aloha e Cathy,

i [sic] would very much be interested in being a part of the CIA process for this project. When will you be coming to Maui to conduct your work. I would also like to add my mother Walette Pellegrino as part of the process. Do you have other lineal descendants and or community members of Waikapū that you have reached out to? Mahalo nui!

Concerns: Mr. Pellegrino did not express any concerns about the project during either email. Please see Mr. Pellegrino's interview summary in the Interview section below.

Andrew "Kealana" Phillips, Burial Sites Specialist, State Historic Preservation Division

Mr. Phillips, Burial Sites Specialist, State Historic Preservation Division, responded via an email dated Monday August 5, 2019:

Aloha Cathy,

I forwarded email to the 5 members of the MLIBC. Mahalo

Kealana

Concerns: No concerns were expressed during the CIA consultation process.

Blossom Feiteira, Maui Mokupuni Council

Ms. Blossom Feiteira responded via an email dated August 31, 2019:

Aloha Cathy,

Sorry for the delay in getting back to you.

I am not familiar with the project area or its history. Was hoping to find others who would be familiar with the Waikapu ahupua'a but have not been very successful.

As far as I know it was in sugar cultivation for about a century by Wailuku Sugar Company, and most of The Waikapu residents are former plantation workers.

If I find someone who has cultural knowledge of the area will pass on your contact information.

Aloha,

Blossom

Concerns: No concerns were expressed during the CIA consultation process.

Foster Among, recognized cultural descendant of inadvertent discovered iwi kupuna of Wailuku Ahupua'a, a lineal and cultural descendant of o'iwi (native Hawaiian) ancestors that lived in the Wailuku Moku

Mr. Among responded via an email dated October 31, 2019:

Aloha Kakahiaka e Cathy,

Mahalo for the Invite to participate in the proposed Pu'unani Homestead Project. Yes, I am interested in participating in this CIA. I'd like discuss scheduling a site visit/discussion with you prior to any interviews. The later week of November looks doable for me.

Mahalo nui loa ha'aha'a

Foster

Concerns: Mr. Among did not express any concerns in his email (see Interview section).

Walette Pellegrino, mother of Hōkūāo Pellegrino, cultural practitioner, and a member of the Waikapū Community Association

Mrs. Pellegrino responded via an email dated November 13, 2019 which stated:

Aloha e Cathy,

Please contact Travis Polido, president of the Waikapu Community Association and life-long resident of Waikapu. He is interested in being involved in the process of reviewing the Pu'unani Homestead Project CIA. Thank you.

Aloha,

Walette Pellegrino

In a follow-up email dated July 9, 2020, Mrs. Pellegrino stated:

Mahalo e Cathy for the follow-up email regarding the DHHL Pu'unani Homestead project which will be built in Waikapu. I have already submitted information regarding the DRAFT EA, specifically with reference to the Old Government Road. Unless you have specific questions that require information, I think my comments should suffice at this time. Thank you for asking me again to participate.

Concerns: Mrs. Pellegrino did not express any concerns about the proposed project in her emails.

Note: Scientific Consultant Services, Inc. included Travis Polido in the consultation process for this CIA via an email dated November 13, 2019.

Dr. Hokulani Holt, cultural practitioner and Director, Ka Hikina O Ka Lā Hawai'i Papa o ke Ao, University of Hawaii Maui College

Dr. Holt responded via an email dated September 19, 2019:

Aloha and mahalo for checking in again. I don't know what other information I can offer that you would not be able to get from folks like Hōkūāo Pellegrino and other natives of that area. I am hopeful that you already have researchers that are looking in the standard resource materials and Hawaiian language newspapers. If that is so, you will have as much as I can additionally share. Mahalo.

‘O au iho nō,
Hōkūlani

Hōkūlani Holt
Director, Ka Hikina O Ka Lā
Hawai'i Papa o ke Ao
University of Hawaii Maui College

Concerns: No concerns were expressed during the CIA consultation process.

Note: Scientific Consultant Services, Inc. contacted Hōkūiao Pellegrino via an email dated July 30, 2019 and interviewed him December 23, 2019, via telephone.

Joyclynn Costa, cultural practitioner and Hāmākualoa Moku Representative, Aha Moku O Maui

Joyclynn Costa responded via a series of emails:

On Jul 30, 2019, Joyclynn Costa wrote:

Mahalo for the information
I have, however forward this communication to the Wailuku Aha Moku Council and our Maui Aha Moku LLC.. as well as our Kiolo.

Joyclynn Costa

July 30, 2019, at 9:59:

Would you happen to have older maps with kuleana names? The map provided is to general and hard to imagine.

Mahalo

Joyclynn

And, on Wed 7/31/2019 11:36 AM:

I will also check with the moku. I remember seeing older and more informed maps in the past.

Joyclynn

Concerns: No concerns were expressed during the CIA consultation process.

Note: Scientific Consultant Services, Inc. provided Ms. Costa with maps of the project area via emails sent August 1, 2019; August 31, 2019; and November 6, 2019. Scientific Consultant Services, Inc. also sent Ms. Costa gentle reminders about the current CIA on August 30, 2019; September 25, 2019; October 15, 2019; and October 28, 2019. No further response was received from Ms. Costa.

Kī'ope Raymond, cultural practitioner and former University of Hawaii, Maui Campus Hawaiian Language faculty member

Dr. Raymond responded via an email dated August 31, 2019:

Aloha,

I have no comment at this time.

Mahalo,

Kī'ope

Concerns: No concerns were expressed during the CIA consultation process.

Ke'eaumoku Kapu, CEO, Aha Moku O Maui Inc.

Mr. Kapu responded via an email dated Aug 31, 2019:

Thank you for the information. I will arrange a date with Kupuna consultation and get back to you soon.

Concerns: No concerns were expressed during the CIA consultation process.

Nicholas Harders, life-long resident of Waikapū Ahupua'a and cultural practitioner

Nicholas Harders provided the statement presented below via an email dated April 15, 2020:

Aloha Cathy,

Mahalo for reaching out and please excuse my procrastination in replying. To be quite frank it saddens my family to see the constant development around us, covering the soil with concrete and pavement. Nonetheless, it is inevitable, and the hand of time ticks on. My family has called Waikapu home for a long time. Our old family home which is still in use stands at 180 W Waiko Rd, it was built in 1904. To this day, five generations have been born and raised in that house, commuting and playing on W Waiko Rd.

Presently, we are fortunate enough to still have the traditional 'auwai, now known as the North Waikapu 'Auwai, to deliver water to our kuleana lands. The 'auwai splits in two directions as it meets W Waiko Rd, one flow runs alongside W Waiko with the other going under W Waiko in an aged culvert then to our property where we irrigate yards, gardens, fruit trees and most importantly our kalo.

Which brings me to my main point, traffic. We maintain this traditional water system as a family and neighborhood cultural practice. When we perform maintenance on the roadside sections of the 'auwai, both the flow going into

our property and the flow running alongside W Waiko, we are exposed to vehicles traveling in both directions. I understand there may be a possibility of using Old Waikapu Rd as a thru road or access road to the proposed development. I would like to state that my family is opposed to connecting the proposed development to Old Waikapu Rd (which then connects to W Waiko Rd). We have already seen an increase of road activity over the years due to the Kama St. development and the Hu'ihu'i Place development. The days of us knowing every car that travelled our road is gone. We believe the increase in traffic on W Waiko Rd that would result from connecting yet another subdivisions-worth of cars would have a severe negative impact on our already impacted cultural practice of 'auwai management/maintenance. Not to mention the possible impact of increased water and air pollution.

Mahalo for taking the time to read this and consider my 'ohana's thoughts. Please reply if you have any questions or comments.

Concerns: Mr. Harders expressed concern that the proposed DHHL project would include "using Old Waikapu Rd as a thru road or access road to the proposed development." Mr. Harders further states that he and his family are opposed to connecting the proposed DHHL development to Old Waikapu Road, which then connects to W. Waiko Road, as this may cause an increase in traffic which has the potential to impacting traditional cultural practices (i.e., kalo cultivation and maintenance on the roadside sections of the 'auwai) currently conducted by him and his family.

Crystal Smythe, life-long resident of Waikapū Ahupua'a

Crystal Smythe, life-long resident of Waikapū Ahupua'a, provided her mana'o via two emails. The first email was received by SCS on March 31, 2020:

Aloha e Cathy, Please allow me a short time to discuss with 'Ohana Waikapu; and respond accordingly.

Peace Always, cs

The second email from Ms. Smythe was received by SCS on August 17, 2020:

Mahalo nui all your courtesies. I have no cultural comments to extend at this time. What's imperative; is that the land continue to be governed by Kingdom Laws, utilizing any pertinent HRS strictly for guide lines.

Mahalo Hou. Be well, stay safe. Peace, cs

Concerns: Ms. Smythe states that she has no cultural concerns. However, she believes that it is imperative "...that the land continue to be governed by Kingdom Laws, utilizing any pertinent HRS strictly for guide lines."

INTERVIEWS

Please note that DHHL, through coordination with Dowling Company, Inc., has graciously allowed the consultation reach out timeline to be extended to include the additional individuals suggested by Mr. Pellegrino and that these potential interviews were going to be handled by telephone or virtual means for everyone's health and safety due to the COVID-19 pandemic. Two interviews were conducted by SCS, via telephone, during the Pu'unani Homestead CIA consultation process. These interviews are summarized below.

Hökūāo Pellegrino, cultural practitioner and cultural and lineal descendant of Waikapū and Wailuku Ahupua'a, Wailuku Moku, Maui Island, Hawai'i

Hökūāo Pellegrino was interviewed via telephone, on December 23, 2019, by Cathleen Dagher, SCS Senior Archaeologist. Initially, Mr. Pellegrino had agreed to an interview conducted by Ms. Dagher via Skype. However, at the time of the scheduled interview, Mr. Pellegrino contacted Ms. Dagher, via email, stating that he could not get his Skype to work and that "we will need to just talk over the phone."

Mr. Pellegrino began the interview by stating he was born and raised in the Waikapū Ahupua'a, in the 'Ili of Pilipili and Noho'ana. His father is Italian from New York. His family, on his mother's side, is Hawaiian, Chinese, Portuguese, French and English. Through his mother, his family has genealogical connections to a number of kuleana parcels in Waikapū Ahupua'a, on multiple sides of his family (i.e., on the Hawaiian side, on the English side, and on the French side). On his French side, there is Eugene Bal (married to Me'eau), who is Mr. Pellegrino's 4th great grandfather. Mr. Bal received three Māhele awards in Waikapū Ahupua'a. The Land Grant was one of the largest Land Grants [comprised of approximately 130 acres] and was located just south and east of the current project area.

On his English side, Edward Bailey, who was also Mr. Pellegrino's 4th great grandfather, had a kuleana parcel located in Waikapū Valley in the 'ili of 'Ōhi'a, as well, as a large parcel near the boundary of Waikapū and Wailuku Ahupua'a.

The kuleana parcel that Mr. Pellegrino lives on today with his wife and family is located adjacent to the parcel of land that he grew up on, in Pilipili 'Ili, where his parents still reside. Mr. Pellegrino and his family currently live in the 'Ili of Nohoana, which he is connected to on his

Hawaiian side through Keanini and the Enos family. Mr. Pellegrino has multiple lineal genealogical ties, especially on his Hawaiian side, to Waikapū Ahupua‘a and to Wailuku Ahupua‘a.

Being born and raised in Waikapū Ahupua‘a, Mr. Pellegrino has spent a lot of time with kupuna and elders that are connected to him genealogically and through the community. Mr. Pellegrino stated he feels very blessed to have learned so much from these elders who were very knowledgeable about the history, sense of place, cultural sites, and the cultural and natural resources of the Waikapū area. This knowledge that has been passed down to him is what led him to continue on with the traditions of the land where he and his family live on now. Mr. Pellegrino, his wife and children raise wetland taro on his family kuleana land, which historically was cultivated at the time of the Māhele, and prior to that.

There are a number of cultural sites that he and his family care for on their kuleana parcel, as well as the kuleana parcel they have in the mauka area of the valley, which they are connected to through the Bailey side of his mother’s family. And then, on the Eugene Bal side, they don’t have ownership of that property, but on East Waiko Road, which is below and east of the property where Mr. Pellegrino and his family live in Waikapū, there is a Japanese Cemetery. This area once was part of the Nā Wai ‘Ehā sand dune system that came across part of the upper central plains of Maui. There are ancient burials of his kupuna and the kupuna of others that are buried there. This particular parcel which is located where the Japanese Cemetery and remaining sand dune system is, was described at the time of the Māhele by Edward Bailey who was a surveyor for the Kingdom of Hawai‘i, as having ancient Hawaiian burials. While the Nā Wai ‘Ehā sand dune system was historically and is currently known as having hundreds if not thousands of iwi kūpuna interred in them, it was one of the only Māhele awards to make this notation, especially in the Waikapū ahupua‘a.

During time he was growing up, up until 1988, there was in sugar cane cultivation all around, including in the current project area. Following, 1988, the project areas was cultivated in pineapple along with maintenance of the Waihe‘e Irrigation Ditch and a reservoir on the northeaster end. Kupuna have shared with Mr. Pellegrino that prior to the land being in sugar cane there were lo‘i kalo and ‘auwai systems that spanned Waikapū in its entirety, even in the project area. Hōkūāo in the latter part of his high school years, Mr. Pellegrino engaged into understanding the land tenure Waikapū and the greater part of Nā Wai ‘Ehā since there was major changes in the cultural landscape from large scale plantation agriculture to extensive housing developments. Hōkūāo has researched, compiled comprehensive data, developed cultural landscape maps, authored documents and curriculum about Waikapū and Nā Wai ‘Ehā

for over the last 20 years since graduating from Notre Dame de Namur University and University of Hawai‘i at Hilo. He has researched in detail, all ‘ili, Land Commission Awards, Land Grants, traditional ‘auwai/irrigation systems and eco-cultural landscape systems throughout the Waikapū ahupua‘a, many of which are still in cultivation and in which cultural engagement practices are currently taking place.

In terms of people who have lineal ties to Waikapū, there are not many of them left. In terms of people who actually have genealogical lineal ties to Waikapū that connect back to these kuleana parcels, he can only think of a dozen, or so, who are still living there. That’s why this information is so important. Some of those families with genealogical ties to Waikapū and are still very much engaged on their kuleana lands and exercising their traditional and customary practices are but not limited to the, descendants of Pelekai, Makaiwi, Kuamū, Nāhau, Kuolaia, Bailey, Cockett, Bal, Ka‘iliponi, Ka‘a‘a, Ha‘a, Kekeleai, Palakiko, Richardson, Koa, Kalawai‘a, Ehunui, Sylva. Hōkūāo highly recommends reaching out to many of the descendants of these families as part of the Cultural Impact Assessment as it relates to the Waikapū ahupua‘a.

While there may have been sugar cane and then, later, pineapple growing on these lands, prior to that, these lands were rich in traditional agricultural terraces. Mr. Pellegrino spent some time, a while ago, when he was doing his graduate work around Waikapū conducting research and he found a number of sites that were connected to the area where the current project area is located. Mr. Pellegrino shared this information with one of his friends who is a Department of Hawaiian Home Lands Commissioner who was looking for a name for this project. While Mr. Pellegrino did not want to participate in naming the project, he offered to provide background information on the traditional land tenure that was associated with the project area. Mr. Pellegrino prepared a document comprised of a spread sheet listing all of the kuleana parcels, both Land Commission Awards and Land Grants, which were located in the project area and provided a brief description of what was historically there.

According to Mr. Pellegrino’s research there were about five Land Commission Awards and three Land Grants in the parcel containing the project area. Predominantly, these lands were traditionally used for cultural ag practices, specifically tied to wetland cultivation. There were animals that were raised there, there were kula lands, and there were ‘auwai systems that connected directly to the Waikapū Stream. Most important is the significance of one of the most important areas in Waikapū Ahupua‘a. Near the Old Government Road that is adjacent to the western and northern boundaries of the project area, near the northwest corner of the current project area, there once was located a very important stone called Pōhāko‘i. Pōhāko‘i was first and foremost a hoana, or grinding stone used to file and finish ko‘i (adzes – stone tool used for

cutting and carving wood). Secondly, it was a commonly known palena 'āina (boundary marker) for the northern end of the Waikapū ahupua'a according to Mr. Pellegrino.

Mr. Pellegrino says that Pōhāko'i is shown on approximately 60 historic maps of Waikapū. Some maps reference that site as the location of Pōhāko'i (the stone), but, adjacent to where the stone is located, there is reference to a Pōhāko'i as an 'ili also. However, Land Grant 2952, to David Crowningburg, and Land Commission Award 433, to William Crowningburg, both specified the ahupua'a boundary, as well as the 'ili, as Pōhāko'i. So, it was an important cultural site, not just for being a boundary marker and a grinding stone, but also for being a place name (i.e., the name of an 'ili). Pōhāko'i is such a significant site; it has been mentioned in mele [songs], in oli [chants], and historical mo'olelo [legends]. The exact location of Pōhāko'i (the stone) is not known and it is not known if Pōhāko'i remains in situ, or if it has been relocated. Pōhāko'i (the stone) is shown on almost every historic map of Waikapū [see Figure 8]. Pōhāko'i (the stone) is shown on most maps as on the Waikapū Ahupua'a boundary and sometimes it is shown more within Waikapū Ahupua'a, more along that William Crowningburg property boundary in the 'Ili of Pōhāko'i. So, if there is any archaeological work conducted in the, that would be a critical thing to look for in addition to former agricultural and irrigation sites.

Also, there was a historic bridge at that same corner [the northwest corner of the current project area] that crossed Kahoi Gulch and Lapaleihua Gulch. These two gulches came down from the West Maui Mountains. The bridge was in existence at the time of the Māhele [mid-1800s] and is shown on historic maps dated as late as 1939.

One of the points that Mr. Pellegrino would like to stress in this interview is that archaeological work and cultural impact assessment studies do not always make a concerted effort to delve into the historical background of these types of areas that were historically in sugar cane cultivation to present information about how these lands were used traditionally, prior to being under commercial sugar cane cultivation. Although lands were extensively impacted and modified historically for the commercial cultivation of sugar cane, they retain the potential to contain information about the traditional use of these lands. In addition, there may still be kupuna who have connections to those lands. Mr. Pellegrino also recommended that if the project does move forward, that archaeological monitors be required on-site at all times. Many kuleana parcels whether impacted or not by plantation era agriculture, still retain numerous archaeological features above and below the ground, which can include walls, artifacts, and most importantly, burial sites. He stated that it was not uncommon for Māhele land parcels to have burial sites both pre-western and post-contact. He stressed the need especially for a Hawaiian

Organization such as DHHL to go above and beyond the basic requirements and processes for developing land, especially knowing that these were Native Hawaiian ancestral kuleana lands.

For cultural practitioners it is very important to know whether, or not, Pōhāko'i (the stone) is still in or near its original location. There are a number kupuna who conduct traditional cultural practices; i.e., farming, fishing, carving. Mr. Pellegrino is also traditional wood and stone carver; he makes traditional-type stone tools; he has made adzes along with poi pounders and other stone tools. So, for cultural practitioners, the sites where their ancestors conducted the same types of activities are very important. Mr. Pellegrino explained that access to these areas was always limited and/or prohibited to any and all lineal descendants since the plantation and their predecessors took over the project area and adjacent lands.

Of the remaining kuleana land holders that are still left in Waikapū, most of them reside all along Waikō Road, which is the main road that come in and on the north side of the Waikapū Stream as well as those living on the southern portion of the Waikapū Stream. Approximately 25 years ago, there was a development that came about called Waiolani Subdivision and most recently the Waiolani Mauka Subdivision in the last 10 years which abuts the current DHHL project area. At that time, major concerns were widely shared by lineal descendants of Waikapū along with long-standing community members/residents – they didn't want the Old Waikapū Government Road open in that section because they didn't want the extra traffic and most importantly the impacts that would have on the Waikō Road kuleana properties which still retain, pre-western archaeological sites such as stone walls, lo'i kalo and 'auwai systems. One of the major 'auwai flows along Waikō Road. Waikō Road is a main road and a County road, but it is substandard; in some areas it is a two-lane highway and in others it's one lane. So, when the developers for Waiolani and Waiolani Mauka came up, they said they were not going to open up the road to traffic and that the road would just be used for emergency purposes. But, in the end, they defied the cries of the community and ended up opening up that portion of the road; i.e., the Old Government Road which feeds into Waikō Road, and that has caused a lot of issues, including accidents on the road, most which have caused severe damage to portions of the 'auwai system used by kalo farmers, crime, and people impacting their traditional cultural practices. There are all these 'ulu [breadfruit, Artocarpus altilis] trees and traditional pre-Western stone walls located along the 'auwai and those have been impacted by the traffic. For Mr. Pellegrino, the major issue, if not the only issue, is ensuring that there is no access to that Government Road. Based on the project plan, it looked like the feeder road, inlet, and outlet, would be on Honoapiilani Highway which is what he wants to see happen. Mr. Pellegrino believes that if this section of the Old Government Road is opened up to Waikō Road, which would be all the way up to Honoapiilani Highway, the County or State would have to upgrade the road which would

impact all of these cultural sites and their 'auwai system, which are positioned along part of Waikō Road and part of the Government Road, at least on the Waikō Road side.

Mr. Pellegrino's other major concern is the view plain. There are specific ridges, like Kahoi, Lapaleihua, and Kalapaooka'ilio, where he and his family gather lā'au lapa'au [medicinal plants] and which house some very rare native plant species. These are all ridges mauka [west] of the project area. Mr. Pellegrino is concerned that during the construction phase of the current project the land would be filled to the extent that these culturally important view plains would be blocked from those who are genealogically connected to Waikapū Ahupua'a and living in the lower areas below. A prime example of how this occurred is the neighboring Waiolani Subdivision which built up their properties in some cases over 10 feet and directly adjacent to the Honoapi'ilani Highway. This has destroyed any natural view plains of the Kapilau and Hana'ula Mountain Ranges. Former development plans for this project site under the name of Pu'unani Subdivision had explicit setbacks from the Honoapi'ilani Highway as well as a large buffer between the Waiolani Subdivision and northern boundary of the Waikapū ahupua'a near Ku'ikahi Road and Honoapi'ilani Highway. This was to ensure a clear distinction between the Waikapū ahupua'a and the Wailuku ahupua'a. There is a project the Mr. Pellegrino is working on with the Waikapū and greater Wailuku moku community members to develop ahupua'a signage. One such sign for the northern most boundary of the Waikapū ahupua'a would be near and/or adjacent to the project area and he states that it is imperative there are clear distinctions between ahupua'a still are retained. Knowing that Waikapū has been greatly impacted by development and continues to be with future development, retaining our cultural identity will be critically important moving forward and something the Waikapū community made clear for as long as he can remember.

Along the Government Road, along the mauka portion, there was a historic 'auwai. And so, that road is still there and Mr. Pellegrino believes there are remnants of that 'auwai are still there. That 'auwai historically connected to the 'auwai that Mr. Pellegrino's family accesses along Waikō Road. There were four major 'auwai in Waikapū and this particular 'auwai that came down, part of it comes off the 'auwai used by Mr. Pellegrino's family, but above his family's kuleana parcel and currently goes under Waikō Road. On historic (1887) maps you can see that 'auwai go within the boundary of the project area, as well as along the upper (northern) boundary of the project area. That 'auwai provided the water that was used to feed all of the lo'i kalo that were in this project area. Water also fed kuleana parcels of land before the project area as well.

Mr. Pellegrino reiterated that while his family had kuleana lands throughout Waikapū Ahupua'a, none of them were located within the confines of the current project area. The names of the Hawaiian families who had connections to the project area were Manu and Keliiolelo. There were also a number of foreigners who received kuleana parcels of lands within the project area: James Louzada, who married into a Hawaiian family. A lot of the foreigners like William Crowningberg, David Crowningberg had Hawaiian wives that connected them to the 'ili or parcels of lands as well.

A lot of people see Waikapū as a sleepy little town; but prior to western contact, it was a thriving kalo growing landscape which was part of the greater Nā Wai 'Ehā region. There were over 1,400 lo'i kalo documented on 900 acres of land as being in cultivation at the time of the Māhele in Waikapū alone. Following western contact, Waikapū was really the birthplace of sugarcane industry in Hawai'i. One of the kuleana claimants, James Louzada, who had a Land Commission Award in the project area, he and another Italian, were really the forefathers of the sugarcane industry on Maui and in Hawai'i. They started cultivation sugarcane on the parcels of land, working with kuleana landowners in Waikapū even before the Māhele occurred and they were milling sugarcane and processing into molasses by 1838.

Lastly, Mr. Pellegrino wanted to include the importance of water resources as being a major cultural impact. While most if not all of the project site's historical land use was wetland kalo cultivation, these lands are not likely going to be returning to that practiced knowing that a housing development is being proposed. There are currently agricultural practices being conducted on that land, although not cultural, they are an important part of retaining the historic and cultural nature of the Waikapū ahupua'a. Hökūao is a leader in water resource management issues on Maui, especially within the region of Nā Wai 'Ehā. A major concern that he has is the potential impacts this project will have on both surface and ground water resources, both of which are directly tied to cultural practices. While not necessarily tied to the project site, both ground water and surface water resources would likely cause impacts to those surrounding ahupua'a in Nā Wai 'Ehā, which have already seen great strain for decades. With the return of in-stream flow standards occurring in all four streams of Nā Wai 'Ehā (Waikapū, Wailuku, Waiehu, and Waihe'e) he is seeing a huge influx of Native Hawaiian lineal descendants of kuleana lands returning and re-cultivating their lands in kalo and other traditional food crops. Ensuring that these water resources are protected in the areas for which they derive is critical to not only food production and sustainability but the positive impact it is having to our Native Hawaiians community and greater lāhui building. Most if not all development projects have

direct impacts to water resource depletion both from our ground water aquifers and surface water. Mr. Pellegrino has grave concerns about this project and its impact to already heavily strains on the Wailuku/Waikapū aquifer and surface water waters of Nā Wai ‘Ehā. Mr. Pellegrino is the president of Hui o Nā Wai ‘Ehā, an organization that is focused on protecting both surface and ground water resources. There has not been anything shared with him nor their organization about the water needs of this project as it relates to both ground and surface water.

Concerns: Mr. Pellegrino would like to see that lineal descendants of Waikapū Ahupua‘a have access through the project area for use of Pōhāko‘i (hoana or grinding stone) if it is still there. Another important concern for his family and for many of the other lineal descendants and community members in Waikapū is use of the Government Road. Mr. Pellegrino requests that there will be no access to or from the DHHL Pu‘unani Homestead project area to the Government Road, as that would impact traditional cultural practices. Mr. Pellegrino also expressed concern that construction phase of the DHHL Pu‘unani Homestead project would include filling the land to the extent that the culturally important view plains would be blocked from those who are genealogically connected to Waikapū Ahupua‘a and to those living in the lower areas below. He urges that there be large and clearly defined green buffers between Honoapi‘ilani Highway, Waiolani Development, and the Ku‘ikahi Road near the northern most boundary of the Waikapū ahupua‘a to ensure clear delineation between the Waikapū and Wailuku ahupua‘a. Lastly, Mr. Pellegrino expressed concerns about the cultural impacts of this project as it relates to water resources both ground and surface water, both within the ahupua‘a of Waikapū as well as neighboring ahupua‘a such as Wailuku.

Note: Scientific Consultant Services, Inc. received Mr. Pellegrino’s signed information form March 30, 2020, via e-mail (see Appendix D). In an email dated March 26, 2020, Mr. Pellegrino suggested SCS contact Nicholas Harders (see Written Response section), Crystal Smythe (see Written Response section), and Walette Pellegrino (see Written Response section). In a subsequent email dated March 30, 2020, Mr. Pellegrino suggested SCS also contact ‘Iliahi McLean, as all of these individuals are life-long residents of Waikapū Ahupua‘a. Scientific Consultant Services, Inc. made a good faith effort to contact ‘Iliahi McLean. Scientific Consultant Services, Inc. sent Ms. McLean the initial letter of Inquiry inviting her to participate in the consultation process for this project via an email dated March 30, 2020. Scientific Consultant Services, Inc. conversed with Ms. McLean between March 30, 2020 and August 24, 2020, via email. Although Ms. McLean indicated in several of her emails that she would like to contribute her mana‘o, she ultimately was unable to do so.

Foster Ampong, recognized cultural descendant of inadvertent discovered iwi kupuna of Wailuku Ahupua‘a, a lineal and cultural descendant of o‘iwi (native Hawaiian) ancestors that lived in the Wailuku Moku

Foster Ampong is a recognized Cultural Descendant of inadvertent discovered iwi kupuna of the Wailuku Ahupua‘a, as well as a lineal and cultural descendant of my o‘iwi (native Hawaiian) ancestors that lived in the Wailuku Moku. Mr. Ampong was interviewed via telephone by Cathleen Dagher, SCS Senior Archaeologist, on December 5, 2019, the interview resumed on April 9, 2020, and continued on August 18, 2020. Unfortunately, due to health issues, Mr. Ampong was unable to provide his permission to include the interview summary in this document. Please note that SCS reached out to Mr. Ampong, via emails and telephone calls between August 21 and September 10, 2020

Concerns: On August 18, 2020, Mr. Ampong re-stated his initial concerns:

1. That this was a Hawaiian Home Lands project,
2. That this project would benefit the beneficiaries,
3. The lots would not be sold on the open market, and
4. An archaeological monitor to be on site during all construction related ground altering activities associated with the project, specifically one archaeological monitor present per each earth-moving machine.

Scientific Consultant Services, Inc. was able to confirm this is a DHHL project on land owned by DHHL where all 161 proposed residential lots will be for DHHL beneficiaries (Darren Okimoto, Dowling Company Inc., personal communication April 9, 2020). In addition, the DHHL is committed to a program of archaeological monitoring during all construction-related ground-altering activities associated with this development (Darren Okimoto, Dowling Company Inc., personal communication September 9, 2020).

CONSULTATION RESULTS FROM DAGHER (2018)

The currently proposed DHHL Pu‘unani Homestead project will include sewer line improvements within a portion of TMK: (2) 3-5-001:064. A separate CIA report (Dagher2018) was prepared in advance of the proposed Wailuku Affordable Housing project, which was located in Wailuku and Waikapū Ahupua‘a, Wailuku District, Island of Maui, Hawai‘i [TMK: (2) 3-5-001:064]. Thus, the results of the Dagher (2018) consultation process are included in the current CIA report and are presented below.

INTERVIEWS (FROM DAGHER 2018)

As stated elsewhere in this document, sewer line improvements within a portion of TMK: (2) 3-5-001:064 will be undertaken as part of the currently proposed DHHL Pu'unani Homestead project. A separate CIA report (Dagher2018) was prepared in advance of the proposed Wailuku Affordable Housing project, which was located in Wailuku and Waikapū Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-5-001:064]. Thus, the results of the Dagher (2018) consultation process are presented below.

Clayton Suzuki, long-time community member and worked for Wailuku Sugar Company.

Clayton Suzuki was interviewed via telephone by Cathleen Dagher on February 27, 2018. Mr. Suzuki reviewed his interview summary between March 2 and March 4, 2018, when SCS received his edited summary, via e-mail.

Clayton Suzuki grew up on the island of Hawaii and came to Maui for work opportunities. After graduating from the University of Hawaii. He came to Maui in 1975 to work for HC&S then moved to Wailuku Sugar Company in 1978. He worked for the company as an engineer then later as the Operation Manager till retirement in 2016.

Wailuku Sugar Company shut down its sugarcane milling operation in 1979, it delivered the sugarcane to the HC&S mill under contract. The 2500 acres of sugarcane from Iao Valley to Waihee Valley were converted to Macadamia Nut in the early 1980's. Sugarcane was continued in the 2500 acres in the Wailuku to Maalaea area. Some Wailuku fields about 500 acres were left fallow, its long-term plan was for a housing development,

Wailuku Sugar Company became Wailuku Agribusiness in 1988 when its sugarcane growing operation stopped. Much of the lands in sugar were converted to pineapple and sold to Maui Land & Pineapple. The fields that were of sandy soil were not converted to pineapple. These fields were left fallow. The macadamia nut operation continued.

After closing both its macadamia nut and pineapple operations in 1999, Wailuku Agribusiness became Wailuku Water Company. This company continued its water delivery operations using the existing ditch system used for its agricultural operations.

Mr. Suzuki did not mention any traditional cultural activities practiced in the area.

Concerns: None

Roger Yamaoka, long-time community member and family also comes from Waikapu.

Roger Yamaoka was interviewed via telephone by Cathleen Dagher on February 28, 2018. Mr. Yamaoka reviewed his interview summary between March 2 and March 8, 2018, when SCS received his edited summary, via e-mail.

Roger Yamaoka is a long-time Waikapū community member whose family comes from Waikapū. His father owned a pig farm near the Vida family's in Waikapū, several miles away on Old Waikapu Road, which is where Mr. Yamaoka grew up. Mr. Yamaoka said that the project area was currently used as a baseyard or staging area for a construction company, and that Long's Drugs and Foodland were nearby, and a prison is located to the north. He also mentioned that Emmanuel Lutheran Church of Maui was on the next lot over to the south.

He remembered that when he was a child, some 50 years ago, and while he was growing up, the whole area was planted in sugar cane and later in pineapple. After the sugar mill closed down, the area was abandoned, and eventually was covered in grass and weeds. Gradually the area came to be developed – first homes began to appear (Kealani Subdivision), then Foodland and Long's Drugs, and Maui Lani began to open up.

Mr. Yamaoka stated that he was not aware of any traditional cultural practices conducted in the area nor was he aware of anywhere in the area where traditional cultural practices could be conducted, as the whole area was under commercial agriculture for many years and eventually began to be developed for residential use.

Mr. Yamaoka suggested SCS contact the Vida family, as they may have information pertaining to traditional cultural practices conducted in the area. He also spoke highly of Uncle Les Kuloloio and suggested he be contacted, as he would be a reliable source of information on traditional cultural practices conducted in the area.

Concerns: None

Wally Rogers, long-time community member, family has lived in Waikapū on Upper Waiko Road for several generations. His father was Eddie Rogers who started the Rogers Ranch and pig farm in Waikapū.

Scientific Consultant Services, Inc. included Mr. Rogers in the consultation process for this CIA on February 27 and March 6, 2018, via telephone. Scientific Consultant Services, Inc. spoke with Dolores, Mr. Rogers' wife, on both occasions. Mrs. Rogers said that she and her husband reached out to other family members in an effort to see if they had information about traditional cultural practices conducted in the near the proposed project area. None of the family members had any information to share.

Concerns: None

WRITTEN RESPONSES (FROM DAGHER 2018)

Chris Nakahashi, Cultural Historian State Historic Preservation Division. Scientific Consultant Services, Inc. receive a written response, via e-mail dated September 11, 2017, from Chris Nakahashi, Cultural Historian State Historic Preservation Division:

Aloha Cathy,
Mahalo for contacting me regarding the CIA for the proposed Wailuku Affordable Housing Project.
The people listed at the bottom of your September 9, 2017 letter are appropriate to contact regarding the traditional cultural practices in the ahupua'a of Wailuku and Waikapū, on the island of Maui.

Please contact Ke'eaumoku Kapu... about this CIA.
I recommend SCS to also utilize the media (ex. OHA's Ka Wai Ola, Maui News, etc.) to solicit additional information for this CIA.
I recommend SCS also to contact and meet with the native tenants and people that currently live or previously lived in the ahupua'a of Wailuku and Waikapū on Maui for information about the cultural customs and practices for this CIA.
Please let me know if I can assist with anything else.
A hui hou,

Christopher "Ikaika" Nakahashi, M.S.
Cultural Historian
Department of Land & Natural Resources
State Historic Preservation Division

[Note:] Scientific Consultant Services, Inc. did include Mr. Kapu in the consultation process. The initial letter of inquiry and associated project area maps were sent to Mr. Kapu via

an e-mail dated September 29, 2017. The follow-up letter was sent to Mr. Kapu via an e-mail dated October 17, 2017. However, SCS did not receive a response from Mr. Kapu.

Kaniolo Kamaunu, Wailuku District Representative, Aha Moku O Maui

Scientific Consultant Service, Inc. received an e-mail dated November 7, 2017, from Mr. Kamaunu. In his e-mail Mr. Kamaunu stated that the proposed project area is adjacent from Long's on Waiale Drive and expressed concerns about what companies would be conducting the Archaeological Inventory Survey and preparing the Environmental Impact Assessment.

Glenn McLean, community member, community member

Scientific Consultant Services, Inc. made several unsuccessful efforts to contact Mr. McLean. In an e-mail dated October 26, 2017, SCS contacted Hinano R. Rodrigues, State Historic Preservation Division (SHPD) Culture and History Branch Chief requesting Mr. McLean's contact information. In an e-mail dated October 27, 2017, Mr. Rodrigues responded, "I don't have contact information for him, but I am sure his son Luke lives in Waikapu on a daily basis. Hokua [sic] [Pellegrino] may be able to contact him."

As no contact information was provided for Luke McLean, SCS e-mailed Mr. Pellegrino, via an e-mail dated October 27, 2017, requesting this information. Scientific Consultant Services, Inc. did not receive a response from Mr. Pellegrino. In an e-mail dated October 27, 2017, SCS contacted Andrew "Kealana" Phillips, SHPD Burial Sites Specialist requesting Mr. McLean's contact information. Mr. Phillips did not respond. In e-mails dated October 24 and 27, 2017, SCS contacted Chris Nakahashi, SHPD Cultural Historian, also requesting Mr. McLean's contact information. Mr. Nakahashi responded, via an e-mail dated October 25, 2017, that he did not have the requested information.

IDENTIFIED CULTURAL PRACTICES

The purpose of a CIA is to identify the possibility of on-going cultural activities and resources within a project area, or its vicinity, and then assessing the potential for impacts on these cultural resources. As stated elsewhere in this report, the Hawaii State Office of Environmental Quality Control (OEQC 2012:11), states the geographical extent of the CIA study area should be greater than the area over which the proposed project extends to ensure that cultural practices that occur outside of the project area, but which may still be affected, are included in the assessment. Thus, for the purpose of this CIA study, the entire ahupua'a is the project area.

The consultation process of the Dagher (2018) CIA did not identify traditional cultural practices currently conducted in or near the Wailuku Affordable Housing project area and there were no concerns expressed regarding impacts to traditional cultural practices or the gathering of cultural resources. The findings of the current CIA did not identify “valued cultural and natural resources” specifically within the DHHL Pu‘unani Homestead project area. The findings of this study indicate there are on-going traditional cultural practices, primarily consisting of taro cultivation, within Waikapū Ahupua‘a and on lands near the project area which may be impacted by the proposed DHHL Pu‘unani Homestead development. In addition, the consultation process identified a unique cultural property, the grinding stone known as Pōhāko‘i, which may be in close proximity to the northwestern boundary of the DHHL Pu‘unani Homestead project area. However, the exact location of Pōhāko‘i is not known and it is not known if Pōhāko‘i remains in situ, or if it has been relocated.

AGRICULTURE

The findings of previous archaeological studies conducted in the vicinity and the traditional and historic background research indicate Waikapū Ahupua‘a was not only an area rich with traditional and customary practices during the pre-Contact and early-Historic Periods, it was renowned for its extensive lo‘i fields.

One traditional practitioner and lineal descendant is currently living within Waikapū Ahupua‘a on land near the proposed project area and actively cultivating wet land taro on the property. Taro or kalo (*Colocasia esculenta*) was and continues to be an important staple in the Hawaiian diet. Neal (1965: 58) states that taro was brought to Hawai‘i by the Polynesians on their voyages and that “it has been the principle food of the natives from the earliest times to the present.” Kirch (1985:216) elaborates on the intricate intertwining Hawaiian system of agriculture:

The Hawaiian planter commanded a sophisticated knowledge of his plants and their varieties (several hundred varieties of taro and sweet potato were named and recognized), of planting, tending, and harvesting methods, and of food preparation. His system of agriculture—along with an intricate web of social, religious, and political relationships—tied him to the land, to his chiefs, and to his gods, especially Lono, deity of fertility...

Water is integral for any agricultural pursuit and is a necessary resource for the traditional practice of wet land taro, which is a dietary supplement for this individual’s family. There is the potential for this project to impact the Wailuku/Waikapū aquifer and surface water waters of Nā Wai ‘Ehā.

CULTURAL IMPACT ASSESSMENT SUMMARY

This Cultural Impact Assessment was prepared in accordance with the Guidelines for Assessing Cultural Impacts (OEQC 2012:11-13). The Guidelines recommend that a CIA consult relevant individuals/organizations, conduct ethnographic interviews and archival and historical research, identify cultural resources and practices located within the project area or in proximity, and finally, assess the impact of the proposed action and its mitigation measures on the cultural practices or resources identified.

Letters of inquiry were sent to twenty-five individuals and organizations that may have knowledge or information pertaining to the collection of cultural resources and/or practices currently, or previously, conducted in the vicinity of the proposed project area. The consultation process resulted in SCS receiving responses from twelve (12) individuals via e-mail and SCS conducting two telephone interviews.

As sewer line improvements for the DHHL Pu‘unani Homestead project will occur within a portion of TMK: (2) 3-5-001:064, which was the subject of an earlier CIA report (Dagher2018) prepared under separate cover in advance of the proposed Wailuku Affordable Housing project located in Wailuku and Waikapū Ahupua‘a, Wailuku District, Island of Maui, Hawai‘i, the results of the Dagher (2018) consultation process are included in the Consultation section of the current CIA report.

The information obtained during the consultation process reflects that the proposed project area is located in an area rich with traditional and customary practices conducted during the pre-Contact and early Historic Period. However, based on historical research and the above listed responses, it is reasonable to conclude that there is evidence of cultural practices related to Hawaiian rights related to agricultural pursuits, access to resources (i.e., water), and possibly other customary activities presently occurring in the vicinity of the proposed project area.

Based on the information obtained during the consultation process portion of the current CIA, ground altering activities associated with the proposed Pu‘unani Homestead project has the potential to impact currently conducted traditional native Hawaiian activities in the surrounding environment in the vicinity of the proposed DHHL residential development.

CONCLUSION AND RECOMMENDATIONS

The findings of the current CIA did not identify any traditional cultural practices previously or currently conducted within the proposed DHHL Pu'unani Homestead project area. Nor were valued cultural and natural resources identified within the proposed DHHL Pu'unani Homestead project area. Based upon this review and analysis, sufficient information has been provided in this document to determine that traditional cultural practices were previously and continue to be conducted within the surrounding environs of the proposed DHHL Pu'unani Homestead project area. This determination has been substantiated by the culture-historical background, the summarized results of prior archaeological studies in the project area and in the neighboring areas, and primarily in the concerns expressed by the cultural informants during the consultation process of the current CIA. Thus, it is the finding of the current analysis that specific cultural activities are currently conducted on lands in the vicinity of the DHHL Pu'unani Homestead project area which may potentially be impacted by the proposed project.

To date, the legendary grinding stone (Pöhäko'i) is currently unknown. Thus, it is recommended that an archaeological field inspection be conducted by a qualified archaeologist, in an effort to locate this cultural feature, prior to the commencement of any construction-related ground-altering activities. If the archaeological field inspection identifies the Pöhäko'i within the proposed Pu'unani Homestead project area, then consultation with the State Historic Preservation Division will need to be undertaken to discuss appropriate mitigation measures. If the Pöhäko'i is evaluated as a Traditional Cultural Place (i.e., a property that is eligible for inclusion in the National Register of Historic Places based on its associations with the cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living community), then community consultation will also need to be undertaken.

In addition, given the proximity of the proposed DHHL residential development to the sand dunes, which are known to contain pre-Contact native Hawaiian burials, there is the potential for the human burials and the continuous use of the area from the pre-Contact Period through the Historic Period and Plantation Era, evidence of pre- and post-Contact and the Plantation Era may still be present in subsurface contexts. Thus, a program of full-time archaeological monitoring is recommended during all construction-related ground-altering activities. The remaining issues are of an environmental nature and will be better addressed under separate cover in the Environmental Assessment

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APPENDIX A: EXAMPLE LETTER OF INQUIRY

Aloha kāua,

Scientific Consultant Services, Inc. (SCS) is seeking information on cultural resources and traditional, previously or on-going, cultural activities within or near the proposed Pu'unani Homestead Project area. The proposed Project will consist of the development of a subdivision comprised of 137 turn-key homes and 24 vacant lots, for a total of 161 homes and lots, within the 48.23 acre Project area. The proposed State of Hawaii, Department of Hawaiian Home Lands (DHHL) Project will be located in Waikapū Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-5-002:002, Figures 1 through 3]. The subject property is owned by the State of Hawaii, Department of Hawaiian Home Lands.

The purpose of this Cultural Impact Assessment (CIA) is to identify and understand the importance of any traditional Hawaiian and/or historic cultural resources or traditional cultural practices associated with the project area and the surrounding *ahupua'a*. In an effort to promote responsible decision-making, the CIA will gather information about the project area and its surroundings through research and interviews with individuals that are knowledgeable about the area in order to assess potential impacts to the cultural resources, cultural practices, and beliefs identified as a result of the proposed project. We are seeking your *kōkua* and guidance regarding the following aspects of our study:

- General history as well as present and past land use of the project area
- Knowledge of cultural resources which may be impacted by future development of the project area (i.e. historic and archaeological sites, as well as burials)
- Knowledge of traditional gathering practices in the project area, both past and ongoing Cultural associations of the project area, such as legends, traditional uses and beliefs
- Referrals of kūpuna or elders and kama'āina who might be willing to share their cultural knowledge of the project area and the surrounding ahupua'a
- Due to the sensitive nature regarding iwi kūpuna or ancestral remains discovered, mana'o regarding nā iwi kūpuna will be greatly appreciated
- Any other cultural concerns the community has related to Hawaiian cultural practices within or in the vicinity of the project area.

The CIA is in compliance with the Hawai'i Revised Statute (HRS) Chapter 343 Environmental Impact Statements Law and in accordance with the State of Hawai'i Department of Health's Office of Environmental Quality Control (OEQC) *Guidelines for Assessing Cultural Impacts* as adopted by the Environmental Council, State of Hawai'i on November 19, 1997 (and revised in 2012).

According to the *Guidelines for Assessing Cultural Impacts* (Office of Environmental Quality Control 2012:12):

A2

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 which support such cultural beliefs...

Enclosed are maps showing the locations of the proposed project area. Please contact me within 30 days at (808) 597-1182 or via e-mail (cathy@scshawaii.com) with any information or recommendations concerning this Cultural Impact Assessment.

Sincerely yours,



Cathleen Dagher
Senior Archaeologist

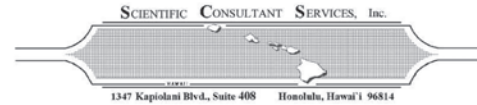
Enclosures (3)

A3

PU'UNANI HOMESTEAD

Scientific Consultant Services, Inc. (SCS) is seeking information on cultural resources and traditional, previously or on-going, cultural activities within or near the proposed Pu'unani Homestead project area. The proposed project will consist of the development of a State of Hawai'i, Department of Hawaiian Home Lands (DHHL) subdivision comprised of 137 turn-key homes and 24 vacant lots, for a total of 161 homes and lots, to be located in Waikapū Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-5-002:002]. The 48.23-acre project area is owned by the State of Hawai'i, Department of Hawaiian Home Lands.

APPENDIX C: EXAMPLE FOLLOW-UP LETTER



Aloha kāua,

This is the follow-up letter to our July 31, 2019, letter which was in compliance with the statutory requirements of the State of Hawai'i Revised Statute (HRS) Chapter 343 Environmental Impact Statements Law, and in accordance with the State of Hawai'i Department of Health's Office of Environmental Quality Control (OEQC) Guidelines for Assessing Cultural Impacts as adopted by the Environmental Council, State of Hawai'i, on November 19, 1997.

Scientific Consultant Services, Inc. (SCS) is seeking information on cultural resources and traditional, previously or on-going, cultural activities within or near the proposed Pu'unani Homestead Project area. The proposed Project will consist of the development of a subdivision comprised of 137 turn-key homes and 24 vacant lots, for a total of 161 homes and lots, within the 48.23-acre Project area. The proposed State of Hawaii, Department of Hawaiian Home Lands (DHHL) Project will be located in Waikapū Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-5-002:002]. The subject property is owned by the State of Hawaii, Department of Hawaiian Home Lands.

The purpose of this Cultural Impact Assessment (CIA) is to identify and understand the importance of any traditional Hawaiian and/or historic cultural resources or traditional cultural practices associated with the project area and the surrounding *ahupua'a*. In an effort to promote responsible decision-making, the CIA will gather information about the project area and its surroundings through research and interviews with individuals that are knowledgeable about the area in order to assess potential impacts to the cultural resources, cultural practices, and beliefs identified as a result of the proposed project. We are seeking your *kōkua* and guidance regarding the following aspects of our study:

- General history as well as present and past land use of the project area
- Knowledge of cultural resources which may be impacted by future development of the project area (i.e. historic and archaeological sites, as well as burials)
- Knowledge of traditional gathering practices in the project area, both past and ongoing Cultural associations of the project area, such as legends, traditional uses and beliefs
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- Due to the sensitive nature regarding iwi kūpuna or ancestral remains discovered, mana'o regarding nā iwi kūpuna will be greatly appreciated

- Any other cultural concerns the community has related to Hawaiian cultural practices within or in the vicinity of the project area.

The CIA is in compliance with the Hawai'i Revised Statute (HRS) Chapter 343 Environmental Impact Statements Law and in accordance with the State of Hawai'i Department of Health's Office of Environmental Quality Control (OEQC) *Guidelines for Assessing Cultural Impacts* as adopted by the Environmental Council, State of Hawai'i on November 19, 1997 (and revised in 2012).

According to the *Guidelines for Assessing Cultural Impacts* (Office of Environmental Quality Control 2012:12):

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 which support such cultural beliefs...

Please contact me within 30 days at (808) 597-1182 or via e-mail (cathy@scshawaii.com) with any information or recommendations concerning this Cultural Impact Assessment.

Sincerely yours,



Cathleen Dagher
Senior Archaeologist

C3

APPENDIX D: SIGNED INFORMATION RELEASE FORMS

D

INFORMATION RELEASE FORM

I, the undersigned, personally participated in an interview with Cathleen Dagher, B.A., of Scientific Consultant Services, Inc., on December 23, of the year 2019. The interview was conducted, by telephone. I also provided supplemental information following the interview in late February that was written into the document.


I understand that the information I have provided to Scientific Consultant Services, Inc., shall be submitted as part of a Cultural Impact Assessment report prepared in advance of the proposed Pu'unani Homestead Project, located in Waikapū Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-5-002:002]. This information will be subject to publication which will be submitted to the public for general review.

I have read the summary of the interview and the information is true and accurate to the best of my knowledge. By signing this release form, I am providing my approval for the release of the information to Scientific Consultant Services, Inc., for the purpose outlined above (i.e., making the contents of this interview available for publication to the general public).

Print Name: Hōkūao Pellegrino

Signature: *Hōkūao Pellegrino*

Release Dated: February 28, 2020



ADDENDUM CULTURAL
IMPACT ASSESSMENT
FOR THE PROPOSED
PU'UNANI HOMESTEAD
SUBDIVISION WATER
SYSTEM STORAGE
IMPROVEMENTS

APPENDIX

D-1



**FINAL—Addendum Cultural Impact Assessment for the
Proposed Pu‘unani Homestead Water Storage Tank, Waikapū
Ahupua‘a, Wailuku District, Island of Maui, Hawai‘i**

TMK: (2) 3-5-002:003 (por.)



Prepared For:

DDC LLC
2005 Main Street
Wailuku, HI 96793

April 2022



Keala Pono Archaeological Consulting, LLC • PO Box 1645, Kāne‘ohe, HI 96744 • Phone 808.381.2361

**FINAL— Addendum Cultural Impact Assessment for the
Proposed Pu‘unani Homestead Water Storage Tank, Waikapū
Ahupua‘a, Wailuku District, Island of Maui, Hawai‘i**

TMK: (2) 3-5-002:003 por.

Prepared For:

DDC LLC
2005 Main Street
Wailuku, HI 96793

Prepared By:

Cathleen A. Dagher, BA
and
Windy Keala McElroy, PhD

April 2022



Keala Pono Archaeological Consulting, LLC • PO Box 1645, Kāne‘ohe, HI 96744 • Phone 808.381.2361

MANAGEMENT SUMMARY

An Addendum Cultural Impact Assessment (CIA) was prepared for a proposed Department of Hawaiian Homelands (DHHL) water storage tank to service the area that includes the DHHL Pu'unani Homestead. The new water storage tank will be located on approximately 1.25–2 acres of land within a 148-acre parcel in Waikapū Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-5-002:003, por.]. A CIA was previously completed for the DHHL Pu'unani Homestead residential development (Dagher 2020), and additional consultation with the same participants was done for this Addendum CIA, which specifically concerns the proposed water storage tank.

Community consultations were performed to obtain information about the cultural significance of the subject property and the surrounding area, as well as to address possible concerns of the community members regarding the effects of the project on places of cultural and traditional importance. No traditional cultural practices or cultural resources were identified within the project area itself, and the interviewees were not opposed to the proposed water storage tank. However, several concerns were raised pertaining to effects that the proposed project may have on natural resources, cultural resources, and cultural practices in the surrounding area. The following concerns were mentioned by interviewees:

- the project might impact the surface water supply, the Maui aquifer, native plants, and iwi kūpuna;
- access to cultural resources may be affected;
- currently conducted traditional practices, including taro cultivation may be affected;
- the quality of life may change, through an increase of traffic resulting from an increase in population;
- the project might affect access to areas where cultural activities are currently practiced; and
- the aesthetics of the area could be impacted.

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FIGURES

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TABLE

Table 1. List of Individuals Contacted 10

INTRODUCTION

At the request of DDC LLC, on behalf of the Department of Hawaiian Home Lands (DHHL), Keala Pono Archaeological Consulting has prepared an Addendum Cultural Impact Assessment (CIA) in advance of the proposed construction of a DHHL water storage tank to service the area that includes the DHHL Pu'unani Homestead. The new water storage tank will be located on approximately 0.51–0.81 ha (1.25–2 ac.) in Waikapū Ahupua'a, Wailuku District, on the island of Maui, on TMK: (2) 3-5-002:003 por.

A CIA was previously prepared for the DHHL Pu'unani Homestead residential development (Dagher 2020), which is located approximately 0.8 km (0.5 mi.) to the east of the current project area within TMK: (2) 3-5-002:002 and 3-5-001:064 (por.). This document, which was designed to identify any cultural resources or practices that occur in the current project area, will serve as an addendum to the original CIA and will only contain information relevant to the current project. The reader is directed to the Dagher (2020) CIA for traditional and historic background research, as well as a summary of archaeological projects previously conducted in the area.

The report begins with a description of the project area. The next section presents methods and results of the ethnographic survey. Results are summarized and recommendations are made in the final section. Also included are appendices with documents relevant to the ethnographic survey including full transcripts of the interviews.

Project Description and Environment

The proposed water tank will be located on approximately 0.51–0.81 ha (1.25–2 ac.) within TMK: (2) 3-5-002:003 (Figures 1 and 2). This is a 59.89-ha (148-ac.) parcel owned by Kuikahi Properties, LLC. The new water storage tank will be able to store between 200,000 and 1 million gallons of water and will be constructed of concrete or steel. It is intended to be dedicated to the County Department of Water Supply.

The new DHHL water storage tank will be located on currently undeveloped land, which was previously under commercial agriculture, situated at approximately 224 m (734 ft.) above mean sea level. The project area is approximately 4.8 km (3 mi.) southwest of Kahului Harbor and roughly 9.7 km (6 mi.) north of Mā'alaea Bay. The closest road is Kuikahi Drive, which is approximately 160 m (0.1 mi.) to the north. Honoapi'ilani Highway lies roughly 800 m (0.5 mi.) to the east, Wailuku Heights Park is approximately 320 m (0.2 mi.) to the west, and an unnamed dirt road is located roughly 1.3 km (0.8 mi.) to the south. The project area is positioned between the Waihe'e Ditch (Site 50-80-04-5197) to the east and the Waikapu Ditch to the west.

Soils within the project area are of the Iao Series, specifically, Iao cobbly silty clay, 3–7% slopes (IbB) (Foote et al. 1972:Sheet 100; Figure 3). Soils of this series are often used for the cultivation of sugarcane and also for residential development (Foote et al. 1972:47). Also within the vicinity are Iao silty clay, 0–3% slopes (IaA); Iao cobbly silty clay, 7–15% slopes (IbC); Iao clay, 3–7% slopes (IcB); Iao clay, 7–15% slopes (IcC); Jaucas sand, 0–15% slopes (JaC); Puuone sand, 7–30% slopes (PZUE); Pulehu silt loam, 3–7% slopes (PpB); Pulehu clay loam, 0–3% slopes (PsA); Wailuku silty clay, 3–7% slopes (WvB); Wailuku silty clay, 7–15% slopes (WvC); Rough broken land (rRR); and Rough mountainous land (rRT), as well as water (W).

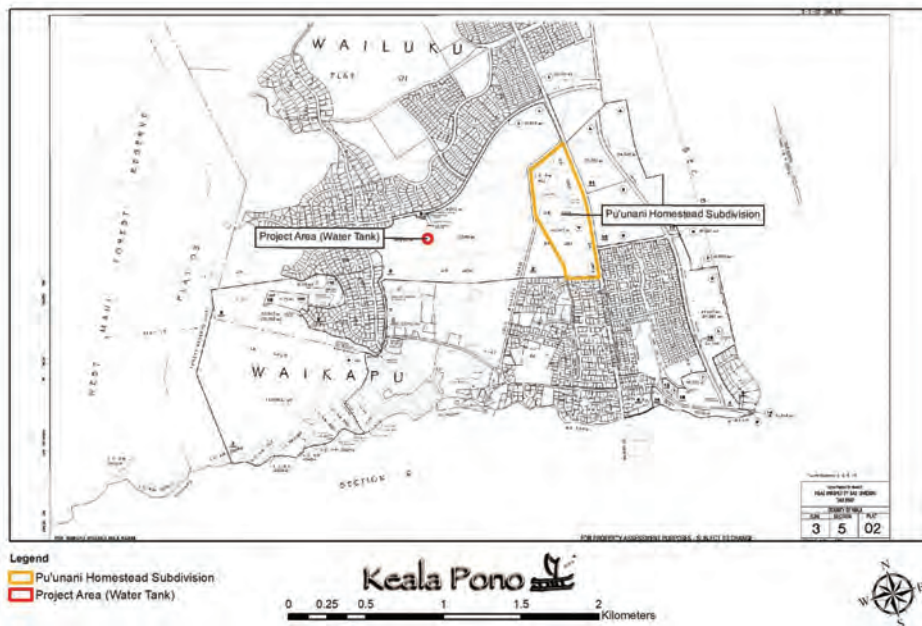


Figure 2. TMK Plat (2) 3-5-002 showing the project area in relation to the DHHL Pu'unani Homestead Subdivision (State of Hawai'i 2008).

3

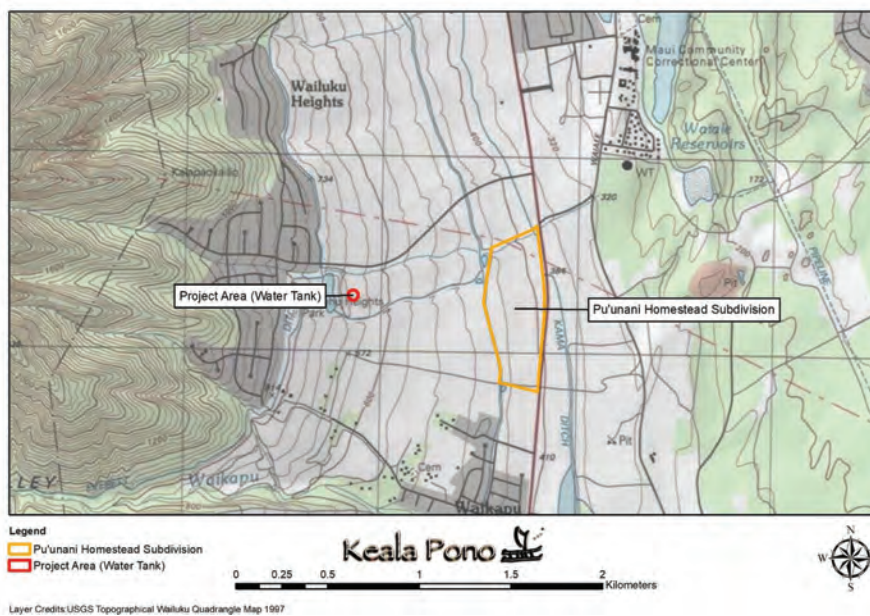


Figure 1. Wailuku quadrangle map showing the project area in relation to the DHHL Pu'unani Homestead Subdivision (USGS 1997).

2

CULTURAL AND HISTORICAL BACKGROUND

As this document serves as an addendum to the CIA prepared for the Pu'unani Homestead project (Dagher 2020), only a brief cultural and historical background is presented here. The reader is referred to the Traditional and Historical Cultural Context chapter of the Dagher (2020) report for more detailed background information.

Waikapu in Traditional Times

The island of Maui was named after the legendary demigod Māui (Pukui et al. 1974), known for his trickiness. Legends tell of how he stole fire, raised the sky, and snared the sun, trapped winds, and changed landscapes. Among all of the mo'olelo, one of his biggest accomplishments was fishing land out of the ocean and creating the Hawaiian Islands. Earlier accounts share that the name of the island was once called Hikapalaumewa in ancient times, prior to Papa and Wākea and before their child Māui became famous (Sterling 1998).

The project area is within Waikapu Ahupua'a of the Wailuku District of Maui, which has a significant traditional history. Wailuku literally means "water of destruction" (Pukui et al. 1974:225) due to the battles that took place there, most notably the battle at 'Iao Valley between Kamehameha the Great and Kahekili. Wailuku is also referred to as Nā Wai 'Ehā, which translates to "the four waters," after the four streams that run through its valleys: Waiehu, Waikapu, Wailuku, and Waie'e. The old 'okana (land division) named Nā Wai 'Ehā comprised the four great valleys which cut far back into the slopes of West Maui and drain the eastward watershed of Pu'u Kukui and the ridges radiating from it.

Wailuku was a gathering place and home to important chiefs and their attendants (ʻŪ 1959:135). Handy et al. (1991:272) assert that there were five centers of population on the island of Maui, one of which was the part of West Maui: "where four deep valley streams watered four areas of arable land spreading fanwise to seaward: the Four Waters (Nā-wai-'ehā) famed in song and story—Waiehu, Waiehu, Wailuku, and Waikapu." The waters of Waikapu Stream were once diverted to feed lo'i systems, and its overflow was discharged on the dry plains on the isthmus between East and West Maui (Handy et al. 1991:496). Cheever commented on the lo'i of Wailuku in the mid-19th century:

As you get into the valley and vega of Wailuku, you see numerous remains of old kihapais, or cultivated lots, and divisions of land now waste, showing how much more extensive formerly was the cultivation, and proportionally numerous the people than now... The whole valley of Wailuku, cultivated terrace after terrace, gleaming with running waters and standing pools, is a spectacle of uncommon beauty to one that has a position a little above it. (Cheever 1851 in Sterling 1998:75)

To the northwest of the project area is the storied 'Iao Valley, a fertile center of agriculture and sacred burial place of ali'i (Pukui et al. 1974:55). The Haleki'i-Pihana heiau complex was perched above the valley, signifying the importance of the area. 'Iao Valley supported a large population that relied on the many lo'i systems that were situated along the stream banks. 'Auwai fed these lo'i with an abundance of water from the streams:

['Auwai] have existed immemorially and were evidently constructed for the purpose of irrigating kalo on the plains which stretch away to the northward and southward of the ['Iao] river. Several minor 'auwai have, since ancient times, tapped the river at different points lower down and spread the water through the lands in the gulch on either side of the river bed. (Sterling 1998:86)

The region was wrought with warfare through much of its known history, including what some would term as a 100 years war. Many stories and accounts have been passed down. Reverend

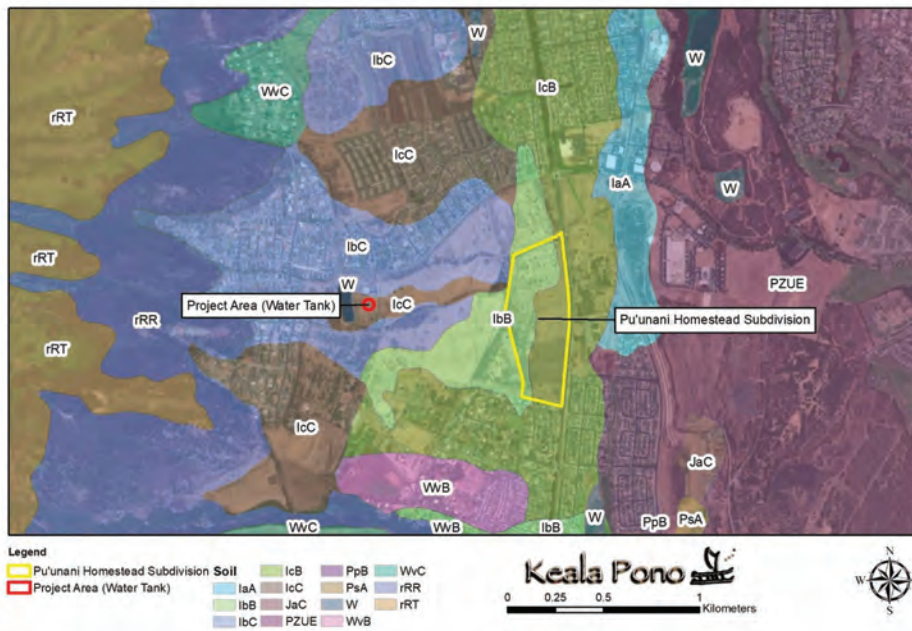


Figure 3. Soils in the vicinity of the project area (data from Foote et al. 1972).

Cheever, in his book, *Life in the Sandwich Islands: or, The Heart of the Pacific, As It Was and Is*, wrote of how the various wars had an effect on how each stream in Wailuku was named:

There are in this region four streams in succession from the different gorges of the mountain, significantly named, it is thought, from the events of battles which have transpired upon them. Waikapu—The water where the conch was blown, and the engagement began. Waiehu—The water where the combatants smoked with dust and perspiration. Wailuku—The water of destruction, where the battle began to be fierce and fatal. Waihee—The water of total rout and defeat, where the army melted away. (Cheever 1851:59)

Historic Waikapū and Wailuku

Foreigners increasingly visited Hawai‘i after Captain Cook arrived at Kahului Bay in the late 18th century, and this was happening as Kamehameha was rising to power. Kamehameha, armed with a cannon he acquired by foreigners, went to battle in Wailuku. After winning the battle on Maui, Kamehameha moved on to conquer the remaining islands of Moloka‘i, O‘ahu, and Kaua‘i.

The bay from Kahului to Hopukoa was filled with war canoes. For two days there was constant fighting in which many of the most skillful warriors of Maui took part, but Kamehameha brought up the cannon, Lopaka, with men to haul it and the white men, John Young and Isaac Davis, to handle it; and there was a great slaughter. Had they fought face-to-face and hand-to-hand, as the custom was, they would have been equally matched. But the defensive was drawn up in a narrow pass in ‘Iao, and the offensive advanced from below and drew up the cannon as far as far as Kawelowelo‘ula and shot from there into ‘Iao and the hills about, and the men were routed. The victors pursued them and slew the vanquished as they scrambled up the cliffs. There was a great slaughter, but mostly among the commoners; no important chief was killed in the battle. “Clawed off the cliff” (Ka ‘uwa‘u-pali) and “The damming of the waters” (Ka-pani-wai) this battle was called.” (Kamakau 1992:148–149)

In 1832, missionaries began arriving in Maui and established a girls’ school in Wailuku. Around that time, the sugar industry was introduced, greatly affecting the region. The abundance of water supply and accessible land in Wailuku allowed for the sugar industry to develop and become profitable within a short time period, with Waikapū Stream being one of the watercourses that supplied the thirsty crop (Handy et al. 1991). A network of irrigation ditches soon extended throughout the region, including the Waihe‘e Ditch, Iao-Waikapu Ditch, South Waikapu Ditch, and Everett Ditch, with the latter connecting to a reservoir near the project area (see Figure 1). With the rise of the sugar industry in Wailuku, Kahului, and continuing on further east to Spreckelsville and Pā‘ia, it was apparent that a railroad was needed to transport sugar to be exported to the U.S. The Kahului Railroad was first organized under the partnership between Thomas H. Hobron, William O. Smith, and William H. Bailey. The burgeoning sugar industry in Wailuku and Kahului also contributed to the increased use of Kahului Harbor as a major trade port. A small commercial landing was opened in 1879 for the purposes of the sugar trade. Soon thereafter, sugar magnate Claus Spreckels began operating Oceanic Steamship Lines between Kahului and North America out of the Kahului Harbor, making it the main shipping point for sugar from all of the Maui plantations.

Māhele Land Tenure

The change in the traditional land tenure system in Hawai‘i began with the appointment of the Board of Commissioners to Quiet Land Titles by Kamehameha III in 1845. The Great Māhele took place during the first few months of 1848 when Kamehameha III and more than 240 of his chiefs worked out their interests in the lands of the Kingdom. This division of land was recorded in the Māhele Book. The King retained roughly a million acres as his own as Crown Lands, while approximately

a million and a half acres were designated as Government Lands. The Konohiki Awards amounted to about a million and a half acres, however title was not awarded until the konohiki presented the claim before the Land Commission.

In the fall of 1850 legislation was passed allowing citizens to present claims before the Land Commission for parcels that they were cultivating within the Crown, Government, or Konohiki lands. By 1855 the Land Commission had made visits to all of the islands and had received testimony for about 12,000 land claims. Ultimately between 9,000 and 11,000 kuleana land claims were awarded to kama‘āina totaling only about 30,000 acres and recorded in ten large volumes.

The Office of Hawaiian Affairs (OHA) Kipuka Database (n.d.) indicates that the current project area is located within Land Commission Award (LCA) 326, which was claimed by William Humphries. The Waihona ‘Aina Database (n.d.) confirms that LCA 326 was awarded to Humphries under Royal Patent (RP) 7659. According to both sources, the award was comprised of one ‘āpana consisting of 131.1 acres within the ‘ili of Awikiwki and Puhiaawa.

Dagher (2020:20) relates how the current land divisions of the region are a relatively modern construct:

Traditionally, the lands of Waihe‘e and Waiehu, now part of Wailuku District, “were independent of any of any moku and are listed in the Book of the Mahele as being in ‘Puāli Komohana,’ i.e., West Isthmus” (R.D. King in J.W. Coulter 1935 cited in Sterling 1998:3). R.D. King in J.W. Coulter 1935 cited in Sterling 1998:3) further states that Wailuku and Waikapū Ahupua‘a also were independent of any moku (district), and were referred to as Na Poko, with “...Na Poko in this case meaning a smaller division of land.” W. D. Alexander (1891 cited in Sterling 1998:63) stated that the ahupua‘a of Waihe‘e, Waiehu, Wailuku, and Waikapū were grouped into a district in modern times. R.D. King (in J.W. Coulter 1935 cited in Sterling 1998:3) explains, “...with reference to the ahupua of Waihe‘e, Waiehu, Wailuku, and Waikapu, on the map it was necessary to form a new district and call it Wailuku [because] Nawaiehu, ‘the four waters,’ [was] too cumbersome and ill understood.”

Previous Archaeological and Cultural Studies

Many previous archaeological projects have been conducted in the project region, and again the reader is referred to Dagher (2020) for more information. Of particular note are archaeological inventory surveys that were conducted within the current project area (Wilson and Dega 2005, Dega 2022). The earliest survey took place on 215.8 acres that include and surround the area proposed for the water tank construction (Wilson and Dega 2005). A total of seven historic-period archaeological sites were documented. These are:

- the Waihe‘e Ditch [State Inventory of Historic Places (SIHP) 50-50-04-5197];
- the Waikapu Ditch (SIHP 50-50-04-5493);
- a rock and mortar ditch, the name of which is unknown (SIHP 50-50-04-5729);
- an earthen ditch, the name of which is unknown (SIHP 50-50-04-5726);
- a reservoir that is the terminus of the Waikapu Ditch (SIHP 50-50-04-5727);
- a complex of erosion-control features for sugarcane fields (SIHP 50-50-04-5728); and
- the Old Waikapu Road, which was a dirt road used or hauling sugarcane (SIHP 50-50-04-5730).

More recently, an archaeological field inspection of the current project area was completed (Dega 2022) as a supplement to the earlier archaeological inventory survey (Wilson and Dega 2005). This recent field inspection consisted of a 100% pedestrian survey of the approximately 1.3-acre proposed

water storage tank project area (Dega 2022). No historic properties or traditional or historic cultural materials were identified.

A CIA was also completed for the Pu'unani Homestead Development, which is associated with the current project (Dagher 2020). The homestead is located approximately 0.8 km (0.5 mi.) to the east of the current project area. The water tank, which is the subject of this Addendum CIA, will be used for the homestead. Consultation for the original CIA included publishing a notice in the OHA newsletter *Ka Wai Ola*, as well as reaching out to 25 individuals. As a result of this effort, 12 individuals provided written responses, and two ethnographic interviews were conducted. The CIA found that:

...based on historical research and the above listed responses, it is reasonable to conclude that there is evidence of cultural practices related to Hawaiian rights related to agricultural pursuits, access to resources (i.e., water), and possibly other customary activities presently occurring in the vicinity of the proposed project area. (Dagher 2020:60)

Summary of Background Research

The project area is located in a storied place with a long and intense history of use. The abundance of water in Waikapū has been valued since pre-contact times, where streams were used to irrigate the many lo'i systems that supported a large population. The water was later used to feed the extensive cane fields of the historic era, and many of the ditches and other infrastructure of the sugarcane industry still remain. While a CIA has already been completed for the Pu'unani Homestead development (Dagher 2020), the importance of water in this region necessitates this Addendum CIA, which focuses on the addition of a proposed water tank for the homestead.

ETHNOGRAPHIC SURVEY

Not all information can be found in the archives, in textbooks, or at the library. Rather, it is through the stories, knowledge and experiences of our kama'āina and kūpuna, that hidden information is found. Through them we are able to better understand the past and plan for our future. With the goal to identify and understand the importance of, and potential impacts to, traditional Hawaiian and/or historic cultural resources and traditional cultural practices of the project area in Waikapū, ethnographic interviews were conducted with community members who are knowledgeable about the area.

Methods

Consultation for this Addendum CIA was conducted through a multi-phase process between January and April 2022. Guiding documents for this work include The Hawai'i Environmental Council's Guidelines for Assessing Cultural Impacts, A Bill for Environmental Impact Statements, Act 50 (State of Hawai'i). Personnel involved with this study include Windy McElroy, PhD, Principal Investigator of Keala Pono Archaeological Consulting and Cathleen Dagher, BA, Ethnographer.

A total of 25 individuals identified as knowledgeable about traditional cultural resources and practices of Waikapū were contacted for the original CIA (Dagher 2020). These same individuals were contacted for the addendum CIA consultation, and two participated in interviews (Table 1). Interviews were conducted via telephone and were recorded using a Sony digital recorder. During the interviews, each person was provided with a map identifying the project area, the Agreement to Participate (Appendix A), and Consent Form (Appendix B), and were briefed on the purpose of the CIA. Research categories were addressed in the form of open questions which allowed the interviewee to answer in the manner that they are most comfortable. Follow-up questions were asked based on the interviewee's responses or to clarify what was said.

Transcription was completed by listening to recordings of the interviews and typing what was said. A copy of the edited transcript was sent to each interviewee for review, along with the Transcript Release Form (Appendix C). The Transcript Release Form provided space for clarifications, corrections, additions, or deletions to the transcript, as well as an opportunity to address any objections to the release of the document. When the forms were returned, transcripts were corrected to reflect any changes made by the interviewee.

All of the 25 potential interviewees were contacted, resulting in the two interviews and the receipt of written responses via email from several individuals (see Table 1). The ethnographic analysis process consisted of examining each transcript and organizing information into research themes, or categories. Research topics include connections to the project lands, Waikapū history, the natural environment, archaeological sites and cultural practices, change through time, and concerns and recommendations for the project. Edited transcripts are presented in Appendices D and E.

Interviewee Background

The following section presents background information for each interviewee, in their own words. This includes information on the interviewee's 'ohana and where the interviewee was born and raised. The interviewees are Crystal Smythe and Kaniloa Kamaunu.

Table 1. (continued)

Name	Affiliation	Method of Contact	Results of Contact	Concerns, Comments, Recommendations
Chris "Ikaika" Nakahashi	Cultural Historian, SHPD	E-mail	No reply.	See original CIA (Dagher 2020).
Hökūiao Pellegrino	Cultural practitioner; cultural and lineal descendant of Waikapū and Wailuku; President, Hui o Nā Wai 'Ehā; Sustainability and 'Āina-Based Learning Designer and Facilitator, Kamehameha Schools Maui	E-mail	Declined additional interview.	See original CIA (Dagher 2020). Also see original CIA (Dagher 2020).
Walette Pellegrino	Hökūiao Pellegrino's mother; long-time Waikapū resident; Waikapū Community Association	E-mail	Emailed response.	Replied that she would work with the WCA board. Noted old camps in the area. Also see original CIA (Dagher 2020).
Andrew "Kealana" Phillips	Burial Sites Specialist, SHPD	E-mail	No reply.	See original CIA (Dagher 2020).
Travis Polido	President Waikapū Community Association; life-long Waikapū resident	E-mail	No reply.	None received.
Ki'ope Raymond	Former University of Hawai'i Maui College Hawaiian Language faculty, cultural practitioner	E-mail	Declined interview.	See original CIA (Dagher 2020).
Wally Rogers	Long-time Waikapū resident; 'ohana has lived in Waikapū for several generations; father started the Rogers Ranch and pig farm in Waikapū	US Postal Service	No reply.	None received.
Thelma Shimaoka	Community Outreach Coordinator, OHA	US Postal Service	No reply.	None received.
Crystal Smythe	Life-long Waikapū resident	E-mail	Interview completed.	See Topical Breakouts section of this report. Also see original CIA (Dagher 2020).
Clayton Suzuki	Worked for Wailuku Sugar Company and now for the Wailuku Water Company	E-mail	No reply.	None received
Roger Yamaoka	'Ohana from Waikapū; father was a long-time resident and owned a pig farm near the Vida 'Ohana in Waikapū	E-mail	No reply.	None received.

Table 1. List of Individuals Contacted

Name	Affiliation	Method of Contact	Results of Contact	Concerns, Comments, Recommendations
Foster Ampong	Lineal and cultural descendant of Wailuku Ahupua'a and Moku	E-mail	Declined additional interview.	See original CIA (Dagher 2020).
Joyclynn Costa	Cultural practitioner; Hämākualoa Representative, Aha Moku O Maui	E-mail	Declined interview.	See original CIA (Dagher 2020).
Rose Duey	Cultural practitioner; long-time Waikapū resident	E-mail	No reply.	None received.
Blossom Feiteira	Maui Moku Council	E-mail	Declined interview.	See original CIA (Dagher 2020).
Nick Harders	Life-long Waikapū resident	E-mail	Declined interview.	Noted unfamiliarity with cultural/historical information for this specific area but mentioned likelihood of lo'i kalo or other agriculture there. Also see original CIA (Dagher 2020).
Hokulani Holt-Padilla	Cultural practitioner; Kumu Hula; Director, Ka Hikina O Ka Lā Hawai'i Papa o ke Ao, University of Hawai'i Maui College	E-mail	Declined interview.	None received.
Clyde Kahalehau	Wailuku Representative, Aha Moku O Maui	E-mail	No reply.	None received.
Johanna Kamaunu	Wailuku Representative, Maui/Lāna'i Islands Burial Council	E-mail	Initially agreed to interview but unable to schedule.	None received.
Kaniloa Kamaunu	Lineal descendant and kuleana heir of Waihe'e; Aha Moku O Maui, Wailuku District	E-mail	Interview completed.	See Topical Breakouts section of this report. Also see original CIA (Dagher 2020).
Ke'eaumoku Kapu	CEO, Aha Moku O Maui	E-mail	Declined interview.	Consult with Clyde Kahalehau or his kako'o Kaniloa Kamaunu or their burial committee and genealogist rep Pua Marciel Basbas.
Kai Markell	Compliance Manager, OHA	US Postal Service	No reply.	None received.
'Iliahi McLean	Life-long Waikapū resident	E-mail	No reply.	None received.
Clifford Nae'ole	Cultural Advisor, Ritz Carlton, Kapalua	US Postal Service	No reply.	None received.

Crystal Smythe

John Minamina Brown, my tutu on whose lands I reside today, was the pastor of Waikapū Protestant Church... Right there on Waiko Road. [My] uncles were the first conservation officers. You know, not paid conservation officers, but they were the ones who made sure the water ran, the trees grew healthy, cattle didn't get messed up in different places because they were also ranchers.

Kaniloa Kamaunu

I am actually from Waihe'e. I am actually a kuleana heir to the property I am in Waihe'e Valley. I am a lineal descendant of this area. I'm 59 years old. My mother is actually from Maui. My dad is from O'ahu. He's from Waimānalo. My grandparents are actually from – my grandmother's from this area and my grandfather is from 'Ulupalakua. My grandmother has ties to Hāna.

Topical Breakouts

The following sections are extended quotations from the interviews, organized by topic. Interviewees provided information on connections to the project lands, the history of Waikapū and adjacent lands, the natural environment, archaeological sites and cultural practices, and change through time. They also shared their concerns and recommendations for the proposed DHHL Pu'unani Homestead Water Storage Tank,

Connections to Waikapū

I pretty much grew up in the Wailuku area. And I am familiar with the area. [Kaniloa Kamaunu]

I know from...growing up on Maui. [Kaniloa Kamaunu]

[M]y family: Mikala Sylva and John Minamina Brown. They were here from the 1880s through the 1960s. [Crystal Smythe]

Now, it comes down to the last person standing or the last person who knows. I have five brothers and sisters, but, you know it's so ironic that I'm the only one here standing as the descendant, etcetera, etcetera. And, I'm still here, again, on our Royal Patent. [Crystal Smythe]

I[M]y tutu man, the pastor at the church was also the founder – he was a Boy Scout leader. So, he opened up Kepani Wai Park, in 'Iao, as a Boy Scout project. [Crystal Smythe]

For me, as far as handed down in olis and chants, I would also recommend Auntie Hōkūlani Padilla. They were our teachers growing up, you know, as far as the ancient name places, the accuracy of the districts, mokus. A lot of my teaching came from Auntie Hōkūlani, and Auntie Pua Kanahele was here at the college back in the '80s. [Crystal Smythe]

History of Waikapū and Adjacent Lands

Well, we do have Kingdom Laws that are still on the books that prevail over our lands – the lands of Hawai'i. And so, I would like that to be honored as, you know, the foundation of this conversation. [Crystal Smythe]

That when I come to these discussions or conversations or any kind of discernment, I come from the kānāwai aupuni e u'i ē. And what the kānāwai aupuni e u'i ē means is that for me, in discussion of these items, that the Kingdom Laws prevail upon the lands. And I am just going to leave that disclosure right there. [Crystal Smythe]

Every Kingdom Law that still abides on the books today is what I am speaking of, yes. But, mostly I said specifically "upon the lands." [Crystal Smythe]

I know that it's in Nā Wai 'Ehā... and I know that historically our people lived in those areas and occupied those areas [Kaniloa Kamaunu]

I know there is a cultural history. I mean this whole area has, I mean because we're in Nā Wai 'Ehā which is the biggest... it was the mainstay of Kahekili. That's where...his stronghold was in these areas... I know these areas did have people living in them...for over a hundred years. So these areas were in the days of our people because these were the main areas you know for Maui. [Kaniloa Kamaunu]

[Kahekili's] stronghold was in Wailuku. That's what they mention. And that is why they came that way because Kalani'ōpu'u wanted to get to it says, "the sweet waters of Wailuku." And so which you know, anywhere Waikapū has an extreme sort of Wailuku and then sort of the other two which one of them might have been. Yeah, his stronghold was in Wailuku area. That's where they were coming to do battle with him. [Kaniloa Kamaunu]

I know for like for that area, it was an important battle site as far as strategic...And the area has a history of being an area where Kahekili would direct his battles. [Kaniloa Kamaunu]

...[R]ight in the area where actually the park is – not site specific, but that area like I was saying...that area is known for Kahekili to be able direct his troops when he fought battles...One of the battles – and there's several battles in that area. One of them that I am familiar with is Kakanilu'a. Which is basically pretty much a massacre of those warriors that came from the Big Island...a lot of people actually died in that battle. But that is a little further down, but that area... that particular area where the park is there is a stone – I don't know if that's where it originally stood – but there is a stone there that they actually used to stand on to see the battle, as well as direct the warriors as they fought. [Kaniloa Kamaunu]

... [T]hat stone still exists and if you go up to that park...just off the main road at the entrance to that park. It's right on the very top of it. I think they moved it from its original site, I'm not sure, but it's still there. And the reason it's still there is because of the significance of that stone. [Kaniloa Kamaunu]

Yeah. And they used colored flags to signal to the warriors that were down how to change and how to move. So, they'd take the colored flags and then they had other people that were posted where they could be seen and where they could see the person giving them the directions. From what I understand, from that story, that's how they were able to defeat the warriors from the Big Island, which is under Kalani'ōpu'u, in 1776. [Kaniloa Kamaunu]

That was just before Captain Cook came to Hawai'i. That battle happened just before he came to Hawai'i. And so, it was a significant battle because...it was really high, it was in the thousands – people that actually died in that skirmish. [Kaniloa Kamaunu]

It's between Kalani'ōpu'u who's the brother-in-law of Kahekili. And he comes to take over Maui. And so, when he comes, he brings, they describe it as an armada of ships to come 'cause they were basically gonna take over Maui and they were gonna take over all of the people here. So, as they were traveling from the Big Island, they came from the east and they came up from the south. So, what they did was, they came to Hāna-side and they did battles and then they came on and they were coming up towards the Mākena/Honua'ula area and they came all the way up to Mā'alaea where they...were actually raiding villages as they were coming. [Kaniloa Kamaunu]

And then they landed in Mā'alaea and then they went into the dunes to meet Kahekili. And basically they were fighting in the sand dunes, and so they were fighting uphill – an uphill battle for Kalani'ōpu'u. And it turned out to be going uphill – and they were actually pushing the warriors of Maui back. But that was part of the plan. 'Cause the plan was to

lead his troops into [inaudible] and as they fought up and then they were going to have to come back down and they got into that kinda like a valley. Basically what happens is Kahekili has his nephew from O'ahu that comes from behind and basically cuts them off and traps them in that valley or depression. And basically, they just slaughter them 'cause there was no way for them to leave. And I think they left one or two people to tell the story, to report back. [Kaniloa Kamaunu]

Yeah. So, [inaudible] was streams [inaudible] you know with soldiers and their spears and their you know their armament, capes, the caps. And they were left, they were never buried. They were actually left to rot on the sand. That was a warning. That was a warning to anyone who came; the same thing would happen to them. So, that's why a lot of the artifacts particularly...they were above ground. So they used to have tourists in the '20s, '40s, they used to have tourists to the sand dunes and people would take the helmets, the capes, the spears. But the main thing they would take would be the heads. The heads were I think were [inaudible] visitors. And so a lot of the heads would be taken. They took the skulls...[Kaniloa Kamaunu]

The Natural Environment

But, so you understand also, specifically myself and my grandma before me have been in a water war with the corporate ranchers. We do have ongoing appeals to the stream flow here at Waikapū, which some of the ditches do go across the foothills of Kahālāwai. Now whether that immediately impacts the surface water tank that they are proposing, I'm not sure, but I just want that to be known – that we have an ongoing water battle where, again, as Kingdom Law prevails, taro farmers have the superior rights to the water, and then the farmers, and then the homes, etcetera, etcetera. [Crystal Smythe]

...I just want to emphasize the natural resource management because it is right at that conservation forest line. And you know, we are talking about the big global droughts. And the importance of the forest line. So, again, I just want to reiterate the natural resources management in that vicinity. [Crystal Smythe]

It might not be right on it, but in conjunction as far as drawing clouds, drawing water, tree line, etcetera [inaudible] at best. [Crystal Smythe]

Oh and then, again, that is something I would defer back to Hōkūāo [laughs]. But then, of course there are other...now we can reach out to the College because they are more specific as far as territory – where they're finding these resources. And some of them have started to...say for instance when they didn't have enough to make kapa to wrap the iwi in, you know they didn't have enough of the plant to pound kapa so that the iwi could be properly wrapped. [Crystal Smythe]

But that area also had a lot of water. [Kaniloa Kamaunu]

Archaeological Sites and Cultural Practices

And then that also would include, if I'm not mistaken, any heiau. But, again, because we used it for ranching, it's highly unlikely – you know what I'm saying. We would have made mention of it. In other words, the Hawaiian Church was there and my grandfather took leadership or stewardship of that Hawaiian Church, I have a feeling if there was a heiau there, he would also take leadership of that. And I think that's why he went over to 'Āo and opened up the Boy Scouts. Because that really is where the sacred temples were. [Crystal Smythe]

Waikapū Protestant Church, which is now on the Hawai'i State Register of Historic Places. Right there on Waiko Road. [Crystal Smythe]

And so there was burials there when the Wailuku Church sold it. That was pre-Burial Council. So, of course those new cottages are built on the cemetery. [Crystal Smythe]

So just for practices, some just want to do ceremonial, some just...I think you just have to be open, respectful to all. But, do what's right for most. [Crystal Smythe]

So, what they did was they went to these certain places where they know had the good...oh gosh, I don't want to say mamaki...Wauke...So, like Lisa, she's a professor there, right? At the college, Raymond. So, she'll take the students and they will go do planting. You know what I'm saying? They would reforest the good ones – the good sites. So, again, I want to defer that back to the college. As far as those actual practitioners and what they deem, you know...because I know they're doing a lot of that. [Crystal Smythe]

So, I guess when they do the – 'cause they're gonna have to do a lot of digging to put in the pipes and to put in the electrical and stuff like that and the sewer lines. I guess our thing is as far as the archaeological is concerned but because our...the iwi...I know a lot of these places... suppose they run into any...I know below the highway we have a problem down there. Um and above the main highway...As far as cultural practices um I'm not familiar. That doesn't mean that there isn't any. I don't want to be quoted to say that there is not. [Kaniloa Kamaunu]

I've done pules there. I've done the cultural practices. You know and participated in those things. As far as the lineal and to that area having that generational knowledge, I really don't. I know growing up there was plantation...and I know that historically our people lived in those areas and occupied those areas. And...so for me, archaeology is important; how they do the archaeology, what they find. [Kaniloa Kamaunu]

That is for myself. I want to make that clear. As far as my knowledge, it is not my area. Particularly, that there are other people that are lineal descendants over that I would hope that DHHL goes and talks to... you know, might've talked to them: Hōkūāo Pellegrino and Crystal Smythe. [Kaniloa Kamaunu]

They are actually lineal descendants from that area. You know, because... practices change depending on the area. So, even though we are the same moku or the same district, but you know, families have different practices – doesn't always share with everybody. And then you have the general practices that are done by, you know, everyone. [Kaniloa Kamaunu]

[A]ctually, I know there are other groups that have been doing their practices in the area of the moku that includes those areas. And I don't know all the practices...[Kaniloa Kamaunu]

Change Through Time

[G]rowing up, it was, you know of course plantation fields. That's what it was. [Kaniloa Kamaunu]

And so for me, the sugarcane was nice. I mean, and I enjoyed – I didn't enjoy them burning it – but I did enjoy burning it – they'd burn it right by my house. But, I grew up with sugarcane burning...and then it was fun to watch the big fires. You know, I mean it was fun from the plantation times. Back then, we could roam wherever we wanted to. I mean we went all over the place. There was no place we couldn't go. The plantation really didn't stop you from...because you know, you couldn't really do anything to the sugarcane...you couldn't damage it unless you burned it. But, otherwise...there's no other way to damage it. We used to go into a lot of the ditches that were made we would play in...We would ride the flumes. You know what I mean, all that kind of kid stuff that kids do, but you shouldn't be doing. [Kaniloa Kamaunu]

So, you know to be sustainable one needs to be able to have a sense that they can actually stay there and if anything support themselves without any type of outside influence. You know, people today have lost that capability and especially when there isn't land to do that...But say, you could have a small, little vegetable garden. But, how long is that going to last you if things...? You know, are you going to shut down again 'cause the pandemic

numbers rise up – what, different variant? You know, these are things people are starting to look at...water resource, you know, and how you gonna support your family. So, yeah, I mean, it's gonna change. It's gonna change...Yeah, so I think with the changes anywhere it's gonna be hard. The impacts are going to be great because they lose our farmlands. We lose everything we could have grown for ourself. And actually have water availability...to be able to grow stuff. [Kaniloa Kamaunu]

Oh, just on my road alone, we live on the private road 'cause we live off the grid in Waikapū Valley. Just in the last five years there's three new owners on this road. Where for my whole life long there were six of us. You know, six families. [Crystal Smythe]

And all of a sudden there's three new families. That, you know, the people died – the old folks died and the kids didn't want to come home take care of the place. And so, that's been interesting. [Crystal Smythe]

So, they did like a skeleton refurb...they couldn't change the size of the house or they just restored it with new wood, upgraded stuff, and moved themselves in, started farming taro. The other gentleman just opened up a nice big shop. You know, different people from different places – not just off-islanders, two local kids and one gentleman retired from I think West Coast or something like that. But, because they're new and we've been in this water fight, they don't have a clear appreciation or the struggles of the water and it's just not there to be pumped out for their whatever...[Crystal Smythe]

You know, I've done 30 summers of Hawaiian immersion program up here where the kids stay with us and we always took them to walk on the 'auwai, you know the waterline, to show them it ends up at the golf course. It's totally wrong. [Crystal Smythe]

Concerns and Recommendations

So, when we come across these types of things where you're now pitting homes against farms, we have to come from the understanding that they go hand in hand. So, if... however you want to publicly...you know, the public's perception of that surface water tank. For me, I would think that... and if culturals do prevail, and again the laws of the kalo farmers, you want to make sure that you are not having Hawaiians go against Hawaiians. That's what I would not like to see. You know the farmers against having a home, etcetera. If you have the understanding, then planning that they go hand in hand. [Crystal Smythe]

[W]e have those ongoing appeals people should be aware that even though it is surface water, we also are on surface water, except ours isn't in a tank. It's in a stream...And like I said, I don't really know how that ties in because we can't really predict the future, but we should just be aware of what's in our surroundings. And be even more mindful that way. [Crystal Smythe]

And then lastly, of course, nobody wants to talk about it, but we have to because it's a fairly new thing. Like I said, a lot of stuff was done pre-Burial Council. But now we have the iwi and every little stone unturned. I know it's evolving. The statutes are fairly new – 20 years, if that. You know, NAGPRA. And now we're in judiciary where... we don't want it to get there, as far as Waikapū...So, smaller projects like this, if we can set a tone or set a precedence of how we want to treat it then, it's easier for...others when they come upon mishaps. [Crystal Smythe]

Because you know their plan is to develop mauka until it's pretty much decimated with homes. And you know, with this project I have no problem because, our people. But there are other projects that are coming up in that area and it's just gonna be...As you can see from your 2013 map, Google map, you can see how busy it is already. So, while many of those areas are developed [inaudible] other subdivisions came in. And so with...the shopping center that is down there and now the light industrial area. [Kaniloa Kamaunu]

[O]nce you put anything in... 'cause you're gonna...the water tank is one thing...Right now, right now it's already a battle because everybody is claiming private property. You know, so there's a battle to be able to go into certain areas. Some are areas that we're negotiating to go do a cultural practice is in danger, too. Private property owners don't want people going in there. So, there's a lot of as far as how's that gonna work. How's that going to be allowed. In some places are allowing you to walk in. But those things are still being worked out. [Kaniloa Kamaunu]

Because I can see it's going to block off areas. It's going to change areas. Grading is gonna change other things. So, it definitely will have an impact on anyone that culturally wants to do their protocol. It's going to have an impact. I think it's going to have impact just on...aesthetics, you know I mean just the way it is now. From the part of the aesthetics, subdivisions don't make aesthetics look better. [Kaniloa Kamaunu]

Yeah, I mean, the thing is, part of Hawaiian Homes is they are supposed to be able to farm and I don't know how they're going to be able to be there if they're not allowed 'cause there's houses, But, I mean originally, the original thing with Hawaiian Homes was: one, to get the people back on their lands; and two, to help them recuperate their cultural practices which is being able to be self-sufficient – because sustainable. And I don't know how this area basically does that – fulfill that mandate from their Hawaiian Homes...fulfilling their obligations to the kanaka as far as being able to be sustainable. You know, so yeah you know what I mean, once you dig it up and...people are going to have to start realizing – people don't realize it now with the pandemic. You know, we're just an island and people are just coming to realize that. [Kaniloa Kamaunu]

...I can see from DHHL their purpose is to fulfill that mandate – the federal mandate to be able...to have our people have homes. But the rest...any other type of construction the planning has to bear in mind that it's not only about turning a profit, but how does it support the changes...I guess the effect on resources. Because we just had this discussion when you start to put up asphalt and you start putting cement...the problem with the water is it's supposed to have a natural recharge. And the aquifers lose that capability of the natural recharge because the ground is covered by asphalt. And we know as for the cement what happens with the water is it basically just sits there and get dried out. You know, it doesn't percolate down to the aquifer, which then decreases the recharge for the aquifer, which then depletes the amount of fresh water that's in the aquifer. So, I think in 2009...the USDA did a study and the study was reflecting that the freshwater lens, 'cause there's a lens, yeah? [Kaniloa Kamaunu]

And so, the freshwater lens here is really thin and so we're at the verge...See like before, you get the plantations you get the fields, so there's an artificial recharge. Even though the plantations were taking 59 billion gallons a day to water the fields, part of the field was recharging back into the aquifer. But, that still decrease because the water flows through the main streams and wherever the tributaries were, it naturally will go into now where we receive the water. And so, it decrease even so with the artificial recharge. Now, the thing is they're not gonna have any recharge unless...the thing I've been trying to tell the County and State you allow these...you know you guys are worried about making your money from construction, but you're not worried about how to replenish the resource. Because they like to use, "Oh we have a new water source." And we only have one aquifer. So, the thing is, you cannot have another resource. It comes from the same resource. And if there's no recharge, natural recharge or artificial recharge, then all you are doing is taking out and you're not replenishing. [Kaniloa Kamaunu]

All of the wells they are developing, which is what DHHL is going to do, is basically take it direct from the source, which then even lessens the fresh water then. Which just endangers... 'cause once that's done no matter who you are, you can't live here no more. [Kaniloa Kamaunu]

'Cause there's not enough stream flow to provide for all these houses. [Kaniloa Kamaunu]

Summary of Ethnographic Survey

Both interviewees have ancestral ties to lands within Wailuku District. One of the interviewees is a lineal descendant to land in Waikapū Ahupua'a and the other is a lineal descendant to land in Waihe'e Ahupua'a and both interviewees are currently living on their respective ancestral land. Through these lineal ties and as life-long residents and students of the area, both interviewees are extremely familiar with Waikapū and the surrounding vicinity.

The interviews brought to light the cultural and historical significance of the area. Waikapū is located within the well-watered, traditional land division of Nā Wai 'Ehā, which at one time, "was the largest continuous area of wet-taro cultivation in the Islands" (Handy et al. 1991:496). The area was the stronghold of Kahekili, a ruling chief of Maui, whose rule also extended to the islands of Moloka'i and O'ahu for a time. Kahekili was said to have been a fearsome warrior and an excellent battle strategist who directed battles being fought on the isthmus below, while standing on a stone on the eastern-facing slopes of the West Maui Mountains, in Waikapū.

Traditional cultural practices currently conducted in Waikapū and the surrounding area that were identified by the interviewees include taro farming, the re-planting/reforestation of diminishing cultural resources used in cultural practices, and the conducting of pule. Other practitioners carry out traditional activities in the area, but these activities were not specifically identified. Both interviewees identified water as an important resource, and acknowledged that traditional practices cannot be conducted without sufficient water, and that water as an integral component of traditional lifeways. The significance of water was a consistent thread throughout both of the interviews. One of the interviewees noted potential impacts on surface water and the other interviewee mentioned potential effects to the aquifer. In addition, both interviewees acknowledged that iwi kūpuna were likely to be encountered in the vicinity, as people have lived in the area since traditional times.

Currently, both of the interviewees are actively engaged in efforts to protect natural and cultural resources through legal activities and by working with community organizations. Although the interviewees have these concerns, neither is opposed to the proposed DHHL Pu'unani Homestead Residential Development or the associated water storage tank. The following project-specific concerns were mentioned by interviewees:

- the project might impact the surface water supply, the Maui aquifer, native plants, and iwi kūpuna;
- access to cultural resources may be affected;
- currently conducted traditional practices, including taro cultivation may be affected;
- the quality of life may change, through an increase of traffic resulting from an increase in population;
- the project might affect access to areas where cultural activities are currently practiced; and
- the aesthetics of the area could be impacted.

SUMMARY AND RECOMMENDATIONS

Waikapū was a land rich in natural and cultural resources that supported a large population. It was an extremely productive agricultural area, with extensive lo'i systems. There are many mo'olelo of this area featuring significant Hawaiian individuals and events. Kahekili, the ruling chief of Maui, is said to have based his stronghold in Wailuku District and directed battles from the uplands of Waikapū. In addition, there are many oli that describe the natural beauty, the significant land formations, and place names in the area.

In the historic era, sugarcane fields replaced traditional taro lo'i. Large tracts of land were acquired for what had become the extremely lucrative sugar industry. However, obtaining sufficient water for the commercial production of sugarcane was a prominent issue, and water from Waikapū Stream was used to irrigate large expanses of sugarcane lands.

Cultural Resources, Practices, and Beliefs Identified

Archival research and ethnographic interviews compiled for the current study reveal that Waikapū Ahupua'a was not only an area rich with traditional and customary practices during the pre-contact and early-historic periods, it was renowned for its extensive lo'i fields. Taro farming, the re-planting/reforestation of diminishing cultural resources used in cultural practices, and the conducting of pule were identified as currently conducted traditional cultural practices. Water (i.e., surface water and the Maui aquifer) and iwi kūpuna were the two primary cultural resources identified by interviewees.

Potential Effects of the Proposed Project

The proposed project may impact the following traditional cultural practices and cultural resources:

- surface water supply, the Maui aquifer, native plants, and iwi kūpuna;
- access to cultural resources;
- currently conducted traditional practices, including taro cultivation;
- the quality of life through an increase of traffic resulting from an increase in population;
- access to areas where cultural activities are currently practiced; and
- the aesthetics of the area.

Confidential Information Withheld

During the course of researching the present report and conducting the ethnographic survey program, no information was withheld in confidentiality.

Conflicting Information

No conflicting information was obvious in analyzing the ethnographic interviews. On the contrary, a number of themes were repeated and information was generally confirmed by both interviewees. The interviewees both emphasized the cultural significance of the area.

Recommendations/Mitigations

Cultural resources and ongoing cultural practices have been identified in the vicinity of the proposed project area. Therefore, based on interviewees concerns, mitigation measures should be taken to ensure:

- access to cultural resources to remain open;
- access to areas where cultural practices are currently conducted to remain open;

- cultural resources are protected and replenished; and
- the Kingdom Laws prevail upon the lands.

Summary and Conclusion

In sum, background research and oral history interviews identified several cultural resources in the project vicinity. While an archaeological field inspection of the project area produced no findings (Dega 2022), an archaeological inventory survey of the larger area (Wilson and Dega 2005) and the additional interviews conducted during the current consultation process did identify archaeological resources. Because of this, a program of archaeological monitoring is recommended during all construction-related ground-altering activities at the water tank area, with special care to look out for buried iwi kūpuna.

Water is critical in Waikapū, and the protection and replenishment of this resource should be an important consideration in project plans. The community should be kept informed on the water tank project, and their concerns and recommendations should be considered during all phases of the proposed work. The area is clearly significant in both the past and present.

GLOSSARY

‘ahupua‘a	Traditional Hawaiian land division usually extending from the uplands to the sea.
ali‘i	Chief, chiefess, monarch.
aloha	Love, affection, compassion, sympathy, kindness, greeting.
‘āpana	Piece, slice, section, part, land segment, lot, district.
‘auwai	Ditch, often for irrigated agriculture.
heiau	Place of worship and ritual in traditional Hawai‘i.
‘ili	Traditional land division, usually a subdivision of an ahupua‘a.
kāko‘o	To support, bind, favor, aid, or uphold.
kalo	The Polynesian-introduced <i>Colocasia esculenta</i> , or taro, the staple of the traditional Hawaiian diet.
kama‘āina	Native-born.
kapa	Tapa cloth.
konohiki	The overseer of an ahupua‘a ranked below a chief; land or fishing rights under control of the konohiki; such rights are sometimes called konohiki rights.
kuleana	Right, title, property, portion, responsibility, jurisdiction, authority, interest, claim, ownership.
kumu	Teacher.
kupuna	Grandparent, ancestor; kūpuna is the plural form.
lo‘i, lo‘i kalo	An irrigated terrace or set of terraces for the cultivation of taro.
Māhele	The 1848 division of land.
makai	Toward the sea.
mālama	To care for, preserve, or protect.
mana‘o	Thoughts, opinions, ideas.
mauka	Inland, upland, toward the mountain.
mele	Song, chant, or poem.
mō‘ī	King.
mo‘olelo	A story, myth, history, tradition, legend, or record.
‘ohana	Family.
oli	Chant.
pre-contact	Prior to A.D. 1778 and the first written records of the Hawaiian Islands made by Captain James Cook and his crew.
pule	prayer, magic spell, incantation, blessing.
sugarcane	The Polynesian-introduced <i>Saccharum officinarum</i> , or kō, a large grass traditionally used as a sweetener and for black dye.
tūtū	Grandmother or grandfather
wauke	The paper mulberry, or <i>Broussonetia papyrifera</i> , which was made into tapa cloth in traditional Hawai‘i.

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APPENDIX A: AGREEMENT TO PARTICIPATE

**Agreement to Participate in the Cultural Impact Assessment for the
DHHL Pu'unani Homestead Water Storage Tank
Cathleen Dagher, Ethnographer, Keala Pono Archaeological Consulting**

You are invited to participate in a Cultural Impact Assessment (CIA) for the Pu'unani Homestead Water Storage Tank in Waikapū Ahupua'a, Wailuku District, on Maui (herein referred to as "the Project"). The Assessment is being conducted by Keala Pono Archaeological Consulting (Keala Pono), a cultural resource management firm, at the Dowling Company, Inc., on the behalf of the Department of Hawaiian Homelands (DHHL). The ethnographer will explain the purpose of the Assessment, the procedures that will be followed, and the potential benefits and risks of participating. A brief description of the Assessment is written below. Feel free to ask the ethnographer questions if the procedures need further clarification. If you decide to participate, please sign the attached Consent Form. A copy of this form will be provided for you to keep.

Description of the Project

This CIA is being conducted to collect information about the Project in Waikapū, through interviews with individuals who are knowledgeable about this area, and/or about information including (but not limited to) cultural practices and beliefs, mo'olelo, mele, or oli associated with this area. The goal of this Assessment is to identify and understand the importance of any traditional Hawaiian and/or historic cultural resources, or traditional cultural practices within the Project. This Assessment will also attempt to identify any effects that the proposed development may have on cultural resources present, or once present within the Project area.

Procedures

After agreeing to participate in the Assessment and signing the Consent Form, the ethnographer will digitally record your interview and it may be transcribed in part or in full. The transcript may be sent to you for editing and final approval. Data from the interview will be used as part of the ethno-historical report for this project and transcripts may be included in part or in full as an appendix to the report. The ethnographer may take notes and photographs and ask you to spell out names or unfamiliar words.

Discomforts and Risks

Possible risks and/or discomforts resulting from participation in this Assessment may include, but are not limited to the following: being interviewed and recorded; having to speak loudly for the recorder; providing information for reports which may be used in the future as a public reference; your uncompensated dedication of time; possible misunderstanding in the transcribing of information; loss of privacy; and worry that your comments may not be understood in the same way you understand them. It is not possible to identify all potential risks, although reasonable safeguards have been taken to minimize them.

Benefits

This Assessment will give you the opportunity to express your thoughts and opinions and share your knowledge, which will be considered, shared, and documented for future generations. Your sharing of knowledge may be instrumental in the preservation of cultural resources, practices, and information.

Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected upon request. You may request, for example, that your name and/or sex not be mentioned in the Assessment material, such as in written notes, on tape, and in reports; or you may request that some of the information you provide remain off-the-record and not be recorded in any way. To ensure protection of your privacy, confidentiality and/or anonymity, you should immediately inform the ethnographer of your requests. The ethnographer will ask you to specify the method of protection and note it on the attached Consent Form.

Refusal/Withdrawal

At any time during the interview process, you may choose to not participate any further and ask the ethnographer for the tape and/or notes. If the transcription of your interview is to be included in the report, you will be given an opportunity to review your transcript, and to revise or delete any part of the interview.

APPENDIX B: CONSENT FORM

CONSENT FORM

I, _____, am a participant in the Cultural Impact Assessment for the Pu'unani Homestead Water Storage Tank in Waikapū Ahupua'a, Wailuku District, on Maui (herein referred to as "the Project"). I understand that the purpose of the Assessment is to conduct oral history interviews with individuals knowledgeable about the Project and the surrounding area of Waikapū. I understand that Keala Pono Archaeological Consulting and/or Dowling Company will retain the product of my participation (digital recording, transcripts of interviews, etc.) as part of their permanent collection and that the materials may be used for scholarly, educational, land management, and other purposes.

_____ I hereby grant to Keala Pono and Dowling Company ownership of the physical property delivered to the institution and the right to use the property that is the product of my participation (e.g., my interview, photographs, and written materials) as stated above. By giving permission, I understand that I do not give up any copyright or performance rights that I may hold.

_____ I also grant to Keala Pono and Dowling Company my consent for any photographs provided by me or taken of me in the course of my participation in the Assessment to be used, published, and copied by Keala Pono and Dowling Company and its assignees in any medium for purposes of the Assessment.

_____ I agree that Keala Pono and Dowling Company may use my name, photographic image, biographical information, statements, and voice reproduction for this Assessment without further approval on my part.

_____ If transcriptions are to be included in the report, I understand that I will have the opportunity to review my transcripts to ensure that they accurately depict what I meant to convey. I also understand that if I do not return the revised transcripts after two weeks from the date of receipt, my signature below will indicate my release of information for the draft report, although I will still have the opportunity to make revisions during the draft review process.

By signing this permission form, I am acknowledging that I have been informed about the purpose of this Assessment, the procedure, how the data will be gathered, and how the data will be analyzed. I understand that my participation is strictly voluntary, and that I may withdraw from participation at any time without consequence.

Consultant Signature Date

Print Name Phone

Address

Thank you for participating in this valuable study.

APPENDIX C: TRANSCRIPT RELEASE

TRANSCRIPT RELEASE

I, _____, am a participant in the Cultural Impact Assessment for the Pu'unani Homestead Water Storage Tank in Waikapū Ahupua'a, Wailuku District, on Maui (herein referred to as "the Project") and was interviewed for the Assessment. I have reviewed the transcripts of the interview and agree that the transcript is complete and accurate except for those matters delineated below under the heading "CLARIFICATION, CORRECTIONS, ADDITIONS, DELETIONS."

I agree that Keala Pono Archaeological Consulting and/or Dowling Company may use and release my identity, biographical information, and other interview information, for the purpose of including such information in a report to be made public, subject to my specific objections, to release as set forth below under the heading "OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS."

CLARIFICATION, CORRECTIONS, ADDITIONS, DELETIONS:

OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS:

Participant Signature Date

Print Name Phone

Address

APPENDIX D: INTERVIEW WITH CRYSTAL SMYTHE

TALKING STORY WITH CRYSTAL SMYTHE (CS)

Ethnographer: Cathleen Dagher (CD)

Date: 3/23/2022

[CD and CS exchange greetings.]

CS: Oh, yes. I've been waiting for your call. Thank you for calling me.

CD: Thank you! Thank you for agreeing to talk to me.

[CD explains the purpose of the CIA and the consultation process.]

CS: I appreciate that.

CD: Then, I want to tell you that, well...First of all, I am calling you about the Pu'unani Water Tank that they are going to be putting in – it's associated with DHHL and they are going to be putting it in to support the DHHL Pu'unani residential subdivision.

CS: Okay. Yes, I have it here in front of me. Thank you for sending me those items.

[CD introduces the purpose of the CIA.]

CS: Alright.

CD: Alright... So, I am going to ask you some questions. I know that you're a descendant, but first, I was wondering if you would tell me your name, tell me where you grew up and, of course, your connection to the land.

CS: Okay. I can do that. But, listen, I would like to do, right off the top a disclosure of my own, as well.

CD: Okay.

CS: That when I come to these discussions or conversations or any kind of discernment, I come from the kānāwai aupuni e u'i ē. And what the kānāwai aupuni e u'i ē means is that for me, in discussion of these items, that the Kingdom Laws prevail upon the lands. And I am just going to leave that disclosure right there.

CD: Okay. Can you explain that?

CS: Well, we do have Kingdom Laws that are still on the books that prevail over our lands – the lands of Hawai'i. And so, I would like that to be honored as, you know, the foundation of this conversation.

CD: Okay. Do those laws pertain to ownership? Is that what you are referring to?

CS: Every Kingdom Law that still abides on the books today is what I am speaking of, yes. But, mostly I said specifically "upon the lands."

CD: Okay. Okay, thank you.

CS: Yeah. For sure. So, okay, I'll skip down to number 4, my family Mikala Sylva and John Minamina Brown. They were here from the 1880s through the 1960s. John Minamina Brown, my tutu on whose lands I reside today, was the pastor of Waikapū Protestant Church, which is now on the Hawai'i State Register of Historic Places. Right there on Waiko Road.

CD: Okay.

CS: And so there was burials there when the Wailuku Church sold it. That was pre-Burial Council. So, of course those new cottages are built on the cemetery. Just so you know. And, also again, being from the 1880s and 1960s, my uncles were the first conservation officers. You know, not paid conservation officers, but they were the ones who made sure the water ran, the trees grew healthy, cattle didn't get messed up in different places because they were also ranchers. So, that's my descendant connection.

CD: Okay.

CS: And, I'm still here, again, on our Royal Patent.

CD: That's great. That's really great.

CS: I guess I want to just brag a little [inaudible] Also my tutu man, the pastor at the church was also the founder – he was a Boy Scout leader. So, he opened up Kepani Wai Park, in 'Iao, as a Boy Scout project.

CD: Wow. That's pretty great!

CS: That's according to his obituary. So, you know. [laughs] If you can believe it. I wasn't alive. But, you know, I'm thinking historical documents for the park.

CD: Yeah. Your family has a nice long history in the area.

CS: Yes. We do. So, ever evolving. Now, it comes down to the last person standing or the last person who knows. I have five brothers and sisters, but, you know it's so ironic that I'm the only one here standing as the descendant, etcetera, etcetera. So, just want to be very careful about that, too, you know. That we are not trespassing against others' rights as we are begging for ours to be recognized.

CD: Ahh. Good point.

CS: So, the second thing for me, looking at your maps is the big water tank, yeah?

CD: Yes.

CS: And understanding that it is surface water. But, so you understand also, specifically myself and my grandma before me have been in a water war with the corporate ranchers. We do have ongoing appeals to the stream flow here at Waikapū, which some of the ditches do go across the foothills of Kahālāwai. Now whether that immediately impacts the surface water tank that they are proposing, I'm not sure, but I just want that to be known – that we have an ongoing water battle where, again, as Kingdom Law prevails, taro farmers have the superior rights to the water, and then the farmers, and then the homes, etcetera, etcetera. And we are...even though they are saying "Yes, it's on the books" they are not enforcing that here in Waikapū.

CD: I see.

CS: Okay? So there's that. So, when we come across these types of things where you're now pitting homes against farms, we have to come from the understanding that they go hand in hand. So, if... however you want to publicly...you know, the public's perception of that surface water tank. For me, I would think that ... and if culturals do prevail, and again the laws of the kalo farmers, you want to make sure that you are not having Hawaiians go against Hawaiians. That's what I would not like to see. You know the farmers against having a home, etcetera. If you have the understanding, then planning that they go hand in hand. I'm going to leave that right there, as well.

CD: Okay.

CS: Unless you have any other questions. That's all the notes I have.

CD: Oh, well, I guess number 5 would be about personal anecdotes, if you know any mo'olelo, mele, oli, significant place names. That kind of information would be helpful.

CS: Oh, okay. That's pretty detailed [laughs]. Okay, I thought about that, too, because I'm more aware of it right here where I sit on this Royal Patent, which is south of Waikapū Stream, in conjunction to your property - to the proposed site. So, I thought about that over there. Even though the church is up there, I was just going to give you a list of resources like Ulukau.org, Wahikina, or those more specific. For me, as far as handed down in olis and chants, I would also recommend Auntie Hōkūlani Padilla. They were our teachers growing up, you know, as far as the ancient name places, the accuracy of the districts, mokus. A lot of my teaching came from Auntie Hōkūlani, and Auntie Pua Kanahale was here at the college back in the '80s.

CD: Are they still around now?

CS: Yes, alive and well. They were arrested on the Mauna. They're teachers [laughs].

CD: Oh. Okay.

CS: They would be good resources or even the Maui Sites book. That's what I referenced.

CD: Oh, yeah. That's a great book.

CS: Yeah. But, there're other more...like I said, the Kumu Hulas who memorized the chants, etcetera.

CD: It's nicer when it comes from someone.

CS: I think when Auntie Pua was at Maui College, I have it somewhere, she did put together a book on the Maui oli place names of the places.

CD: Oh, is that right?

CS: It has about a hundred pages of different olis that describe different...like the foothills of Kahālāwai, etcetera. I would recommend that, too.

CD: Okay. I'll see if I can find it.

CS: Yeah. Now you can get a lot of stuff digitally. It's amazing.

CD: Yeah.

CS: There's no reason we shouldn't know when we ask the right questions.

CD: Right.

CS: Thank you.

CD: Yeah. Let's see. Okay. Well, over the years, in your years living there, how has that area changed?

CS: Oh, just on my road alone, we live on the private road 'cause we live off the grid in Waikapū Valley. Just in the last five years there's three new owners on this road. Where for my whole life long there were six of us. You know, six families.

CD: Wow.

CS: And all of a sudden there's three new families. That, you know, the people died - the old folks died and the kids didn't want to come home take care of the place. And so, that's been interesting.

CD: So, are they occupying...are they newly developing land or it's land that people previously lived on and they're moving out?

CS: Correct. So, they did like a skeleton refurb...they couldn't change the size of the house or they just restored it with new wood, upgraded stuff, and moved themselves in, started farming taro. The other gentleman just opened up a nice big shop. You know, different people from different places - not just off-islanders, two local kids and one gentleman retired from I think West Coast or something like that. But, because they're new and we've been in this water fight, they don't have a clear appreciation or the struggles of the water and it's just not there to be pumped out for their whatever. [in audible] Let's just put it that way. I mean, even the big new guy, Mr. Atherton, since he's come, he's been super nice. He's my immediate neighbor. You know, I've done 30 summers of Hawaiian immersion program up here where the kids stay with us and we always took them to walk on the 'auwai, you know the waterline, to show them it ends up at the golf course. It's totally wrong. But, Mr. Atherton, since he's been there's been a good neighbor. I have to say that.

CD: Well, that's good to know.

CS: Yeah.

CD: Yeah.

CS: Where I do have issues with the corporate rancher. So, there's a you know...

CD: Oh.

CS: Yeah. He's the one who's the defendant in the water fight is the corporate rancher.

CD: Oh, I see.

CS: Yeah.

CD: Okay. What about traditional sites? Do you know of any that are nearby. Well, nearby and also that are maybe in danger of being impacted if they put in that water tank?

CS: I'm sorry. I didn't understand the first part of your question.

CD: Oh. I'm sorry. I'm interested in knowing if there are any traditional sites in the area and then particularly that might be impacted – that are, you know, close to where they want to put in the water tank and that might be impacted.

CS: Yeah. Again, and the only thing I would think, and I still see there's a little bit of consistency there is we...my forefathers used it as ranching, grazing, and just to make sure that the forest line stayed the forest line and that the pipipi (cows) didn't trespass and damage the forest line. So, if anything, I think it's just ranching. And the one I think who would be more I think I'm sure you already spoke to Hōkūāo Pellegrino.

CD: Oh. Yeah. I have contacted Hōkūāo. He didn't choose to respond to this query. I did talk to him though about the DHHL residential subdivision.

CS: Yeah. And I know that he's slammed, like I said, because he's the president of our water hui. He's been working a lot of overtime trying to get our water back.

CD: Oh. I see.

CS: So, that's probably why he asked me to meet with you or talk with you, as well.

CD: Oh. I'm glad he did.

CS: But as for effect, you know, name places, I would go back to the Maui Sites.

CD: Okay.

CS: Oh no, traditional sites, yeah. And then that also would include, if I'm not mistaken, any heiau. But, again, because we used it for ranching, it's highly unlikely – you know what I'm saying. We would have made mention of it. In other words, the Hawaiian Church was there and my grandfather took leadership or stewardship of that Hawaiian Church, I have a feeling if there was a heiau there, he would also take leadership of that. And I think that's why he went over to 'Āao and opened up the Boy Scouts. Because that really is where the sacred temples were. Does that make sense?

CD: Yeah. I understand. Yeah.

CS: So, it's highly unlikely And just like I said, it's a personal feeling based on our family's story.

CD: Okay. Is there any mo'olelo about that area that you would like to share?

CS: No. Not really, but I just want to emphasize the natural resource management because it is right at that conservation forest line. And you know, we are talking about the big global droughts. And the importance of the forest line. So, again, I just want to reiterate the natural resources management in that vicinity.

CD: I need to ask where is that forest line in relationship to the project area. Is that it to the west?

CS: Yes.

CD: Okay.

CS: It might not be right on it, but in conjunction as far as drawing clouds, drawing water, tree line, etcetera.[inaudible] at best.

CD: I just wanted to get a perspective. Thank you.

CS: And then lastly, of course, nobody wants to talk about it, but we have to because it's a fairly new thing. Like I said, a lot of stuff was done pre-Burial Council. But now we have the iwi and every little stone unturned. I know it's evolving. The statutes are fairly new – 20 years, if that. You know, NAGPRA. And now we're in judiciary where...we don't want it to get there, as far as Waikapū. And you know, as far as we've discussed it here...the descendants...With other...we know Mr. Atherton's going to take a hit on that. So, smaller projects like this, if we can set a tone or set a precedence of how we want to treat it then, it's easier for, you know what I'm saying, others when they come upon mishaps.

CD: I see.

CS: So just for practices, some just want to do ceremonial, some just...I think you just have to be open, respectful to all. But, do what's right for most.

CD: Okay. So there are people that are practicing in that area currently. Is that correct.

CS: Is there someone what? I'm sorry.

CD: Oh, I'm sorry. Are traditional cultural practices still being conducted in the area, in the area of that water tank?

CS: Oh. I can't speak to that specifically because I do know more and more now. Well maybe not...it hasn't been specifically been adopted by say a non-profit organization or a hui who's starting to take care of natural resource management. In other words, a type of tree they're trying to reforest, etcetera. So, yeah. I would like to think that the Department of Land and Natural Resources would be a better outreach for that question.

CD: Okay.

CS: They would have to go and get permission to access there, so to speak. The practitioners, they wouldn't just go. You know what I'm saying? To practice that...yeah.

CD: So, do you think that the water tank is going to impact...well, would the water tank impact any cultural practices or cultural resources? That's my other question, too. Are there cultural resources, besides water, that are in that area that people might want to gather? Are there specific plants that people might be interested in for medicinal purposes or ceremonial, or...

CS: Oh and then, again, that is something I would defer back to Hōkūāo [laughs]. But then, of course there are other...now we can reach out to the College because they are more specific as far as territory – where they're finding these resources. And some of them have started to...say for instance when they didn't have enough to make kapa to wrap the iwi in, you know they didn't have enough of the plant to pound kapa so that the iwi could be properly wrapped.

CD: Yeah.

CS: So, what they did was they went to these certain places where they know had the good...oh gosh, I don't want to say mamaki...

CD: Wauke?

CS: Wauke! Thank you [laughs]! So, like Lisa, she's a professor there, right? At the college, Raymond. So, she'll take the students and they will go do planting. You know what I'm saying? They would reforest the good ones – the good sites. So, again, I want to defer that back to the college. As far as those actual practitioners and what they deem, you know...because I know they're doing a lot of that. Do you know Lisa Raymond?

CD: No.

CS: She's the head of the College of Botany or...anyway. Lisa Raymond she's married to Kī'ope Raymond.

CD: Oh, I know him, yeah.

CS: She's his wife. So, she brings a lot of the students up to the museum, Bailey House, to do outreach and research. I would, and you can tell her I referred you. I refer a lot of people to her when I feel like she can be a better, you know what I mean?

CD: Yeah.

CS: A better help.

CD: Alright. Thank you.

CS: Yeah.

CD: Well, as development continues, do you have any ideas on what's gonna lessen the impacts? Do you want to make any suggestions about the water whatever is important to you that you would like me to record?

CS: Well, for sure because like I said, we have those ongoing appeals people should be aware that even though it is surface water, we also are on surface water, except ours isn't in a tank. It's in a stream.

CD: Yeah.

CS: So...And like I said, I don't really know how that ties in because we can't really predict the future, but we should just be aware of what's in our surroundings.

CD: Yeah.

CS: And be even more mindful that way.

CD: Okay. And then, are you aware of any other cultural concerns the community might have related to cultural practices in that area?

CS: None at this time to my knowledge.

CD: Okay. Water is the really big issue then.

CS: And the iwi.

CD: And the iwi. Okay. Well, I'd like to know some of those kūpuna that you recommended that I talk to. I didn't catch all of their names.

CS: Okay. I think I'll email it so that the spelling's right.

CD: Yeah.

CS: Yeah, yeah, yeah. Then you can get all their professional stuff off their LinkedIn and what have you.

CD: Okay. Yeah, I'd really appreciate that.

CS: Okay. For sure.

CD: Alright. I think that's it, Crystal.

CS: Perfect. Thank you for calling.

CD: Oh. Thank you so much. You know, I've wanted to talk to you for a lot of years already. So, I really, really appreciate you taking the time.

[CD and CS continue to chat]

APPENDIX E: INTERVIEW WITH KANILOA KAMAUNU

TALKING STORY WITH KANILOA KAMAUNU (KK)

Ethnographer: Cathleen Dagher (CD)

Date: 3/1/2022

[CD: and KK exchange greetings.]

CD: Okay. Great. I just want to say thank you so much for taking the time to talk to me.

KK: Okay.

CD: As you probably know, the purpose of CIAs is to identify traditional cultural practices and cultural resources within a particular project area or the greater ahupua'a. And then to determine if the proposed project is going to have any impact on those practices or resources. And then to come up with some mitigation measures to protect them or lessen the impacts. And so, I am going to be recording us and I am going to be asking you some questions and then, once the interview is completed. I will summarize the interview, actually, I will transcribe it and then I will send that back to you for your edits and stuff. And then I will send you a Transcript Release Form, too, for you to sign off on when you are happy with it.

KK: Okay.

CD: Okay. Well good. So, all right. Let's get started. I don't know anything about you. Can you tell me about yourself and where you grew up, where you were born and all that.

KK: I am actually from Waihe'e. I am actually a kuleana heir to the property I am in Waihe'e Valley. I am a lineal descendant of this area. I pretty much grew up in the Wailuku area. And I am familiar with the area. I'm 59 years old. My mother is actually from Maui. My dad is from O'ahu. He's from Waimānalo. My grandparents are actually from – my grandmother's from this area and my grandfather is from 'Ulupalakua. My grandmother has ties to Hāna. But, as far as this area that you are particularly talking about, is that the area that is notated off of Honoapi'ilani, just across from – is it mauka or is it makai?

[CD and KK discuss the location of the proposed project area in relationship to Honoapi'ilani Highway, Ku'ikahi Road, and known landmarks and establish this is the DHHL Water Tank project.]

KK: So, anyway, I kinda know where you are... "Cause we had, not with DHHL, but we had a discussion with uh what was it? It's another firm. It's a private development... So, it's near that area 'cause there's houses close to the water tank, too. Yeah. So okay. I kinda know where you are now.

CD: Okay. Well, let's see. So, do you know anything about that particular property or that particular area?

KK: Well, kinda the predicament for us... I mean, I'm, glad it's Hawaiian Homes. Uh, it's just our concerns as far as um ... Even though it's plantation, uh, these areas [inaudible] are important, too, because maybe not in this particular area, but these are parts of areas that have battles. Also had a lot of, I mean, our people lived in those areas. So, I guess when they do the – 'cause they're gonna have to do a lot of digging to put in the pipes and to put in the electrical and stuff like that and the sewer lines. I guess our thing is as far as the archaeological is concerned but because our... the iwi... I mean I know a lot of these places... suppose they run into any... I mean, I know below the highway we have a problem down there. Um and above the main highway uh... As far as cultural practices

um I'm not familiar. That doesn't mean that there isn't any. I don't want to be quoted to say that there is not.

CD: Okay.

KK: That is for myself. I want to make that clear. As far as my knowledge, it is not my area. Particularly, that there are other people that are lineal descendants over that I would hope that DHHL goes and talks to... you know, might've talked to them: Hōkūāo Pellegrino and Crystal Smythe.

CD: Okay.

KK: They are actually lineal descendants from that area. You know, because... practices change depending on the area. So, even though we are the same moku or the same district, but you know, families have different practices – doesn't always share with everybody. And then you have the general practices that are done by, you know, everyone. And then... Then you have as far as stories, some of the stories, you know um that is... I know for like for that area, it was an important battle site as far as strategic... And the area has a history of being an area where Kahekili would direct his battles. So there's... a lot of things at play there besides... you know, for me, I don't want anything that I say to get back you know on anyone else because I'm not the say all.

CD: Okay.

KK: I want that to be... I don't want you to think that I'm an expert... I guess, just you know relating what I know as I grew up. Uh growing up, it was, you know of course plantation fields. That's what it was. But that area also had a lot of water. In that area uh I know through recent... actually, I know there are other groups that have been doing their practices in the area of the moku that includes those areas. And I don't know all the practices... but I know there is a cultural history. I mean this whole area has, I mean because we're in Nā Wai 'Ehā which is the biggest... and then of course there was the... it was the mainstay of Kahekili. That's where he you know that's where his stronghold was in these areas... I know these areas did have people living in them uh you know for over a hundred years. So these areas were in the days of our people because these were the main areas you know for Maui. And so as far as to give you a record of what practices are still being upheld I don't think I have that information to share.

CD: Okay.

KK: 'Cause uh I don't want to disturb anybody else's you know kuleana. And then they get mad at me 'cause I said something. So, there are other people to take into consideration and which I would always you know basically uh give that credit to like I say Hōkūāo Pellegrino... Crystal Smythe 'cause they are descendants. As for another family there, I can't remember the name. Try and hold on.

CD: Okay.

KK: So, I know there is also the McLean family. They are lineal descendants to that area.

CD: Okay.

KK: And then I think like uh the Vidas.

CD: How do you spell that?

KK: Which one? Vida? Vida is V-I-D-A.

CD: Oh. Okay.

KK: So, that's another family. So, yeah, they're the ones who have the piggery above. I would... you know give more uh... How can I say? Uh they actually [inaudible] there. So, they have more stories. I'm not against DHHL uh you know 'cause they give homes to our people and you know [inaudible]... Just to be on the safe side as far as my concern, I'm not sure of all the practices. I know I've done some things up there with our group, but we're recently a newer group.

CD: Okay.

KK: So you know our practices are pretty much [inaudible] to our culture than it is site specific.

CD: I see.

KK: ...So, you know there is also another person, some other people, you might want to talk to – Clare Apana. 'Cause she is close to that area and she grew up around that area. Uh and I know she does a lot of research around in that area. So she might be really good to refer to. I don't know how much more research... you guys are going to do, but because they are from that area I think that it is important for me to mention them. I work with these people for other things, except for the Vidas. Uh, but I mean for me to feel comfortable I want to mention their names and to have that in the report that I am giving today.

CD: Okay.

KK: And um... I've done pules there. I've done the cultural practices. You know and participated in those things. As far as the lineal and to that area having that generational knowledge, I really don't. I know growing up there was plantation. I know that it's in Nā Wai 'Ehā... and I know that historically our people lived in those areas and occupied those areas. And... so for me, archaeology is important; how they do the archaeology, what they find. I know this is only for the water tank, but that's kinda the best I can do.

CD: Okay.

KK: You know, I don't want to try to seem like I know everything and I really don't [laughs]. I know from my best from my growing up on Maui. You know, Wailuku Heights... that's where all the rich people were living when I was growing up.

CD: Yeah.

KK: That's the rich area of town – of Wailuku. Today it's just massive with houses and stuff like that.

CD: Yeah.

KK: I'm sure there are other cultural practices, customs, stories that I don't know.

CD: Oh.

KK: ... I know that there are. Those would probably be the people that would know them.

CD: Because that was going to be my next question –if you knew any mo'olelo, or mele, or oli that were associated with that area.

KK: Of course. You know, like I say right in the area where actually the park is – not site specific, but that area like I was saying... that area is known for Kahekili to be able direct his troops when he fought battles. Down below where the [inaudible] sand is. One of the battles – and there's several battles in that area. One of them that I am familiar with is Kakanilu'a. Which is basically pretty much a massacre of those warriors that came from the Big Island. It was a... a lot of people actually died in that battle. But that is a little further down, but that area... that particular area where the park is there is a stone – I don't know if that's where it originally stood – but there is a stone there that they actually used to stand on to see the battle, as well as direct the warriors as they fought.

CD: Wow.

KK: Yeah. So there is... that stone still exists and if you go up to that park, [inaudible] it sits on the... just off the main road at the entrance to that park. It's right on the very top of it. I think they moved it from its original site, I'm not sure, but it's still there. And the reason it's still there is because of the significance of that stone.

CD: Wow.

KK: Yeah. And they used colored flags to signal to the warriors that were down how to change and how to move. So, they'd take the colored flags and then they had other people that were posted where they could be seen and where they could see the person giving them the directions. From what I understand, from that story, that's how they were able to defeat the warriors from the Big Island, which is under Kalani'ōpu'u, in 1776.

CD: Wow.

KK: That was just before Captain Cook came to Hawai'i. That battle happened just before he came to Hawai'i. And so, it was a significant battle because I think it was over ten.... it was really high, it was in the thousands – people that actually died in that skirmish.

CD: Wow.

KK: Yeah, so that's why if you read oh, what's his name? I can't remember his name now.

CD: Kamakau?

KK: No. Yeah. Kamakau tells that story.

[CD and KK discuss the name of the battle.]

KK: It's between Kalani'ōpu'u who's the brother-in-law of Kahekili. And he comes to take over Maui. And so, when he comes, he brings, they describe it as an armada of ships to come 'cause they were basically gonna take over Maui and they were gonna take over all of the people here. So, as they were traveling from the Big Island, they came from the east and they came up from the south. So, what they did was, they came to Hāna-side and they did battles and then they came on and they were coming up towards the Mākena/Honua'ula area and they came all the way up to Mā'alaea where they... were actually raiding villages as they were coming.

CD: Wow.

KK: And then they landed in Mā'alaea and then they went into the dunes to meet Kahekili. And basically they were fighting in the sand dunes, and so they were fighting uphill – an uphill battle for Kalani'ōpu'u. And it turned out to be going uphill – and they were actually pushing the warriors of Maui back. But that was part of the plan. 'Cause the plan was to lead his troops into [inaudible] and as they fought up and then they were going to have to come back down and they got into that kinda like a valley. Basically what happens is Kahekili has his nephew from O'ahu that comes from behind and basically cuts them off and traps them in that valley or depression. And basically, they just slaughter them 'cause there was no way for them to leave. And I think they left one or two people to tell the story, to report back.

CD: Yeah.

KK: Yeah. So, [inaudible] was streams [inaudible] you know with soldiers and their spears and their you know their armament, capes, the caps. And they were left, they were never buried. They were actually left to rot on the sand. That was a warning. That was a warning to anyone who came; the same thing would happen to them. So, that's why a lot of the artifacts particularly... they were above ground. So they used to have tourists in the '20s, '40s, they used to have tourists to the sand dunes and people would take the helmets, the capes, the spears. But the main thing they would take would be the heads. The heads were I think were [inaudible] visitors. And so a lot of the heads would be taken. They took the skulls...

CD: Wow.

KK: Yeah, so, I don't know where... some of them ended up... a lot of them ended up in the Peabody Museum of the United States.

CD: Yeah, at Yale, right? Yale.

KK: Yeah, so they took... like a lot of skulls ended up there, too. 'Cause they were paying a lot of money for the human skulls.

CD: I know this is off-track, but were they repatriated?

KK: Uh, no, I don't know if that was... if they did that from the Peabody Museum. 'Cause a lot of times they lived in foreign countries, too. I know New Zealand, from Kealoha, had some. I don't know if it came directly from there but, they say some I don't how many years ago, but they kept 'em and they never returned them back to Yale and that about two years ago, they actually had them... had them picked up and brought back. They saved them for us to be able to bring them back and... then they just had several come back from Germany within the last month, last two months. So, yeah because I guess now they have that new law now that things have to be returned, be repatriated to where it belongs. So, a lot of our stuffs are coming back. You know so, I think there's just still more it's just that they have to I guess [inaudible].

CD: Yeah.

KK: I don't know anybody who would take bones anyway [laughs].

CD: Wow. It's always amazes me, you know, the things people do. I didn't know they took the skulls.

KK: Yeah, that was actually one of the prize things to do. They were paying a lot of money for the skulls ... for the studies on the skulls and what they found out with the people here that our people here had perfect teeth.

CD: [Laughs] That's because you had such good diets.

KK: We ate a lot of taro and the taro had a lot of calcium.

CD: And you guys were really healthy.

KK: So in a lot of other places the teeth would be grinded down after a while. Here in Hawai'i they found that the teeth were perfectly intact. So, this is interesting to know.

CD: It is interesting to know, yeah.

KK: ...So that's the kind of stuff that I just learned that you know several years ago when I got involved with that... with our group that was trying to advocate for our bones to stay in their burial sites, so yeah. I know there's another [inaudible] that's kind of peripheral to [inaudible] so that area was strategic for them to be able to wage their wars... and back to where Kahekili's stronghold was, too, in that area.

CD: I see. Where was his stronghold?

KK: Huh?

CD: Was his stronghold nearby?

KK: His stronghold was in Wailuku. That's what they mention. And that is why they came that way because Kalani'ōpu'u wanted to get to it says, "the sweet waters of Wailuku." And so which you know, anywhere Waikapū has an extreme sort of Wailuku and then sort of the other two which one of them might have been. Yeah, his stronghold was in Wailuku area. That's where they were coming to do battle with him. But yeah, I would hope that you guys would reach out to the other people. 'Cause I think it is important for them. If they want to.

CD: Yeah.

KK: To have their say.

CD: I have contacted both of them. I have contacted Hōkūāo and Crystal. Let's see, I also contacted the McLeans. I don't think I contacted the Vidas, though.

KK: Yeah, I know that they live right up in that area.

CD: Okay.

KK: 'Cause I know that they kinda live around the top, right around that area. Yeah.

CD: Okay. I'll give them another shout out.

KK: Yeah, I know they have the piggery up there. I don't know if they're still doing it. But, I know that's where they were for a long time.

CD: My next question is just how that area has changed over the years – since you were growing up, what have you seen?

KK: It's ugly [laughs]... The sugarcane... they were planting... I was just used to sugarcane and then... And so for me, the sugarcane was nice. I mean, and I enjoyed – I didn't enjoy them burning it – but I did enjoy burning it – they'd burn it right by my house. But, I grew up with sugarcane burning. For a lot of guys who moved here, like us guys who were just used to it, it was just [inaudible] and then it was fun to watch the big fires. You know, I mean it was fun from the plantation times. Back then, we could roam wherever we wanted to. I mean we went all over the place. There was no place we couldn't go. The plantation really didn't stop you from... because you know, you couldn't really do anything to the sugarcane... you couldn't damage it unless you burned it. But, otherwise... there's no other way to damage it. We used to go into a lot of the ditches that were made we would play in... We would ride the flumes. You know what I mean, all that kind of kid stuff that kids do, but you shouldn't be doing.

CD: [Laughs]

KK: And very interesting plantation because there were guts or other stuff. You know you could go in 'cept for the areas that were covered up. You know what I mean, what you saw was pretty much still intact. I mean whatever was there. But it was pretty with the sugarcane... Right now the problem is, is we have a lot of bottleneck. So, you know I mean the thing is the traffic is it's... kinda bad at certain time up there. But, the more and more you introduce residential areas that the traffic becomes a problem. Because you know their plan is to develop mauka until it's pretty much decimated with homes. And you know, with this project I have no problem because, our people. But there are other projects that are coming up in that area and it's just gonna be... As you can see from your 2013 map, Google map, you can see how busy it is already. So, while many of those areas are developed [inaudible] other subdivisions came in. And so with, of course, you know the shopping center that is down there and now the light industrial area. That it, it's just... you know what I mean, the traffic is, it's crazy. The only thing that saves that Kuikahi Road is that turnabout.

CD: I see.

KK: It lets the traffic flow. 'Cause when they had the stop sign, traffic was backed up really badly. The bad part about all that is just that concentration of people in that one area and our roads aren't really... There's almost no way to make that a 4-lane highway. Because it doesn't... because the residential areas are right up to the road.

CD: Yeah.

KK: And if you look at the mapping and there really is no room to make any more lanes than what they have. And when you come into Wailuku Town, absolutely and if they condemn everything, there is absolutely no way to take that road.

CD: Wow.

KK: Yeah. There isn't any. And in Wailuku, we're cut off the area we're in, we're cut off from there and we're cut off by bridges. So, without the two middle bridges that are over, I think they're almost... those things ought to be 70, 80 years old already.

CD: Yeah.

KK: So, those bridges are only meant for you know small traffic.

CD: Yeah.

KK: And because it's historic, they can't change it. They can't destroy it. It has to stay the same. And they cannot take it down. Because it's considered historical. That's the thing that's messed up in that area – it's the traffic. It's gonna be messed up because they got like two or three more subdivisions coming.

CD: Wow.

KK: So, you think Honolulu is bad [laughs].

[CD and KK discuss the development in Honolulu.]

CD: Well, so let me ask you this, do you think any of the cultural practices will be impacted by the water storage tank and the DHHL residential area? Do you think it will limit access to those areas they've cut off already, for example?

KK: Oh yeah, if you put the... once you put anything in... 'cause you're gonna... the water tank is one thing. And like I say, I'm not really sure what exactly what that area [inaudible]. But right now, right now it's already a battle because everybody is claiming private property. You know, so there's a battle to be able to go into certain areas. Some are areas that we're negotiating to go do a cultural practice is in danger, too. Private property owners don't want people going in there. So, there's a lot of as far as how's that gonna work. How's that going to be allowed. In some places are allowing you to walk in. But those things are still being worked out. So, within this area... You know, it's sad that Hōkūāoa and Crystal don't participate because it's gonna be kinda too late when this comes up and then they're gonna want to do things that they can't because it's gonna have an impact. Because I can see it's going to block off areas. It's going to change areas. Grading is gonna change other things. So, it definitely will have an impact on anyone that culturally wants to do their protocol. It's going to have an impact. I think it's going to have impact just on I mean you know on aesthetics, you know I mean just the way it is now. From the part of the aesthetics, subdivisions don't make aesthetics look better.

CD: Yeah. So, I think what you're saying is it's gonna change the landscape a lot. It's going to affect the landscape, the grading is going to affect how people are going to be able to use the land. Yeah?

KK: Yeah. I mean, the thing is, part of Hawaiian Homes is they are supposed to be able to farm and I don't know how they're going to be able to be there if they're not allowed 'cause there's houses. But, I mean originally, the original thing with Hawaiian Homes was: one, to get the people back on their lands; and two, to help them recuperate their cultural practices which is being able to be self-sufficient – because sustainable. And I don't know how this area basically does that – fulfill that mandate from their Hawaiian Homes... fulfilling their obligations to the kanaka as far as being able to be sustainable. You know, so yeah you know what I mean, once you dig it up and... people are going to have to start realizing – people don't realize it now with the pandemic. You know, we're just an island and people are just coming to realize that.

CD: Yeah.

KK: For the stores, you see all the shelves are empty. And then you have this thing with the Ukraine that brings in another demographic. So, you know to be sustainable one needs to be able to have a sense that they can actually stay there and if anything support themselves without any type of outside influence. You know, people today have lost that capability and especially when there isn't land to do that... But say, you could have a small, little vegetable garden. But, how long is that going to last

you if things...? You know, are you going to shut down again 'cause the pandemic numbers rise up – what, different variant? You know, these are things people are starting to look at... water resource, you know, and how you gonna support your family. So, yeah, I mean, it's gonna change. It's gonna change... And it is sad to say it's gonna be you know... Yeah, so I think with the changes anywhere it's gonna be hard. The impacts are going to be great because they lose our farmlands. We lose everything we could have grown for ourself. And actually have water availability... to be able to grow stuff.

CD: Hmm. But, do you think that they can do anything when they plan those developments to lessen those adverse effects?

KK: Yeah, you know, the thing is, I mean, I guess the purpose of the construction itself... I mean why... I mean I can see from DHHL their purpose is to fulfill that mandate – the federal mandate to be able to give... to have our people have homes. But the rest... any other type of construction the planning has to bear in mind that it's not only about turning a profit, but how does it support the changes... I guess the effect on resources. Because we just had this discussion when you start to put up asphalt and you start putting cement... the problem with the water is it's supposed to have a natural recharge. And the aquifers lose that capability of the natural recharge because the ground is covered by asphalt. And we know as for the cement what happens with the water is it basically just sits there and get dried out. You know, it doesn't percolate down to the aquifer, which then decreases the recharge for the aquifer, which then depletes the amount of fresh water that's in the aquifer. So, I think in 2009... the USDA did a study and the study was reflecting that the freshwater lens, 'cause there's a lens, yeah?

CD: Yeah.

KK: And so, the freshwater lens here is really thin and so we're at the verge... and because all these areas... See like before, you get the plantations you get the fields, so there's an artificial recharge. Even though the plantations were taking 59 billion gallons a day to water the fields, part of the field was recharging back into the aquifer. But, that still decrease because the water flows through the main streams and wherever the tributaries were, it naturally will go into now where we receive the water. And so, it decrease even so with the artificial recharge. Now, the thing is they're not gonna have any recharge unless... the thing I've been trying to tell the County and State you allow these... you know you guys are worried about making your money from construction, but you're not worried about how to replenish the resource. Because they like to use, "Oh we have a new water source." And we only have one aquifer. So, the thing is, you cannot have another resource. It comes from the same resource. And if there's no recharge, natural recharge or artificial recharge, then all you are doing is taking out and you're not replenishing.

CD: Yeah.

KK: All of the wells they are developing, which is what DHHL is going to do, is basically take it direct from the source, which then even lessens the fresh water then. Which just endangers ever... 'cause once that's done no matter who you are, you can't live here no more.

CD: Yeah. Wow.

KK: 'Cause there's not enough stream flow to provide for all these houses.

CD: Yeah.

KK: Yeah, so that's my... We do a lot of this stuff... we are advocates. We do a lot of studies as far as mauka to makai. Yeah, so, I've been dealing in water for a long time.

CD: Well, it's the source of life – it's pretty important.

[CD and KK discuss the current water situation on Maui].

CD: So, I have one more question that I wanted to ask you. This is about place names in that area. Are there any specific peaks or anything that comes to your mind?

KK: No. I couldn't really say. Not in that specific area. I'm sure there are... but I don't know them.

CD: Okay. Well, thank you, Kaniloa. It's been really fascinating – and that was the best detail of that battle that I've ever heard.

KK: Oh, yeah. We've been studying that and then, we've been talking about that battle for about the last 14 years.

[CD and KK discuss the Ahalau Ka Pi'ipi'i O Kakanilu'a]


KK: Well, thank you for calling.

CD: Yeah. Thank you.

[CD and KK continue to chat]

KK: Otherwise, thank you for calling.


CD: [Laughs] Well, thank you very, very much! I really appreciate your taking the time to talk with me. And I really appreciate all the great information that you've shared with me. Alright, you take care.



ANALYSIS OF THE
PROJECT
APPLICABILITY TO
HAWAI'I STATE PLAN

APPENDIX

E



APPENDIX E

Analysis of Project Applicability to Hawai'i State Plan

Chapter 226, Hawai'i Revised Statutes (HRS), also known as the Hawai'i State Plan, is a long-range comprehensive plan which serves as a guide for the future long-term development of the State by identifying goals, objectives, policies, and priorities, as well as implementation mechanisms. The Plan consists of three (3) parts. Part I includes the Overall Theme, Goals, Objectives, and Policies; Part II includes Planning, Coordination, and Implementation; and Part III establishes Priority Guidelines. Inasmuch as Part II of the State Plan covers its administrative structure and implementation process, discussion of the proposed project's applicability to Part II is not appropriate. Below is an analysis of the project's applicability to Part I and Part III of the Hawai'i State Plan.

The methodology for the analysis involves examining the project's applicability to the Hawai'i State Plan's goals, objectives, and policies. "Applicability" refers to a project's need, purpose and effects, and how these advance or promote a particular set of goals, objectives and priority guidelines. In assessing the relationship between a proposed action and the Hawai'i State Plan, an action may be categorized in one of the following groups:

1. **Directly applicable:** the action and its potential effects directly advances or promotes the objective, policy or priority guideline.

Example: A county project to develop a new water source and related transmission facilities would be directly applicable to the objectives and policies for Facility Systems-Water (HRS 226-16) which states" (5) *Support water supply services to areas experiencing critical water problems.*

2. **Indirectly applicable:** the action and its potential effects indirectly supports or advances the objective, policy or priority guideline.

Example: The county water source project cited above supports other related objectives and policies for the economy (HRS 226-6, General), which, by example, states: (9) *Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.* In this case, the principle purpose of the project was not to create new construction activities, but nonetheless, supports this policy by creating temporary construction activity during the implementation of the project. In this instance, the proposed action may be deemed to be indirectly applicable to the objective and policy of the Hawai'i State Plan.

3. **Not applicable:** the action and its potential effects have no direct or indirect relationship to the objectives and policies of the Hawai'i State Plan.

Example: That same county water source improvement project referenced above, may not have direct or indirect linkage to objectives and policies for the economy-Federal Expenditures (HRS 226-9) which states: (1) *Encourage the sustained flow of federal expenditures in Hawaii that generates long-term government civilian employment.* From the standpoint of the agency proposing the water system improvement, and assuming no Federal Funding for the project, there is an unlikely intent that the proposed water source project would be connected to or reliant upon the foregoing policy. Hence, from the standpoint of judiciously applied policy analysis, the proposed action would be considered not applicable to the policy.

In general, a proposed action's applicability the objectives, policies and priority guidelines of the Hawai'i State Plan is judged on the basis of the action's direct or indirect relationship to the respective objectives, policies and priority directions. It is recognized that the categorization of "applicability" is subject to interpretation and should be appropriately considered in the context of local and regional conditions.

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
HRS 226-1: Findings and Purpose			
HRS 226-2: Definitions			
HRS 226-3: Overall Theme			
HRS 226-4: State Goals. In order to guarantee, for the present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self determination, it shall be the goal of the State to achieve: (1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii's present and future generations. (2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people. (3) Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life.			
Analysis: The proposed project provides needed water system storage infrastructure to support the Department of Hawaiian Home Lands (DHHL) Pu'unani Homestead Subdivision which will provide much needed housing to DHHL beneficiaries on Maui in an area close to the government, business and commercial centers of Wailuku and Kahului.			
Chapter 226-5 Objective and Policies for Population			
Objective: It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter.		✓	
Policies:			
(1) Manage population growth statewide in a manner that provides increased opportunities for Hawaii's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.		✓	
(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.			✓
(3) Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands.		✓	

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
(4) Encourage research activities and public awareness programs to foster an understanding of Hawaii's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawaii's population.			✓
(5) Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.			✓
(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			✓
(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.		✓	
Analysis: The proposed project involves the construction of water system storage improvements to adequately supply water to the planned Pu'unani Homestead Subdivision. The proposed action indirectly supports the State's goals and objectives for population through the provision of adequate infrastructure to create livable communities, thereby increasing opportunities for Hawai'i's people to pursue their socio-economic aspirations.			
Chapter 226-6 Objectives and policies for the economy -- in general			
Objectives: Planning for the State's economy in general shall be directed toward achievement of the following objectives:			
(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.		✓	
(2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.		✓	
Policies:			
(1) Promote and encourage entrepreneurship within Hawaii by residents and nonresidents of the State.			✓
(2) Expand Hawaii's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.			✓
(3) Promote Hawaii as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people.			✓
(4) Transform and maintain Hawaii as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.			✓
(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaii.			✓
(6) Seek broader outlets for new or expanded Hawaii business investments.			✓
(7) Expand existing markets and penetrate new markets for Hawaii's products and services.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
(8) Assure that the basic economic needs of Hawaii's people are maintained in the event of disruptions in overseas transportation.			✓
(9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.		✓	
(10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawaii's small scale producers, manufacturers, and distributors.			✓
(11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.		✓	
(12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawaii.			✓
(13) Foster greater cooperation and coordination between the government and private sectors in developing Hawaii's employment and economic growth opportunities.		✓	
(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.			✓
(15) Maintain acceptable working conditions and standards for Hawaii's workers.			✓
(16) Provide equal employment opportunities for all segments of Hawaii's population through affirmative action and nondiscrimination measures.			✓
(17) Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.			✓
(18) Encourage businesses that have favorable financial multiplier effects within Hawaii's economy, particularly with respect to emerging industries in science and technology.			✓
(19) Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.			✓
(20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new or innovative potential growth industries in particular.			✓
(21) Foster a business climate in Hawaii--including attitudes, tax and regulatory policies, and financial and technical assistance programs-- that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.			✓
Analysis: The proposed action indirectly supports the general objectives and policies for the economy by supporting design and construction activity which contributes to increased employment opportunities, job choices, and living standards. Businesses positively affected by the project are those which support design and construction such as engineers, material suppliers.			
Chapter 226-7 Objectives and policies for the economy -- agriculture.			
Objectives: Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:			
(1) Viability of Hawaii's sugar and pineapple industries.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
(2) Growth and development of diversified agriculture throughout the State.			✓
(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.			✓
Policies:			
(1) Establish a clear direction for Hawaii's agriculture through stakeholder commitment and advocacy.			✓
(2) Encourage agriculture by making the best use of natural resources.			✓
(3) Provide the governor and the legislature with information and options needed for prudent decision-making for the development of agriculture.			✓
(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.			✓
(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawaii's economy.			✓
(6) Seek the enactment and retention of federal and state legislation that benefits Hawaii's agricultural industries.			✓
(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaii's food producers and consumers in the State, nation, and world.			✓
(8) Support research and development activities that strengthen economic productivity in agriculture, stimulate greater efficiency, and enhance the development of new products and agricultural by-products.			✓
(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.			✓
(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			✓
(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			✓
(12) In addition to the State's priority on food, expand Hawaii's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.			✓
(13) Promote economically competitive activities that increase Hawaii's agricultural self-sufficiency, including the increased purchase and use of Hawaii-grown food and food products by residents, businesses, and governmental bodies as defined under section 103D-104.			✓
(14) Promote and assist in the establishment of sound financial programs for diversified agriculture.			✓
(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			✓
(16) Facilitate the transition of agricultural lands in economically nonfeasible agricultural production to economically viable agricultural uses.			✓
(17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko i'a, māla, and irrigated lo'i, and growth of traditional Hawaiian crops, such as kalo, 'uala, and 'ulu.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
(18) Increase and develop small-scale farms.			✓
Analysis: The proposed action does not directly or indirectly affect the objectives for agriculture. The proposed project will be developed on lands designated for agriculture use. According to HRS 205-4.5, water storage tanks are a permissible use within the State agricultural district. It is noted that the proposed water tank will serve a residential subdivision and will not be utilized for agricultural purposes. However, in the context of the amount of viable agriculture lands on the island of Maui, implementation of the proposed action is not considered to adversely affect agricultural productivity on Maui.			
Chapter 226-8 Objective and policies for the economy -- visitor industry.			
Objective: Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.			✓
Policies:			
(1) Support and assist in the promotion of Hawaii's visitor attractions and facilities.			✓
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.			✓
(3) Improve the quality of existing visitor destination areas by utilizing Hawaii's strengths in science and technology.			✓
(4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.			✓
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people.			✓
(6) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the visitor industry.			✓
(7) Foster a recognition of the contribution of the visitor industry to Hawaii's economy and the need to perpetuate the aloha spirit.			✓
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaii's cultures and values.			✓
Analysis: The proposed water system storage improvements will serve a residential subdivision and is not directly or indirectly applicable to the objective and policies for the visitor industry. The proposed action has no implications for enhancement or growth of the visitor industry.			
Chapter 226-9 Objective and policies for the economy -- federal expenditures.			
Objective: Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaii's economy.			✓
Policies:			
(1) Encourage the sustained flow of federal expenditures in Hawaii that generates long-term government civilian employment;			✓
(2) Promote Hawaii's supportive role in national defense, in a manner consistent with Hawaii's social, environmental, and cultural goals by building upon dual-use and defense applications to develop thriving ocean engineering, aerospace research and development, and related dual-use technology sectors in Hawaii's economy;			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
(3) Promote the development of federally supported activities in Hawaii that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawaii's environment;			✓
(4) Increase opportunities for entry and advancement of Hawaii's people into federal government service;			✓
(5) Promote federal use of local commodities, services, and facilities available in Hawaii;			✓
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawaii; and			✓
(7) Pursue the return of federally controlled lands in Hawaii that are not required for either the defense of the nation or for other purposes of national importance, and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.			✓
Analysis: The proposed action is not reliant on federal funding, and does not directly or indirectly advance the objective and policies for strengthening or increasing federal expenditures for the betterment of Hawaii's economy.			
Chapter 226-10 Objective and policies for the economy -- potential growth and innovative activities.			
Objective: Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawaii's economic base.			✓
Policies:			
(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawaii's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors;			✓
(2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawaii through the export of services or products or substitution of imported services or products;			✓
(3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements;			✓
(4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity;			✓
(5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus;			✓
(6) Expand Hawaii's capacity to attract and service international programs and activities that generate employment for Hawaii's people;			✓
(7) Enhance and promote Hawaii's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts;			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, underground resources, and solid waste;			✓
(9) Promote Hawaii's geographic, environmental, social, and technological advantages to attract new or innovative economic activities into the State;			✓
(10) Provide public incentives and encourage private initiative to attract new or innovative industries that best support Hawaii's social, economic, physical, and environmental objectives;			✓
(11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research;			✓
(12) Develop, promote, and support research and educational and training programs that will enhance Hawaii's ability to attract and develop economic activities of benefit to Hawaii;			✓
(13) Foster a broader public recognition and understanding of the potential benefits of new or innovative growth-oriented industry in Hawaii;			✓
(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaii's social, economic, physical, and environmental objectives;			✓
(15) Increase research and development of businesses and services in the telecommunications and information industries;			✓
(16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation; and			✓
(17) Recognize and promote health care and health care information technology as growth industries.			✓
Analysis: As a water storage improvement project, the proposed action does not directly or indirectly affect the development and expansion of innovative activities to increase and diversify Hawaii's economic base.			
Chapter 226-10.5 Objectives and policies for the economy -- information industry.			
Objective: Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaii as a leader in broadband and wireless communications and applications in the Pacific Region.			✓
Policies:			
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawaii and between Hawaii and the world, and make high speed communication available to all residents and businesses in Hawaii;			✓
(2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawaii to accommodate future growth and innovation in Hawaii's economy;			✓
(3) Facilitate the development of new or innovative business and service ventures in the information industry which will provide employment opportunities for the people of Hawaii;			✓
(4) Encourage mainland- and foreign-based companies of all sizes, whether information technology-focused or not, to allow their principals, employees, or contractors to live in and work from Hawaii, using technology to communicate with their headquarters, offices, or customers located out-of-state;			✓

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(5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well-designed information industry;			✓
(6) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people;			✓
(7) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the information industry;			✓
(8) Foster a recognition of the contribution of the information industry to Hawaii's economy; and			✓
(9) Assist in the promotion of Hawaii as a broker, creator, and processor of information in the Pacific.			✓
Analysis: The proposed action does not directly or indirectly affect Hawaii's capacity to be a leader in the broadband and wireless communications industries, nor does it affect these innovative industries in advancing Hawaii's economic position in the Pacific.			
Chapter 226-11 Objectives and policies for the physical environment -- land based, shoreline, and marine resources.			
Objectives: Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:			
(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.		✓	
(2) Effective protection of Hawaii's unique and fragile environmental resources.		✓	
Policies:			
(1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.			✓
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.		✓	
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.		✓	
(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.			✓
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.			✓
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.			✓
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			✓
(8) Pursue compatible relationships among activities, facilities, and natural resources.			✓
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.			✓
Analysis: The proposed project will utilize Best Management Practices (BMPs) to ensure that natural resources such as the coastal environment is not impacted by construction activities. The use of BMPs also ensures compatibility between land-based and water-based functions, resources, and ecological systems. In addition, appropriate mitigation measures will be followed to protect any rare or endangered plant and animal species, which may be present in the project area.			

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Chapter 226-12 Objective and policies for the physical environment -- scenic, natural beauty, and historic resources.			
Objective: Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.		✓	
Policies:			
(1) Promote the preservation and restoration of significant natural and historic resources.		✓	
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.			✓
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.			✓
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.		✓	
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.			✓
Analysis: Archaeological and cultural investigations have been undertaken for the proposed project in efforts to preserve and protect important cultural and historical resources, which may be impacted by the proposed action.			
Chapter 226-13 Objectives and policies for the physical environment -- land, air, and water quality.			
Objectives: Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives.			
(1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.		✓	
(2) Greater public awareness and appreciation of Hawaii's environmental resources.			✓
Policies:			
(1) Foster educational activities that promote a better understanding of Hawaii's limited environmental resources.			✓
(2) Promote the proper management of Hawaii's land and water resources.		✓	
(3) Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.		✓	
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii's people.			✓
(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.		✓	
(6) Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.			✓
(7) Encourage urban developments in close proximity to existing services and facilities.			✓

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(8) Foster recognition of the importance and value of the land, air, and water resources to Hawaii's people, their cultures and visitors.			✓
Analysis: Maintenance of land, air, and water quality are indirectly advanced by the proposed action. Construction BMPs will be used to manage and control erosion control during grading operations to minimize downstream water quality impacts. Work on the project is not anticipated to be affected by natural hazards, and industry standard design and construction practices will be employed for the project.			
Chapter 226-14 Objective and policies for facility systems -- in general.			
Objective: Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.	✓		
Policies:			
(1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.	✓		
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.			✓
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.	✓		
(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			✓
Analysis: The proposed improvements are directly applicable to the objective and policies for facility systems through the provision of adequate water system storage infrastructure to supply water to the planned DHHL Pu'unani Subdivision.			
Chapter 226-15 Objectives and policies for facility systems -- solid and liquid waste.			
Objectives: Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:			
(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.			✓
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.			✓
Policies:			
(1) Encourage the adequate development of sewerage facilities that complement planned growth.			✓
(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.			✓
(3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.			✓
Analysis: As a water system storage project, the proposed action is not directly or indirectly applicable to the goals and objectives for solid and liquid waste facility systems.			

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Chapter 226-16 Objective and policies for facility systems -- water.			
Objective: Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.	✓		
Policies:			
(1) Coordinate development of land use activities with existing and potential water supply.	✓		
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			✓
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.			✓
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.	✓		
(5) Support water supply services to areas experiencing critical water problems.			✓
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.			✓
Analysis: The proposed action is directly supportive of the objectives and policies for water facility systems by improving water system storage capacity to provide consistent and reliable water supply for residential use. In planning for the proposed action, the DHHL has coordinated with the County of Maui, Department of Water Supply (DWS) on the proposed improvements to ensure an adequate supply of resources and confirm infrastructure requirements to serve the Pu'unani Homestead Subdivision.			
Chapter 226-17 Objectives and policies for facility systems -- transportation.			
Objectives: Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives:			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.			✓
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.			✓
Policies:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;			✓
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;			✓
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties;			✓
(4) Provide for improved accessibility to shipping, docking, and storage facilities;			✓
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs;			✓

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(6) Encourage transportation systems that serve to accommodate present and future development needs of communities;			✓
(7) Encourage a variety of carriers to offer increased opportunities and advantages to interisland movement of people and goods;			✓
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs;			✓
(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification;			✓
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawaii's natural environment;			✓
(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;			✓
(12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives; and			✓
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.			✓
Analysis: As a water system storage facility, the proposed project is not applicable to the objectives and policies for transportation facility systems and does not contravene these objectives or policies.			
Chapter 226-18 Objectives and policies for facility systems -- energy.			
Objectives: Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:			
(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;			✓
(2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation.			✓
(3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems;			✓
(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and			✓
(5) Utility models that make the social and financial interests of Hawaii's utility customers a priority.			✓
Policies:			
(b) To achieve the energy objectives, it shall be the policy of this State to ensure the short- and long-term provision of adequate, reasonable prices, and dependable energy services to accommodate demand.			✓
(1) Support research and development as well as promote the use of renewable energy sources;			✓
(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;			✓

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(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits;			✓
(4) Promote all cost-effective conservation of power and fuel supplies through measures, including:			✓
(A) Development of cost-effective demand-side management programs;			✓
(B) Education;			✓
(C) Adoption of energy-efficient practices and technologies; and			✓
(D) Increasing energy efficiency and decreasing energy use in public infrastructure			✓
(5) Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies; and			✓
(6) Support research, development, demonstration, and use of energy efficiency, load management, and other demand-side management programs, practices, and technologies;			✓
(7) Promote alternate fuels and transportation energy efficiency;			✓
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications;			✓
(9) Support actions that reduce, avoid, or sequester Hawaii's greenhouse gas emissions through agriculture and forestry initiatives;			✓
(10) Provide priority handling and processing for all state and county permits required for renewable energy projects;			✓
(11) Ensure that liquefied natural gas is used only as a cost-effective transitional, limited-term replacement of petroleum for electricity generation and does not impede the development and use of other cost-effective renewable energy sources; and			✓
(12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaii.			✓
Analysis: The proposed action involves a water system storage improvements and is neither directly or indirectly applicable to the objectives and policies for energy facility systems and has no implications for the supply or provision of energy sources or facilities.			
Chapter 226-18.5 Objectives and policies for facility systems -- telecommunications.			
Objectives: Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.			
Policies:			
(b) To achieve the telecommunications objective, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable telecommunications services to accommodate demand.			✓

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(1) Facilitate research and development of telecommunications systems and resources;			✓
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning;			✓
(3) Promote efficient management and use of existing telecommunications systems and services; and			✓
(4) Facilitate the development of education and training of telecommunications personnel.			✓
Analysis: The proposed action does not directly or indirectly affect telecommunications systems dependability, efficiency, and cost parameters. In particular, the project does not promote research and development of telecommunications systems and resources and does not advance efficient management and use of existing telecommunications systems and services.			
Chapter 226-19 Objectives and policies for socio-cultural advancement -- housing.			
Objectives: Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:			
(1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population.		✓	
(2) The orderly development of residential areas sensitive to community needs and other land uses.		✓	
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.			✓
Policies:			
(1) Effectively accommodate the housing needs of Hawaii's people.		✓	
(2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.			✓
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			✓
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			✓
(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.			✓
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.		✓	
(7) Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.			✓
(8) Promote research and development of methods to reduce the cost of housing construction in Hawaii.			✓

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Analysis: The proposed action is indirectly applicable to the goals and objectives for housing through the provision of water system storage improvements which will serve a residential subdivision. The proposed improvements will indirectly increase the housing opportunities for Native Hawaiian DHHL beneficiaries by ensuring water service availability necessary for the development of the Pu'unani Homestead Subdivision.			
Chapter 226-20 Objectives and policies for socio-cultural advancement -- health.			
Objectives: Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:			
(1) Fulfillment of basic individual health needs of the general public.			✓
(2) Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities.			✓
(3) Elimination of health disparities by identifying and addressing social determinants of health.			✓
Policies:			
(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.			✓
(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.			✓
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.			✓
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.			✓
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.			✓
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.			✓
(7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and revised based on the best available epidemiological and public health data.			✓
Analysis: The proposed action does not directly or indirectly affect the objectives and policies for health. The proposed action does not affect individual health needs, sanitation and health conditions, and health disparities.			
Chapter 226-21 Objectives and policies for Socio-cultural advancement -- education.			
Objective: Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.			
			✓

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Policies:			
(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.			✓
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.			✓
(3) Provide appropriate educational opportunities for groups with special needs.			✓
(4) Promote educational programs which enhance understanding of Hawaii's cultural heritage.			✓
(5) Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands.			✓
(6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.			✓
(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			✓
(8) Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.			✓
(9) Support research programs and activities that enhance the education programs of the State.			✓
Analysis: The proposed action is neither directly or indirectly applicable to the objectives and policies for education and has no implications for the provision of educational services or opportunities.			
Chapter 226-22 Objective and policies for socio-cultural advancement -- social services.			
Objective: Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.			✓
Policies:			
(1) Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.			✓
(2) Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.			✓
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaii's communities.			✓
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.			✓
(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.			✓

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(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			✓
Analysis: The proposed action is neither directly or indirectly applicable to the objectives and policies for social services and activities and will not specifically address social problems.			
Chapter 226-23 Objective and policies for socio-cultural advancement -- leisure.			
Objective: Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.			✓
Policies:			
(1) Foster and preserve Hawaii's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.			✓
(2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.			✓
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.			✓
(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.			✓
(5) Ensure opportunities for everyone to use and enjoy Hawaii's recreational resources.			✓
(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.			✓
(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawaii's people.			✓
(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.			✓
(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawaii's population to participate in the creative arts.			✓
(10) Assure adequate access to significant natural and cultural resources in public ownership.			✓
Analysis: The proposed water system storage improvements will serve a residential subdivision and is neither directly or indirectly applicable to the objectives and policies for leisure.			
Chapter 226-24 Objective and policies for socio-cultural advancement -- individual rights and personal well-being.			
Objective: Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations.			✓

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Policies:			
(1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.			✓
(2) Uphold and protect the national and state constitutional rights of every individual.			✓
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			✓
(4) Ensure equal opportunities for individual participation in society.			✓
Analysis: The proposed project involves water system storage improvements and does not directly or indirectly affect the objective and policies related to individual rights and personal well-being. Specifically, the proposed action does not advance policies for the protection of constitutional or consumer rights and the availability of public services.			
Chapter 226-25 Objective and policies for socio-cultural advancement -- culture.			
Objective: Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaii's people.		✓	
Policies:			
(1) Foster increased knowledge and understanding of Hawaii's ethnic and cultural heritages and the history of Hawaii.		✓	
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaii's people and which are sensitive and responsive to family and community needs.			✓
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii.			✓
(4) Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawaii's people and visitors.			✓
Analysis: A cultural impact investigation was undertaken for the proposed project as part of the environmental review process and is discussed in this Environmental Assessment (EA) document. The cultural report fosters increased knowledge of Native Hawaiian cultural practices, as well as the history of the project area. In this context, the proposed action indirectly advances the objective and policies related to the socio-cultural advancement of culture.			
Chapter 226-26 Objectives and policies for socio-cultural advancement -- public safety.			
Objective: Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:			
(1) Assurance of public safety and adequate protection of life and property for all people.			✓
(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.			✓

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(3) Promotion of a sense of community responsibility for the welfare and safety of Hawaii's people.			✓
Policies (Public Safety):			
(1) Ensure that public safety programs are effective and responsive to community needs.			✓
(2) Encourage increased community awareness and participation in public safety programs.			✓
Policies (Public Safety-Criminal Justice):			
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			✓
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			✓
(3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.			✓
Policies (Public Safety - Emergency Management):			
(1) Ensure that responsible organizations are in a proper state of readiness to respond to major war-related, natural, or technological disasters and civil disturbances at all times.			✓
(2) Enhance the coordination between emergency management programs throughout the State.			✓
Analysis: The proposed action does not directly or indirectly affect the objectives and policies for public safety. In particular, the project does not address protection of life and property parameters, organizational readiness and capacity, and community responsibility for peoples' welfare and safety.			
Chapter 226-27 Objectives and policies for socio-cultural advancement -- government.			
Objectives: Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:			
(1) Efficient, effective, and responsive government services at all levels in the State.		✓	
(2) Fiscal integrity, responsibility, and efficiency in the state government and county governments.			✓
Policies:			
(1) Provide for necessary public goods and services not assumed by the private sector.			✓
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.		✓	
(3) Minimize the size of government to that necessary to be effective.			✓
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawaii.			✓
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	NA
(6) Provide for a balanced fiscal budget.			✓
(7) Improve the fiscal budgeting and management system of the State.			✓
(8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.			✓
Analysis: The proposed action has indirect applicability to the objectives and policies for government. In particular, the project will comply with regulatory requirements which advance transparency in the flow of project-related information to the public. Such requirements include the Chapter 343, HRS environmental review process.			

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Chapter 226-101: Purpose. The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.			
Chapter 226-102: Overall direction. The State shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation.			
Chapter 226-103: Economic priority guidelines.			
(a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaii's people and achieve a stable and diversified economy:		✓	
(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.		✓	
(A) Encourage investments which:			✓
(i) Reflect long term commitments to the State;		✓	
(ii) Rely on economic linkages within the local economy;			✓
(iii) Diversify the economy;		✓	
(iv) Reinvest in the local economy;		✓	
(v) Are sensitive to community needs and priorities; and		✓	
(vi) Demonstrate a commitment to provide management opportunities to Hawaii residents; and			✓
(B) Encourage investments in innovative activities that have a nexus to the State, such as:			✓
(i) Present or former residents acting as entrepreneurs or principals;			✓
(ii) Academic support from an institution of higher education in Hawaii;			✓
(iii) Investment interest from Hawaii residents;			✓
(iv) Resources unique to Hawaii that are required for innovative activity; and			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable	DA	IA	N/A
(v) Complementary or supportive industries or government programs or projects.			✓
(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			✓
(3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.			✓
(4) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.			✓
(5) Streamline the processes for building and development permit and review, and telecommunication infrastructure installation approval and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where scientific evidence indicates that public health, safety and welfare would not be adversely affected.			✓
(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawaii's small-scale producers, manufacturers, and distributors.			✓
(7) Continue to seek legislation to protect Hawaii from transportation interruptions between Hawaii and the continental United States.			✓
(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:			✓
(A) An industry that can take advantage of Hawaii's unique location and available physical and human resources.			✓
(B) A clean industry that would have minimal adverse effects on Hawaii's environment.			✓
(C) An industry that is willing to hire and train Hawaii's people to meet the industry's labor needs at all levels of employment.			✓
(D) An industry that would provide reasonable income and steady employment.			✓
(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawaii business.			✓
(10) Enhance the quality of Hawaii's labor force and develop and maintain career opportunities for Hawaii's people through the following actions:			✓
(A) Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.			✓
(B) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.			✓
(C) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.			✓
(D) Promote career opportunities in all industries for Hawaii's people by encouraging firms doing business in the State to hire residents.			✓
(E) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on-the-job training opportunities.			✓
(F) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			✓

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(b) Priority guidelines to promote the economic health and quality of the visitor industry:			✓
(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaii's residents and visitors.			✓
(2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.			✓
(3) Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.			✓
(4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaii's significant natural, scenic, historic, and cultural resources.			✓
(5) Develop and maintain career opportunities in the visitor industry for Hawaii's people, with emphasis on managerial positions.			✓
(6) Support and coordinate tourism promotion abroad to enhance Hawaii's share of existing and potential visitor markets.			✓
(7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.			✓
(8) Support law enforcement activities that provide a safer environment for both visitors and residents alike.			✓
(9) Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques.			✓
(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries:			✓
(1) Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.			✓
(2) Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawaii.			✓
(3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			✓
(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:			✓
(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.			✓
(2) Assist in providing adequate, reasonably priced water for agricultural activities.			✓
(3) Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.			✓
(4) Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			✓
(5) Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawaii's agricultural community.			✓
(6) Seek favorable freight rates for Hawaii's agricultural products from interisland and overseas transportation operators.			✓


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(7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.			✓
(8) Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			✓
(9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			✓
(10) Support the continuation of land currently in use for diversified agriculture.			✓
(11) Encourage residents and visitors to support Hawaii's farmers by purchasing locally grown food and food products.			✓
(e) Priority guidelines for water use and development:			✓
(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.			✓
(2) Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.			✓
(3) Increase the support for research and development of economically feasible alternative water sources.			✓
(4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.			✓
(f) Priority guidelines for energy use and development:			✓
(1) Encourage the development, demonstration, and commercialization of renewable energy sources.			✓
(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.			✓
(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			✓
(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.			✓
(g) Priority guidelines to promote the development of the information industry:			✓
(1) Establish an information network, with an emphasis on broadband and wireless infrastructure and capability that will serve as the foundation of and catalyst for overall economic growth and diversification in Hawaii.			✓
(2) Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.			✓
(3) Encourage the development of small businesses in the information field such as software development; the development of new information systems, peripherals, and applications; data conversion and data entry services; and home or cottage services such as computer programming, secretarial, and accounting services.			✓
(4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			✓
(5) Encourage research activities, including legal research in the information and telecommunications fields.			✓
(6) Support promotional activities to market Hawaii's information industry services.			✓
(7) Encourage the location or co-location of telecommunication or wireless			✓

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information relay facilities in the community, including public areas, where scientific evidence indicates that the public health, safety, and welfare would not be adversely affected.			
Analysis: The proposed action indirectly supports the economic priority guidelines by supporting construction activity which contributes to increased employment opportunities, job choices, and living standards. The proposed action is a necessary water system storage improvement that considers the needs and priorities of the community and advances the mission of the DHHL.			
Chapter 226-104: Population growth and land resources priority guidelines.			
(a) Priority guidelines to effect desired statewide growth and distribution:			
(1) Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawaii's people.	✓		
(2) Manage a growth rate for Hawaii's economy that will parallel future employment needs for Hawaii's people.			✓
(3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.			✓
(4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.			✓
(5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.			✓
(6) Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands.			✓
(7) Support the development of high technology parks on the neighbor islands.			✓
(b) Priority guidelines for regional growth distribution and land resource utilization:			
(1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.		✓	
(2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.		✓	
(3) Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.			✓
(4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			✓
(5) In order to preserve green belts, give priority to state capital-improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a noncontiguous new urban core.			✓
(6) Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.			✓
(7) Pursue rehabilitation of appropriate urban areas.			✓
(8) Support the redevelopment of Kakaako into a viable residential, industrial, and commercial community.			✓

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(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.			✓
(10) Identify critical environmental areas in Hawaii to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.			✓
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			✓
(12) Utilize Hawaii's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.			✓
(13) Protect and enhance Hawaii's shoreline, open spaces, and scenic resources.			✓
Analysis: The proposed action is directly applicable to the priority guidelines for the desired statewide growth and distribution through water storage improvements to accommodate the planned distribution of housing on Maui. In addition, the proposed water storage tank will be located next to existing water system infrastructure making prudent use of land resources. In addition, the proposed action is in support of the development of a residential subdivision on otherwise unproductive agricultural lands.			
Chapter 226-105: Crime and criminal justice.			
Priority guidelines in the area of crime and criminal justice:			
(1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.			✓
(2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.			✓
(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			✓
(4) Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.			✓
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			✓
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			✓
Analysis: The proposed action does not directly or indirectly affect the priority guidelines for crime and criminal justice.			
Chapter 226-106: Affordable housing.			
Priority guidelines for the provision of affordable housing:			
(1) Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate-income and gap-group households.		✓	

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(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			✓
(3) Improve information and analysis relative to land availability and suitability for housing.			✓
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawaii's low- and moderate-income households, gap-group households, and residents with special needs.		✓	
(5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawaii's people for the purchase of initial owner-occupied housing.			✓
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			✓
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			✓
(8) Give higher priority to the provision of quality housing that is affordable for Hawaii's residents and less priority to development of housing intended primarily for individuals outside of Hawaii.		✓	
Analysis: The proposed action is indirectly applicable to the priority guidelines for the provision of affordable housing or rental opportunities. As previously mentioned, the proposed improvements are intended to support residential homesteads for DHHL beneficiaries.			
Chapter 226-107: Quality education.			
Priority guidelines to promote quality education:			✓
(1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement;			✓
(2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs;			✓
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force;			✓
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision making responsibilities;			✓
(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for:			✓
(A) The electronic exchange of information;			✓
(B) Statewide electronic mail; and			✓
(C) Access to the Internet.			✓
(6) Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives;			✓
(7) Pursue the establishment of Hawaii's public and private universities and colleges as research and training centers of the Pacific;			✓
(8) Develop resources and programs for early childhood education;			✓
(9) Explore alternatives for funding and delivery of educational services to improve the overall quality of education; and			✓
(10) Strengthen and expand educational programs and services for students with special needs.			✓
Analysis: The proposed action is neither directly or indirectly applicable to the priority guidelines for quality education or educational programs.			
CHAPTER 226-108: Sustainability			
Priority guidelines and principles to promote sustainability shall include:		✓	

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(1) Encouraging balanced economic, social, community, and environmental priorities;			✓
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State;		✓	
(3) Promoting a diversified and dynamic economy;		✓	
(4) Encouraging respect for the host culture;			✓
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations;			✓
(6) Considering the principles of the ahupuaa system; and			✓
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaii.			✓
Analysis: The proposed action indirectly advances the priority guidelines for sustainability by constructing the proposed improvements near existing water system infrastructure and through the promotion of construction activity and infrastructure improvements that support economic sustainability.			
CHAPTER 226-109: Climate change adaptation			
Priority guidelines and principles to promote climate change adaptation shall include:		✓	
(1) Ensure that Hawaii's people are educated, informed, and aware of the impacts climate change may have on their communities;			✓
(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;			✓
(3) Invest in continued monitoring and research of Hawaii's climate and the impacts of climate change on the State;			✓
(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;			✓
(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;			✓
(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;			✓
(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;			✓
(8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;			✓
(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and			✓
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.		✓	
Analysis: The proposed project indirectly supports the climate change priority guidelines as it will be implemented in an area that is outside of natural hazard areas, such as flood zones, the tsunami evacuation zone, as well as the projected sea level rise hazard area in order to avoid impacts related to climate change.			



ANALYSIS OF THE
PROJECT APPLICABILITY
TO COUNTYWIDE
POLICY PLAN

APPENDIX

E-1



APPENDIX E-1

Analysis of Project Applicability to Countywide Policy Plan

The Countywide Policy Plan was adopted in March 2010 and is a comprehensive policy document for the islands of Maui County to the year 2030. The plan replaces the *General Plan of the County of Maui 1990 Update* and provides the policy framework for the development of the forthcoming Maui Island Plan as well as for updating the nine detailed Community Plans.

The Countywide Policy Plan provides broad goals, objectives, policies and implementing actions that portray the desired direction of the County's future. Goals are intended to describe a desirable condition of the County by the year 2030 and are intentionally general. Objectives tend to be more specific and may be regarded as milestones to achieve the larger goals. Policies are not intended as regulations, but instead provide a general guideline for County decision makers, departments, and collaborating organizations toward the attainment of goals and objectives. Implementing actions are specific tasks, procedures, programs, or techniques that carry out policy.

Discussion of the proposed project conforms to the relevant goals, objectives, policies, and implementing actions of the Countywide Policy Plan is provided below. The methodology for assessing a project's relationship to the Countywide Policy Plan involves examining the project's applicability to the Plan's goals, objectives, and policies. "Applicability" refers to a project's need, purpose and effects, and how they advance or promote a particular set of goals, objectives and policies. In assessing the relationship between a proposed action and the Countywide Policy Plan, an action may be categorized in one of the following groups:

1. **Directly applicable:** the action and its potential effects directly advances, promotes or affects the relevant goal, objective, or policy.

Example: A County project to develop a new water source and related transmission facilities would be directly applicable to improving physical infrastructure. The relevant objective states: *"Improve water systems to assure access to sustainable, clean, reliable, and affordable sources of water"* (Objective I.1). A policy within this objective category states: *Ensure that adequate supplies of water are available prior to approval of subdivision or construction documents* (Policy I.1.a).

In this instance, the proposed action is considered to be directly applicable to the cited objective and policy.

2. **Indirectly applicable:** the action and its potential effects indirectly supports, advances or affects the objective, policy or priority guideline.

Example: The county water source project cited above supports the objective to: *"Improve land use management and implement a directed-growth strategy"* (Objective J.1). A related policy encompassed by this objective states: *"Direct new development in*

and around communities with existing infrastructure and service capacity, and protect natural, scenic, shoreline, and cultural resources" (Policy J.1.h). In this case, the principle purpose of the project is not to create source specifically intended to improve land use management. Nonetheless, the proposed action indirectly supports the Countywide Policy Plan's directives relating to appropriate locations for new development.

3. **Not applicable:** the action and its potential effects have no direct or indirect relationship to the objectives and policies of the Countywide Policy Plan.

Example: The county water source improvement project referenced above, may not have direct or indirect linkage to Objective D.1, which states: *"In cooperation with the Federal and State governments and nonprofit agencies, broaden access to social and healthcare services and expand options to improve the overall wellness of the people of Maui County"*. Hence, from a policy analysis and linkage standpoint, the proposed action would be considered not applicable to this set of objectives and policies.

It is recognized that policy analysis is subject to interpretation and is best considered in the context of the proposed action's local and regional conditions.

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
A. PROTECT THE NATURAL ENVIRONMENT			
Goal: Maui County's natural environment and distinctive open spaces will be preserved, managed, and cared for in perpetuity.		✓	
Objective:			
(1) Improve the opportunity to experience the natural beauty and native biodiversity of the islands for present and future generations.			✓
Policies:			
(a) Perpetuate native Hawaiian biodiversity by preventing the introduction of invasive species, containing or eliminating existing noxious pests, and protecting critical habitat areas.			✓
(b) Preserve and reestablish indigenous and endemic species' habitats and their connectivity.			✓
(c) Restore and protect forests, wetlands, watersheds, and stream flows, and guard against wildfires, flooding, and erosion.			✓
(d) Protect baseline stream flows for perennial streams, and support policies that ensure adequate stream flow to support Native Hawaiian aquatic species, traditional kalo cultivation, and self-sustaining ahupua'a.			✓
(e) Protect undeveloped beaches, dunes, and coastal ecosystems, and restore natural shoreline processes.			✓
(f) Protect the natural state and integrity of unique terrain, valued natural environments, and geological features.			✓
(g) Preserve and provide ongoing care for important scenic vistas, view planes, landscapes, and open-space resources.			✓
(h) Expand coordination with the State and nonprofit agencies and their volunteers to reduce invasive species, replant indigenous species, and identify critical habitat.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
Implementing Actions:			
(a) Develop island-wide networks of greenways, watercourses, and habitat corridors.			✓
Analysis: The proposed project involves water system storage improvements for a residential subdivision and is neither directly nor indirectly applicable to the objective or policies for improving opportunities to experience the natural environment.			
Objective:			
(2) Improve the quality of environmentally sensitive, locally valued natural resources and native ecology of each island.		✓	
Policies:			
(a) Protect and restore nearshore reef environments and water quality.			✓
(b) Protect marine resources and valued wildlife.			✓
(c) Improve the connection between urban environments and the natural landscape, and incorporate natural features of the land into urban design.			✓
(d) Utilize land-conservation tools to ensure the permanence of valued open spaces.			✓
(e) Mitigate the negative effects of upland uses on coastal wetlands, marine life, and coral reefs.		✓	
(f) Strengthen coastal-zone management, re-naturalization of shorelines, where possible, and filtration or treatment of urban and agricultural runoff.			✓
(g) Regulate the use and maintenance of stormwater-treatment systems that incorporate the use of native vegetation and mimic natural systems.			✓
(h) Advocate for stronger regulation of fishing, boating, cruise ship, and ecotourism activities.			✓
(i) Restore watersheds and aquifer-recharge areas to healthy and productive status, and increase public knowledge about the importance of watershed stewardship, water conservation, and groundwater protection.			✓
Implementing Actions:			
(a) Develop regulations to minimize runoff of pollutants into nearshore waters and reduce nonpoint and point source pollution.			✓
Analysis: The proposed project will utilize Best Management Practices (BMPs) to ensure that natural resources such as the coastal environment are not impacted by construction activities. The use of BMPs also ensures compatibility between land-based and water-based functions, resources, and ecological systems.			
Objective:			
(3) Improve the stewardship of the natural environment.		✓	
Policies:			
(a) Preserve and protect natural resources with significant scenic, economic, cultural, environmental, or recreational value.			✓
(b) Improve communication, coordination, and collaboration among government agencies, nonprofit organizations, communities, individuals, and land owners that work for the protection of the natural environment.			✓
(c) Evaluate development to assess potential short-term and long-term impacts on land, air, aquatic, and marine environments.		✓	
(d) Improve efforts to mitigate and plan for the impact of natural disasters, human influenced emergencies, and global warming.			✓
(e) Regulate access to sensitive ecological sites and landscapes.			✓
(f) Reduce air, noise, light, land, and water pollution, and reduce Maui County's contribution to global climate change.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(g) Plan and prepare for and educate visitors and residents about the possible effects of global warming.			✓
(h) Provide public access to beaches and shorelines for recreational and cultural purposes where appropriate.			✓
(i) Educate the construction and landscape industries and property owners about the use of best management practices to prevent erosion and nonpoint source pollution.			✓
(j) Support the acquisition of resources with scenic, environmental, and recreational value, and encumber their use.			✓
(k) Improve enforcement activities relating to the natural environment.			✓
(l) For each shoreline community, identify and prioritize beach-conservation objectives, and develop action plans for their implementation.			✓
Implementing Actions:			✓
(a) Document, record, and monitor existing conditions, populations, and locations of flora and fauna communities.			✓
(b) Implement Federal and State policies that require a reduction of greenhouse-gas emissions.			✓
(c) Establish a baseline inventory of available natural resources and their respective carrying capacities.			✓
Analysis: The proposed project indirectly supports the objective of improving the stewardship of the natural environment. The project will employ BMPs to prevent impacts from construction, including but not limited to temporary erosion control, stormwater management and dust control. In addition, the environmental review process evaluates the proposed action's potential impacts on the environment, and where applicable, advances mitigative measures aimed at reducing impacts.			
Objective:			
(4) Educate residents and visitors about responsible stewardship practices and the interconnectedness of the natural environment and people.			✓
Policies:			
(a) Expand education about native flora, fauna, and ecosystems.			✓
(b) Align priorities to recognize that the health of the natural environment and the health of people are inextricably linked.			✓
(c) Promote programs and incentives that decrease greenhouse-gas emissions and improve environmental stewardship.			✓
Analysis: The proposed project does not have direct or indirect relationships to the objective of educating residents and visitors about responsible stewardship practices and the interconnectedness of the natural environment and people.			
B. PRESERVE LOCAL CULTURES AND TRADITIONS			
Goal: Maui County will foster a spirit of pono and protect, perpetuate, and reinvigorate its residents multi-cultural values and traditions to ensure that current and future generations will enjoy the benefits of their rich island heritage.		✓	
Objective:			
(1) Perpetuate the Hawaiian culture as a vital force in the lives of residents.		✓	
Policies:			
(a) Protect and preserve access to mountain, ocean, and island resources for traditional Hawaiian cultural practices.			✓
(b) Prohibit inappropriate development of cultural lands and sites that are important for traditional Hawaiian cultural practices, and establish mandates for the special protection of these lands in perpetuity.		✓	

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(c) Promote the use of ahupua'a and moku management practices.			✓
(d) Encourage the use of traditional Hawaiian architecture and craftsmanship.			✓
(e) Promote the use of the Hawaiian language.			✓
(f) Recognize and preserve the unique natural and cultural characteristics of each ahupua'a or district.			✓
(g) Encourage schools to promote broader incorporation of Hawaiian and other local cultures' history and values lessons into curriculum.			✓
(h) Ensure the protection of Native Hawaiian rights.			✓
(i) Promote, encourage, and require the correct use of traditional place names, particularly in government documents, signage, and the tourism industry.			✓
Implementing Actions:			
(a) Establish alternative land use and overlay zoning designations that recognize and preserve the unique natural and cultural characteristics of each ahupua'a or district.			✓
(b) Develop requirements for all County applicants to perpetuate and use proper traditional place names in all applications submitted.			✓
Analysis: Indirectly, the proposed action supports the objective for the perpetuation of the Hawaiian culture and the protection of cultural lands and sites that are important for traditional Hawaiian practices through archaeological investigations and cultural consultation undertaken for the project. These studies foster increased knowledge of Native Hawaiian cultural practices and history in the project area.			
Objective:			
(2) Emphasize respect for our island lifestyle and our unique local cultures, family, and natural environment.		✓	
Policies:			
(a) Acknowledge the Hawaiian culture as the host culture, and foster respect and humility among residents and visitors toward the Hawaiian people and their practices.			✓
(b) Perpetuate a respect for diversity, and recognize the historic blending of cultures and ethnicities.			✓
(c) Encourage the perpetuation of each culture's unique cuisine, attire, dance, music, and folklore, and other unique island traditions and recreational activities.			✓
(d) Recognize the interconnectedness between the natural environment and the cultural heritage of the islands.		✓	
(e) Protect and prioritize funding for recreational activities that support local cultural practices, such as surfing, fishing, and outrigger-canoe paddling.			✓
Analysis: The project indirectly supports this objective and policy as the cultural consultation undertaken as part of the environmental review process recognizes the relationship between the natural environment and cultural resources found in the project vicinity.			
Objective:			
(3) Preserve for present and future generations the opportunity to know and experience the arts, culture, and history of Maui County.			✓
Policies:			
(a) Foster teaching opportunities for cultural practitioners to share their knowledge and skills.			✓
(b) Support the development of cultural centers.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(c) Broaden opportunities for public art and the display of local artwork.			✓
(d) Foster the Aloha Spirit by celebrating the Hawaiian host culture and other Maui County cultures through support of cultural-education programs, festivals, celebrations, and ceremonies.			✓
(e) Support the perpetuation of Hawaiian arts and culture.			✓
(f) Support programs and activities that record the oral and pictorial history of residents.			✓
(g) Support the development of repositories for culture, history, genealogy, oral history, film, and interactive learning.			✓
Implementing Actions:			
(a) Establish incentives for the display of public art.			✓
(b) Establish centers and programs of excellence for the perpetuation of Hawaiian arts and culture.			✓
Analysis: The proposed project does not have direct or indirect relationships to the objective of preserving the arts, culture, and history of Maui County for present and future generations.			
Objective:			
(4) Preserve and restore significant historic architecture, structures, cultural sites, cultural districts, and cultural landscapes.		✓	
Policies:			
(a) Support the development of island-wide historic, archaeological, and cultural resources inventories.		✓	
(b) Promote the rehabilitation and adaptive reuse of historic sites, buildings, and structures to perpetuate a traditional sense of place.			✓
(c) Identify a sustainable rate of use and set forth specific policies to protect cultural resources.			✓
(d) Protect and preserve lands that are culturally or historically significant.			✓
(e) Support programs that protect, record, restore, maintain, provide education about, and interpret cultural districts, landscapes, sites, and artifacts in both natural and museum settings.			✓
(f) Perpetuate the authentic character and historic integrity of rural communities and small towns.			✓
(g) Seek solutions that honor the traditions and practices of the host culture while recognizing the needs of the community.			✓
(h) Support the development of an Archaeological District Ordinance.			✓
(i) Protect summits, slopes, and ridgelines from inappropriate development.			✓
(j) Support the registering of important historic sites on the State and Federal historic registers.			✓
(k) Provide opportunities for public involvement with restoration and enhancement of all types of cultural resources.			✓
(l) Foster partnerships to identify and preserve or revitalize historic and cultural sites.			✓
Implementing Actions:			
(a) Identify, develop, map, and maintain an inventory of locally significant natural, cultural, and historical resources for protection.			✓
(b) Prepare, continually update, and implement a cultural-management plan for cultural sites, districts, and landscapes, where appropriate.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(c) Enact an Archaeological District Ordinance.			✓
(d) Nominat e important historic sites to the State and Federal historic registers.			✓
Analysis: The proposed action is indirectly applicable to these objectives and related policies and implementing actions. Archaeological investigations and coordination for the proposed action are aimed at ensuring the preservation of historic resources which may be impacted by the project. In addition, the State Historic Preservation Division (SHPD) has been consulted and the project will comply with all recommended mitigation measures. Should any archaeological resources be discovered during ground altering activities, work shall cease in the immediate area of the find and mitigation coordination will be undertaken with the SHPD.			
C. IMPROVE EDUCATION			
Goal: Residents will have access to lifelong formal and informal educational options enabling them to realize their ambitions.			✓
Objective:			
(1) Encourage the State to attract and retain school administrators and educators of the highest quality.			✓
Policies:			
(a) Encourage the State to provide teachers with nationally competitive pay and benefit packages.			✓
(b) Encourage the State to ensure teachers will have the teaching tools and support staff needed to provide students with an excellent education.			✓
(c) Explore Maui County district- and school-based decision making in public education.			✓
Analysis: The proposed project involves water system storage improvements and neither directly nor indirectly advances the objective and policies for the attraction or retention of school administrators and educators.			
Objective:			
(2) Provide nurturing learning environments that build skills for the 21st century.			✓
Policies:			
(a) Expand professional-development opportunities in disciplines that support the economic-development goals of Maui County.			✓
(b) Plan for demographic, social, and technological changes in a timely manner.			✓
(c) Encourage collaborative partnerships to improve conditions of learning environments.			✓
(d) Promote development of neighborhood schools and educational centers.			✓
(e) Integrate schools, community parks, and playgrounds, and expand each community's use of these facilities.			✓
(f) Support coordination between land use and school-facility planning agencies.			✓
(g) Encourage the upgrade and ongoing maintenance of public-school facilities.			✓
(h) Encourage the State Department of Education to seek reliable, innovative, and alternative methods to support a level of per-pupil funding that places Hawai'i among the top tier of states nationally for its financial support of public schools.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(i) Encourage the State to promote healthier, more productive learning environments, including by providing healthy meals, more physical activity, natural lighting, and passive cooling.			✓
(j) Encourage the State to support the development of benchmarks to measure the success of Hawai'i's public-education system and clarify lines of accountability.			✓
(k) Design school and park facilities in proximity to residential areas.			✓
(l) Support technology- and natural-environment-based learning.			✓
(m) Encourage the State to support lower student-teacher ratios in public schools.			✓
(n) Encourage alternative learning and educational opportunities.			✓
Implementing Actions:			
(a) Develop safe walking and bicycling programs for school children.			✓
Analysis: The objective and policies for nurturing learning environments that build 21st century skills is neither directly nor indirectly supported by the proposed action. The proposed water system storage tank will serve a residential subdivision and will not impact educational environments or facilities.			
Objective:			
(3) Provide all residents with educational opportunities that can help them better understand themselves and their surroundings and allow them to realize their ambitions.			✓
Policies:			
(a) Encourage the State to improve Maui Community College as a comprehensive community college that will serve each community.			✓
(b) Broaden the use of technology and telecommunications to improve educational opportunities throughout the County.			✓
(c) Attract graduate-level research programs and institutions.			✓
(d) Promote the teaching of traditional practices, including aquaculture; subsistence agriculture; Pacific Island, Asian, and other forms of alternative health practices; and indigenous Hawaiian architecture.			✓
(e) Integrate cultural and environmental values in education, including self-sufficiency and sustainability.			✓
(f) Foster a partnership and ongoing dialogue between business organizations, formal educational institutions, and vocational training centers to tailor learning and mentoring programs to County needs.			✓
(g) Ensure teaching of the arts to all ages.			✓
(h) Expand and develop vocational learning opportunities by establishing trade schools.			✓
(i) Encourage the State to integrate financial and economic literacy in elementary, secondary, and higher-education levels.			✓
Implementing Actions:			
(a) Encourage the State to establish a four-year university, and support the development of other higher-education institutions to enable residents to obtain bachelor degrees and postgraduate degrees in Maui County.			✓
Analysis: The proposed action is neither directly nor indirectly applicable to the objective or policies for the provision of educational opportunities or development of higher-education institutions.			

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
Objective:			
(4) Maximize community-based educational opportunities.			✓
Policies:			
(a) Encourage the State and others to expand pre-school, after-school, and homebased (parent-child) learning.			✓
(b) Support public-private partnerships to develop youth-internship, apprenticeship, and -mentoring programs.			✓
(c) Support the development of a wide range of informal educational and cultural programs for all residents.			✓
(d) Improve partnerships that utilize the skills and talents at Hawai'i's colleges and universities to benefit the County.			✓
(e) Support career-development and job-recruitment programs and centers.			✓
(f) Attract learning institutions and specialty schools to diversify and enhance educational opportunities.			✓
(g) Expand education of important life skills for the general public.			✓
(h) Support community facilities such as museums, libraries, nature centers, and open spaces that provide interactive-learning opportunities for all ages.			✓
Analysis: As a water system storage improvement project for a residential subdivision, the proposed action does not advance the objective or policies for maximizing community-based educational opportunities.			
D. STRENGTHEN SOCIAL AND HEALTHCARE SERVICES			
Goal: Health and social services in Maui County will fully and comprehensively serve all segments of the population.			✓
Objective:			
(1) In cooperation with the Federal and State governments and nonprofit agencies, broaden access to social and healthcare services and expand options to improve the overall wellness of the people of Maui County.			✓
Policies:			
(a) Work with other levels of government and the nonprofit sector to expand services to address hunger, homelessness, and poverty.			✓
(b) Support the improvement of opportunities for disadvantaged youth, encourage the tradition of hanai relatives, and support expanded opportunities for foster care.			✓
(c) Support expanded long-term-care options, both in institutions and at home, for patients requiring ongoing assistance and medical attention.			✓
(d) Encourage the expansion and improvement of local hospitals, facilitate the establishment of new healthcare facilities, and facilitate prompt and high-quality emergency- and urgent-care services for all.			✓
(e) Support broadened access to affordable health insurance and health care, and recognize the unique economic challenges posed to families when healthcare services are provided off-island.			✓
(f) Encourage equal access to social and healthcare services through both technological and traditional means.			✓
Analysis: The proposed water system storage improvement project will serve a residential subdivision and is neither directly nor indirectly applicable to the objective and policies for access to social and healthcare services.			
Objective:			
(2) Encourage the Federal and State governments and the private sector to improve the quality and delivery of social and healthcare services.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
Policies:			
(a) Strengthen partnerships with government, nonprofit, and private organizations to provide funding and to improve counseling and other assistance to address substance abuse, domestic violence, and other pressing social challenges.			✓
(b) Encourage the State to improve the quality of medical personnel, facilities, services, and equipment.			✓
(c) Encourage investment to improve the recruitment of medical professionals and the quality of medical facilities and equipment throughout Maui County.			✓
(d) Promote the development of continuum-of-care facilities that provide assisted living, hospice, home-care, and skilled-nursing options allowing the individual to be cared for in a manner congruent with his or her needs and desires.			✓
(e) Support improved social, healthcare, and governmental services for special needs populations.			✓
(f) Plan for the needs of an aging population and the resulting impacts on social services, housing, and healthcare delivery.			✓
(g) Improve coordination among the police, the courts, and the public in the administration of social and healthcare services.			✓
(h) Support programs that address needs of veterans.			✓
(i) Support programs that address the needs of immigrants.			✓
Implementing Actions:			
(a) Invest in programs designed to improve the general welfare and quality of life of Native Hawaiians.			✓
(b) Assist and facilitate the State Department of Public Safety and others in efforts to strengthen programs and facilities that will improve the mental and social health of incarcerated people and assist in prison inmates' successful transition back into Maui County communities.			✓
(c) Develop and maintain a comprehensive index that will measure the health and wellness needs of families.			✓
(d) Provide heliports countywide for emergency health and safety purposes.			✓
Analysis: The proposed project is neither directly nor indirectly applicable to the objective and policies for the quality and delivery of social and healthcare services and programs. Specifically, the proposed action will not encourage or impact partnerships with governments and the private sector for social and healthcare programs or services.			
Objective:			
(3) Strengthen public-awareness programs related to healthy lifestyles and social and medical services.			✓
Policies:			
(a) Expand public awareness about personal safety and crime prevention.			✓
(b) Encourage residents to pursue education and training for careers in the healthcare, social services, and community-development fields.			✓
(c) Expand public awareness and promote programs to achieve healthy eating habits and drug-free lifestyles.			✓
Analysis: The proposed project is neither directly nor indirectly applicable to the objective and policies for the quality and delivery of social and healthcare services and programs. Specifically, the proposed action will not encourage or impact partnerships with governments and the private sector for social and healthcare programs or services.			

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)				DA	IA	NA
E. EXPAND HOUSING OPPORTUNITIES FOR RESIDENTS						
Goal: Quality, island-appropriate housing will be available to all residents.						
Objective:						
(1) Reduce the affordable housing deficit for residents.						
Policies:						
(a) Ensure that an adequate and permanent supply of affordable housing, both new and existing units, is made available for purchase or rental to our resident and/or workforce population, with special emphasis on providing housing for low- to moderate-income families, and ensure that all affordable housing remains affordable in perpetuity.						
(b) Seek innovative ways to lower housing costs without compromising the quality of our island lifestyle.						
(c) Seek innovative methods to secure land for the development of low- and moderate- income housing.						
(d) Provide the homeless population with emergency and transitional shelter and other supportive programs.						
(e) Provide for a range of senior-citizen and special needs housing choices on each island that affordably facilitates a continuum of care and services.						
(f) Support the Department of Hawaiian Home Lands' development of homestead lands.						
(g) Manage property-tax burdens to protect affordable resident homeownership.						
(h) Explore taxation mechanisms to increase and maintain access to affordable housing.						
(i) Improve awareness regarding available affordable homeowner's insurance.						
(j) Redevelop commercial areas with a mixture of affordable residential and business uses, where appropriate.						
(k) Ensure residents are given priority to obtain affordable housing units developed in their communities, consistent with all applicable regulations.						
(l) Establish pricing for affordable housing that is more reflective of Maui County's workforce than the United States Housing and Urban Development's median-income estimates for Maui County.						
(m) Develop neighborhoods with a mixture of accessible and integrated community facilities and services.						
(n) Provide alternative regulatory frameworks to facilitate the use of Kuleana lands by the descendants of Native Hawaiians who received those lands pursuant to the Kuleana Act of 1850.						
(o) Work with lending institutions to expand housing options and safeguard the financial security of homeowners.						
(p) Promote the use of the community land trust model and other land-lease and land- financing options.						
(q) Support the opportunity to age in place by providing accessible and appropriately designed residential units.						
Analysis: The proposed action increases housing opportunities for residents and reduces the affordable housing deficit in Maui County by providing the water system storage improvements necessary to develop the Department of Hawaiian Home Lands' (DHHL) Pu'unani Homestead Subdivision.						
Objective:						
(2) Increase the mix of housing types in towns and neighborhoods to promote sustainable land use planning, expand consumer choice, and protect the County's rural and small town character.						

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)				DA	IA	NA
Policies:						
(a) Seek innovative ways to develop 'ohana cottages and accessory-dwelling units as affordable housing.						
(b) Design neighborhoods to foster interaction among neighbors.						
(c) Encourage a mix of social, economic, and age groups within neighborhoods.						
(d) Promote infill housing in urban areas at scales that capitalize on existing infrastructure, lower development costs, and are consistent with existing or desired patterns of development.						
(e) Encourage the building industry to use environmentally sustainable materials, technologies, and site planning.						
(f) Develop workforce housing in proximity to job centers and transit facilities.						
(g) Provide incentives to developers and owners who incorporate green building practices and energy-efficient technologies into their housing developments.						
Implementing Actions:						
(a) Revise laws to support neighborhood designs that incorporate a mix of housing types that are appropriate for island living.						
Analysis: The proposed action indirectly increases the mix of housing types on Maui through water system storage improvements needed to develop the Pu'unani Homestead Subdivision.						
Objective:						
(3) Increase and maintain the affordable housing inventory.						
Policies:						
(a) Recognize housing as a basic human need, and work to fulfill that need.						
(b) Prioritize available infrastructure capacity for affordable housing.						
(c) Improve communication, collaboration, and coordination among housing providers and social-service organizations.						
(d) Study future projected housing needs, monitor economic cycles, and prepare for future conditions on each island.						
(e) Develop public-private and nonprofit partnerships that facilitate the construction of quality affordable housing.						
(f) Streamline the review process for high-quality, affordable housing developments that implement the goals, objectives, and policies of the General Plan.						
(g) Minimize the intrusion of housing on prime, productive, and potentially productive agricultural lands and regionally valuable agricultural lands.						
(h) Encourage long-term residential use of existing and future housing to meet residential needs.						
Implementing Actions:						
(a) Develop policies to even out the peaks and valleys in Maui County's construction-demand cycles.						
Analysis: Indirectly, the project supports the objective for increasing and maintaining the affordable housing inventory as the proposed water system storage improvements will service the DHHL Pu'unani Homestead Subdivision which will provide needed housing for DHHL beneficiaries on Maui.						
Objective:						
(4) Expand access to education related to housing options, homeownership, financing, and residential construction.						

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
Policies:			
(a) Broaden access to information about County, State, and Federal programs that provide financial assistance to renters and home buyers.			✓
(b) Expand access to information about opportunities for homeownership and self-help housing.			✓
(c) Educate residents about making housing choices that support their individual needs, the needs of their communities, and the health of the islands' natural systems.			✓
(d) Improve home buyers' education on all aspects of homeownership.			✓
Analysis: The proposed action is neither directly nor indirectly applicable to the objective or policies for expanding access to education and information related to housing options or financial assistance programs for renters and home buyers.			
F. STRENGTHEN THE LOCAL ECONOMY			
Goal: Maui County's economy will be diverse, sustainable, and supportive of community values.		✓	
Objective:			
(1) Promote an economic climate that will encourage diversification of the County's economic base and a sustainable rate of economic growth.		✓	
Policies:			
(a) Support economic decisions that create long-term benefits.		✓	
(b) Promote lifelong education, career development, and technical training for existing and emerging industries.			✓
(c) Invest in infrastructure, facilities, and programs that foster economic diversification.			✓
(d) Support and promote locally produced products and locally owned operations and businesses that benefit local communities and meet local demand.			✓
(e) Support programs that assist industries to retain and attract more local labor and facilitate the creation of jobs that offer a living wage.			✓
(f) Encourage work environments that are safe, rewarding, and fulfilling to employees.			✓
(g) Support home-based businesses that are appropriate for and in character with the community.			✓
(h) Encourage businesses that promote the health and well-being of the residents, produce value-added products, and support community values.			✓
(i) Foster an understanding of the role of all industries in our economy.			✓
(j) Support efforts to improve conditions that foster economic vitality in our historic small towns.			✓
(k) Support and encourage traditional host-culture businesses and indigenous agricultural practices.			✓
(l) Support public and private entities that assist entrepreneurs in establishing locally operated businesses.			✓
Implementing Actions:			
(a) Develop regulations and programs that support opportunities for local merchants, farmers, and small businesses to sell their goods and services directly to the public.			✓
(b) Monitor the carrying capacity of the islands' social, ecological, and infrastructure systems with respect to the economy.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
Analysis: Indirectly, the project supports the objective for the economy and economic growth and represents an action that will have positive economic impacts and long-term benefits. The proposed water system storage improvements will have positive short-term economic impacts through design and construction activity and in the long term provides necessary water system infrastructure to support a residential subdivision.			
Objective:			
(2) Diversify and expand sustainable forms of agriculture and aquaculture.			✓
Policies:			
(a) Support programs that position Maui County's agricultural products as premium export products.			✓
(b) Prioritize the use of agricultural land to feed the local population, and promote the use of agricultural lands for sustainable and diversified agricultural activities.			✓
(c) Capitalize on Hawai'i's economic opportunities in the ecologically sensitive aquaculture industries.			✓
(d) Assist farmers to help make Maui County more self-sufficient in food production.			✓
(e) Support ordinances, programs, and policies that keep agricultural land and water available and affordable to farmers.			✓
(f) Support a tax structure that is conducive to the growth of the agricultural economy.			✓
(g) Enhance County efforts to monitor and regulate important agricultural issues.			✓
(h) Support education, research, and facilities that strengthen the agricultural industry.			✓
(i) Maintain the genetic integrity of existing food crops.			✓
(j) Encourage healthy and organic farm practices that contribute to land health and regeneration.			✓
(k) Support cooperatives and other types of nontraditional communal farming and efforts.			✓
(l) Encourage methods of monitoring and controlling genetically modified crops to prevent adverse effects.			✓
(m) Work with the State to ease the permitting process for the revitalization of traditional fish ponds.			✓
Implementing Actions:			
(a) Redirect efforts in the Office of Economic Development to further facilitate the development of the agricultural section and to monitor agricultural legislation and issues.			✓
(b) Publicly identify, with signage and other means, the field locations of all genetically modified crops.			✓
(c) Create agricultural parks in areas distant from genetically modified crops.			✓
Analysis: The objective and policies as it relates to diversification and expansion of sustainable forms of agriculture and aquaculture are not directly or indirectly applicable to the proposed project.			
Objective:			
(3) Support a visitor industry that respects the resident culture and the environment.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)		DA	IA	NA
Policies:				
(a) Promote traditional Hawaiian practices in visitor-related facilities and activities.				✓
(b) Encourage and educate the visitor industry to be sensitive to island lifestyles and cultural values.				✓
(c) Encourage a spirit of welcome for residents at visitor facilities, such as by offering kama'aina incentives and discount programs.				✓
(d) Support the renovation and enhancement of existing visitor facilities.				✓
(e) Support policies, programs, and a tax structure that redirect the benefits of the visitor industry back into the local community.				✓
(f) Encourage resident ownership of visitor-related businesses and facilities.				✓
(g) Develop partnerships to provide educational and training facilities to residents employed in the visitor industry.				✓
(h) Foster an understanding of local cultures, customs, and etiquette, and emphasize the importance of the Aloha Spirit as a common good for all.				✓
(i) Support the diversification, development, evolution, and integration of the visitor industry in a way that is compatible with the traditional, social, economic, spiritual, and environmental values of island residents				✓
(j) Improve collaboration between the visitor industry and the other sectors of Maui County's economy.				✓
(k) Perpetuate an authentic image of the Hawaiian culture and history and an appropriate recognition of the host culture.				✓
(l) Support the programs and initiatives outlined in the Maui County Tourism Strategic Plan 2006-2015.				✓
(m) Promote water conservation, beach conservation, and open-space conservation in areas providing services for visitors.				✓
(n) Recognize the important contributions that the visitor industry makes to the County's economy, and support a healthy and vibrant visitor industry.				✓
Analysis: The proposed action is a water system storage improvement project. The objectives and policies around supporting a visitor industry is not applicable to the project.				
Objective:				
(4) Expand economic sectors that increase living-wage job choices and are compatible with community values.				✓
Policies:				
(a) Support emerging industries, including the following: <ul style="list-style-type: none"> • Health and wellness industry; • Sports and recreation industry; • Film and entertainment industry; • Arts and culture industry; • Renewable-energy industry; 				✓
<ul style="list-style-type: none"> • Research and development industry; • High-technology and knowledge-based industries; • Education and training industry; • Ecotourism industry; and • Agritourism industry. 				
Analysis: The proposed action is neither directly nor indirectly applicable to the objective and policies for the expansion of economic sectors. In particular, the project does not support emerging industries.				

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)		DA	IA	NA
G. IMPROVE PARKS AND PUBLIC FACILITIES				
Goal: A full range of island-appropriate public facilities and recreational opportunities will be provided to improve the quality of life for residents and visitors.				
Objective:				
(1) Expand access to recreational opportunities and community facilities to meet the present and future needs of residents of all ages and physical abilities.				✓
Policies:				
(a) Protect, enhance, and expand access to public shoreline and mountain resources.				✓
(b) Expand and enhance the network of parks, multi-use paths, and bikeways.				✓
(c) Assist communities in developing recreational facilities that promote physical fitness.				✓
(d) Expand venue options for recreation and performances that enrich the lifestyles of Maui County's people.				✓
(e) Expand affordable recreational and after-school programs for youth.				✓
(f) Encourage and invest in recreational, social, and leisure activities that bring people together and build community pride.				✓
(g) Promote the development and enhancement of community centers, civic spaces, and gathering places throughout our communities.				✓
(h) Expand affordable access to recreational opportunities that support the local lifestyle.				✓
Implementing Actions:				
(a) Identify and reserve lands for cemeteries, and preserve existing cemeteries on all islands, appropriately accommodating varying cultural and, faith-based traditions.				✓
Analysis: The proposed action neither directly nor indirectly applicable to the objective and policies for the expansion of access to recreational opportunities and community facilities. The project involves water system storage improvements which will serve a residential subdivision.				
Objective:				
(2) Improve the quality and adequacy of community facilities.				✓
Policies:				
(a) Provide an adequate supply of dedicated shelters and facilities for disaster relief.				✓
(b) Provide and maintain community facilities that are appropriately designed to reflect the traditions and customs of local cultures.				✓
(c) Ensure that parks and public facilities are safe and adequately equipped for the needs of all ages and physical abilities to the extent reasonable.				✓
(d) Maintain, enhance, expand, and provide new active and passive recreational facilities in ways that preserve the natural beauty of their locations.				✓
(e) Redesign or retrofit public facilities to adapt to major shifts in environmental or urban conditions to the extent reasonable.				✓
Analysis: The proposed project will serve a residential subdivision and will not have a direct or indirect impact on the quality and adequacy of community facilities.				
Objective:				
(3) Enhance the funding, management, and planning of public facilities and park lands.				✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
Policies:			
(a) Identify and encourage the establishment of regulated and environmentally sound campgrounds.			✓
(b) Manage park use and control access to natural resources in order to rest sensitive places and utilize the resources in a sustainable manner.			✓
(c) Provide public-recreational facilities that are clean and well-maintained.			✓
(d) Develop partnerships to ensure proper stewardship of the islands' trails, public lands, and access systems.			✓
(e) Ensure that there is an adequate supply of public restrooms in convenient locations.			✓
Implementing Actions:			
(a) Encourage the State to allow for overnight fishing along the shoreline in accordance with management plans and regulations.			✓
(b) Develop and regularly update functional plans, including those relating to public facilities, parks, and campgrounds.			✓
(c) Develop and adopt local level-of service standards for public facilities and parks.			✓
(d) Identify, acquire, and develop lands for parks, civic spaces, and public uses.			✓
Analysis: The proposed project is neither directly nor indirectly applicable to the objective or policies for the enhancement of public facilities and park lands.			
H. DIVERSIFY TRANSPORTATION OPTIONS			
Goal: Maui County will have an efficient, economical, and environmentally sensitive means of moving people and goods.			✓
Objective:			
(1) Provide an effective, affordable, and convenient ground-transportation system that is environmentally sustainable.			✓
Policies:			
(a) Execute planning strategies to reduce traffic congestion.			✓
(b) Plan for the efficient relocation of roadways for the public benefit.			✓
(c) Support the use of alternative roadway designs, such as traffic-calming techniques and modern roundabouts.			✓
(d) Increase route and mode options in the ground-transportation network.			✓
(e) Ensure that roadway systems are safe, efficient, and maintained in good condition.			✓
(f) Preserve roadway corridors that have historic, scenic, or unique physical attributes that enhance the character and scenic resources of communities.			✓
(g) Design new roads and roadway improvements to retain and enhance the existing character and scenic resources of the communities through which they pass.			✓
(h) Promote a variety of affordable and convenient transportation services that meet countywide and community needs and expand ridership of transit systems.			✓
(i) Collaborate with transit agencies, government agencies, employers, and operators to provide planning strategies that reduce peak-hour traffic.			✓
(j) Develop and expand an attractive, island-appropriate, and efficient public transportation system.			✓
(k) Provide and encourage the development of specialized transportation options for the young, the elderly, and persons with disabilities.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(l) Evaluate all alternatives to preserve quality of life before widening roads.			✓
(m) Encourage businesses in the promotion of alternative transportation options for resident and visitor use.			✓
(n) Support the development of carbon-emission standards and an incentive program aimed at achieving County carbon-emission goals.			✓
Implementing Actions:			
(a) Create incentives and implement strategies to reduce visitor dependence on rental cars.			✓
(b) Establish efficient public-transit routes between employment centers and primary workforce residential areas.			✓
(c) Create attractive, island-appropriate, conveniently located park-and-ride and ride-share facilities.			✓
Analysis: The proposed action involves water system storage improvements and does not directly or indirectly advance the objective or policies for ground transportation systems.			
Objective:			
(2) Reduce the reliance on the automobile and fossil fuels by encouraging walking, bicycling, and other energy-efficient and safe alternative modes of transportation.			✓
Policies:			
(a) Make walking and bicycling transportation safe and easy between and within communities.			✓
(b) Require development to be designed with the pedestrian in mind.			✓
(c) Design new and retrofit existing rights-of-way with adequate sidewalks, bicycle lanes, or separated multi-use transit corridors.			✓
(d) Support the development of a countywide network of bikeways, equestrian trails, and pedestrian paths.			✓
(e) Support the reestablishment of traditional trails between communities, to the ocean, and through the mountains for public use.			✓
(f) Encourage educational programs to increase safety for pedestrians and bicyclists.			✓
Implementing Actions:			
(a) Design, build, and modify existing bikeways to improve safety and separation from automobiles.			✓
(b) Increase enforcement to reduce abuse of bicycle and pedestrian lanes by motorized vehicles.			✓
(c) Identify non-motorized transportation options as a priority for new sources of funding.			✓
Analysis: The proposed action is not directly nor indirectly applicable to the objective or policies for reducing the reliance on automobiles and fossil fuels and will not affect the encouragement of alternative modes of transportation.			
Objective:			
(3) Improve opportunities for affordable, efficient, safe, and reliable air transportation.			✓
Policies:			
(a) Discourage private helicopter and fixed-wing landing sites to mitigate environmental and social impacts.			✓
(b) Encourage the use of quieter aircraft and noise-abatement procedures for arrivals and departures.			✓
(c) Encourage the modernization and maintenance of air-transportation facilities for general-aviation activities.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(d) Encourage a viable and competitive atmosphere for air carriers to expand service and ensure sufficient intra-County flights and affordable fares for consumers.			✓
(e) Continue to support secondary airports, and encourage the State to provide them with adequate funding.			✓
(f) During Community Plan updates, explore the use of the smaller airports.			✓
(g) Encourage the State to provide efficient, adequate, and affordable parking and transit connections within and around airports.			✓
Analysis: The objective and policies for air transportation is neither directly nor indirectly impacted by the proposed action.			
Objective:			
(4) Improve opportunities for affordable, efficient, safe, and reliable ocean transportation.			✓
Policies:			
(a) Support programs and regulations that reduce the disposal of maritime waste and prevent spills into the ocean.	✓		
(b) Encourage the upgrading of harbors to resist damage from natural hazards and disasters.			✓
(c) Encourage the State to study the use of existing harbors and set priorities for future use.			✓
(d) Explore all options to protect the traditional recreational uses of harbors, and mitigate harbor-upgrade impacts to recreational uses where feasible.			✓
(e) Encourage the upgrading of harbors and the separation of cargo and bulk materials from passenger and recreational uses.			✓
(f) Encourage the State to provide for improved capacity at shipping, docking, and storage facilities.			✓
(g) Encourage the State to provide adequate parking facilities and transit connections within and around harbor areas.			✓
(h) Encourage the redevelopment and revitalization of harbors while preserving historic and cultural assets in harbor districts.			✓
(i) Encourage the State to provide adequate facilities for small-boat operations, including small-boat launch ramps, according to community needs.			✓
(j) Support the maintenance and cleanliness of harbor facilities.			✓
(k) Support the redevelopment of harbors as pedestrian-oriented gathering places.			✓
Analysis: The proposed action is neither directly nor indirectly applicable to the objective and policies for ocean transportation and will not impact harbors or harbor facilities.			
Objective:			
(5) Improve and expand the planning and management of transportation systems.			✓
Policies:			
(a) Encourage progressive community design and development that will reduce transportation trips.			✓
(b) Require new developments to contribute their pro rata share of local and regional infrastructure costs.			✓
(c) Establish appropriate user fees for private enterprises that utilize public transportation facilities for recreational purposes.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(d) Support the revision of roadway-design criteria and standards so that roads are compatible with surrounding neighborhoods and the character of rural areas.			✓
(e) Plan for multi-modal transportation and utility corridors on each island.			✓
(f) Support designing all transportation facilities, including airport, harbor, and mass-transit stations, to reflect Hawaiian architecture.			✓
(g) Utilize transportation-demand management as an integral part of transportation planning.			✓
(h) Accommodate the planting of street trees and other appropriate landscaping in all public rights-of-way.			✓
Analysis: The objective and policies for the planning and management of transportation systems is not directly or indirectly supported by the proposed project.			
I. IMPROVE PHYSICAL INFRASTRUCTURE			
Goal: Maui County's physical infrastructure will be maintained in optimum condition and will provide for and effectively serve the needs of the County through clean and sustainable technologies.	✓		
Objective:			
(1) Improve water systems to assure access to sustainable, clean, reliable, and affordable sources of water.	✓		
Policies:			
(a) Ensure that adequate supplies of water are available prior to approval of subdivision or construction documents.	✓		
(b) Develop and fund improved water-delivery systems.	✓		
(c) Ensure a reliable and affordable supply of water for productive agricultural uses.			✓
(d) Promote the reclamation of gray water, and enable the use of reclaimed, gray, and brackish water for activities that do not require potable water.			✓
(e) Retain and expand public control and ownership of water resources and delivery systems.			✓
(f) Improve the management of water systems so that surface-water and groundwater resources are not degraded by overuse or pollution.			✓
(g) Explore and promote alternative water-source-development methods.			✓
(h) Seek reliable long-term sources of water to serve developments that achieve consistency with the appropriate Community Plans.			✓
Implementing Actions:			
(a) Develop a process to review all applications for desalination.			✓
Analysis: The proposed water system storage improvements is directly supportive of the goal for physical infrastructure and the objective of improving water systems to ensure the Pu'unani Homestead Subdivision has access to water.			
Objective:			
(2) Improve waste-disposal practices and systems to be efficient, safe, and as environmentally sound as possible.			✓
Policies:			
(a) Provide sustainable waste-disposal systems and comprehensive, convenient recycling programs to reduce the flow of waste into landfills.			✓
(b) Support innovative and alternative practices in recycling solid waste and wastewater and disposing of hazardous waste.			✓
(c) Encourage vendors and owners of automobile, appliance, and white goods to participate in the safe disposal and recycling of such goods, and ensure greater accountability for large waste producers.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(d) Develop strategies to promote public awareness to reduce pollution and litter, and encourage residents to reduce, reuse, recycle, and compost waste materials.			✓
(e) Pursue improvements and upgrades to existing wastewater and solid-waste systems consistent with current and future plans and the County's Capital Improvement Program.			✓
Implementing Actions:			
(a) Establish recycling, trash-separation, and materials recovery programs and facilities to reduce the flow of waste into landfills.			✓
(b) Study the feasibility of developing environmentally safe waste-to-energy facilities.			✓
(c) Utilize taxes and fees as means to encourage conservation and recycling.			✓
(d) Implement and regularly update the Integrated Solid Waste Management Plan.			✓
(e) Phase out the use of injection wells.			✓
Analysis: The proposed project is a water system storage project that is not applicable to the objective or policies for waste-disposal systems.			
Objective:			
(3) Significantly increase the use of renewable and green technologies to promote energy efficiency and energy self-sufficiency.			✓
Policies:			
(a) Promote the use of locally renewable energy sources, and reward energy efficiency.			✓
(b) Consider tax incentives and credits for the development of sustainable and renewable-energy sources.			✓
(c) Expand education about energy conservation and self-sufficiency.			✓
(d) Encourage small-scale energy generation that utilizes wind, sun, water, biowaste, and other renewable sources of energy.			✓
(e) Expand renewable-energy production.			✓
(f) Develop public-private partnerships to ensure the use of renewable energy and increase energy efficiency.			✓
(g) Require the incorporation of locally appropriate energy-saving and green building design concepts in all new developments by providing energy efficient urban design guidelines and amendments to the Building Code.			✓
(h) Encourage the use of sustainable energy to power vehicles.			✓
(i) Promote the retrofitting of existing buildings and new development to incorporate energy-saving design concepts and devices.			✓
(j) Encourage green footprint practices.			✓
(k) Reduce Maui County's dependence on fossil fuels and energy imports.			✓
(l) Support green building practices such as the construction of buildings that aim to minimize carbon dioxide production, produce renewable energy, and recycle water.			✓
(m) Promote and support environmentally friendly practices in all energy sectors.			✓
Implementing Actions:			
(a) Adopt an energy-efficiency policy for Maui County government as a model for other jurisdictions.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(b) Adopt a Green Building Code, and support green building practices.			✓
Analysis: The proposed project is neither directly nor indirectly applicable to the objective and policies for promoting energy efficiency and has no implications for the use of renewable or green energy.			
Objective:			
(4) Direct growth in a way that makes efficient use of existing infrastructure and to areas where there is available infrastructure capacity.		✓	
Policies:			
(a) Capitalize on existing infrastructure capacity as a priority over infrastructure expansion.		✓	
(b) Planning for new towns should only be considered if a region's growth is too large to be directed into infill and adjacent growth areas.			✓
(c) Utilize appropriate infrastructure technologies in the appropriate locations.			✓
(d) Promote land use patterns that can be provided with infrastructure and public facilities in a cost-effective manner.			✓
(e) Support catchment systems and on-site wastewater treatment in rural areas and aggregated water and wastewater systems in urban areas if they are appropriately located.			✓
Implementing Actions:			
(a) Develop a streamlining system for urban infill projects.			✓
(b) Identify appropriate areas for urban expansion of existing towns where infrastructure and public facilities can be provided in a cost-effective manner.			✓
Analysis: The proposed action indirectly supports the objective and policies for directing growth to make use of existing infrastructure. The project area is serviced by the County Department of Water Supply (DWS) and the proposed water system storage tank will connect to the County water system and capitalize on existing infrastructure.			
Objective:			
(5) Improve the planning and management of infrastructure systems.	✓		
Policies:			
(a) Provide a reliable and sufficient level of funding to enhance and maintain infrastructure systems.			✓
(b) Require new developments to contribute their pro rata share of local and regional infrastructure costs.			✓
(c) Improve coordination among infrastructure providers and planning agencies to minimize construction impacts.			✓
(d) Maintain inventories of infrastructure capacity, and project future infrastructure needs.			✓
(e) Require social-justice and -equity issues to be considered during the infrastructure-planning process.			✓
(f) Discourage the development of critical infrastructure systems within hazard zones and the tsunami-inundation zone to the extent practical.		✓	
(g) Ensure that infrastructure is built concurrent with or prior to development.	✓		
(h) Ensure that basic infrastructure needs can be met during a disaster.			✓
(i) Locate public facilities and emergency services in appropriate locations that support the health, safety, and welfare of each community and that minimize delivery inefficiencies.	✓		
(j) Promote the undergrounding of utility and other distribution lines for health safety, and aesthetic reasons.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
Implementing Actions:			
(a) Develop and regularly update functional plans for infrastructure systems.			✓
(b) Develop, adopt, and regularly update local or community-sensitive level-of service standards for infrastructure systems.			✓
Analysis: The objective and policies for the planning and management of infrastructure systems is directly and indirectly supported by the proposed action. The project will be implemented outside of natural hazard zones and will be located in close proximity to existing DWS infrastructure and the planned DHHL Pu'unani Homestead Subdivision, thereby minimizing delivery inefficiencies.			
J. PROMOTE SUSTAINABLE LAND USE AND GROWTH MANAGEMENT			
Goal: Community character, lifestyles, economies, and natural assets will be preserved by managing growth and using land in a sustainable manner.		✓	
Objective:			
(1) Improve land use management and implement a directed-growth strategy.		✓	
Policies:			
(a) Establish, map, and enforce urban- and rural-growth limits.		✓	
(b) Direct urban and rural growth to designated areas.		✓	
(c) Limit the number of visitor-accommodation units and facilities in Community Plan Areas.			✓
(d) Maintain a sustainable balance between the resident, part-time resident, and visitor populations.			✓
(e) Encourage redevelopment and infill in existing communities on lands intended for urban use to protect productive farm land and open-space resources.			✓
(f) Discourage new entitlements for residential, resort, or commercial development along the shoreline.			✓
(g) Restrict development in areas that are prone to natural hazards, disasters, or sea-level rise.		✓	
(h) Direct new development in and around communities with existing infrastructure and service capacity, and protect natural, scenic, shoreline, and cultural resources.			✓
(i) Establish and maintain permanent open space between communities to protect each community's identity.			✓
(j) Support the dedication of land for public uses.			✓
(k) Preserve the public's rights of access to and continuous lateral access along all shorelines.			✓
(l) Enable existing and future communities to be self-sufficient through sustainable land use planning and management practices.			✓
(m) Protect summits, slopes, and ridgelines from inappropriate development.			✓
Implementing Actions:			
(a) Regularly update urban- and rural-growth boundaries and their maps.			✓
(b) Establish transfer and purchase of development rights programs.			✓
(c) Develop and adopt a green infrastructure plan.			✓
(d) Develop studies to help determine a sustainable social, environmental, and economic carrying capacity for each island.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(e) Identify and define resort-destination areas.			✓
Analysis: The project area is located within the Rural Growth Boundary as designated by the County of Maui. In addition, the project will be implemented in an area outside of flood, tsunami, and sea level rise hazard areas.			
Objective:			
(2) Improve planning for and management of agricultural lands and rural areas.			✓
Policies:			
(a) Protect prime, productive, and potentially productive agricultural lands to maintain the islands' agricultural and rural identities and economies.			✓
(b) Provide opportunities and incentives for self-sufficient and subsistence homesteads and farms.			✓
(c) Discourage developing or subdividing agriculturally designated lands when non-agricultural activities would be primary uses.			✓
(d) Conduct agricultural-development planning to facilitate robust and sustainable agricultural activities.			✓
Implementing Actions:			
(a) Inventory and protect prime, productive, and potentially productive agricultural lands from competing non-agricultural land uses.			✓
Analysis: The proposed project will be implemented on land designated for agriculture use and will serve the planned DHHL Pu'unani Subdivision. The proposed action is not applicable to the objective and policies for the planning and management of agricultural lands.			
Objective:			
(3) Design all developments to be in harmony with the environment and to protect each community's sense of place.			✓
Policies:			
(a) Support and provide incentives for green building practices.			✓
(b) Encourage the incorporation of green building practices and technologies into all government facilities to the extent practicable.			✓
(c) Protect and enhance the unique architectural and landscape characteristics of each Community Plan Area, small town, and neighborhood.			✓
(d) Ensure that adequate recreational areas, open spaces, and public-gathering places are provided and maintained in all urban centers and neighborhoods.			✓
(e) Ensure business districts are distinctive, attractive, and pedestrian-friendly destinations.			✓
(f) Use trees and other forms of landscaping along rights-of-way and within parking lots to provide shade, beauty, urban-heat reduction, and separation of pedestrians from automobile traffic in accordance with community desires.			✓
(g) Where appropriate, integrate public-transit, equestrian, pedestrian, and bicycle facilities, and public rights-of-way as design elements in new and existing communities.			✓
(h) Ensure better connectivity and linkages between land uses.			✓
(i) Adequately buffer and mitigate noise and air pollution in mixed-use areas to maintain residential quality of life.			✓
(j) Protect rural communities and traditional small towns by regulating the footprint, locations, site planning, and design of structures.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(k) Support small-town revitalization and preservation.			✓
(l) Facilitate safe pedestrian access, and create linkages between destinations and within parking areas.			✓
Implementing Actions:			
(a) Establish design guidelines and standards to enhance urban and rural environments.			✓
(b) Provide funding for civic-center and civic-space developments.			✓
(c) Establish and enhance urban forests in neighborhoods and business districts.			✓
Analysis: The proposed action involves water system storage improvements to accommodate a residential subdivision and is neither directly nor indirectly applicable to the objective and policies for protecting the community's sense of place.			
Objective:			
(4) Improve and increase efficiency in land use planning and management.	✓		
Policies:			
(a) Assess the cumulative impact of developments on natural ecosystems, natural resources, wildlife habitat, and surrounding uses.	✓		
(b) Ensure that new development projects requiring discretionary permits demonstrate a community need, show consistency with the General Plan, and provide an analysis of impacts.			✓
(c) Encourage public and private partnerships to preserve lands of importance, develop housing, and meet the needs of residents.			✓
(d) Promote creative subdivision designs that implement best practices in land development, sustainable management of natural and physical resources, increased pedestrian and bicycle functionality and safety, and the principles of livable communities.			✓
(e) Coordinate with Federal, State, and County officials in order to ensure that land use decisions are consistent with County plans and the vision local populations have for their communities.			✓
(f) Enable greater public participation in the review of subdivisions.			✓
(g) Improve land use decision making through the use of land- and geographic information systems.			✓
Implementing Actions:			
(a) Institute a time limit and sunseting stipulations on development entitlements and their implementation.			✓
Analysis: The environmental review processes involved detailed analysis of the proposed project's potential impacts on the environment, infrastructure, and socio-economic conditions, directly supporting efficiency in land use planning and management.			
K. STRIVE FOR GOOD GOVERNANCE			
Objective:			
(1) Strengthen governmental planning, coordination, consensus building, and decision making.		✓	
Policies:			
(a) Plan and prepare for the effects of social, demographic, economic, and environmental shifts.			✓
(b) Plan for and address the possible implications of Hawaiian sovereignty.			✓
(c) Encourage collaboration among government agencies to reduce duplication of efforts and promote information availability and exchange.		✓	

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(d) Expand opportunities for the County to be involved in and affect State and Federal decision making.			✓
(e) Plan and prepare for large-scale emergencies and contingencies.			✓
(f) Improve public awareness about preparing for natural hazards, disasters, and evacuation plans.			✓
(g) Improve coordination among Federal, State, and County agencies.			✓
Implementing Actions:			
(a) Develop policies, regulations, and programs to protect and enhance the unique character and needs of the County's various communities.			✓
(b) Evaluate and if necessary, recommend modifications to the County Charter that could result in a possible change to the form of governance for Maui County.			✓
(c) Study and evaluate the feasibility and implications of voting in Maui County Council elections.			✓
(d) Study and evaluate the feasibility of authorizing town governments in Maui County.			✓
Analysis: The objective of strengthening governmental planning, coordination, consensus building, and decision making along with the policies that support this objective is not directly applicable to the proposed project but is indirectly supported through coordination among government agencies.			
Objective:			
(2) Promote civic engagement.		✓	
Policies:			
(a) Foster consensus building through in-depth, innovative, and accessible public participatory processes.		✓	
(b) Promote and ensure public participation and equal access to government among all citizens.			✓
(c) Encourage a broad cross-section of residents to volunteer on boards and commissions.			✓
(d) Encourage the State to improve its community-involvement processes.			✓
(e) Support community-based decision making.		✓	
(f) Expand advisory functions at the community level.			✓
(g) Expand opportunities for all members of the public to participate in public meetings and forums.		✓	
(h) Facilitate the community's ability to obtain relevant documentation.			✓
(i) Increase voter registration and turnout.			✓
Implementing Actions:			
(a) Implement two-way communication using audio-visual technology that allows residents to participate in the County's planning processes.			✓
(b) Ensure and expand the use of online notification of County business and public meetings, and ensure the posting of all County board and commission meeting minutes.			✓
(c) Explore funding mechanisms to improve participation by volunteers on boards and commissions.			✓
(d) Develop a project-review process that mandates early and ongoing consultation in and with communities affected by planning and land use activities.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
Analysis: The design and environmental review processes involved opportunities for the public to provide input throughout the project's review process. Public meetings and requests for comments were included which provided the space for engagement and feedback opportunities.			
Objective:			
(3) Improve the efficiency, reliability, and transparency of County government's internal processes and decision making.			✓
Policies:			
(a) Use advanced technology to improve efficiency.			✓
(b) Simplify and clarify the permitting process to provide uniformity, reliability, efficiency, and transparency.			✓
(c) Improve communication with Lana'i and Moloka'i through the expanded use of information technologies, expanded staffing, and the creation and expansion of government-service centers.			✓
(d) Ensure that laws, policies, and regulations are internally consistent and effectuate the intent of the General Plan.			✓
Implementing Actions:			
(a) Update the County Code to be consistent with the General Plan.			✓
(b) Identify and update County regulations and procedures to increase the productivity and efficiency of County government.			✓
(c) Develop local level-of-service standards for infrastructure, public facilities, and services.			✓
(d) Implement plans through programs, regulations, and capital improvements in a timely manner.			✓
(e) Expand government online services.			✓
Analysis: The objective and policies as it relates to improving the efficiency, reliability, and transparency of County government's internal processes and decision making is not applicable to the proposed project.			
Objective:			
(4) Adequately fund in order to effectively administer, implement, and enforce the General Plan.			✓
Policies:			
(a) Adequately fund, staff, and support the timely update and implementation of planning policy, programs, functional plans, and enforcement activities.			✓
(b) Ensure that the County's General Plan process provides for efficient planning at the County, island, town, and neighborhood level.			✓
(c) Encourage ongoing professional development, education, and training of County employees.			✓
(d) Encourage competitive compensation packages for County employees to attract and retain County personnel.			✓
(e) Enable the County government to be more responsive in implementing our General Plan and Community Plans.			✓
(f) Review discretionary permits for compliance with the Countywide Policy Plan.			✓
(g) Strengthen the enforcement of County, State, and Federal land use laws.			✓
Implementing Actions:			
(a) Establish penalties to ensure compliance with County, State, and Federal land use laws.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
Analysis: The objective and policies regarding the funding of the General Plan do not apply to the proposed action.			
Objective:			
(5) Strive for County government to be a role model for implementing cultural and environmental policies and practices.			✓
Policies:			
(a) Educate residents on the benefits of sustainable practices.			✓
(b) Encourage the retention and hiring of qualified professionals who can improve cultural and environmental practices.			✓
(c) Incorporate environmentally sound and culturally appropriate practices in government operations and services.			✓
(d) Encourage all vendors with County contracts to incorporate environmentally sound and culturally appropriate practices.			✓
Analysis: The objective and policies regarding the County of Maui implementing cultural and environmental practices does not apply to the proposed water system storage improvements.			
L. MITIGATE CLIMATE CHANGE AND WORK TOWARD RESILIENCE			
Goal: Minimize the causes and negative effects of climate change.		✓	
Objective:			
(1) Lower carbon emissions levels to mitigate climate change impacts and limit the rate of global warming.			✓
Policies:			
(a) Increase reforestation efforts by encouraging residents and visitors to plant non-invasive gardens and trees.			✓
(b) Improve communication, coordination, and collaboration among those that work to mitigate climate change impacts.			✓
(c) Promote the teaching and use of regenerative agriculture.			✓
(d) Invest in infrastructure that is not dependent on fossil fuels and utilizes renewable energy.			✓
(e) Improve efforts to mitigate and plan for the impact of natural disasters and global warming.			✓
(f) Encourage the building industry to use environmentally sustainable materials, technology, and site planning.			✓
(g) Reduce air, noise, light, land, and water pollution, and reduce Maui County's contribution to global climate change.			✓
(h) Plan and prepare for and educate visitors and residents about the possible effects of global warming.			✓
(i) Promote programs and incentives that decrease greenhouse-gas emissions and improve environmental stewardship.			✓
(j) Support the development of carbon-emission standards and an incentive program aimed at achieving County carbon-emission goals.			✓
Implementing Actions:			
(a) Implement Federal and State policies that require a reduction of greenhouse-gas emissions.			✓
(b) Establish a Countywide Climate Action Plan			✓
(c) Develop programs that assist residents and businesses with obtaining access to renewable energy sources.			✓
(d) Revise laws to support neighborhood designs that incorporate the use of renewable energy sources that are appropriate for island living.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(e) Incorporate planting of native and indigenous trees as a major component of Urban Design to both cool neighborhoods and reduce carbon dioxide.			✓
(f) Coordinate with State, County, and private landowners in the development of forestry and prioritizing of native and indigenous trees to reduce carbon dioxide.			✓
(g) Strongly support efforts to restore and improve Maui County's watersheds for the purpose of improving the water supply, controlling carbon dioxide levels, decreasing soil runoff, and reducing coastal flooding.			✓
Analysis: The proposed action does not directly or indirectly lower carbon emission levels to reduce global warming. Construction of the proposed water storage tank will involve the short-term use of construction equipment and vehicles which will emit carbon emissions. However, the proposed water system storage tank will not significantly contribute to carbon emission levels.			
Objective:			
(2) Reduce the impacts of sea-level rise by acknowledging climate change, adapting, mitigating, and planning accordingly.		✓	
Policies:			
(a) Evaluate development to assess potential short-term and long-term sea-level rise impacts on nearshore environments.		✓	
(b) Improve efforts to mitigate and plan for the impact of sea-level rise.		✓	
(c) Protect undeveloped beaches, dunes, and ecosystems, and restore natural shoreline processes.			✓
(d) Develop an inventory of private wastewater systems (septic systems, cesspools) that may be affected by sea-level rise.			✓
(e) Strengthen coastal-zone management, re-naturalization of shorelines, where possible, and filtration or treatment of urban and agricultural runoff.			✓
(f) Educate the construction and landscape industries and property owners about the use of best management practices to prevent erosion and nonpoint source pollution.		✓	
(g) Discourage beach hardening processes such as building sea walls and revetments that block movement of the shoreline and can accelerate erosion.			✓
(h) Discourage new entitlements for residential, resort, or commercial development along the shoreline.			✓
(i) Restrict development in areas that are prone to sea-level rise.			✓
(j) Move or rebuild public facilities away from nearshore environments to account for sea-level rise to the extent reasonable.			✓
(k) Move or rebuild roads that are in sea-level rise inundation zones to the extent reasonable.			✓
(l) Ensure that public or affordable housing projects include siting and design standards that promote equity and resilience for vulnerable populations.			✓
(m) Identify, research, and evaluate innovative and sustainable financing to support mitigation and adaptation to sea level rise.			✓
Implementing Actions:			
(a) Develop programs to help transition shoreline property owners out of their nearshore locations and develop a long-term plan to stay out of the way of natural beach migration.			✓
(b) Identify buildings, roads, and other infrastructure that are in sea-level rise inundation zones and assist in adaptive efforts, including nature-based solutions, elevation, or moving them away from such zones.			✓

COUNTYWIDE POLICY PLAN (Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable)	DA	IA	NA
(c) Identify disaster redevelopment alternatives that support resilience-focused adaptation to sea level rise in the event of a catastrophic coastal event.			✓
Analysis: The proposed action will be implemented inland, away from the coastline and the 3.2-foot sea-level rise exposure area, indirectly mitigating the effects of climate change and ensuring the long-term viability of the project. In addition, BMPs to prevent erosion and nonpoint source pollution will be implemented by the contractor to minimize negative impacts to the environment.			
Objective:			
(3) Significantly increase the use of renewable and green technologies to promote energy efficiency and energy self-sufficiency.			✓
Policies:			
(a) Promote the use of locally renewable energy sources, and reward energy efficiency.			✓
(b) Consider tax incentives and credits for the development of sustainable- and renewable-energy sources.			✓
(c) Expand education about energy conservation and self-sufficiency.			✓
(d) Encourage small-scale energy generation that utilizes wind, sun, water, biowaste, and other renewable sources of energy.			✓
(e) Expand renewable-energy production.			✓
(f) Develop public-private partnerships to ensure the use of renewable energy and increase energy efficiency.			✓
(g) Require the incorporation of locally appropriate energy-saving and green building design concepts in all new developments by providing energy-efficient urban design guidelines and amendments to the Building Code.			✓
(h) Encourage the use of sustainable energy to power vehicles.			✓
(i) Promote the retrofitting of existing buildings and new development to incorporate energy-saving design concepts and devices.			✓
(j) Encourage green footprint practices.			✓
(k) Reduce Maui County's dependence on fossil fuels and energy imports.			✓
(l) Support green building practices such as the construction of buildings that aim to minimize carbon dioxide production, produce renewable energy, and recycle water.			✓
(m) Promote and support environmentally friendly practices in all energy sectors.			✓
Implementing Actions:			
(a) Adopt an energy-efficiency policy for Maui County government as a model for other jurisdictions.			✓
(b) Adopt a Green Building Code and support green building practices.			✓
Analysis: The proposed action is neither directly or indirectly applicable to the objective of significantly increasing the use of renewable and green technologies and will not require a substantial amount of fossil fuels or energy.			



ANALYSIS OF THE
PROJECT APPLICABILITY
TO MAUI ISLAND PLAN

APPENDIX

E-2



APPENDIX E-2

Analysis of Project Applicability to Maui Island Plan

The Maui Island Plan (MIP) is applicable to the island of Maui only, providing more specific policy-based strategies for population, land use, transportation, public and community facilities, water and wastewater systems, visitor destinations, urban design, and other matters related to future growth.

As provided by Chapter 2.80B, the MIP shall include the following components:

1. *An island-wide land use strategy, including a managed and directed growth plan*
2. *A water element assessing supply, demand and quality parameters*
3. *A nearshore ecosystem element assessing nearshore waters and requirements for preservation and restoration*
4. *An implementation program which addresses the County's 20-year capital improvement requirements, financial program for implementation, and action implementation schedule*
5. *Milestone indicators designed to measure implementation progress of the MIP*

It is noted that Ordinance No. 4004 does not address the component relating to the implementation program. Chapter 2.80B of the Maui County Code, relating to the General Plan, was amended via Ordinance No. 3979, October 5, 2012, to provide that the implementation program component be adopted no later than one (1) year following the effective date of Ordinance No. 4004. In December 2013 and March 2014, the Council approved time extensions for approval and adoption of the implementation chapter of the MIP. The implementation program component of the MIP was adopted as Ordinance No. 4126 on May 29, 2014.

The MIP addresses a number of planning categories with detailed policy analysis and recommendations which are framed in terms of goals, objectives, policies and implementing actions. These planning categories address the following areas:

1. *Population*
2. *Heritage Resources*
3. *Natural Hazards*
4. *Economic Development*
5. *Housing*
6. *Infrastructure and Public Facilities*
7. *Land Use*

The proposed project has been reviewed with respect to pertinent goals, objectives, policies and implementing actions of the MIP. The analysis is presented in the table below.

The methodology used for assessing a project's relationship to the MIP involves examining the project's applicability to the Plan's goals, objectives, and policies. "Applicability" refers to a project's need, purpose and effects, and how these advance or promote a particular set of goals, objectives and priority guidelines. In assessing the relationship between a proposed action and the MIP, an action may be categorized in one of the following groups:

1. **Directly applicable:** the action and its potential effects directly advances or promotes the objective, policy or priority guideline.

Example: Using a county project to develop a new water source and related transmission facilities as an example, a project of this nature would be directly applicable to the MIP's Objective 6.3.2, which states: *"Increase the efficiency and capacity of the water systems in striving to meet the needs and balance the island's water needs"*. As well, this action would directly advance the MIP's Policy 6.3.2.f, which states: *Acquire and develop additional sources of potable water*. The need, purpose and effects of the proposed new water source project is directly applicable to the foregoing objective and policy.

2. **Indirectly applicable:** the action's potential effects indirectly supports or advances the objective, policy or priority guideline.

Example: The county water source project cited above supports the MIP's Objective 7.3.2 which states: *"Facilitate more self-sufficient and sustainable communities"*. Additionally, this kind of action is indirectly applicable to the related MIP Policy 7.3.2.f, which states: *"Facilitate the development of housing by focusing projects in locations where land and infrastructure costs facilitate the development of affordably-priced housing"*. In this case, the principle purpose of the project was not to specifically facilitate the development of affordably-priced housing. However, the project's contribution to adequate infrastructure systems is supportive of the policy. In this instance, the proposed action may be deemed to be indirectly applicable to the objective and policy of the MIP.

3. **Not applicable:** The action and its potential effects have no direct or indirect relationship to the objectives and policies of the Maui Island Plan.

Example: That same county water source improvement project referenced above, may not have direct or indirect linkage to the MIP's Objective 4.2.1, which states: *"Increase the economic contribution of the visitor industry to the island's environmental well-being for the island's residents' quality of life"*. In this case, there is no reasonably deduced direct or indirect relationship between the proposed action and Objective 4.2.1. Hence, the proposed action would be considered not applicable to the objective.

In general, a proposed action's applicability to the MIP is assessed on the basis of the action's direct or indirect relationship to the respective objectives, policies and implementing actions. It is recognized that the categorization of "applicability" is subject to interpretation and should be appropriately considered in the context of local and regional conditions.

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
CHAPTER 1 – POPULATION			
<u>Goal:</u>			
1.1		✓	
Maui's people, values, and lifestyles thrive through strong, healthy, and vibrant island communities.			
<u>Objective:</u>			
1.1.1		✓	
Greater retention and return of island residents by providing viable work, education, and lifestyle options.			
<u>Policies:</u>			
1.1.1.a			✓
Expand programs that enable the community to meet the education, employment, housing, and social goals of youth and young adults.			
1.1.1.b		✓	
Expand housing, transportation, employment, and social opportunities to ensure residents are able to comfortably age within their communities.			
1.1.1.c			✓
Measure and track resident satisfaction through surveys and community indicators.			
1.1.1.d			✓
Support funding for transportation, housing, health care, recreation, and social service programs that help those with special needs (including the elderly and disabled).			
Analysis: The proposed water system storage improvements indirectly supports the goal for strong, healthy, and vibrant island communities by providing the infrastructure needed in order for the Department of Water Supply (DWS) system to supply water to the planned Department of Hawaiian Home Lands (DHHL) Pu'unani Homestead Subdivision. Access to potable water and increased housing opportunities provides Maui residents and specifically, DHHL beneficiaries, with greater lifestyle options.			
CHAPTER 2 – HERITAGE RESOURCES			
CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES ISSUES			
<u>Goal:</u>			
2.1		✓	
Our community respects and protects archaeological and cultural resources while perpetuating diverse cultural identities and traditions.			
<u>Objective:</u>			
2.1.1		✓	
An island culture and lifestyle that is healthy and vibrant as measured by the ability of residents to live on Maui, access and enjoy the natural environment, and practice Hawaiian customs and traditions in accordance with Article XII, Section 7, Hawai'i State Constitution, and Section 7-1, Hawai'i Revised Statutes (HRS).			
<u>Policies:</u>			
2.1.1.a			✓
Perpetuate the spirit of aloha and celebrate the host Hawaiian culture and other ethnic cultures.			
2.1.1.b			✓
Perpetuate a respect for diversity and recognize the broad blending of cultures and ethnicities as vital to the quality of life on Maui.			

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
2.1.1.c			✓
Ensure traditional public access routes, including native Hawaiian trails, are maintained for public use.			
2.1.1.d			✓
Support the education of visitors and new residents about the customs and etiquette of the Hawaiian culture, as well as other cultures.			
Analysis: The objective related to maintaining an island cultural and lifestyle that is healthy and vibrant is indirectly applicable to the proposed project. Cultural impact investigation and archaeological consultation with the State Historic Preservation Division (SHPD) was conducted for this project, which advances the goal for the protection of archaeological and cultural resources.			
<u>Objective:</u>			
2.2		✓	
A more effective and efficient planning and review process that incorporates the best available cultural resources inventory, protection techniques, and preservation strategies.			
<u>Policies:</u>			
2.1.2.a		✓	
Ensure that the island has a comprehensive and up-to-date inventory of historic and archaeological resources, and their cultural significance.			
2.1.2.b			✓
Require the update of existing planning and regulatory mechanisms to protect the natural, cultural, scenic, and historic resources within designated Heritage Areas (see Cultural Resources Overlay/Scenic Corridor Protection Technical Reference Map).			
2.1.2.c		✓	
Ensure that cultural, historic, and archaeological resources are protected for the benefit of present and future generations.			
<u>Objective:</u>			
2.3		✓	
Enhance the island's historic, archaeological, and cultural resources.			
<u>Policies:</u>			
2.1.3.a			✓
Identify and pursue a listing of the properties and sites on the State and National Register of Historic Places.			
2.1.3.b			✓
Support the use of easements, dedications, and other mechanisms to acquire, maintain, and protect lands with cultural, archaeological, and historic significance.			
2.1.3.c		✓	
Support regulations to require developers, when appropriate, to prepare an Archaeological Inventory Survey, Cultural Impact Assessment, and Ethnographic Inventories that are reviewed and commented upon by the Office of Hawaiian Affairs, Native Hawaiian advisory bodies, the State Historic Preservation Division (SHPD), and the Office of Environmental Quality Control, and systematically comply with the steps listed in SHPD's administrative rules, including consultation and monitoring during construction phases of projects.			
2.1.3.d			✓
Promote the rehabilitation and adaptive reuse of historic sites, buildings, and structures.			
2.1.3.e			✓
Encourage property owners to register historic and archaeological sites on the State and National Register.			
2.1.3.f		✓	
Support opportunities for public involvement with the intent to facilitate the protection and restoration of historic and archeological sites, including consultation with stakeholders.			

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
2.1.3.g Encourage the resolution of land title questions relating to Land Commission Awards and Royal patents.			✓
2.1.3.h Ensure compliance with historic preservation laws, and discourage demolition of properties that are determined to be eligible for listing on the National or State Register of Historic Places.		✓	
Analysis: Archaeological and cultural investigations were conducted for the project as part of the environmental review process, which thereby increases the cultural resources inventory and indirectly enhances historical, cultural and archaeological resources through consultation with the cultural informants and the SHPD. In addition, the proposed project will comply with SHPD's recommendations for mitigation.			
SHORELINE, REEFS, AND NEARSHORE WATERS			
Goal:			
2.2 An intact, ecologically functional system of reef, shoreline, and nearshore waters that are protected in perpetuity.		✓	
Objective:			
2.2.1 A more comprehensive and community-based ICZM program.			✓
Policies:			
2.2.1.a Encourage a management system that protects and temporarily rests the reef ecosystems from overuse.			✓
2.2.1.b Support the establishment of additional MMAs and reef replenishment areas.			✓
2.2.1.c Work with appropriate agencies and community members to protect any special managed conservation areas from overuse and ensure that surrounding land uses do not contribute to the degradation of the natural resources, such as 'Ahihi-Kina'u Natural Area Reserve, Honolua-Mokulē'ia Bay Marine Life Conservation District, and Mākena State Park.			✓
2.2.1.d Incorporate the following into the MIP, where consistent with the MIP:			✓
(1) Beach Management Plan for Maui;			✓
(2) Coastal Nonpoint Pollution Control Program Management Plan;			✓
(3) Implementation Plan for Polluted Runoff Control; and			✓
(4) Ocean Resource Management Plan.			✓
2.2.1.e Support greater coordination among governmental agencies involved with the protection of the island's marine resources.			✓
Objective:			
2.2.2 Improved reef health, coastal water quality, and marine life.		✓	
Policies:			
2.2.2.a Create additional mechanisms where needed to contain and control runoff and pollution.		✓	
2.2.2.b Allow extraction of high quality, Class A, low silt sands only when they will be used to protect or restore Maui's shorelines and beaches.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
2.2.2.c Carefully manage beach nourishment activities to protect the coastal and marine ecosystem.			✓
2.2.2.d Require, where appropriate, a buffer between landscaped areas and the shoreline, gulches, and streams to reduce the runoff of fertilizers, pesticides, herbicides, and other pollutants into coastal waters.			✓
2.2.2.e Strictly regulate shoreline armoring in accordance with adopted Shoreline Rules, with an intent to protect the coastal and marine ecosystem.			✓
2.2.2.f Support greater protection of Keālia Pond National Wildlife Refuge through the following:			✓
(1) Enhancement of marine ecosystems;			✓
(2) Beach and sand dune restoration; and			✓
(3) Expansion of habitat for Maui's threatened or endangered sea turtles, birds, and other species.			✓
2.2.2.g Support the development of regulations to prevent the excessive depletion of fish stocks due to non-sustainable practices and gear such as SCUBA spear-fishing and lay nets, within the context of nearshore ecosystems.			✓
2.2.2.h Encourage the State to conduct a regular census of fish populations and monitor coral health.			✓
2.2.2.i Encourage the State to significantly increase the number of park rangers, enforcement officers, and marine biologists to protect coastal resources.			✓
2.2.2.j Encourage the State to prohibit the collection and exportation of fish, coral, algae, and other marine species for the ornamental and aquarium trade.			✓
Objective:			
2.2.3 Water quality that meets or exceeds State Clean Water Act standards.			✓
Policies:			
2.2.3.a Reduce the amount of impervious surface and devise site plan standards that aim to minimize storm runoff and NPS pollution.			✓
2.2.3.b Support the revision of existing regulations to require an Erosion and Sedimentation Control Plan (ESCP) for development activities that may pose a threat to water quality.			✓
2.2.3.c Require an on-site monitoring program, where applicable, when grading may pose a threat to water quality or when recommended in the ESCP.			✓
2.2.3.d Avoid development actions that impair Maui's reef systems and remove identified stressors.			✓
2.2.3.e Phase out cesspools and restrict the use of septic systems in ecologically sensitive coastal areas by converting to environmentally-friendly alternative sewage treatment systems, and connecting to central sewerage systems when and where feasible.			✓
2.2.3.f Prohibit the development of new wastewater injection wells, except when unavoidable for public health and safety purposes.			✓
2.2.3.g Ensure that the County upholds its affirmative duty under the Clean Water Act by monitoring and reducing point and NPS pollution to help safeguard coastal waters.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
DA	IA	NA	
Objective:			
			✓
Policies:			
			✓
			✓
			✓
			✓
<p>Analysis: The proposed project is located inland, and not in close proximity to the shoreline. With the spatial separation, there are no direct project considerations as it relates to shoreline management programming, reef health, coastal water quality, marine life or shoreline lands and access rights. However, inasmuch as the proposed action does involve grading and earth moving activities, the project may be considered to have indirect applicability to objectives and policies relating to coastal water quality. As such, appropriate Best Management Practices (BMPs) will be implemented during construction to ensure that soil erosion and runoff do not adversely affect coastal waters.</p>			
WATERSHEDS, STREAMS, AND WETLANDS ISSUES			
Goal:			
		✓	
Objective:			
			✓
Policies:			
			✓
			✓
			✓
			✓
			✓
			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
DA	IA	NA	
			✓
			✓
Objective:			
		✓	
Policies:			
		✓	
			✓
			✓
Objective:			
			✓
Policies:			
			✓
			✓
			✓
Objective:			
			✓
Policies:			
			✓
			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
2.3.5.c Strongly encourage new subdivisions and developments that are proximate to environmentally sensitive watershed resources to prepare and implement CSD plans.			✓
Objective:			
2.3.6 Enhance the vitality and functioning of streams, while balancing the multiple needs of the community.			✓
Policies:			
2.3.6.a Protect and enhance natural streambeds and discourage stream alteration.			✓
2.3.6.b Work with appropriate agencies to establish minimum stream flow levels and ensure adequate stream flow to sustain riparian ecosystems, traditional kalo cultivation, and self-sustaining ahupua'a.			✓
2.3.6.c Respect and participate in the resolution of native Hawaiian residual land and water rights issues (kuleana lands, ceded lands, and historic agricultural and gathering rights).			✓
2.3.6.d Ensure that stream flows implement laws and policies found in the State Constitution and Water Code.			✓
2.3.6.e Work with appropriate agencies and stakeholders to establish minimum stream flow levels, promote actions to support riparian habitat and the use of available lo'i, and maintain adequate flows for the production of healthy kalo crops.			✓
Analysis: The proposed project is not directly applicable to the goal of maintaining healthy watersheds, streams, and riparian environments, however, appropriate BMPs will be used during construction and applicable drainage detention and water quality measures will be employed for the long-term use of the site.			
WILDLIFE AND NATURAL AREAS			
Goal:			
2.4 Maui's natural areas and indigenous flora and fauna will be protected.		✓	
Objective:			
2.4.1 A comprehensive management strategy that includes further identification, protection, and restoration of indigenous wildlife habitats.			✓
Policies:			
2.4.1.a Identify and inventory the following:			✓
(1) Natural, recreational, and open space resources;			✓
(2) Flora and fauna with medium, high, and very high concentrations of threatened or endangered species; and			✓
(3) Location and extent of invasive species.			✓
2.4.1.b Require flora and fauna assessment and protection plans for development in areas with concentrations of indigenous flora and fauna; development shall comply with the assessment and protection plan and shall use the avoidance, minimization, and mitigation approach respectively, with an emphasis on avoidance.			✓
2.4.1.c Support the implementation of Hawai'i's Comprehensive Wildlife Conservation Strategy (October 2005).			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Objective:			
2.4.2 A decrease in invasive species through programs and partnerships that eradicate undesirable species and protect native habitat.			✓
Policies:			
2.4.2.a Prevent the introduction of invasive species at all of Maui's airports and harbors.			✓
2.4.2.b Encourage the State to increase funding in support of invasive species interception, control, and eradication.			✓
2.4.2.c Encourage the State to develop programs that allow students to participate in invasive species eradication projects.			✓
Objective:			
2.4.3 Greater protection of sensitive lands, indigenous habitat, and native flora and fauna.		✓	
Policies:			
2.4.3.a Secure an interconnected network of sensitive lands, greenways, watercourses, and habitats.			✓
2.4.3.b Protect Maui's sensitive lands (see Sensitive Lands on Protected Areas Diagrams).			✓
2.4.3.c Promote innovative environmental-planning methods and site-planning standards that preserve and re-establish indigenous flora and fauna habitat, to preserve and restore connected habitat corridors and open space.			✓
2.4.3.d Utilize protection tools such as conservation easements, land trusts, land banks, Purchase of Developments Rights (PDRs), Transfer of Development Rights (TDRs), and other stewardship tools to acquire natural areas			✓
2.4.3.e Encourage discussions with communities to designate heritage areas that protect recreational and cultural lifestyles and resources.			✓
2.4.3.f Support the expansion of Haleakalā National Park, and the creation of new national parks, where appropriate and supported by local communities.			✓
2.4.3.g Encourage reforestation efforts that increase native species' habitat.			✓
2.4.3.h Utilize the Natural Area Partnership Program (NAPP) and other programs to protect natural lands.			✓
2.4.3.i Support increased dedicated funding for the acquisition, protection, restoration, or preservation of important natural areas or open space through the following: grants from the Land and Water Conservation Fund; dedicated funding from real property taxes or other appropriate revenues; bond issues; real estate transfer tax; revenues from the Transient Accommodations Tax; development mitigation fees; and other appropriate funding sources.			✓
Analysis: The proposed action indirectly supports the protection of indigenous flora and fauna through the use of BMPs to mitigate potential impacts to endangered and indigenous species. The biological resources studies conducted in the project area for the DHHL Pu'unani Homestead Subdivision and the Wailuku Rental Housing Apartments were reviewed for this project. The reports identified flora and fauna and their habitats, and addresses applicable protection measures for the restoration of wildlife habitats.			

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
DA	IA	NA	
SCENIC RESOURCES			
Goal:			
2.5	Maui will continue to be a beautiful island steeped in coastal, mountain, open space, and historically significant views that are preserved to enrich the residents' quality of life, attract visitors, provide a connection to the past, and promote a sense of place.	✓	
Objective:			
2.5.1	A greater level of protection for scenic resources.	✓	
Policies:			
2.5.1.a	Protect views to include, but not be limited to, Haleakalā, Īao Valley, the Mauna Kahalawai (West Maui Mountains), Pu'u Ō'la'i, Kaho'olawe, Molokini, Moloka'i, and Lāna'i, Mauna Kea, Mauna Loa, sea stacks, the Pacific Ocean, and significant water features, ridgelines, and landforms.	✓	
2.5.1.b	Identify, preserve, and provide ongoing management of important scenic vistas and open space resources, including mauka-to-makai and makai-to-mauka view planes.		✓
2.5.1.c	Protect "night sky" resources by encouraging the implementation of ambient light ordinances and encouraging conversion of all sources that create excessive light pollution, affecting our ability to view the stars.		✓
2.5.1.d	Protect ridgelines from development where practicable to facilitate the protection of public views.		✓
2.5.1.e	Protect scenic resources along Maui's scenic roadway corridors.		✓
Objective:			
2.5.2.	Reduce impacts of development projects and public-utility improvements on scenic resources.	✓	
Policies:			
2.5.2.a	Enforce the policies and guidelines of the SMA regarding the protection of views.		✓
2.5.2.b	Require any new subdivision of land, development, or redevelopment adjacent to a "high" or "exceptional" scenic corridor to submit an impact assessment of the project's scenic impacts; this assessment shall use the avoidance, minimization, and mitigation steps respectively, with an emphasis on avoidance.		✓
2.5.2.c	Require appropriate building setbacks and limits on wall heights to protect views along scenic corridors.		✓
2.5.2.d	Encourage the State of Hawai'i Board of Land and Natural Resources to deny any development within the State Conservation District that interferes with a scenic landscape or disrupts important open space resources.		✓
2.5.2.e	Require Urban Design and Review Board (UDRB) review and approval of utility poles, facilities, and other visible infrastructure improvements along scenic corridors.		✓
2.5.2.f	Ensure little or no effect on scenic resources from utility improvements, primarily power poles.		✓

Maui Island Plan Goals, Objectives and Policies			
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DA	IA	NA	
2.5.2.g	Protect scenic vistas from intrusion by power poles.		✓
Objective:			
2.5.3	Greater protection of and access to scenic vistas, access points, and scenic lookout points.		✓
Policy:			
2.5.3.a	Protect, enhance, and acquire access to Maui's scenic vistas and resources.		✓
Analysis: The proposed action is indirectly applicable to the goal, policies, and objectives for preserving scenic resources. The project will be implemented in a location that will not impede views to open space, historically significant or scenic views and vistas.			
CHAPTER 3 – NATURAL HAZARDS			
Goal:			
3.1	Maui will be disaster resilient.		✓
Objective:			
3.1.1	Increased inter-agency coordination.		✓
Policy:			
3.1.1.a	Reinforce the island's preparedness capacity by:		✓
	(1) Applying the latest data-gathering techniques/technology;		✓
	(2) Pursuing funding opportunities;		✓
	(3) Improving monitoring and advance warning systems;		✓
	(4) Fostering public awareness; and		✓
	(5) Working with external agencies to coordinate disaster mitigation and response.		✓
Objective:			
3.1.2	Greater protection of life and property.		✓
Policies:			
3.1.2.a	Identify critical infrastructure, lifelines, roads, and populations that are vulnerable to coastal hazards, and encourage strategic retreat and relocation to safer areas.		✓
3.1.2.b	Consider the location of dams, reservoirs, holding ponds, and other water-containing entities that are upstream of inhabited areas to anticipate, avoid, and mitigate inundation risks, and discourage new development in areas where possible inundation hazards may exist.		✓
3.1.2.c	Strengthen current development standards to minimize destruction of land and property.		✓
3.1.2.d	Encourage the use of construction techniques that reduce the potential for damage from natural hazards.		✓

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	DA	IA	NA
3.1.2.e Increase the County's resilience to drought.			✓
3.1.2.f Increase food and energy security through local production and storage.			✓
Objective:			
3.1.3 A more coordinated emergency response system that includes clearly defined and mapped evacuation routes.			✓
Policy:			
3.1.3.a Identify and expand shelter facilities and evacuation routes away from areas susceptible to natural hazards.			✓
Objective:			
3.1.4 A more educated and involved public that is aware of and prepared for natural hazards.			✓
Policies:			
3.1.4.a Promote public education and involvement related to natural hazards awareness and preparedness.			✓
3.1.4.b Coordinate a multi-agency effort to establish and promote a comprehensive public education program that will focus on practical approaches to preparedness, damage prevention, and hazard mitigation.			✓
Analysis: The objectives and policies related to making Maui disaster-resilient are not directly or indirectly applicable to the proposed project. The proposed action is limited to the development of a water system storage tank to serve a residential subdivision.			
CHAPTER 4 – ECONOMIC DEVELOPMENT			
ECONOMIC DIVERSIFICATION			
Goal:			
4.1 Maui will have a balanced economy composed of a variety of industries that offer employment opportunities and well-paying jobs and a business environment that is sensitive to resident needs and the island's unique natural and cultural resources.		✓	
Objective:			
4.1.1 A more diversified economy.		✓	
Policies:			
4.1.1.a Encourage an economy that is driven by innovation, research and development, and human resource development, including but not limited to, increasing technology- and knowledge-based sectors to be a major component in Maui County's economic base.			✓
4.1.1.b Support the creation of new jobs and industries that provide a living wage.		✓	
4.1.1.c Facilitate and expedite permits and approvals.			✓
4.1.1.d Develop linkages and partnerships among international research and development activities and Maui businesses.			✓
Objective:			
4.1.2 Increase activities that support principles of sustainability.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Policies:			
4.1.2.a Support industries that are sustainable, and culturally and environmentally sensitive.			✓
4.1.2.b Encourage and support local businesses.			✓
4.1.2.c Substitute imports with locally-produced services and products where practicable.			✓
4.1.2.d Support the development of economic development clusters in targeted industry sectors.			✓
4.1.2.e Encourage all businesses to save energy, water, and other resources.			✓
Objective:			
4.1.3 Improve the island's business climate.			✓
Policies:			
4.1.3.a Upgrade, maintain the quality of, and improve access to telecommunications infrastructure.			✓
4.1.3.b Ensure an adequate supply of affordable workforce housing.			✓
4.1.3.c Develop neighborhoods and communities that are attractive to the workforce of a diversified economy.			✓
4.1.3.d Encourage, nurture, and reward entrepreneurship and innovation.			✓
4.1.3.e Encourage employers to establish incentive programs. Support flexibility in workforce policies compatible with business and quality of life goals.			✓
4.1.3.f Assist community development organizations with revitalization and development of neighborhoods and communities that are attractive to the workforce of a diversified economy.			✓
Analysis: The proposed project is indirectly applicable to the goal, objectives and policies for the economy as the project will generate short-term design and construction-related employment opportunities, as well as supporting the construction industry as a whole, including local businesses that rely on said industry.			
TOURISM			
Goal:			
4.2 A healthy visitor industry that provides economic well-being with stable and diverse employment opportunities.			✓
Objective:			
4.2.1 Increase the economic contribution of the visitor industry to the island's environmental well-being for the island's residents' quality of life.			✓
Policies:			
4.2.1.a Engage the visitor industry in the growth of emerging sectors where practicable.			✓
4.2.1.b Support the implementation of the Maui County TSP, when consistent with the MIP.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
4.2.1.c			✓
4.2.1.d			✓
4.2.1.e			✓
4.2.1.f			✓
4.2.1.g			✓
Objective:			
4.2.2			✓
Policies:			
4.2.2.a			✓
4.2.2.b			✓
4.2.2.c			✓
4.2.2.d			✓
4.2.2.e			✓
4.2.2.f			✓
Objective:			
4.2.3			✓
Policies:			
4.2.3.a			✓
4.2.3.b			✓
Analysis: The proposed action will serve a residential subdivision and is not directly or indirectly applicable to the objective and policies for the tourism industry and has no implications for enhancement of the visitor industry or mitigation from the impacts of tourism on the host culture.			

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
AGRICULTURE			
Goal:			
4.3			✓
Objective:			
4.3.1			✓
Policies:			
4.3.1.a			✓
4.3.1.b			✓
4.3.1.c			✓
4.3.1.d			✓
Objective:			
4.3.2			✓
Policies:			
4.3.2.a			✓
4.3.2.b			✓
4.3.2.c			✓
4.3.2.d			✓
4.3.2.e			✓
Objective:			
4.3.3			✓
Policies:			
4.3.3.a			✓
4.3.3.b			✓
4.3.3.c			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Analysis: The proposed project does not have direct or indirect relationships to the goal for agriculture and its related objectives for consumption of locally produced fruits and vegetables, maintaining or increasing agriculture's share in the local economy, and expanding diversified agricultural production. The proposed project is located on fallow agricultural lands that have not been used for active agricultural production in many years and is adjacent to existing Department of Water Supply (DWS) infrastructure and is in proximity to residential communities. As such, the proposed action is a prudent use of the land and is not considered to adversely affect agricultural productivity on Maui.			
EMERGING SECTORS			
Goal:			
4.4 A diverse array of emerging economic sectors.			✓
Objective:			
4.4.1 Support increased investment and expanded activity in emerging industries.			✓
Policies:			
4.4.1.a Support the development of and access to state-of-the-art voice, video, and data telecommunications systems and high-speed Internet.			✓
4.4.1.b Attract and assist industries to compete in high technology activities such as those related to renewable energy, green technologies, diversified agriculture, ocean sciences, health sciences, space technologies, and other knowledge-based industries.			✓
4.4.1.c Support new industries that are environmentally and culturally sensitive such as health and wellness, sports and outdoor activities, cultural activities, the arts, film-making, entertainment, and digital media.			✓
4.4.1.d Support a sustainable, culturally sensitive, astronomy industry.			✓
4.4.1.e Support the continued development of the Maui Research and Technology Park in Kihei, as a center for research and development, education, and diversified economic development, as provided by the Maui County Code.			✓
4.4.1.f Work with appropriate organizations to support the development of high technology clusters around renewable energy, diversified agriculture, ocean sciences, health sciences, and other knowledge-based industries.			✓
Objective:			
4.4.2 Increase the development of renewable energy technologies that are supported by the local community.			✓
Policies:			
4.4.2.a Support the expansion of the renewable energy sector and the use of solar, wind, wave, and biofuel technologies.			✓
4.4.2.b Provide incentives to encourage renewable energy development, the use of green energy technologies, and energy conservation.			✓
4.4.2.c Ensure an adequate supply of land and facilitate permitting to meet the needs for renewable energy technologies such as solar, wind, wave, biofuel, and other technologies, provided that environmental, view plane, and cultural impacts are addressed.			✓
4.4.2.d Support the Maui County Energy Alliance Plan where consistent with the MIP.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Analysis: The proposed water system storage improvements is neither directly or indirectly applicable to the goal, objectives and policies for emerging or innovative economic sectors and will not affect the expansion of the renewable energy sector.			
SMALL BUSINESS DEVELOPMENT			
Goal:			
4.5 Small businesses will play a key role in Maui's economy.			✓
Objective:			
4.5.1 Increase the number of and revenue generated by small businesses and decrease the percentage of small business failures.			✓
Policies:			
4.5.1.a Provide incentives and support for small businesses and entrepreneurs that incorporate sustainable technologies and practices into their operations, utilize local materials, or produce and sell locally-made goods or services.			✓
4.5.1.b Assist traditional "mom and pop" business establishments.			✓
4.5.1.c Reduce barriers to small business development.			✓
4.5.1.d Require, where feasible, the government procurement of goods and services from locally-owned, small businesses.			✓
4.5.1.e Support community markets and venues that sell locally-made produce, goods, and services.			✓
Analysis: The proposed action is limited to the construction water system storage improvements and is not directly or indirectly applicable to the goal, objective and policies for small businesses.			
HEALTH CARE SECTOR			
Goal:			
4.6 Maui will have a health care industry and options that broaden career opportunities that are reliable, efficient, and provide social well-being.			✓
Objective:			
4.6.1 Expand the economic benefits of the health care sector.			✓
Policies:			
4.6.1.a Encourage expanded services at MMMC and at other medical facilities.			✓
4.6.1.b Support expansion of federally qualified health centers with the direct involvement of the residents of the communities served.			✓
4.6.1.c Support the use of multimedia as a means to provide healthcare information.			✓
4.6.1.d Encourage digitalization of all diagnostic equipment at all facilities on Maui to enable sharing of data and more efficient use of limited provider workforce, consistent with data protection and patient privacy.			✓
4.6.1.e Support the expansion of telemedicine.			✓
4.6.1.f Encourage expansion and improved access to emergency care in all communities.			✓

Maui Island Plan Goals, Objectives and Policies			
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	DA	IA	NA
Objective:			
4.6.2 Be more efficient in the delivery of health care services and in minimizing health care costs.			✓
Policies:			
4.6.2.a Support expansion of health care providers and facilities to improve access to quality care throughout the island.			✓
4.6.2.b Encourage the expansion of veteran health care services.			✓
4.6.2.c Allow home-based out-patient medical care that does not interfere with surrounding neighborhoods.			✓
Objective:			
4.6.3. Expand Maui's alternative health care services, including spiritual practices.			✓
Policies:			
4.6.3.a Support efforts to promote alternative medicine.			✓
4.6.3.b Allow small-scale home-alternative medicine businesses such as massage, chiropractic care, traditional Hawaiian healing, and acupuncture that do not interfere with surrounding neighborhoods.			✓
Analysis: The proposed project does not have direct or indirect relationships to the goal for the health care and its related objectives for expanding the economic benefits of the healthcare sector, increasing efficiency of the health care delivery system, minimizing the costs of health care, and expanding Maui's alternative health care system.			
EDUCATION AND WORKFORCE DEVELOPMENT			
Goal:			
4.7 Maui will have effective education and workforce development programs and initiatives that are aligned with economic development goals.			✓
Objective:			
4.7.1 Improve preschool and K-12 education to allow our youth to develop the skills needed to successfully navigate the 21st century.			✓
Objective:			
4.7.1.a Encourage the State to implement programs such as:			✓
(1) Universally available preschool for children between the ages of one and five;			✓
(2) Mandatory kindergarten;			✓
(3) Mandatory K-5th grade classroom size limits of 1 teacher to 20 students;			✓
(4) Mandatory nutrition programs; and			✓
(5) Mandatory Native Hawaiian programs at all grade levels.			✓
4.7.1.b Encourage the DOE to extend the school day by at least an hour.			✓
4.7.1.c Encourage the State to increase funding for public education so that Hawai'i is among the top 10 states nationally as measured by investment per pupil.			✓

Maui Island Plan Goals, Objectives and Policies			
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	DA	IA	NA
4.7.1.d Encourage the State to ensure teacher certifications relate to effective delivery and improved student performances, and develop an industry experience/equivalency certification to assure our DOE students have access to career technical education and training.			✓
4.7.1.e Encourage the UHMC to provide dormitory space for high school students.			✓
4.7.1.f Encourage the development and implementation of curriculum on native Hawaiian history, culture, and practices, in consultation with native Hawaiian groups and associations.			✓
Objective:			
4.7.2 Encourage an increase in the number of certificate recipients and associate, bachelors, and graduate degrees conferred.			✓
Policies:			
4.7.2.a Encourage the State to increase the number of articulation agreements between the UHMC and four-year universities, particularly the University of Hawai'i at Manoa.			✓
4.7.2.b Encourage the State to expand accredited 2-year, 4-year, and graduate programs through the UHMC.			✓
4.7.2.c Encourage the education and training of our residents to meet the needs of a diversified economy.			✓
4.7.2.d Support education and training programs such as student internships, vocational training, and career development opportunities to ensure a highly skilled workforce			✓
4.7.2.e Work with educational institutions to improve and expand access to education and training through multiple modes, including distance learning.			✓
Objective:			
4.7.3 Strive to ensure that more of Maui's jobs are developed in STEM-related sectors by 2030.			✓
Policies:			
4.7.3.a Support the development of STEM-related certificates and degrees at the two- and four year levels.			✓
4.7.3.b Support the education initiatives of the Maui Agricultural Development Plan.			✓
4.7.3.c Expand and seek funding for internships, mentoring, job shadowing, etc. to foster interest in health and green workforce careers.			✓
4.7.3.d Work with MEDB, UHMC, and other similar organizations to expand internship/education programs to support STEM careers.			✓
4.7.3.e Continue to partner with the MEDB and other similar organizations to recruit, assist, and retain emerging industries, research and development activities, and educational/workforce opportunities.			✓
Analysis: The goal for education and workforce development is not directly or indirectly applicable to the proposed action. Furthermore, the related objectives of improving preschool and K-12 education, increasing higher education certificates and degrees, and developing more jobs in the STEM-related sectors are not affected by the proposed project.			

Maui Island Plan Goals, Objectives and Policies			
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DA	IA	NA	
CHAPTER 5 – HOUSING			
Goal:			
5.1	Maui will have safe, decent, appropriate, and affordable housing for all residents developed in a way that contributes to strong neighborhoods and a thriving island community.	✓	
Objective:			
5.1.1	More livable communities that provide for a mix of housing types, land uses, income levels, and age.	✓	
Policies:			
5.1.1.a	Promote livable communities (compact/walkable/bikeable, access to transit) that provide for a mix of housing types and land uses, including parks, open space, and recreational areas.		✓
5.1.1.b	Promote planning approaches that provide a mix of multifamily and single-family housing units to expand housing choices.		✓
5.1.1.c	Discourage gated communities.		✓
5.1.1.d	Provide incentives for the rehabilitation or adaptive reuse of historic structures to facilitate more housing choices.		✓
5.1.1.e	Use planning and regulatory approaches to provide higher housing densities.		✓
Objective:			
5.1.2	Better monitoring, evaluation, and refinement of affordable housing policy in conjunction with the economic cycle.		✓
Policies:			
5.1.2.a	Improve data on resident and nonresident housing.		✓
5.1.2.b	Utilize the following approaches to promote resident housing and to minimize offshore market impacts:		✓
	(1) Ensure that the future housing stock is composed of a mix of housing types (multifamily, small lots, ohana units, co-housing, cottage houses, etc.);		✓
	(2) Encourage new housing in proximity to jobs and services, in places that are conducive/affordable to island residents; and		✓
	(3) Explore taxation alternatives and building fee structures.		✓
Objective:			
5.1.3	Provide affordable housing, rental or in fee, to the broad spectrum of our island community.		✓
Policies:			
5.1.3.a	Consider regulations that can help keep affordable housing available at affordable rents.		✓
5.1.3.b	Seek to have ownership of affordable for-sale and rental housing vested in a non-profit community land trust, or other qualified housing provider, committed to keeping such housing affordable in perpetuity.		✓
5.1.3.c	Facilitate the use of public lands in urban areas that are suitable for affordable housing.		✓

Maui Island Plan Goals, Objectives and Policies			
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DA	IA	NA	
5.1.3.d	Develop or support partnerships and initiatives that provide housing-related education/outreach.		✓
5.1.3.e	Support the continuing efforts of the County and its community partners to:		✓
	(1) Disseminate information on different housing/financial assistance programs (loans, grants, etc.) including information on housing rehabilitation/restoration/adaptive reuse;		✓
	(2) Provide housing-related counseling including budget, credit, and financial planning assistance; and		✓
	(3) Create and maintain a comprehensive/master list of available affordable housing to help residents secure a unit that satisfies their need.		✓
Objective:			
5.1.4	Provide infrastructure in a more timely manner to support the development of affordable housing.		✓
Policies:			
5.1.4.a	Prioritize the development of infrastructure that supports the development of affordable housing.		✓
5.1.4.b	Utilize appropriate financing approaches and assistance tools to encourage the development of infrastructure and public facilities.		✓
5.1.4.c	Tailor infrastructure requirements to correspond with appropriate level-of-service standards to help control housing costs and to maintain safety.		✓
Objective:			
5.1.5	A wider range of affordable housing options and programs for those with special needs.		✓
Policies:			
5.1.5.a	Ensure that residents with special needs have access to appropriate housing.		✓
5.1.5.b	Encourage housing to be built or rehabilitated to allow the elderly and those with special needs to live in their homes.		✓
5.1.5.c	Ensure and facilitate programs to assist those with special needs from becoming homeless.		✓
5.1.5.d	Promote programs that stimulate the production of sustainable homeless shelters and alternative housing technologies.		✓
5.1.5.e	Support programs that offer home modification counseling on low-interest retrofit loans and grants to those with special needs.		✓
Objective:			
5.1.6	Reduce the cost to developers of providing housing that is affordable to families with household incomes 160 percent and below of annual median income.		✓
Policies:			
5.1.6.a	Support fast-track processing procedures for the following housing-related entitlements: affordable housing projects/units; indigenous Hawaiian housing/units; and special-needs housing units (seniors, disabled, homeless, etc.).		✓
5.1.6.b	Require the construction of affordable for-sale and rental housing units as part of the construction of new housing developments.		✓

Maui Island Plan Goals, Objectives and Policies			
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	DA	IA	NA
5.1.6.c Offer extra incentives in boom periods and withdraw incentives during slack periods.			✓
Objective:			
5.1.7 Increased preservation and promotion of indigenous Hawaiian housing and architecture.			✓
Policies:			
5.1.7.a Preserve, promote, and give priority to Hawaiian housing/architecture forms to preserve Hawaiian culture.			✓
5.1.7.b Provide for indigenous architecture as an allowable structure for native Hawaiian uses to include hula and lā'au lapa'au.			✓
Analysis: As a water system storage improvement project, the proposed action directly advances the goal for housing by providing infrastructure improvements necessary to construct the DHHL Pu'unani Homestead Subdivision.			
CHAPTER 6 – INFRASTRUCTURE AND PUBLIC FACILITIES			
SOLID WASTE			
Goal:			
6.1 Maui will have implemented the ISWMP thereby diverting waste from its landfills, extending their capacities.			✓
Objective:			
6.1.1 Meet our future solid waste needs with a more comprehensive planning and management strategy.			✓
Policies:			
6.1.1.a Update and publicize the ISWMP every ten years.			✓
6.1.1.b Strengthen inter-agency coordination including Planning and Environmental Management departments.			✓
6.1.1.c Divert waste from the landfills and educate the public about the recommendations of the ISWMP.			✓
6.1.1.d Minimize future active, unlined landfill cells to the extent feasible.			✓
Objective:			
6.1.2 Divert at least 60 percent of solid waste from the island's landfills.			✓
Policies:			
6.1.2.a Require residents and commercial enterprises that generate waste to pay a fair proportion of disposal costs.			✓
6.1.2.b Encourage environmentally safe waste-to-energy solutions.			✓
6.1.2.c Facilitate the reduction of solid waste generated by packaging, food service products, construction waste, etc.			✓
6.1.2.d Educate residents and visitors about the impacts of and methods to reduce, reuse, and recycle.			✓
6.1.2.e Discourage the disposal of landfill leachate by diversion to wastewater treatment plants, where practicable.			✓

Maui Island Plan Goals, Objectives and Policies			
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	DA	IA	NA
Analysis: The proposed project is neither directly or indirectly applicable to the goal, objectives and policies for solid waste as it involves water system infrastructure.			
WASTEWATER			
Goal:			
6.2 Maui will have wastewater systems that comply with or exceed State and Federal regulations; meet levels-of-service needs; provide adequate capacity to accommodate projected demand; ensure efficient, effective, and environmentally sensitive operation; and maximize wastewater reuse where feasible.			✓
Objective:			
6.2.1 A wastewater planning program capable of efficiently providing timely and adequate capacity to service projected demand where economically feasible and practicable.			✓
Policies:			
6.2.1.a Encourage the use of renewable energy in support of wastewater treatment facilities.			✓
6.2.1.b Focus the expansion of wastewater systems to accommodate planned growth consistent with the MIP Directed Growth Strategy.			✓
6.2.1.c Establish new wastewater treatment plant(s) outside the tsunami zone.			✓
Objective:			
6.2.2 Adequate levels of wastewater service with minimal environmental impacts.			✓
Policies:			
6.2.2.a Meet or exceed all State and Federal standards regulating wastewater disposal or reuse.			✓
6.2.2.b Encourage tertiary treatment for all municipal wastewater that is disposed through deep injection wells. Phase out all municipal and private injection wells in coordination with water reuse programs, where feasible, by 2020.			✓
6.2.2.c Improve and upgrade the County's existing wastewater collection, treatment, and reuse facilities consistent with current and future plans and the County's CIP.			✓
6.2.2.d Maintain an ongoing sewer inspection program for public and private multi-user systems to identify potential problems and forecast each system's residual life.			✓
6.2.2.e Require all new developments to fund system improvements in proportion to the development impact and in accordance with the County's wastewater functional plan.			✓
6.2.2.f Require appropriate funding mechanisms, such as a sinking fund, to adequately maintain or replace aging water-system components.			✓
6.2.2.g Strongly encourage the phase out of cesspools.			✓
Objective:			
6.2.3 Increase the reuse of wastewater.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Policies:			
6.2.3.a Strengthen coordination between the Department of Water Supply (DWS) and the WWRD to promote reuse/recycling of wastewater.			✓
6.2.3.b Expand the reuse of wastewater from the Central Maui, Kihei, Lahaina, and other wastewater systems.			✓
Analysis: The proposed action is a water system storage improvement and will not have direct or indirect impacts on the goal, objective or policies for wastewater systems.			
WATER			
Goal:			
6.3 Maui will have an environmentally sustainable, reliable, safe, and efficient water system.	✓		
Objective:			
6.3.1 More comprehensive approach to water resources planning to effectively protect, recharge, and manage water resources including watersheds, groundwater, streams, and aquifers.			✓
Policies:			
6.3.1.a Ensure that DWS actions reflect its public trust responsibilities toward water.	✓		
6.3.1.b Ensure the WUDP implements the State Water Code and MIP's goals, objectives, and policies.			✓
6.3.1.c Regularly update the WUDP, to maintain compliance with the General Plan.			✓
6.3.1.d Ensure that the County's CIP for water-source development is consistent with the WUDP and the MIP.			✓
6.3.1.e Where desirable, retain and expand public ownership and management of watersheds and fresh-water systems.			✓
6.3.1.f Encourage and improve data exchange and coordination among Federal, State, County, and private land use planning and water resource management agencies.			✓
Objective:			
6.3.2 Increase the efficiency and capacity of the water systems in striving to meet the needs and balance the island's water needs.	✓		
Policies:			
6.3.2.a Ensure the efficiency of all water system elements including well and stream intakes, water catchment, transmission lines, reservoirs, and all other system infrastructure.	✓		
6.3.2.b Encourage increased education about and use of private catchment systems where practicable for nonpotable uses.			✓
6.3.2.c Maximize the efficient use of reclaimed wastewater to serve nonpotable needs.			✓
6.3.2.d Work with appropriate State and County agencies to achieve a balance in resolving the needs of water users in keeping with the water allocation priorities of the MIP.			✓
6.3.2.e Ensure water conservation through education, incentives, and regulations.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
6.3.2.f Acquire and develop additional sources of potable water.			✓
Objective:			
6.3 Improve water quality and the monitoring of public and private water systems.	✓		
Policy:			
6.3.3.a Protect and maintain water delivery systems.			✓
Analysis: The proposed action is directly applicable to the goal for water through improvements that will increase the efficiency of water systems and capacity for water system storage to meet the needs of Maui residents and specifically, DHHL beneficiaries.			
TRANSPORTATION			
Goal:			
6.4 An interconnected, efficient, and well-maintained, multimodal transportation system.			✓
Objective:			
6.4.1 Provide for a more integrated island-wide transportation and land use planning program that reduces congestion and promotes more efficient (transit-friendly) land use patterns.			✓
Policies:			
6.4.1.a Plan for an integrated multi-modal transportation system comprised of public transit, bicycle, pedestrian, automobile, and other transportation modes.			✓
6.4.1.b Refocus transportation investment from the construction of additional roadways only for the automobile to the expansion of a multimodal transportation system.			✓
6.4.1.c Encourage the use of "complete streets" design methods.			✓
6.4.1.d Encourage employers to implement TDM strategies.			✓
Objective:			
6.4.2 Safe, interconnected transit, roadway, bicycle, equestrian, and pedestrian network.			✓
Policies:			
6.4.2.a Ensure transit-, roadway-, and pedestrian-facilities design and level-of-service standards respect the unique character of our communities.			✓
6.4.2.b Prioritize transportation improvements list to cost-effectively meet existing and future needs consistent with the MIP.			✓
6.4.2.c Require new development, where appropriate, to integrate sidewalks, pathways, bikeways, and transit infrastructure into new commercial and residential projects while enhancing community character.			✓
6.4.2.d Identify and improve hazardous and substandard sections of roadways, drainage infrastructure, and bridges, provided that the historical integrity of the roads and bridges are protected.			✓
6.4.2.e Consider identification, acquisition where appropriate, and utilization of abandoned right-of-ways for bikeways, pedestrian pathways, and open-space networks.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
6.4.2.f Support the implementation of the <i>Central Maui Pedestrian & Bicycle Master Plan</i> (March 2012), when consistent with the MIP.			✓
Objective:			
6.4.3 An island-wide, multimodal transportation system that respects and enhances the natural environment, scenic views, and each community's character.			✓
Policies:			
6.4.3.a Ensure that the roadway and transit alignments respect the natural environment and scenic views.			✓
6.4.3.b Ensure that roadways and transit systems in rural areas and small towns enhance community character.			✓
6.4.3.c Design all transit systems to respect visual corridors and Maui's character.			✓
Analysis: The proposed action is not directly or indirectly applicable to the objectives or policies for transportation systems and has no implications for the development of transportation systems and infrastructure.			
TRANSIT			
Goal:			
6.5 An island-wide transit system that addresses the needs of residents and visitors and contributes to healthy and livable communities.			✓
Objective:			
6.5.1 An integrated transit system that better serves all mobility needs of Maui's residents and visitors.			✓
Policies:			
6.5.1.a Maximize access to public transit in town centers, commercial districts, and employment centers.			✓
6.5.1.b Expand regional and inter-regional transit services, where appropriate, in heavily traveled corridors and within communities			✓
6.5.1.c Increase the frequency of current service, add additional bus routes as demand requires, and transition to nonpolluting transit vehicles, as funding permits.			✓
6.5.1.d Provide adequate transit infrastructure (e.g., bus pullouts, waiting benches and shelters, signs) along existing and future transit right-of-ways.			✓
6.5.1.e Require new development where appropriate, to provide right-of-ways (ROWs) to accommodate transit circulation and support facilities.			✓
6.5.1.f Identify, protect, and preserve, or acquire corridors for future inter-community transit use, including but not limited to, rail and also multimodal use corridors.			✓
6.5.1.g Establish transit corridors by planning for and securing right-of-way when appropriate for alternative modes of transportation (such as rail and water ferry service).			✓
6.5.1.h Pursue improvements and upgrades to the existing transit system consistent with updated MDOT planning studies/transit plans (within the framework of comprehensive island-wide multimodal transportation plans).			✓
6.5.1.i Increase inter-agency coordination between the Department of Planning, State Department of Transportation, County Department of Public Works, and other applicable agencies.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Objective:			
6.5.2 Plan for a more diversified and stable funding base to support transportation goals.			✓
Policies:			
6.5.2.a Support alternative methods and sources of funding transportation improvements (including impact fees, higher taxes, fare adjustments, dedicated sources of funding, and assessments).			✓
6.5.2.b Collaborate with public-private entities or nonprofit organizations to reduce public transit operational expenses.			✓
6.5.2.c Coordinate with appropriate Federal, State, and County agencies to fund transportation projects in areas where growth is anticipated.			✓
Analysis: The proposed action is not directly or indirectly applicable to the objectives or policies for an island-wide transit system and has no implications for the development of transit systems and infrastructure.			
PARKS			
Goal:			
6.6 Maui will have a diverse range of active and passive recreational parks, wilderness areas, and other natural-resource areas linked, where feasible, by a network of greenways, bikeways, pathways, and roads that are accessible to all.			✓
Objective:			
6.6.1 More effective, long-range planning of parks and recreation programs able to meet community needs.			✓
Policies:			
6.6.1.a Support, consistent with the MIP, the implementation of open-space and recreational plans, such as the <i>Pali to Puamana Parkway Master Plan</i> and the <i>Upcountry Greenways Master Plan</i> .			✓
6.6.1.b Utilize the ahupua'a approach by integrating mauka-to-makai natural landscapes into an island-wide parks and recreation functional plan.			✓
6.6.1.c Provide a balanced mix of passive and active parks, including neighborhood, community, and regional parks, in each community plan area.			✓
6.6.1.d Support the expansion of Haleakala National Park, where supported by affected communities.			✓
6.6.1.e Support lo'i and dryland taro restoration in County, State, and Federal parks.			✓
6.6.1.f Encourage private landowners to dedicate land to Federal, State, or County governments, or nonprofit land trusts, for parks and open-space protection consistent with the MIP.			✓
6.6.1.g Strengthen inter-agency coordination including State and County departments, such as resolving joint use of facilities and properties.			✓
6.6.1.h Work with the State to prepare and implement a master management plan for 'Āhihi-Kīna'u and La Perouse-Keone 'ō'io Bay to Kanaloa Point region.			✓
Objective:			
6.6.2 Achieve parks and recreation opportunities to meet the diverse needs of our community.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Policies:			
6.6.2.a			✓
6.6.2.b			✓
6.6.2.c			✓
6.6.2.d			✓
6.6.2.e			✓
6.6.2.f			✓
6.6.2.g			✓
6.6.2.h			✓
6.6.2.i			✓
6.6.2.j			✓
6.6.2.k			✓
Objective:			
6.6.3			✓
Policies:			
6.6.3.a			✓
6.6.3.b			✓
6.6.3.c			✓
6.6.3.d			✓
6.6.3.e			✓
6.6.3.f			✓
Analysis: The proposed action is limited to water system storage improvements for a residential subdivision and is neither directly or indirectly applicable to the goal, objective or policies for parks and recreational activities.			

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
PUBLIC FACILITIES			
Goal:			
6.7			✓
Objective:			
6.7.1			✓
Policies:			
6.7.1.a			✓
6.7.1.b			✓
6.7.1.c			✓
6.7.1.d			✓
6.7.1.e			✓
6.7.1.f			✓
6.7.1.g			✓
6.7.1.h			✓
6.7.1.i			✓
6.7.1.j			✓
6.7.1.k			✓
Analysis: The proposed action does not have direct or indirect relationships to the goal for public facilities. In this context, the project does not advance or promote the objective or more effective planning for public facilities which meet community needs.			
SCHOOLS AND LIBRARIES			
Goal:			
6.8			✓
Objective:			
6.8.1			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Policies:			
6.8.1.a			✓
6.8.1.b			✓
6.8.1.c			✓
6.8.1.d			✓
6.8.1.e			✓
6.8.1.f			✓
6.8.1.g			✓
6.8.1.h			✓
6.8.1.i			✓
6.8.1.j			✓
Objective:			
6.8.2			✓
Policies:			
6.8.2.a			✓
6.8.2.b			✓
Analysis: The proposed action is not directly or indirectly applicable to the priority guidelines and principles for schools and libraries and does not affect the construction of schools or pedestrian friendly streets, pathways and bikeways.			
HEALTH CARE			
Goal:			
6.9			✓
Objective:			
6.9.1			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Policies:			
6.9.1.a			✓
6.9.1.b			✓
6.9.1.c			✓
6.9.1.d			✓
6.9.1.e			✓
6.9.1.f			✓
6.9.1.g			✓
6.9.1.h			✓
Objective:			
6.9.2			✓
Policies:			
6.9.2.a			✓
6.9.2.b			✓
6.9.2.c			✓
6.9.2.d			✓
Objective:			
6.9.3			✓
Policies:			
6.9.3.a			✓
6.9.3.b			✓
6.9.3.c			✓
6.9.3.d			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
6.9.3.e Encourage the State to adopt the recommendations contained within the Legislative Reference Bureau's report entitled "Gimme a Break: Respite Care Services in Other States," (December 2007) where appropriate, feasible, and consistent with the MIP.			✓
Objective:			
6.9.4 Improved preventative medicine and primary health care.			✓
Policies:			
6.9.4.a Develop and utilize health-status benchmarks to measure prevention and primary health care service delivery.			✓
6.9.4.b Support programs that provide family planning assistance.			✓
Analysis: The proposed action does not have direct or indirect relationships to the goal for healthcare. In this context, the water system storage improvements do not advance or promote the objectives for greater healthcare system autonomy, increase long-term care capacity and alternatives, support home care and community based programs, and improve preventative medicine and primary health care.			
ENERGY			
Goal:			
6.10 Maui will meet its energy needs through local sources of clean, renewable energy, and through conservation.			✓
Objective:			
6.10.1 Reduce fossil fuel consumption. Using the 2005 electricity consumption as a baseline, reduce by 15 percent in 2015; 20 percent by 2020; and 30 percent by 2030.			✓
Policies:			
6.10.1.a Support energy efficient systems, processes, and methods in public and private operations, buildings, and facilities.			✓
6.10.1.b Support the Maui Solar Rooftop initiative.			✓
6.10.1.c Support Hawai'i Energy and other Public Utility Commission (PUC) approved energy efficiency programs.			✓
Objective:			
6.10.2 Increase the minimum percentage of electricity obtained from clean, renewable energy sources. By 2015, more than 15 percent of Maui's electricity will be produced from locally-produced, clean, renewable energy sources, 25 percent by 2020, and 40 percent by 2030.			✓
Policies:			
6.10.2.a Evaluate available renewable energy resource sites and applicable technologies.			✓
6.10.2.b Encourage the installation of renewable energy systems, where appropriate.			✓
6.10.2.c Support the establishment of new renewable energy facilities at appropriate locations provided that environmental, view plane, and cultural impacts are addressed.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
6.10.2.d Encourage all new County facilities completed after January 1, 2015, to produce at least 15 percent of their projected electricity needs with onsite renewable energy.			✓
Objective:			
6.10.3 Increased use of clean, renewable energy.			✓
Policies:			
6.10.3.a Support efforts in the PUC to upgrade Maui's power grid to integrate renewable energy from multiple sources and wheeling of electricity.			✓
6.10.3.b Encourage the PUC to work with the County to implement and expedite community supported renewable energy projects.			✓
6.10.3.c Encourage efforts to produce more renewable energy using distributed generation.			✓
6.10.3.d Encourage import substitution by MECO and the broader community to become more self-sufficient in energy production.			✓
6.10.3.e Educate the public on the economic and environmental benefits from the increased use of renewable energy.			✓
6.10.3.f Encourage support from the Federal government, State, and the private sector for Maui's renewable energy objectives.			✓
6.10.3.g Encourage incentives to support the development and use of renewable energy.			✓
Objective:			
6.10.4 More efficient distribution of power throughout the island while preserving island beauty.			✓
Analysis: The proposed action is a water system storage project that is not directly or indirectly applicable to the goal, objectives, and policies for energy, renewable energy, and energy conservation.			
HARBORS AND AIRPORT			
Goal:			
6.11 Maui will have harbors and airports that will efficiently, dependably, and safely facilitate the movement of passengers and cargo.			✓
Objective:			
6.11.1 Upgraded harbor facilities to handle larger volumes of freight and passengers and additional small boat harbors.			✓
Policies:			
6.11.1.a Support the expansion and upgrade of Kahului Harbor through the following, provided that any expansion is respectful of cultural practices and existing recreational uses and supports improved water quality:			✓
(1) Accommodate increasing volumes of cargo;			✓
(2) Provide deeper pier depths and greater fuel-receiving and storing capacities; and			✓
(3) Ensure safe and efficient work areas, including separating passenger operations from fuel and cargo operations.			✓

Maui Island Plan Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
6.11.1.b Work with public and private entities to provide adequate pier slips, utilities, repair facilities, and waste-disposal capabilities.			✓
6.11.1.c Encourage the State to safely separate passenger (cruise and ferry) operations from hazardous bulk fuels and heavy cargo transporting operations, while not decreasing harbor's capacity to safely support various recreational uses.			✓
6.11.1.d Encourage the State to develop cargo inspecting sites and facilities for efficient cargo and container processing and transportation and to prevent alien species entry.			✓
6.11.1.e Support a State and County task force to study the feasibility of a second commercial harbor on Maui.			✓
Objective:			
6.11.2 Establish more economically thriving and environmentally sensitive small boat harbors accommodating resident and business activity, including fishing, recreation, and tour boats.			✓
Policy:			
6.11.2.a Provide for needed shore-side facilities and capabilities to support small boat harbor users (e.g. repair facilities, parking, cold storage, and mass-transit connections).			✓
Objective:			
6.11.3 Upgraded airport facilities and navigation aids to serve the needs of passengers, freight movements, and general aviation.			✓
Policies:			
6.11.3.a Protect the island's airports from encroaching urbanization that may negatively impact the airport operations.			✓
6.11.3.b Support State efforts to improve Kahului Airport operations to better serve passenger and cargo needs.			✓
6.11.3.c Support State efforts to identify sites and plan to relocate and accommodate small and rotary wing aircraft.			✓
6.11.3.d Encourage the State to improve airport safety including lighting, fuel transmission, fuel safety, etc.			✓
6.11.3.e Consider expansion of rental car facilities in West and South Maui.			✓
6.11.3.f Consider expansion of mass transit (bus, fixed-rail, shuttle, and taxis, bicycle, and pedestrian facilities) to and from Kahului Airport and not limited to passenger movements (allowing for luggage and cargo).			✓
6.11.3.g Encourage the State to maintain airport capacity and to encourage more responsive air services to Hāna and Kapalua.			✓
Analysis: The goal, objectives, and policies for harbors and airports are not applicable to the proposed project. In particular, the water system storage project does not advance or promote the upgrading of harbor and airport facilities, and establishing appropriately planned and functional small boat harbors.			

Maui Island Plan Goals, Objectives and Policies Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
CHAPTER 7 – LAND USE			
AGRICULTURAL LANDS			
Goal:			
7.1 Maui will have a prosperous agricultural industry and will protect agricultural lands.			✓
Objective:			
7.1.1 Significantly reduce the loss of productive agricultural lands.			✓
Policies:			
7.1.1.a Allow, where appropriate, the clustering of development on agricultural lands when approved as a CSD plan or similar approval mechanism.			✓
7.1.1.b Require, where appropriate, the review and approval of CSD plans prior to the subdivision of agricultural land.			✓
7.1.1.c Discourage developing or subdividing productive agricultural lands for residential uses in which the residence would be the primary use and any agricultural activities would be secondary uses.			✓
7.1.1.d Consider requirements for public notification and review of the subdivision of agricultural land into four or more lots.			✓
7.1.1.e Focus urban growth, to the extent practicable, away from productive and important agricultural lands.			✓
7.1.1.f Strongly discourage the conversion of productive and important agricultural lands (such as sugar, pineapple, and other produce lands) to rural or urban use, unless justified during the General Plan update, or when other overriding factors are present.			✓
7.1.1.g Further develop the requirements for agricultural assessments found under Section 19.510, MCC.			✓
7.1.1.h Provide incentives for landowners to preserve and protect agricultural lands from development through the use of TDR/PDR, tax credits, easement programs, or similar means.			✓
7.1.1.i Promote the use of U.S.D.A. Farm and Ranch Lands Protection Program grants to fund the acquisition of conservation easements on eligible agricultural lands.			✓
7.1.1.j Require all major developments adjacent to agricultural lands to provide an appropriate and site-specific agricultural protection buffer as part of a required site plan.			✓
7.1.1.k Support and promote the viability of Maui's agricultural businesses through property tax incentives and other programs and subsidies.			✓
7.1.1.l Encourage future community plan efforts to identify lands within the County Agricultural zoning district that are primarily being used for large-lot residential or rural use and consider such lands for reclassification to an appropriate County Rural zone.			✓
Objective:			
7.1.2 Reduction of the island's dependence on off-island agricultural products and expansion of export capacity.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Policies:			
7.1.2.a			✓
7.1.2.b			✓
7.1.2.c			✓
7.1.2.d			✓
7.1.2.e			✓
7.1.2.f			✓
7.1.2.g			✓
7.1.2.h			✓
7.1.2.i			✓
7.1.2.j			✓
7.1.2.k			✓
7.1.2.l			✓
Objective:			
7.1.3			✓
Policies:			
7.1.3.a			✓
7.1.3.b			✓
Analysis: The proposed action does not have direct or indirect relationships to the goal for agriculture. As previously discussed, the proposed project will be developed on lands designated for agriculture use. Although water system storage tanks are a permissible use on land designated for agriculture, the storage tank will serve a residential subdivision. The lands have not been in cultivation for over a decade, aside from intermittent cattle grazing. In the context of the amount of viable agriculture lands on the island of Maui, implementation of the proposed action is not considered to adversely affect agricultural productivity on Maui.			
RURAL AREAS			
Goal:			
7.2			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Objective:			
7.2.1			✓
Policies:			
7.2.1.a			✓
7.2.1.b			✓
7.2.1.c			✓
7.2.1.d			✓
7.2.1.e			✓
7.2.1.f			✓
7.2.1.g			✓
7.2.1.h			✓
Objective:			
7.2.2			✓
Policies:			
7.2.2.a			✓
7.2.2.b			✓
7.2.2.c			✓
7.2.2.d			✓
Analysis: The proposed project will be implemented on lands within the Rural Growth Boundary as designated within the MIP. However, the project is limited to water system storage capacity improvements and as such, will not impact the use and character of the surrounding lands.			
URBAN AREAS			
Goal:			
7.3			✓
Objective:			
7.3.1			✓

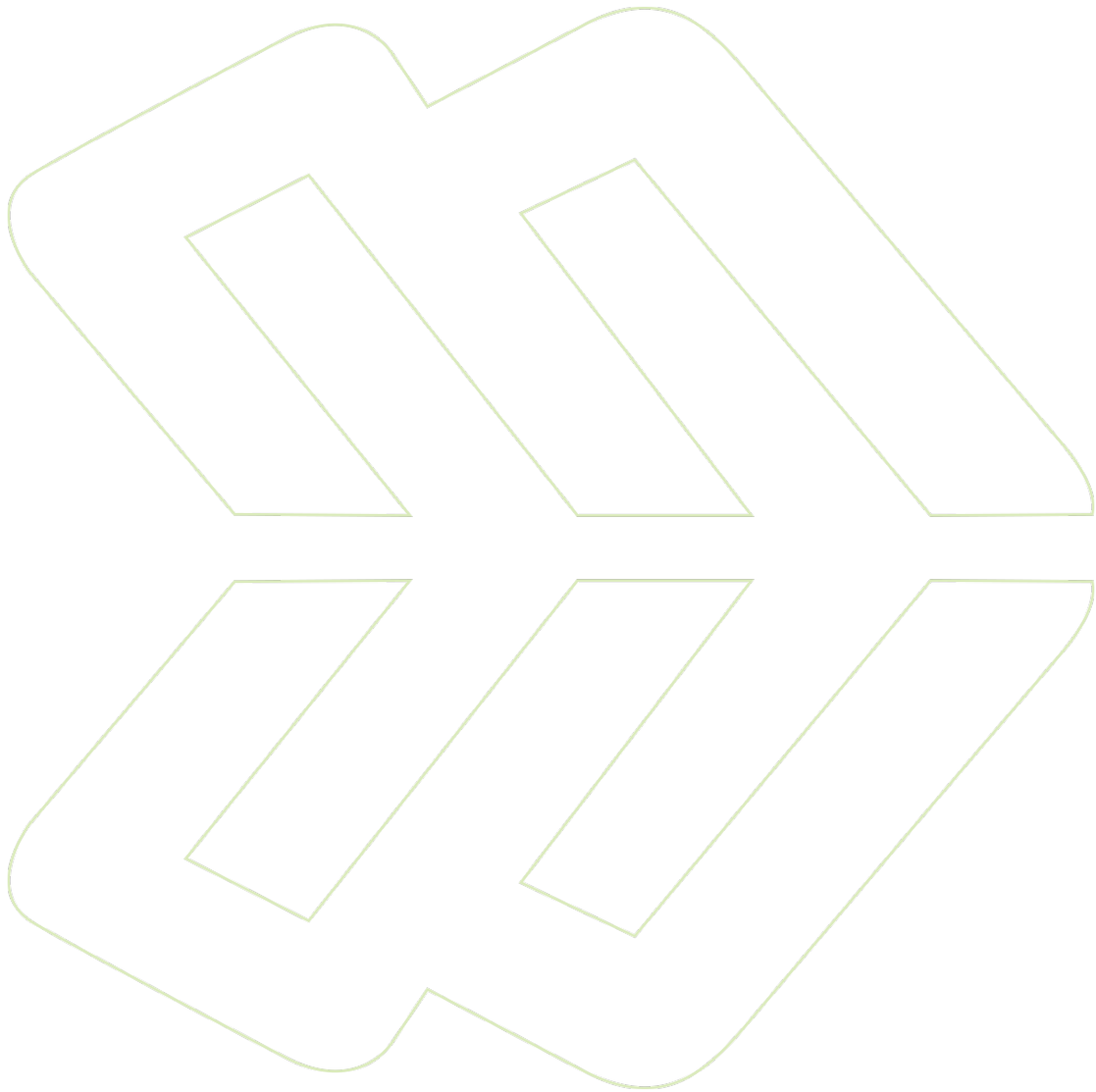
Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
Policies:			
7.3.1.a Ensure higher-density compact urban communities, infill, and redevelopment of underutilized urban lots within Urban Growth Boundaries.			✓
7.3.1.b Maintain a distinct separation between communities, such as but not limited to, Wailuku and Waikapū; Wailuku and Waihe'e; Pukalani and Makawao; Pukalani and Kula; Makawao and Hāli'imaile; Lahaina and Kā'anapali; Kīhei and Mā'alaea; and Mā'alaea and Waikapū, to protect the character and identity of Maui's communities.			✓
7.3.1.c Strengthen evaluation requirements for new urban expansion, new towns, and major urban infill projects within urban growth areas. Tailor submittal requirements to reflect the impact or scale of different projects.			✓
7.3.1.d Ensure future amendments to urban growth boundaries achieve the following: (1) provide a beneficial extension of the existing community; (2) are in areas where it is cost-effective to provide and operate infrastructure/public service facilities; and (3) do not promote automobile-oriented land use patterns.			✓
7.3.1.e Evaluate the impact of gated communities on inter-connectivity.			✓
7.3.1.f Encourage the development and implementation of neighborhood design standards that are environmentally friendly, such as LEED for Neighborhood Development (LEED – ND) standards.			✓
7.3.1.g Discourage future pyramid zoning within the industrial zoning districts, while allowing accessory commercial uses and grandfathering existing uses.			✓
7.3.1.h Promote agriculture by encouraging community gardening, community-supported agricultural programs, and farmers markets within and adjacent to urban areas.			✓
7.3.1.i Discourage land use and urban design that impedes inter-connectivity between adjacent communities.			✓
Objective:			
7.3.2 Facilitate more self-sufficient and sustainable communities.			✓
Policies:			
7.3.2.a When developing new communities, provide sufficient lands for commercial, appropriate industrial, educational, spiritual, and non-profit uses to serve the daily needs of community residents.			✓
7.3.2.b Site community facilities such as schools, parks, libraries, and community centers within walking and biking distance of residences.			✓
7.3.2.c Facilitate self-sufficient communities and shorten commutes by:			✓
(1) Directing residential development to job-rich areas;			✓
(2) Allowing for appropriate commercial development and community services to shorten commutes; and			✓
(3) Allowing home occupations or home-based businesses that are compatible with surrounding neighborhoods and lifestyles.			✓
7.3.2.d Ensure, where appropriate, that affordable employee housing and multi-modal transportation opportunities are located near major employment centers.			✓

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
7.3.2.e Discourage the establishment of bedroom communities where long commutes are required to employment centers.			✓
7.3.2.f Facilitate the development of housing by focusing projects in locations where land and infrastructure costs facilitate the development of affordably-priced housing.			✓
7.3.2.g Provide incentives to facilitate the development of multifamily housing.			✓
7.3.2.h Encourage the placement of rental housing projects in the same areas as for-sale housing to facilitate mixed-income communities.			✓
7.3.2.i Develop communities that provide sufficient parks, schools, libraries, and other essential public facilities and services to serve resident needs.			✓
7.3.2.j Promote agriculture by encouraging community gardening, edible landscaping, community-supported agricultural programs, and farmers markets within and adjacent to urban areas.			✓
Objective:			
7.3.3 Strengthen the island's sense of place.			✓
Policies:			
7.3.3.a Protect and enhance the unique architectural and landscape characteristics of each community.			✓
7.3.3.b Encourage Hawaiian architecture and tropical building designs.			✓
7.3.3.c Support the continued revitalization of historic country towns, Wailuku Town, and Kahului's commercial core and harbor-front without displacing traditional, cultural, recreational and customary uses.			✓
7.3.3.d Strongly encourage the preservation of buildings, structures, and sites of historic significance.			✓
7.3.3.e Require community input through Design Workshops for major new urban expansion, new towns, and major urban infill projects.			✓
7.3.3.f Require design enhancement, landscaping, and integration of park and rides, bicycle parking areas, and mass-transit infrastructure to mitigate the effect of parking lots and structured parking on the urban landscape.			✓
7.3.3.g Ensure that safe and attractive public spaces (e.g., plazas, parks, town/village squares) are provided throughout the island's urban areas.			✓
Objective:			
7.3.4 Strengthen planning and management for the visitor industry to protect resident quality of life and enhance the visitor experience.			✓
Policies:			
7.3.4.a Discourage the conversion of hotel units to timeshares and fractional ownership.			✓
7.3.4.b Monitor and manage the amount of, and impacts from, timeshares and fractional ownership.			✓
7.3.4.c Manage short-term rentals and bed-and-breakfast homes through a permitting and regulatory process in accordance with adopted ordinances and community plan policies.			✓

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	DA	IA	NA
7.3.4.d			✓
Limit large-scale resort development to the four existing resort destination areas of Wailea, Mākena, Kapalua and Kā'anapali. "Large Scale Resort" is defined as complexes that include multiple accommodation facilities, activity businesses, retail complexes, and other amenities.			
Objective:			
7.3.5			✓
Ensure that Maui's planning and development review process becomes more transparent, efficient, and innovative.			
Policies:			
7.3.5.a			✓
Encourage greater community involvement in land use planning and decision making.			
7.3.5.b			✓
Establish a predictable and timely development review process that facilitates the approval of projects that meet planning and regulatory requirements.			
7.3.5.c			✓
Increase inter-agency coordination between the Department of Planning and all State and County agencies responsible for infrastructure and public facilities provision, particularly as it relates to the mitigation of long-term cumulative impacts resulting from development projects.			
7.3.5.d			✓
Provide greater certainty and transparency in the development review process.			
7.3.5.e			✓
Expand and maintain land use and geographic information system databases for improved decisions, and make data and products available to the public.			
Analysis: The proposed project is an infrastructure improvement in a previously developed area and is not directly applicable to the objectives and policies for urban development patterns, sustainable communities, and strengthening the island's sense of place. Ongoing coordination with various County, State, and Federal agencies ensures that the proposed action accounts for and mitigates, to the extent possible, potential long-term cumulative impacts resulting from the project.			
CHAPTER 8 – DIRECTED GROWTH PLAN			
URBAN AND SMALL TOWN GROWTH AREA			
Goal:			
8.1			✓
Maui will have well-served, complete, and vibrant urban communities and traditional small towns through sound planning and clearly defined development expectations.			
Policies:			
8.1.a			✓
The County, with public input, will be responsible for designating new growth areas where infrastructure and public facilities will be provided, consistent with the policies of the MIP and in accordance with State and County infrastructure plans.			
8.1.b			✓
Amendments to a UGB or STB shall be reviewed as a MIP amendment. A UGB or STB shall only be expanded if the island-wide inventory (maintained by the Department of Planning) of existing land uses (residential, commercial, industrial) indicates that additional urban density land is necessary to provide for the needs of the projected population growth within ten years of that inventory; or, during the decennial update of the MIP.			
8.1.c			✓
Community plans shall provide for urban density land use designations only within UGBs and Small Towns. The County may only support and approve State Urban Land Use Designations for areas within UGBs, STBs, and Rural Villages.			

Maui Island Plan Goals, Objectives and Policies			
Key: DA = Directly Applicable, IA = Indirectly Applicable, NA = Not Applicable			
	DA	IA	NA
8.1.d			✓
The unique character and function of existing small towns shall be protected to retain and preserve their sense of place.			
8.1.e			✓
New development shall be consistent with the UGBs, STBs, and all other applicable policies of the MIP. New urban-density development shall not be allowed outside of a UGB or STB.			
8.1.f			✓
The County, as a condition of development approval, shall require developers of privately owned infrastructure systems to provide financial insurance (bonding, etc.) for the operation and maintenance of these systems.			
8.1.g			✓
The County shall implement a zoning program to comprehensively redistrict and rezone lands within UGBs according to updated community plan policies and map designations.			
8.1.h			✓
The County will seek to focus capital improvements (schools, libraries, roads, and other infrastructure and public facilities) within the UGBs and STBs in accordance with the MIP.			
8.1.i			✓
The County will promote (through incentives, financial participation, expedited project review, infrastructure/public facilities support, etc.) appropriate urban infill, redevelopment and the efficient use of buildable land within UGBs to avoid the need to expand the UGBs.			
8.1.j			✓
The MIP's UGBs and STBs shall not be construed or implemented to prohibit the construction of a single-family dwelling on any existing parcel where otherwise permitted by law.			
Analysis: The proposed project is located within the Rural Growth Boundary of the County of Maui's MIP. The project is not located within the Urban or Small Town Growth Boundaries.			
RURAL GROWTH AREA			
Goal:			
8.2		✓	
Maui will maintain opportunities for agriculture and rural communities through sound planning and clearly defined development expectations.			
Policies:			
8.2.a			✓
Amendments to a RGB shall be reviewed as an MIP amendment. A RGB shall only be expanded if an island-wide inventory of existing land uses (residential, commercial, industrial) indicates that additional lands are necessary to provide for the needs of the projected population growth within ten years of that inventory; or, during the decennial update of the MIP.			
8.2.b			✓
New development shall be consistent with RGB and all other applicable policies and requirements of the MIP. Public, quasi-public, civic, and limited commercial or industrial uses may be allowed in the RGB when the proposed uses demonstrate a public need and are consistent with the Community Plan and zoning.			
8.2.c			✓
Environmental protection and compatibility will be a top priority in rural growth areas.			
8.2.d			✓
All development within rural growth areas should avoid encroachment upon prime agricultural land.			
8.2.e			✓
Rural growth areas include Rural Residential Areas and Rural Villages. Rural residential areas may be designated when they are located in association with or on the border of urban growth areas or Small Towns; and/or when they provide for complete, self-sufficient rural communities with a range of uses to be developed at densities that do not require urban infrastructure.			

Maui Island Plan Goals, Objectives and Policies			
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	DA	IA	NA
8.2.f			✓
8.2.g			✓
8.2.h			✓
8.2.i			✓
8.2.j			✓
8.2.k			✓
8.2.l			✓
8.2.m			✓
8.2.n			✓
Analysis: The proposed project site is located within the Rural Growth Boundary (RGB) of the County of Maui's MIP. Although the proposed water system storage tank will not be used for agricultural purposes, it is an appropriate use within the RGB.			
PROTECTED AREA POLICY			
8.3.a	✓		
Analysis: Protected areas, as defined in Table 8-2 of the MIP are those lands categorized as preservation, park, greenbelt, greenway, and sensitive land. Diagram WC-1 shows that the project site has preservation lands and a greenway/greenbelt along the south and east sides of the property, respectively, which correspond to buffers noted within the Maui Island Plan's Pu'unani Growth Area.			



MUNEKIYO HIRAGA

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