



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES | KA 'OIHANA KUMUWAIWAI 'ĀINA
COMMISSION ON WATER RESOURCE MANAGEMENT | KE KAHUWAI PONO
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT
March 19, 2024
Honolulu, Hawai'i

Derrick's Well Drilling & Pump Services, LLC
APPLICATION FOR WELL CONSTRUCTION AND PUMP INSTALLATION PERMITS
Wai Well (State Well No. 8-3802-016), TMK (3) 1-6-141:024
Kea'au Aquifer System Area, Hawai'i

<u>DRILLER/PERMITTEE</u>	<u>WELL OPERATOR</u>	<u>LAND OWNER</u>
Derrick's Well Drilling and Pump Services, LLC	Waiakea Bottling LLC	Ke'aloa'hani, LLC
<u>P.O. Box 2187</u>	<u>447 Kalaniana'ole Avenue</u>	1188 Bishop Street, Suite 2212
Kea'au, Hawai'i 96749	Hilo, Hawai'i 96720	Honolulu, Hawai'i 96813
Contact: Mr. Derrick Moreira	Contact: Mr. Kyle Lemmer	Contact: Mr. Ryan Emmons

SUMMARY OF REQUEST:

Staff is requesting that the Commission on Water Resource Management (Commission) approve Derrick's Well Drilling & Pump Services, LLC application for well construction and pump installation permits for the proposed well. The proposed pump capacity will be 450 gallon per minute (0.096 million gallons per day) for a water bottling plant.

LOCATION MAP:



APPLICATION AND STAFF INITIAL REVIEW

The complete well application was submitted on February 22, 2022 and updated in March 2024 and is attached as Exhibit 1. Staff conducted an initial review, with the following assessments/actions:

- 1) Deposited \$300 filing fee and assigned a well number for this well.
- 2) Verified that the land owner on application matches tax records.
- 3) Consulted with staff geologist and found that no streams will likely be impacted by the proposed well use.
- 4) Checked the proposed well section, and determined that the proposed design will comply with the Hawai'i Well Construction and Pump Installation Standards (see Exhibit 2).
- 5) Made an initial determination that there will be "no adverse impacts on historic properties" associated with the Commission's issuance of this permit.
- 6) Ran a background check of the licensed contractor and assessed that they have no outstanding issues with Commission staff for overdue paperwork or actions.
- 7) Conducted a search of wells within 1-mile of the proposed well (see Exhibit 3).
- 8) Confirmed the contractor's C-57 license is valid and in good standing.
- 9) Ran a query on OHA's Kipuka database and found there are no significant features in the area.

AGENCY COMMENTS

Staff routed the application to the following agencies, and, if comments were received, the comments are summarized for each respective agency. See Exhibit 4.

Department of Health Safe Drinking Water Branch (DOH SDWB): DOH SDWB determined this well is not a source for a public water system.

Department of Health Wastewater Branch (DOH WWB): DOH WWB indicated that there is a cesspool located adjacent to the proposed well. DOH WWB comments are transmitted to the well owner / land owner for information only, but the Commission doesn't restrict the location of wells proximal to sources of contamination because treatment of water can remove contaminants.

Department of Health Clean Water Branch (DOH CWB): Since DOH CWB comments are consistent for all well applications, the Commission staff routinely forwards standard National Pollutant Discharge Elimination System (NPDES) comments to the driller and copies the well and land owner. These comments pertain to the disposal of drilling fluids associated with both the construction of the well, as well as pump tests (where necessary).

Department of Land and Natural Resources (DLNR), Land Division (LD): DLNR LD was sent a copy of the application but did not comment.

DLNR State Historic Preservation Division (SHPD): Commission staff made an initial assessment that "no historic properties are affected" by the proposed well construction / pump installation, and SHPD concurred with this finding.

County of Hawai'i, Department of Planning (HDOP): HDOP identified the proposed well is not located in the Special Management Area. The facility has received a special permit, No. SPP 842 (Docket No. SPP 93-000003) for the bottling facility. On February 18, 2018, SPP 842 was issued time extension to comply with construction completion.

County of Hawai‘i, Department of Water Supply (HDWS): HDWS was consulted and provided comments that this well should have no discernable impacts on HDWS pumping.

DLNR, Aha Moku: Aha Moku was sent a copy of the application but did not comment.

ANALYSIS/ISSUES:

The application indicates that the proposed well will be used for a water bottling plant. The proposed pump capacity is 450 gpm (estimated demand of 0.096 mgd). Staff raised concerns related to potential impacts to nearby wells and the aquifer. Below is a summary of the issues/responses:

Three existing wells, (8-3802-012) Kai, (8-3802-015) Kai III, and (8-3802-006) Hawaiian Springs, and one recently permitted well (8-3802-017) Kai II are located adjacent to the proposed well. In accordance with the Hawai‘i Well Construction and Pump Installation Standards, for a 450 gpm pump, the applicant must conduct a 48-hour constant rate pump test, as well as a step-drawdown test. Because of the proximity of adjacent wells and the large capacity of this pump, staff is recommending that monitoring of the adjacent Kai Well (8-3802-012) be done by installing a transducer and reading hourly water levels for 24 hours prior to the pump test, during the 48-hour pump test, and 24 hours after the pump test is complete. Monitoring the Kai well prior to the pump test will show baseline data. During the pump test, monitoring the Kai well will help to show impacts of pumpage of the subject well. And post-pump test monitoring of the Kai well will show the recovery, if there are any impacts to that well.

HRS CHAPTER 343 – ENVIRONMENTAL ASSESSEMENT (EA) COMPLIANCE

EA Triggers

In accordance with Hawaii Revised Statutes (HRS) §343-5(a), the applicant’s proposed action **does not trigger** the need for an EA, as none of the items below are a trigger for the proposed well.

Potential triggers: (1) use of state or county land or state or county funds; (2) use of conservation district lands; (3) use within a shoreline area as defined in HRS § 205A-41; (4) use within any historic site designated on the National or Hawai‘i registers; (5) use within the Waikiki Special District; (6) amendment to county general plans which results in designations other than agriculture, conservation or preservation except as initiated by a county; (7) reclassification of land classified as conservation by the Land Use Commission; (8) construction/modification of helicopter facilities that may affect conservation district lands, a shoreline area, or a historic site designated on the National or Hawai‘i Register; (9) construction of (a) wastewater treatment units (except an individual wastewater system or water treatment unit serving fewer than fifty single-family dwellings or the equivalent, (b) waste-to-energy facility (c) landfill, (d) oil refinery, or (e) power generating facility.

TRADITIONAL AND CUSTOMARY PRACTICES

Ka Pa‘akai Analysis

In *Ka Pa‘akai O Ka‘aina v. Land Use Commission*, the Hawai‘i Supreme Court recognized that the State has an obligation to protect Hawaiian traditional and customary practices to the extent feasible, and that the proponent of an action must show sufficient evidence that these types of practices are protected, if they exist in the location in question. This “Ka Pa‘akai framework” was created by the Court “to help ensure the enforcement of traditional and customary native Hawaiian rights while reasonably accommodating competing private development interests.” The Commission is obligated to conduct a “Ka Pa‘akai analysis” of a proposed action requiring Commission approval independent of the entity proposing the action. This analysis should be used to inform any decision on the impact of the proposed action on traditional and customary practices.

Consequently, the Court required an assessment of the following:

(1) “the identity and scope of ‘valued cultural, historical, or natural resources’ in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;

Ka Pa‘akai Analysis from the applicant was submitted on May 18, 2023 (see exhibit 1a) and no traditional and customary practices were identified within the project area. The cultural impact assessment relies on archival research, historical documents, previous studies and oral interviews. There was no response to a public notice published in March 2023 requesting that knowledgeable individuals contact the consultant. The Office of Hawaiian Affairs’ (OHA) Kipuka database shows no sites or crown lands involved. On April 6, 2022, SHPD concluded no historic properties affected on the subject site.

(2) the extent to which those resources -- including traditional and customary native Hawaiian rights -- will be affected or impaired by the proposed action.

As concluded in the May 2023 Ka Pa‘akai Analysis, the well location is in an area that has been previously cleared due to cattle ranching and industrial sugarcane. As a previously cleared site, the development of the well site will not impair any traditional and customary practices. Based on the well distance from the coastline, the proportion of the well’s use in relation to sustainable yield and the lack of known springs in the vicinity of the well, staff believe that impacts to groundwater dependent ecosystems and traditional and customary practices along the coastline will be minimal and hard to determine.

(3) the feasible action, if any, to be taken ... to reasonably protect native Hawaiian rights if they are found to exist.

Staff recommend that the existing and proposed wells should be monitored and tested. Additional water level monitoring will be required as a condition of permit issuance. If tests and reporting data show impacts occurring, standard conditions of the permits (well construction condition 3, and pump installation condition 4) require that pumpage will need to be reduced. These notices of potential pump capacity reduction are provided throughout the routine well permitting process. Alternatively, designation as a ground water management area is another action that may occur should the resource or traditional and customary practices with respect to ground water use in the Kea‘au Aquifer System Area become threatened.

RECOMMENDATION:

Staff recommends that the Commission approve the issuance of well construction and pump installation permits for the Wai Well, State Well No. 8-3802-016, subject to the standard well construction permit conditions listed in Exhibit 5, the standard pump installation conditions listed in Exhibit 6, and the following special conditions:

- 1) A constant rate test in accordance with the Hawai‘i Well Construction and Pump Installation Standards must be completed for the Wai Well, using the Kai Well (8-3802-012) as an observation well. Hourly water levels in the Kai Well must be observed, recorded, and submitted, for 24-hours prior to the pump test, during the pump test, and 24-hours after the pump test.

- 2) The pump capacity may be reduced to mitigate any potential impacts.

Ola i ka wai,



DEAN D. UYENO
Acting Deputy Director

- Exhibits:
- 1 (Application)
 - 1a (Cultural Impact Assessment)
 - 2 (Well Design Check)
 - 3 (1-mile Radius Map)
 - 4 (Agency Comments)
 - 5 (Well Construction Permit Standard Conditions)
 - 6 (Pump Installation Permit Standard Conditions)

APPROVED FOR SUBMITTAL:



DAWN N. S. CHANG
Chairperson



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
APPLICATION FOR A WELL CONSTRUCTION /
PUMP INSTALLATION PERMIT

For Official Use Only:

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Original application must be accompanied by a non-refundable filing fee of \$300.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-0225. For further information and updates to this application form, visit <http://www.hawaii.gov/dlnr/cwrm>.

WELL LOCATION INFORMATION					
1. STATE WELL NO. (if assigned)	2. WELL NAME Wai Well	3. ISLAND Hawaii	4. TMK (3) 1 6 141 024 island zone sec plat parcel lot		
5. WELL COORDINATES (latitude and longitude, referenced to NAD 83, degrees, minutes, seconds to 1 decimal place) and ADDRESS (street, city, zip code) 19° 38' 03.83" N 155° 02' 18.60" W					
The following must be attached before this application is accepted as complete: <input checked="" type="checkbox"/> Property tax map, showing well location referenced to established property boundaries <input checked="" type="checkbox"/> Photograph of the proposed well site <input checked="" type="checkbox"/> A photo or schematic diagram showing the well site, access road and proposed well infrastructure <input checked="" type="checkbox"/> Attach written permission from the landowner listed below, that acknowledges the work proposed by this application. If the landowner changes during construction, a new permission statement is required.					
6. WELL OPERATOR'S NAME/COMPANY Waiakea Bottling LLC		Well Operator's Contact Kyle Lemmer		7. LANDOWNER'S NAME/COMPANY Ke'alo'ha'ani LLC	
Well Operator's Mailing Address 447 Kalaniana'ole Ave., Hilo HI 96720		Landowner's Mailing Address 1188 Bishop St., Suite 2212 Honolulu, HI 96813		Landowner's Contact Ryan Emmons	
Well Operator's Phone 808-464-8655	Well Operator's Fax	Well Operator's E-mail klemmer@waiakea.com	Landowner's Phone 805-450-0981	Landowner's Fax	Landowner's E-mail ryanemmons@waiakeasprings.com
PROPOSED WELL CONSTRUCTION			PROPOSED PUMP INSTALLATION		
8. Proposed Work <input checked="" type="checkbox"/> Construct New Well <input type="checkbox"/> Modify Existing Well <input type="checkbox"/> Abandon/Seal Well		9. Construction Type <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Dug <input type="checkbox"/> Shaft <input type="checkbox"/> Tunnel		11. Proposed Work <input checked="" type="checkbox"/> Install New Pump <input type="checkbox"/> Replace Pump	
				13. Proposed Pump Capacity, gpm (gallons per minute) 450	
				12. Method of flow measurement <input checked="" type="checkbox"/> Totalizer flowmeter <input type="checkbox"/> Other (explain)	
				14. Proposed Amount of Withdrawal, gpd (gallons per day) 96,000	
10. Is this well part of a battery of wells? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
15. Proposed Surveyor name and license number (a surveyor is required for all Well Construction Permits and may be required for some Pump Installation Permits) Robert Shirai, License: LS-5985					
PROPOSED USE If the well water will be treated, please describe how (reverse osmosis, ultra violet, etc.) and disposal method of resulting effluent, reject water, etc.					
<input type="checkbox"/> 16. Municipal (water systems serving greater than 25 individuals or 15 service connections)					
<input type="checkbox"/> 17. Domestic Number of units to be served: _____					
<input checked="" type="checkbox"/> 18. Industrial (describe) Bottling Plant					
<input type="checkbox"/> 19. Irrigation (describe crop and no. of acres)					
<input type="checkbox"/> 20. Military (describe)					
<input type="checkbox"/> 21. Other (describe)					
OTHER LEGAL REQUIREMENTS If required, items 22. and 23. must be obtained before the Commission can legally issue a permit:					
22. Conservation District Use Permit (CDUP) <input type="checkbox"/> Well is in Conservation District <input type="checkbox"/> Required, CDUP # _____ date approved _____ <input type="checkbox"/> Not Required (attach documentation from OCCL) <input checked="" type="checkbox"/> Well is not in Conservation District			23. Special Management Area Permit (SMAP) <input type="checkbox"/> Well is in the Special Management Area <input type="checkbox"/> Required, SMA # _____ date approved _____ <input type="checkbox"/> Not Required (attach documentation from applicable County agency) <input checked="" type="checkbox"/> Well is not in the Special Management Area		
24. State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources (Hawaii Revised Statute, Chapter 6E, Section 106) <input checked="" type="checkbox"/> I have filled in the SHPD 6E form (https://dlnr.hawaii.gov/shpd/files/2020/04/012918-SHPD-HRS-6E-Submittal-Intake-Form-2.pdf) and attached it; OR <input type="checkbox"/> I have attached documentation from SHPD indicating that there are no historic sites affected.					
25. Chapter 343 <input type="checkbox"/> An Environmental Assessment was completed, and <input type="checkbox"/> An Environmental Impact Statement was required and has been accepted (attach letter of acceptance). Publication date in The Environmental Notice: _____ <input type="checkbox"/> A Finding of No Significant Impact has been determined (attach letter). Publication date in The Environmental Notice: _____ This project proposes: <input type="checkbox"/> Use of state or county lands, or use of state or county funds <input type="checkbox"/> Use within a state conservation district <input type="checkbox"/> Use within a shoreline setback area <input type="checkbox"/> Use within a national or Hawaii registered historic site <input type="checkbox"/> Use within the Waikiki Special District <input type="checkbox"/> The construction, expansion or modification of helicopter facility <input type="checkbox"/> A wastewater treatment unit <input type="checkbox"/> Waste-to-energy facility <input type="checkbox"/> Landfill <input type="checkbox"/> Oil refinery <input type="checkbox"/> Power-generating facility <input checked="" type="checkbox"/> None of the above 11 items					
26. Water Use Permit No. (if applicable): N/A					
Additional remarks, explanations, etc. (attach additional sheet if more space is needed)					
NOTE: Signing below indicates that the signatories understand and swear that the information provided is accurate and true to the best of their knowledge. Further, the signatories understand that upon permit approval: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 30 days after the completion date of the permitted work; 3) if the landowner changes during construction, a new permission statement is required; 4) in the event that the application is not completed correctly, any permit may be suspended until the item is brought in to compliance, and any work done while the permit is in suspension may result in fines of up to \$5000/day.					
27. WELL DRILLER (Must be filled out if application is for Well Construction) Derrick's Well Drilling & Pump Services, LLC C-28001 Licensee business name C-57 License No. Signature: Derrick Moreira 8/21/2021 Print Date P.O. Box 2187 Keaau, HI 96749 Address 808-982-7627 808-982-7698 derrickswelldrilling07@gmail.com Phone Fax E-mail			28. PUMP INSTALLER (Must be filled out if application is for Pump Installation) Derrick's Well Drilling & Pump Services, LLC C-28001 Licensee business name C-57/C-57A License No. Signature: Derrick Moreira 8/21/2021 Print Date P.O. Box 2187 Keaau, HI 96749 Address 808-982-7627 808-982-7698 derrickswelldrilling07@gmail.com Phone Fax E-mail		

PROPOSED WELL SECTION (Please attach schematic if different from diagram provided below. Also, if this proposed well is a dug well, attach a grading plan with cross section profiles showing existing and finished grades.)

Hole Diameter: 14 in.

Elevation at top of casing 248 ft., msl*

Minimum of 2' Radius & 4" Thick Concrete Pad (to contain benchmark surveyed to nearest 0.01 ft.)

Ground Elevation: 247 ft., msl*

Cement Grout: 184 ft. (min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less.)

Annular space between hole and casing (1.5" for positive displacement, 3" for other methods): 3 in.

Rock or Gravel Packing: 78 ft. Material: ☐ Crushed Basalt ☐ Rounded Gravel

Estimated Water Level Elevation: 6 ft., msl*

Total Depth 262 ft.

Grouting method: ☐ Positive displacement ☒ Other

Solid Casing: ($\geq 90\% \times (\text{Ground Elev.} - \text{Water Level Elev.})$)
Total Length: 242 ft.
Nominal Diameter: 8 in.
Wall Thickness: .322 in.
Bottom Elevation: 5 ft., msl*

Open Casing: ☒ Perforated ☐ Screen
Total Length: 20 ft.
Nominal Diameter: 8 in.
Wall Thickness: .322 in.
Bottom Elevation: -15 ft., msl*
note: Neither bentonite nor mud should be used in saturated zone during drilling

Open Hole:
Length: N/A ft.
Diameter: 8 in.
Bottom Elevation: 5 ft., msl*

Please refer to the **HAWAII WELL CONSTRUCTION AND PUMP INSTALLATION STANDARDS** to ensure that your as-built is in compliance with applicable standards.

* The approximate elevation must be referenced to mean sea level (msl) at the time of application filing. Final elevations of well components shall be submitted in the Well Completion/Well Abandonment reports and referenced to a benchmark which has been established by a surveyor licensed by the State.

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or,

$$\text{Bottom Elevation of Well Limit} = \left(\text{Water Elevation} - \frac{41 \times \text{Water Level Elevation}}{4} \right)$$

Example: Estimated + 2 ft. Water Level Elev. \rightarrow Bottom Elevation of Well Limit = $\left(2 - \frac{41 \times (2)}{4} \right) = -18.5 \text{ ft.}$

Note: Unless a variance is requested and approved, if the well is greater than 1/4 of the theoretical aquifer thickness, the well may have to be backfilled to bring the depth into compliance.

Solid Casing Material:

Carbon Steel: compliant with (check one or more): ☐ ANSI/AWWA C200 ☐ API Spec. 5L ☐ ASTM A53 ☐ ASTM A139

And compliant with (check one or more): ☐ ASTM A242 (or A606) ☐ Type E ☐ Type S ☐ Grade B ☐ Other

Stainless Steel: (check one): ☒ ASTM A409 (production wells) ☐ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one) ☐ Schedule 40 ☐ Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one): ☐ Schedule 40 ☐ Schedule 80 ☐ Schedule 120

Thermoset Plastic: (check one)

- ☐ Filament Wound Resin Pipe conforming to ASTM D2996
- ☐ Centrifugally Cast Resin Pipe conforming to ASTM D2997
- ☐ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
- ☐ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
- ☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
- ☐ FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:

Carbon Steel: compliant with (check one or more): ☐ ANSI/AWWA C200 ☐ API Spec. 5L ☐ ASTM A53 ☐ ASTM A139

And compliant with (check one or more): ☐ ASTM A242 (or A606) ☐ Type E ☐ Type S ☐ Grade B ☐ Other

Stainless Steel: (check one): ☒ ASTM A409 (production wells) ☐ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one) ☐ Schedule 40 ☐ Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one): ☐ Schedule 40 ☐ Schedule 80 ☐ Schedule 120

Thermoset Plastic: (check one)

- ☐ Filament Wound Resin Pipe conforming to ASTM D2996
- ☐ Centrifugally Cast Resin Pipe conforming to ASTM D2997
- ☐ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
- ☐ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
- ☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
- ☐ FEP Fluorocarbon Tubing conforming to ASTM D3296



Exhibit 1 Application



Exhibit 1 Application



Derrick's Well Drilling and Pump Services, LLC.

P.O. Box 2187 Kea'au, HI 96749

16-150 Wiliama Place Kea'au, HI 96749

Office: (808) 982-7627 • Fax: (808) 982-7698 • Cell: 557-5309 • Email: moreira_ds@yahoo.com

Derrick's Well Drilling & Pump Services, LLC
P.O. Box 2187
Kea'au, HI 96749

To: Commission on Water Resource Management:

This letter is to inform you that I Ryan Emmons, Officer of Ke'alo'ha'lani LLC

(landowner) give permission to Derrick's Well Drilling & Pump Services, LLC, to perform work as stated in the accompanied Well Construction and Pump Installation application on the noted TMK.

TMK: (3) 1-6-141:024

Respectfully,

Landowner

2/22/2022

Date



Derrick's Well Drilling & Pump Services, LLC a BBB Accredited Business

Exhibit 1 Application



Exhibit 1 Application

FINAL
CULTURAL IMPACT ASSESSMENT
TMK: (3) 1-6-141: 024



KEA'AU AHUPUA'A, PUNA DISTRICT
ISLAND OF HAWAI'I

KULAIWI ARCHAEOLOGY, LLC
Archaeological, Cultural, and Historical Resource Management Services
P.O. Box 1213, Captain Cook, HI 96704
Phone: 808-493-8884

FINAL
CULTURAL IMPACT ASSESSMENT
TMK: (3)1-6-141:024
KEA'AU AHUPUA'A
PUNA DISTRICT
ISLAND OF HAWAI'I

Prepared by:

Solomon H. Kailihiwa, III, M.S.

Juliana Kailihiwa, B.A.

And

Dave Henry, B.S.

Prepared for:

Waiakea Hawaiian Volcanic Water
5800 Hannum Avenue A 135
Culver City, CA 90230

August 2023

KULAIWI ARCHAEOLOGY. LLC
Archaeological, Cultural, and Historical Resource Management Services
P.O. Box 1213, Captain Cook, HI 96704
Phone: 808-493-8884

SUMMARY

At the request of Waiakea Hawaiian Volcanic Water, Kulaiwi Archaeology, LLC conducted a cultural impact assessment (CIA) of the 2.41-acre parcel TMK (3): 1-6-141: 024 located in Kea'au Ahupua'a, Puna District, Island of Hawai'i. The objective of this assessment is to identify any culturally significant resources or traditional cultural practices that occurred within the project area and its immediate vicinity. The assessment relies upon archival research focused on historical documents, previous archaeology studies, previous cultural impact assessment reports, and oral interviews. This assessment addresses potential cultural impacts that future development could have on any traditional cultural practices or resources following the framework set forth by the Hawai'i Supreme Court in the case of *Ka Pa'akai O Ka 'Aina vs. the Hawai'i State Land Use Commission (LUC)*.

The proposed use of the project area is to drill a commercial well that will be integrated into a proposed beverage bottling plant to produce waters, coffees, and teas.

Previous ethnographic research conducted by Kumu Pono Associates LLC (Maly 1999) identified traditional cultural resources along the coast of Kea'au. These included Kea'au Fishpond, offshore fishing grounds, the Shipman Cemetery, sweet potato cultivating fields, petroglyphs, and *pūnāwai* (freshwater springs).

According to the Water Resource Protection Plan (WRPP)(2019) the sustainable yield of the Kea'au aquifer is 395 million gallons per day (mgd) and, along with the Hilo aquifer, it is part of the Northeast Mauna Loa Aquifer Sector Area which has a total sustainable yield of 744 mgd. The projected maximum extraction for the proposed well is ca. 480,000 gallons per day. Projected water demands for the Northeast Mauna Loa Aquifer Sector Area calculated by the *County of Hawaii Water Use and Development Plan* (CHWUDP)(Fukunaga & Associates Inc. 2010) will be 119 – 203 mgd for the entire aquifer sector area, approximately one third of its sustainable yield. According to the available data from the WRPP and CHWUDP, the proposed well would not be a significant addition to the projected demands placed on the Northeast Mauna Loa Aquifer Sector Area and, based on current data, would have no effect on the shoreline resources of Kea'au.

The landscape of the project area has been transformed by sugarcane cultivation and cattle ranching leaving no evidence of customary and traditional cultural properties or practices within the project area.

Cover photo: Overview of location for proposed water well, view to the northeast.

CONTENTS

SUMMARY.....	i
INTRODUCTION	1
Scope of Work.....	1
Project Area Description	1
Methods.....	5
BACKGROUND	6
Historical Documentary Research	6
FINDINGS	10
Previous Ethnographic Research	10
Land Use	11
Water Use and Development Plan	12
CONCLUSION	14
Discussion	14
REFERENCES	15
APPENDIX A – <i>Ka Wai Ola</i> Public Notice	17

Figures

Figure 1. Portion of Hilo 2017 USGS 7.5' quadrangle showing project area.	2
Figure 2. Tax Map Key 1-6-141 showing project area.	3
Figure 3. Proposed facility showing future water well head location.	4
Figure 4. Current status of vegetation and land usage within project area, view to the southwest.....	5
Figure 5. Royal Patent 7223 (Cahill 1996:166).	7
Figure 6. Sugar ventures after 1876: (Dorrance 2000:82).	8
Figure 7. Portion of 1961 aerial photograph showing project parcel within the original extents of TMK: (3) 1-6-141: 001 (source USGS 1962).	11
Figure 8. Hawai'i Island aquifers and calculated sustainable yields (WRPP 2019: F-109).	13

INTRODUCTION

At the request of Waiakea Hawaiian Volcanic Water, Kulaiwi Archaeology LLC conducted a cultural impact assessment (CIA) of TMK: (3) 1-6-141: 024, a 2.41-acre parcel located in Kea'au Ahupua'a, Puna District, Island of Hawai'i (**Figures 1 and 2**). The objective of this CIA is to identify and protect the traditional cultural practices exercised by Native Hawaiians within the project area. This CIA was conducted following the analytical framework outlined in Act 50 of Ka Pa'akai O Ka 'Aina vs. Land Use Commission (LUC, Supreme Court, State of Hawai'i 2000). This CIA attempted to make specific findings concerning:

- The identity and scope of "valued cultural, historical and natural resources" in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;
- The extent to which those resources, as well as traditional and customary native Hawaiian rights, will be affected or impaired by the proposed action; and
- The feasible action, if any, to be taken by the agency to reasonably protect native Hawaiian rights, if they are found to exist.

The project proponent, Waiakea Hawaiian Volcanic Water, proposes to drill a commercial water well within the previously graded portion of the parcel (**Figure 3**) that will be integrated into a new proposed beverage bottling plant to produce waters, coffees, and teas. The CIA was conducted during March and April, 2023. Described in this report are the project scope of work, methodology, background information, findings and any potential impacts to traditional cultural practices.

Scope of Work

In order to satisfy Act 50 of Ka Pa'akai O Ka 'Aina vs. Land Use Commission the following specific tasks were determined to constitute an appropriate scope of work for the project:

1. Conduct background review and research of existing ethnographic, historical, anthropological, sociological documentary literature relating to traditional cultural practices and resources in the project area and its immediate vicinity.
2. Identify and consult with individuals and organizations to identify knowledgeable individuals with expertise concerning the types of cultural resources, practices, and beliefs found in the vicinity of the project area
3. Conduct ethnographic/oral historical interviews with knowledgeable individuals; and
4. Prepare and submit a CIA Report

Project Area Description

The project area is a flag lot 2.410-acre parcel located in Kea'au Ahupua'a at elevations that range from ca. 235 to 265 ft above mean sea level. The parcel is bounded by partially developed lots to the north, east, and west, and by former sugarcane fields to the south. The soil throughout the project area is comprised of Panaewa very rocky silt clay loam which consists of shallow, moderately drained soils that formed in material weathered from volcanic ash which overlies pahoehoe lava with slopes ranging from 2 to 10 percent (Sato et al., 1977: 45). This soil type is suitable for sugar cane cultivation.

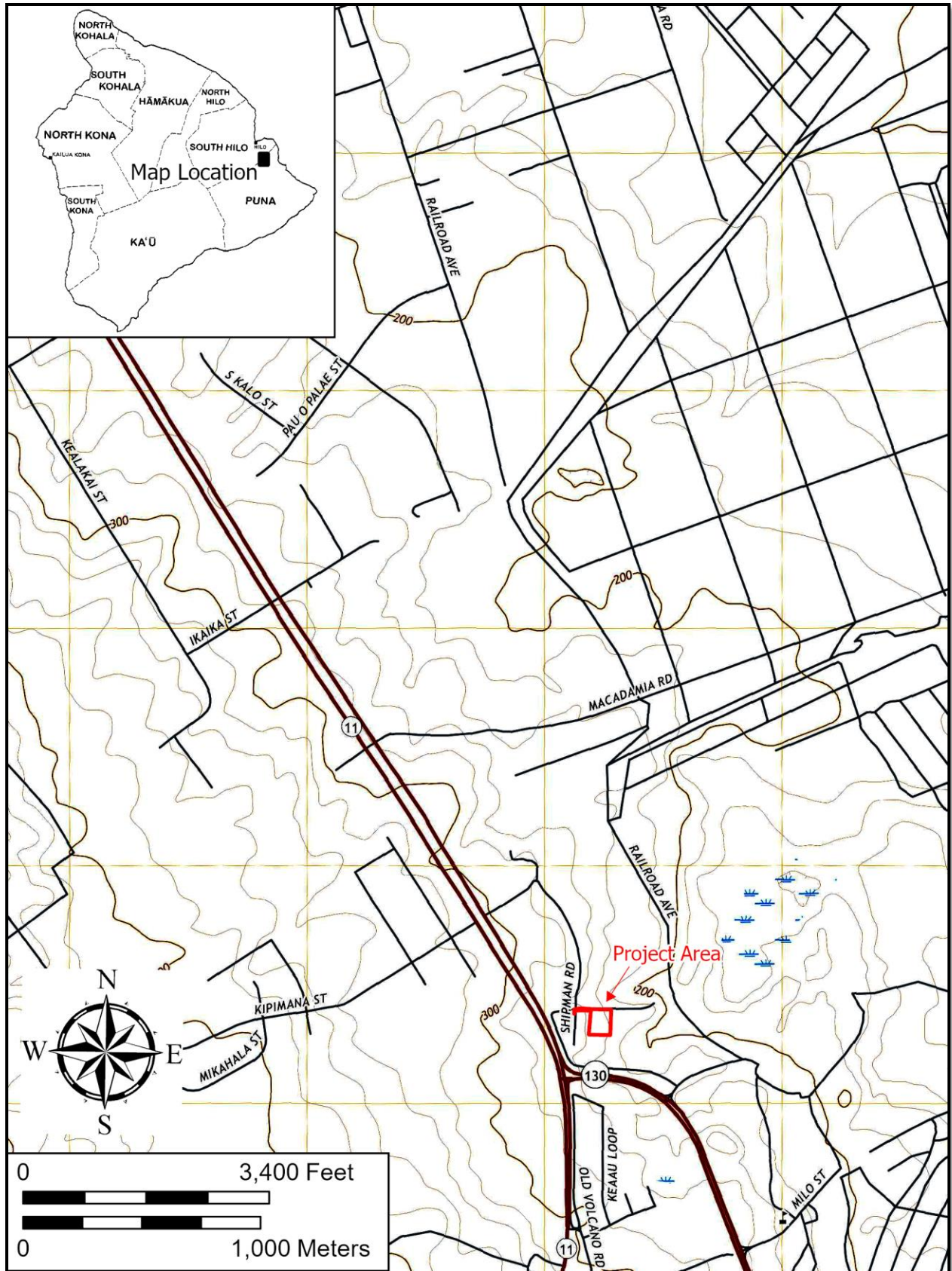


Figure 1. Portion of Hilo 2017 USGS 7.5' quadrangle showing project area.

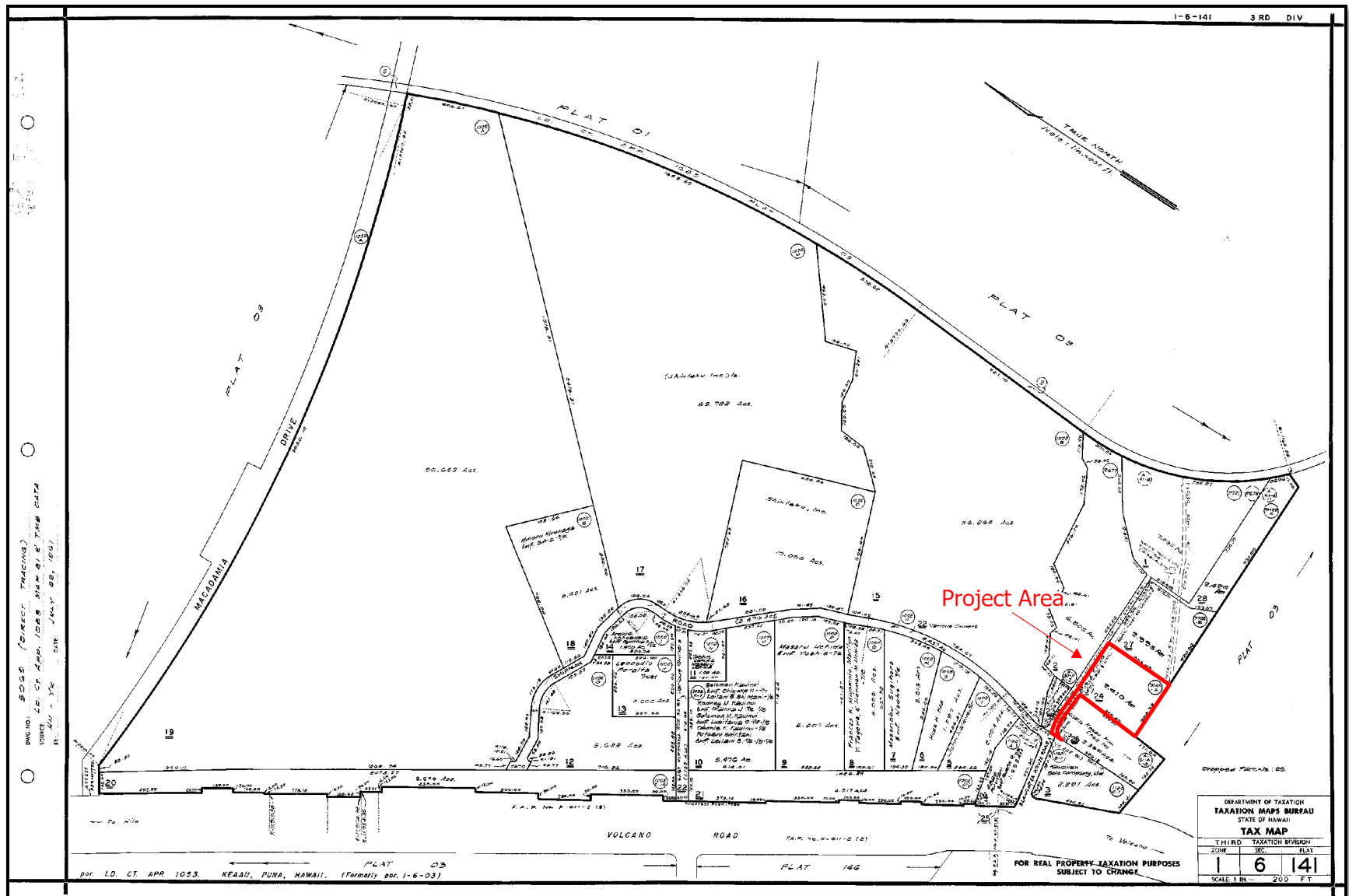


Figure 2. Tax Map Key 1-6-141 showing project area.

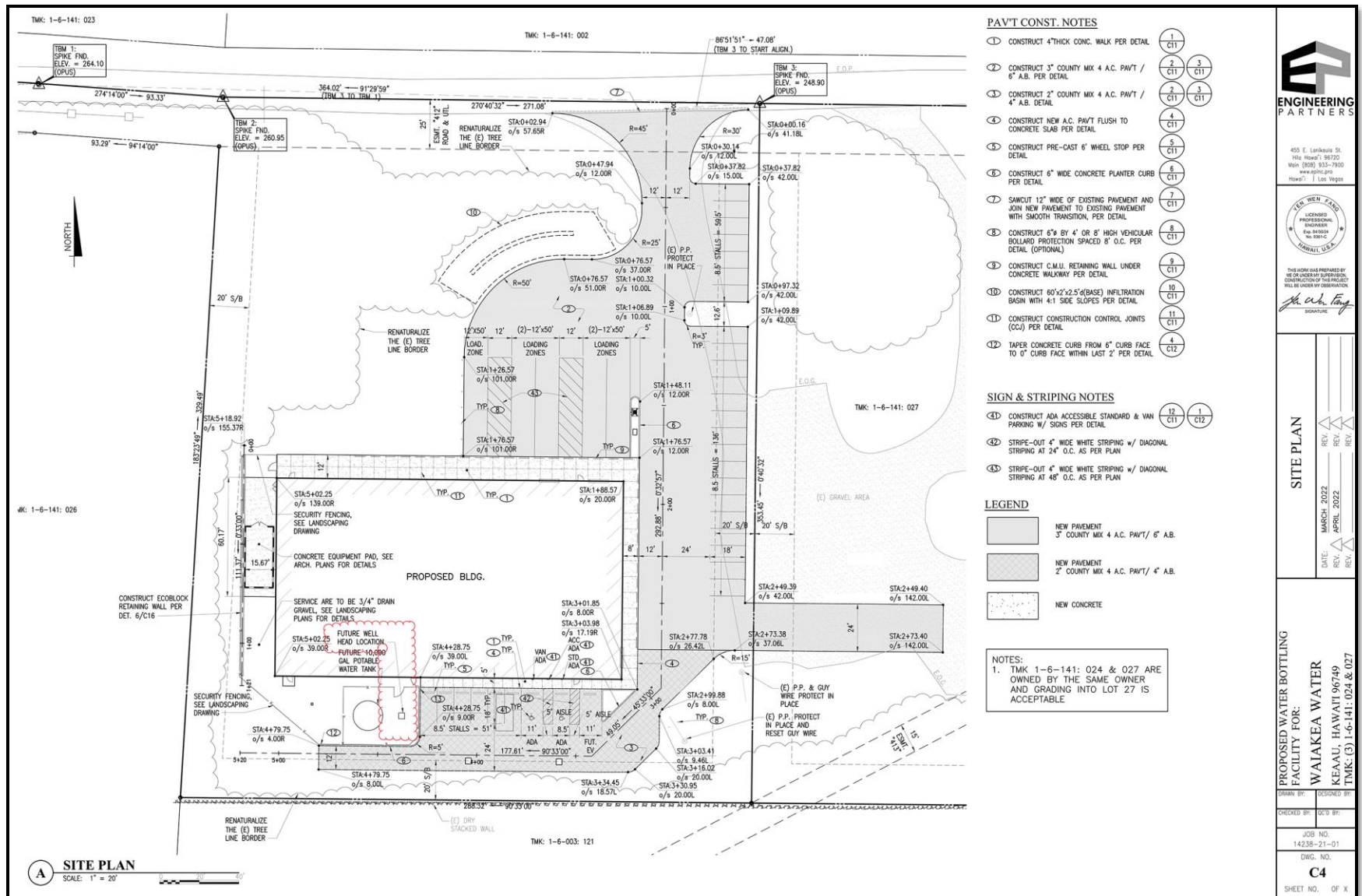


Figure 3. Proposed facility showing future water well head location.

An approximate 0.95-acre portion of the parcel is cleared of vegetated canopy and the ground surface is covered with short grass and angular cobbles and pebbles (see **Figure 4**). The southwestern portion of the parcel is currently being used as a staging area for trailers and construction materials. Vegetation noted within the parcel includes species related to landscaping, pastureland, and invasive secondary growth. The vegetation related to landscaping includes, monkeypod (*Samanea saman*), banyan (*Ficus* sp.), African tulip tree (*Spathodea campanulata*) and various ornamental palms. The vegetation related to pastureland and invasive secondary growth includes, guinea grass (*Panicum maximum*), sleeping grass (*Mimosa pudica*), bamboo orchid (*Arundina graminifolia*), macaranga (*Macaranga* sp.), and various grasses and weeds.



Figure 4. Current status of vegetation and land usage within project area, view to the southwest.

Methods

Archival research was conducted at the Hamilton Library Hawaii and Pacific Collection at the University of Hawaii-Manoa, the University of Hawaii-Hilo Hawaiian Collection, the Land Survey Office and the Archives Division of the Hawaii Department of Accounting and General Services, the Bishop Museum Archives, State Historic Preservation Division library, State Survey Division, and the Hawaii State Public Libraries in Honolulu and Hilo.

BACKGROUND

Historical Documentary Research

The project area is located within the *ahupuaʻa* of Keaʻau in the Puna District, a district nearly as large as the entire island of Oahu (Juvik and Juvik 1998:22). Puna was once comprised of six chiefdoms created by the son of ʻUmi-a-Liloa. According to Orr, the district, “lies between Hilo to the north and Kaʻu to the south; from Kapoho the most easterly point to the uplands that extend to the great central heights of Mauna Loa to the coastal shores of Keaʻau (2004:46).

The Puna District was traditionally referenced as “Puna *paiaʻala i ka hala*” or “Puna hedged with fragrant *hala*” (Handy and Handy 1978:200) and was considered an important place for the cultivation of *awa* (1978:192). According to Emerson (1915) as cited in Handy and Handy (1978):

Manuʻu-ke-eu was the name of a mythical *hala* tree that once grew in Puna. The seed was brought from Kahiki by Ka-moho-aliʻi when he came to Hawaii with Pele. They ate the blossom with salt and sugar cane, and then Ka-moho-aliʻi planted the seed. The tree thereafter was regarded as a *kupua* (nature spirit). (Handy and Handy 1978:199)

A number of traditional sayings or proverbs (*ʻōlelo noʻeau*) make specific mentions of Keaʻau. These *ʻōlelo noʻeau* were compiled by Pukui between 1910 and 1960 (Pukui 1983:vii), and are presented in Orr (2004: 37). A selection of these *ʻōlelo noʻeau* are presented below.

<i>ʻŌlelo noʻeau:</i>	<i>He iki hala au no Keaʻau, ʻaʻohe pohaku ʻalā e nahā ʻai.</i>
Translation:	I am a small <i>hala</i> fruit of Keaʻau, but there is no rock hard enough to smash me.
Meaning:	The boast of a Puna man--I am small, perhaps, but mighty (#624, p 71).
<i>ʻŌlelo noʻeau:</i>	<i>Ka ua kāhiko hala o Keaʻau.</i>
Translation:	The rain that adorns the pandanus trees of Keaʻau.
Meaning:	Refers to the pandanus grove of Keaʻau, Puna, Hawaii (#1560, p 168).
<i>ʻŌlelo noʻeau:</i>	<i>Mai ke kai kuwā e nū ana i ka ulu hala a Keaʻau a ka ʻāina kāʻili lā o lalo o ka Waikūʻauhoe.</i>
Translation:	From the noisy sea that moans to the <i>hala</i> groves of Keaʻau, to the land that snatches away the sun, below Waikūʻauhoe.
Meaning:	From Puna, Hawaiʻi, where the sun was said to rise, to Lehua, beyond Waikūʻauhoe, where it vanishes out of sight (#2070, p 225).
<i>ʻŌlelo noʻeau:</i>	<i>Ka makani hali ʻala o Puna.</i>
Translation:	The fragrance-bearing wind of Puna.
Meaning:	Puna, Hawaiʻi, was famed for the fragrance of <i>maile</i> , <i>lehua</i> , and <i>hala</i> . It was said that when the wind blew from the land, fishermen at sea could smell the fragrance of these leaves and flowers (#1458, p 158).

<i>‘Ōlelo no‘eau:</i>	<i>Ka ua moaniani lehua o Puna.</i>
Translation:	The rain that brings the fragrance of the <i>lehua</i> of Puna.
Meaning:	Puna is known as the land of fragrance (#1587, p 172).

The missionary, William Ellis (1963) described a visit to the Puna District. He describes Kea‘au (or Kaau) as “the last village in the division of Puna. It was extensive and populous, abounding with well cultivated plantations of taro, sweet potatoes, and sugar cane, and probably owes its fertility to a fine, rapid stream, which, descending from the mountains, runs through it into the sea” (Ellis 1963: 60).

During the Great Mahele, the *ahupua‘a* of Kea‘au was claimed by Charles Kanaina, on behalf of his son William C. Lunalilo. Lunalilo was also the grand nephew of Kamehameha I and he would eventually become King, though only reigning for one year (Orr 2004:48). This claim was awarded as LCA 8559B and Royal Patent 7223 (Figure 5).

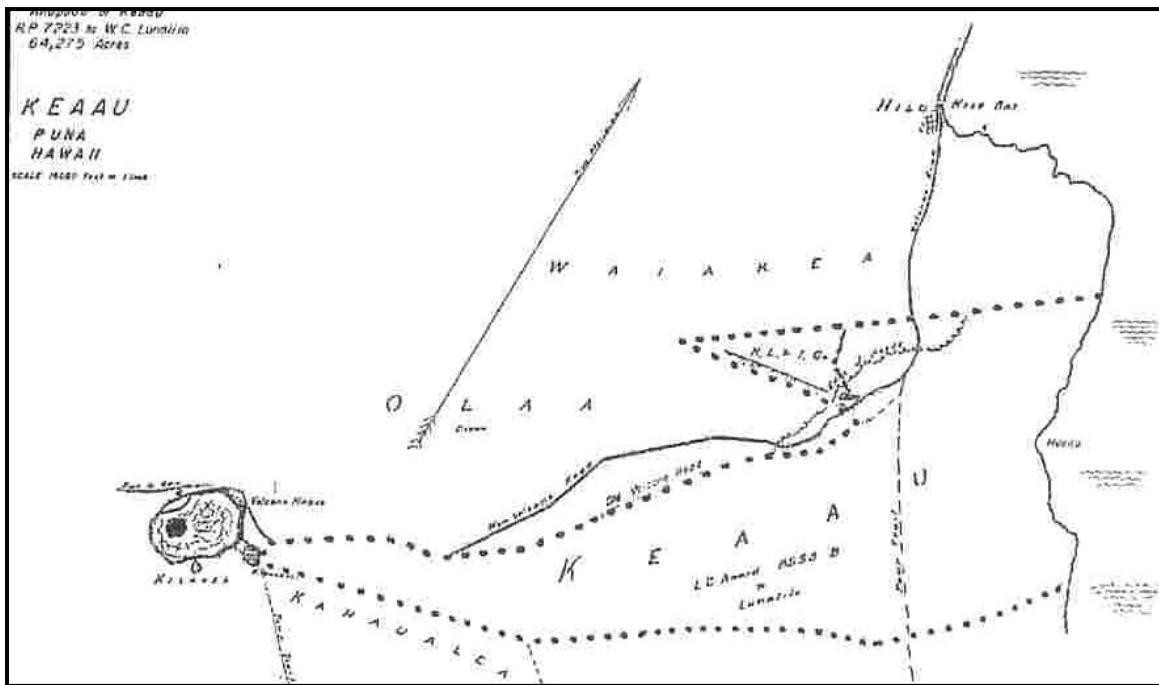


Figure 5. Royal Patent 7223 (Cahill 1996:166).

A *kuleana* claim was made by Hewahewa for a 13.64-acre parcel in Kea‘au (LCA 8081, Royal Patent 4360). The claim indicated that the land was unfenced with no house and coffee was being cultivated within it. (Hurst and Schilz 1994). This parcel was reported sold to the Roman Catholic Church in 1865 (Masterson and Hammatt 1998). According to Orr (2004: 48), the parcel was situated in the *ili* of Halauloa and was bordered by:

On the west by the konohiki
On the north by Keawemakalio’s land
On the east by the konohiki and
By Meaula’s land on the south.

Sugarcane was a Polynesian introduction and had a variety of traditional uses in precontact Hawai‘i. It was used for medicine, as a snack, condiment, famine food, and even thatching with *pili* grass or *hala* were not abundant

(Handy and Handy 1978, Malo 1987). Cook wrote about seeing sugar plantations in Hawai'i when he arrived in 1778.

The first sugar plantation was established in the Hawaiian Islands on Kauai in 1836 (Kent 1983:22, 23, 29). According to Orr (2004:21), the Chinese on Lanai are credited with first producing sugar as early as 1802. The commercial cultivation of sugarcane occurred in 1835 to replace the declining sandalwood industry (Kuykendall and Day 1976:92).

In the 1860's Kea'au Ahupua'a was mortgaged to Honolulu Banker Charles Bishop by the guardians of the Lunalilo estate (Hurst and Schilz 1994). In 1872, more than 60,000 acres of Kea'au were leased for ten years by O.B. Spencer. This lease was subsequently reassigned to Rufus Lyman in 1874. In 1882, the *ahupua'a* of Kea'au was sold by the estate of King Lunalilo to William H. Shipman, J. Eldarts and S. Damon. Two years later, William Shipman had bought out his partners and became the sole owner of the Lands of Kea'au. He constructed a house at Haena Beach in 1904 and expanded his family's ranching operations on his newly acquired land (WHSL 2000).

Though sugar plantations were established in the Hilo and Kohala Districts by the 1860s, it wasn't until 1899 that a plantation was established in Puna. This consisted of the Puna Sugar Company (**Figure 6 - #50**) founded by Benjamin Dillingham, Lorrin Thurston and James Castle (Dorrance 2000:105-107). A year later they founded the Ōla'a [Kea'au] Sugar Company (#49) on land owned by the Shipman family .

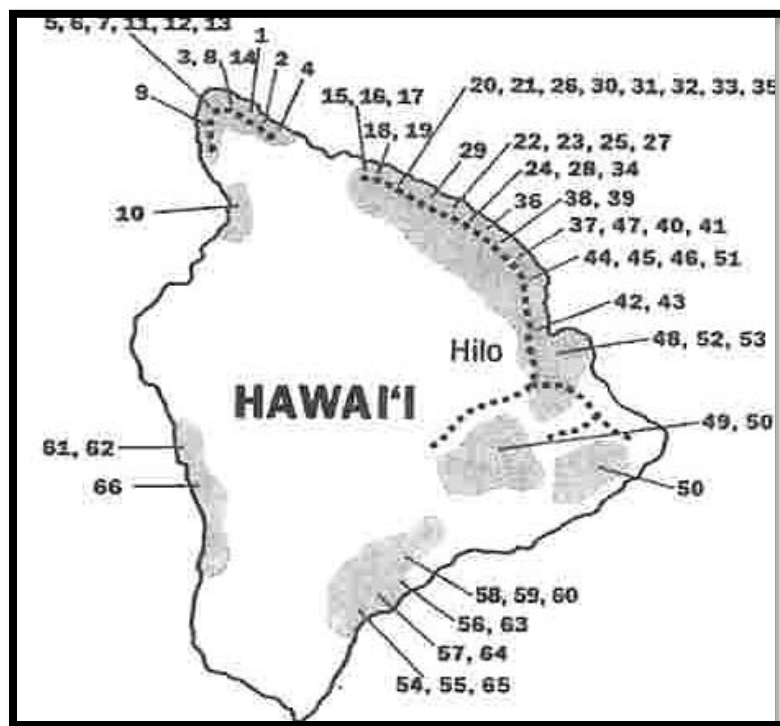


Figure 6. Sugar ventures after 1876: (Dorrance 2000:82).

The following is an excerpt from *Sugar Waters* by Dorrance (2000):

The rocky, acidic Puna District south of Hilo had a much smaller number of plantations. In the 1890s the land was peppered with small homesteads, some devoted to coffee growing. After Hawai'i was annexed to the United States [1898], Benjamin Dillingham saw a sugar-growing opportunity in Puna. Along with investors that included Lorrin Thurston and James Castle, he incorporated Ōla'a Sugar Company to exploit the land. At the time Dillingham was building the Hilo Railroad Company and considered the new plantation a source of revenue for the railroad.

By 1905 Ōla'a Sugar Company had a modern mill, and 7, 676 acres under cultivation serviced by the only gauge plantation railway in Hawai'i.

Production increased when Ōla'a Sugar Company began milling Puna Sugar Company's harvest in and around Kapoho. But Ōla'a Sugar Company waxed and waned during the first 20 years of its life, paying dividends only twice in all that time. The land was rocky, sticky, acidic, and difficult to clear and cultivate. Not every acre received adequate rainfall, growth was stunted, and irrigation water was lacking. An infestation of leaf hoppers in 1916-1917 ruined 10,000 tons of sugar from the 1918 crop. In later years mechanical harvesting was limited because field equipment rusted and eroded too rapidly under the difficult conditions.

In the 1930s, cultivated acreage stabilized at slightly over 15,000 acres. The fields extended up to 23 miles from the mill. Harvests were delivered via the Glenwood branch of Hawaiian Consolidated Railway, which ran from Ōla'a toward Kilauea Volcano, and stopped seven miles short of it at the village of Glenwood. Harvests from the Pahoia region were delivered by the Kapoho branch of tracks that extended 17 miles southwest of the mill. Flumes and the plantation's railroad took care of about half of each harvest, while the Hawaiian Consolidated Railway hauled the rest, and also transported product to the Hilo docks.

In 1935 the plantation housed 5,648 workers and dependents in 1,086 company-supplied houses distributed among over 15 camps or villages. In addition, some 230 homesteaders lived and grew cane on family plots. Maximum production of the combined Ōla'a and Puna/Kapoho enterprises was 52,011 tons of sugar in 1937.

The tsunami of 1946 struck a serious blow when it caused the Hilo railroad to shut down. Then the 1955 volcanic eruption covered thousands of acres in the Kapoho Division and isolated it. Despite all, the plantation company, renamed Puna Sugar Company in 1960 at the urging of landowner Herbert Shipman (1892-1976), struggled on.

By 1982, the Ōla'a mill generated over 40 million kilowatt hours of electric power that was sold to Hawai'i Electric Light Company. The end of sugar operations came when its owners, Amfac, Inc. closed the Puna Sugar Company in the same year. But the mill's generating capability was perpetuated and increased. Oil was burned in the furnaces instead of the former mixture of bagasse and oil, and fulfilled a dire need for electrical energy.

Shops in nearby Kea'au (Ōla'a) served the mill camps and homesteaders who supplied harvests to the Ōla'a mill. When it shut down in 1982, many small businesses were devastated. Highway 11 leading to Kilauea Volcano bypassed the town and further accentuated the demise of its prosperity. (Dorrance 2000:105-107)

Maly (1999) cites additional changes that occurred in Kea'au in the 1890s:

By the 1890s, most of the coastal portion of Kea'au had been abandoned. The few remaining native families of coastal Kea'au worked for and moved into housing provided by W.H. Shipman, or moved further inland. In the 1890s, the Government was also opening up large tracts of Homestead lands throughout Puna, which were sold for residential and agricultural use. Because the rich agricultural parcels were generally situated three or more miles inland, above the 400 foot elevation Homestead lands could be better accessed, and their produce better transported by a new and more direct inland route between Puna and Hilo. As a result, the basic alignment of the Kea'au-Pahoia Highway (now Highway 130) was established and construction underway in 1895. Maly 1999:6)

Beginning in the 1930's and continuing through the 1960's the Hawaiian sugar industry noted a decline in business, due in large part to competing overseas markets (Kent 1983:107-108). Mechanization associated with the industry occurred between the 1950s to 1970s which resulted in the decline of plantation camp lifestyles. Due to increasing unfavorable sugar markets and high costs, by the 1990s the majority of the sugar plantations closed their operations.

FINDINGS

An attempt was made during the current study to identify persons knowledgeable of cultural-historical properties in Kea'au and more specifically within the vicinity of the project area. A public notice was published in the March 2023, issue of *Ka Wai Ola* requesting that knowledgeable individuals contact the author with any information that they felt comfortable sharing (Appendix A). There was no response to the public notice.

The Hawai'i Island Burials Sites Specialists of the Department of Land and Natural Resources – State Historic Preservation Division History and Culture Branch were contacted in an effort to identify any descendants of Kea'au. They were unable to identify anyone in their records that were knowledgeable of Kea'au.

Previous Ethnographic Research

Kepā Maly (1999) conducted oral history interviews to identify cultural-historical resources within Kea'au along the historic Puna Trail. The interviews had a “talk-story” structure where there are no formal questions and answers, but an organic dialogue about general topics that allows the consultant to convey their information in their own way in their own terms.

The discussions recorded in the oral histories covered a wide range of topics across Kea'au and were not limited in scope to the trail. Maly interviewed four individuals that were knowledgeable about Kea'au: John Ka'iewe, Jr., Kea'au resident born in 1929, Roy Shipman Blackshear, grandson of William H. and Mary Shipman born in 1923, Albert K. Haa, Sr., raised in Kea'au born in 1930, and Albert K. Haa, Jr, raised in Kea'au born in 1953.

The interviewees identified culturally important places and sites along the coast of Kea'au. They identified the Kea'au Fishpond, *kū'ula* (fish god stones), the famous stone Hōpoe (swept out to sea by the 1946 tsunami), the Shipman cemetery along with other possible burial sites, sweet potato cultivating field, petroglyphs, the *māwae* (crevice or crack) where Kamehameha I was attacked (Maly 1999). The residents of Kea'au utilized *pūnāwai* (freshwater springs) near the shoreline and rain catchment for drinking water (ibid).

The marine resources were once plentiful along the coast of Kea'au. John Ka'iewe, Jr. and Albert Haa, Sr. recalled that there was an abundance of fish and other resources that included, *manini* (*Acanthurus triostegus*), *moi* (*Polydactylus sexfilis*), *'anae* (*Mugil cephalus*), *'a'ama* (*Grapsus grapsus tenuicrustatus*), *ōpihi* (*Cellana* spp.), *wana* (sea urchin), and *limu* (seaweed) when he was younger. Overharvesting and exploitation of the area had decimated the marine resources (ibid).

Roy Shipman Blackshear shared that his grandfather gave permission to the residents of Kea'au to harvest fish from the Kea'au Fishpond in exchange for work in maintaining the fishpond:

...I asked my grandfather, “When you first bought the property, were there very many Hawaiians living around here?” And he said, “Not very many.” So where the population of Hā'ena went, I don't know. But he said, “There weren't too many.” But he was telling me this fresh water pond out here, he said that after he bought the property, “The Hawaiians that were around here, asked him if they could fish in the pond.” I think that it had been restricted before.

...And he said, "Yes, you can fish in the pond." And he said, "For everyday that you fish in the pond, you give me one day of building stone walls around the edge of the pond." So that's how the walls were built. So that worked out pretty good...(Maly 1999: 135)

Albert Haa, Sr. also spoke about Kea'au Fishpond:

I swam in (the fishpond). Get *'anae* and *'o'opu*. (Herbert) Shipman used to take care of me when I would swim in here. I'd swim all day in there in that cold water. Then he'd send his cook down to dry me up (ibid: A-119).

Land Use

The current project area was formerly part of TMK: (3) 1-6-141: 001 which was described in County of Hawai'i records as a slaughterhouse site of 2.0-acres and 19.662-acres of pasture in 1962 (County of Hawai'i 1982). A 1961 aerial photograph of the project area vicinity shows the slaughterhouse and its pasturelands adjacent to the railroad and separate from the surrounding sugar fields of 'Ōla'a Sugar Company (**Figure 7**). The project parcel was formerly pastureland for cattle waiting to be processed in the slaughterhouse. As evident in Figure 7, the land surface of the project area was leveled to create the pastureland. No structures apart from the slaughterhouse complex were reported in the County of Hawai'i Planning Department tax records in 1962.

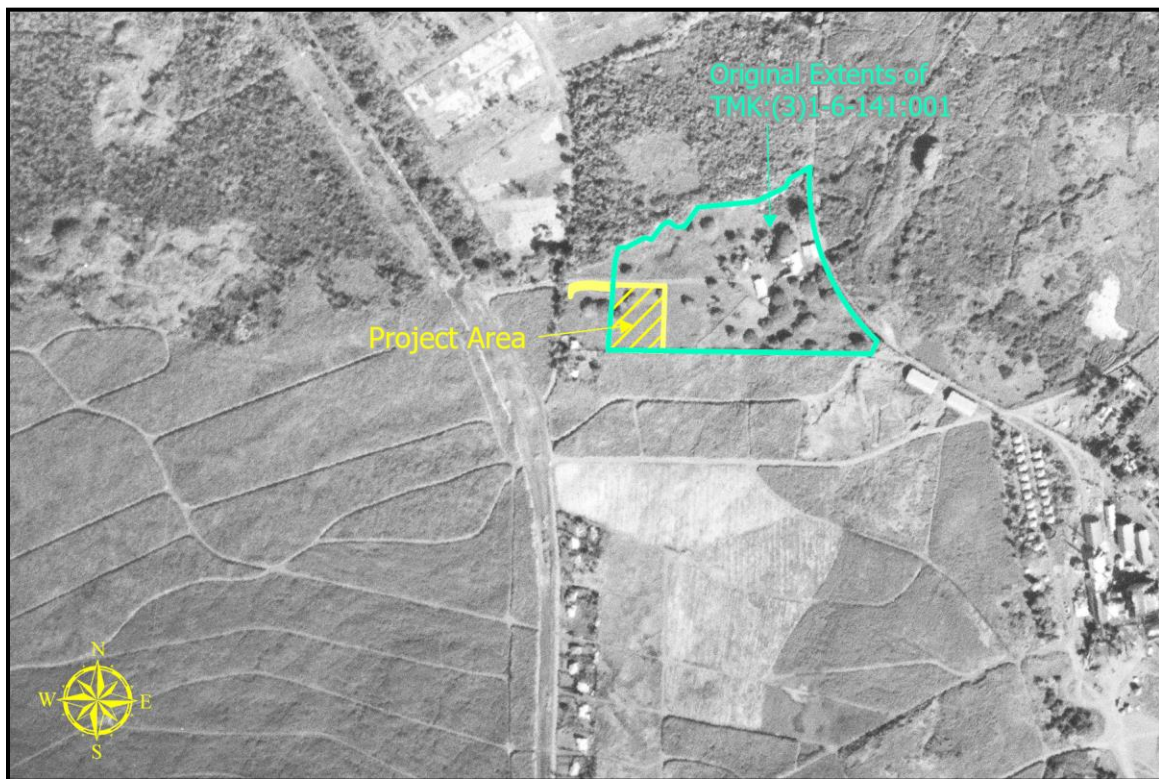


Figure 7. Portion of 1961 aerial photograph showing project parcel within the original extents of TMK: (3) 1-6-141: 001 (source USGS 1962).

Water Use and Development Plan

The County of Hawai'i Department of Water Supply (DWS) prepared the *County of Hawaii Water Use and Development Plan* (CHWUDP) in 1988 (updated in 2010) in compliance with the State Water Code (HRS 174C) which was passed by the Hawai'i State Legislature in 1987 (Fukunaga & Associates Inc. 2010). The purpose of the CHWUDP is to develop policies and strategies that define the allocation of water to land use which shall guide the County of Hawai'i in its development and management of water resources to meet present and future demands (ibid).

The current project area is located within the boundaries of the Kea'au Aquifer which, along with the Hilo Aquifer, is part of the Northeast Mauna Loa Aquifer Sector Area (**Figure 8**). This sector area includes the Urban Hilo area and has the highest current water usage in Hawai'i County. The high annual rainfall for this part of Hawai'i Island contributes to it having the island's highest sustainable yield. The sustainable yield adopted by the State of Hawai'i, Department of Land and Natural Resources - Commission of Water Resource Management (CWRM) for the Kea'au Aquifer is 395 million gallons per day (mgd). The County General Plan Land Use Pattern Allocation Guide (LUPAG) projects that the daily demands for the region developed to full urban density and using the "worst-case agricultural demands" will be 119 – 203 mgd for the entirety of the Northeast Mauna Loa Aquifer Sector Area (Fukunaga & Associates Inc. 2010) which has a calculated sustainable yield of 744 mgd (Hilo 349 mgd, Kea'au 395 mgd, WRPP 2019).

The estimated maximum extraction for the current project is ca. 176 million gallons per year (ca. 482,000 gallons per day). According to the information that is currently available in the CHWUDP and the CWRM's Water Resource Protection Plan (2019 Update) this activity would not be a significant addition to the projected demands placed on the Northeast Mauna Loa Aquifer Sector Area.

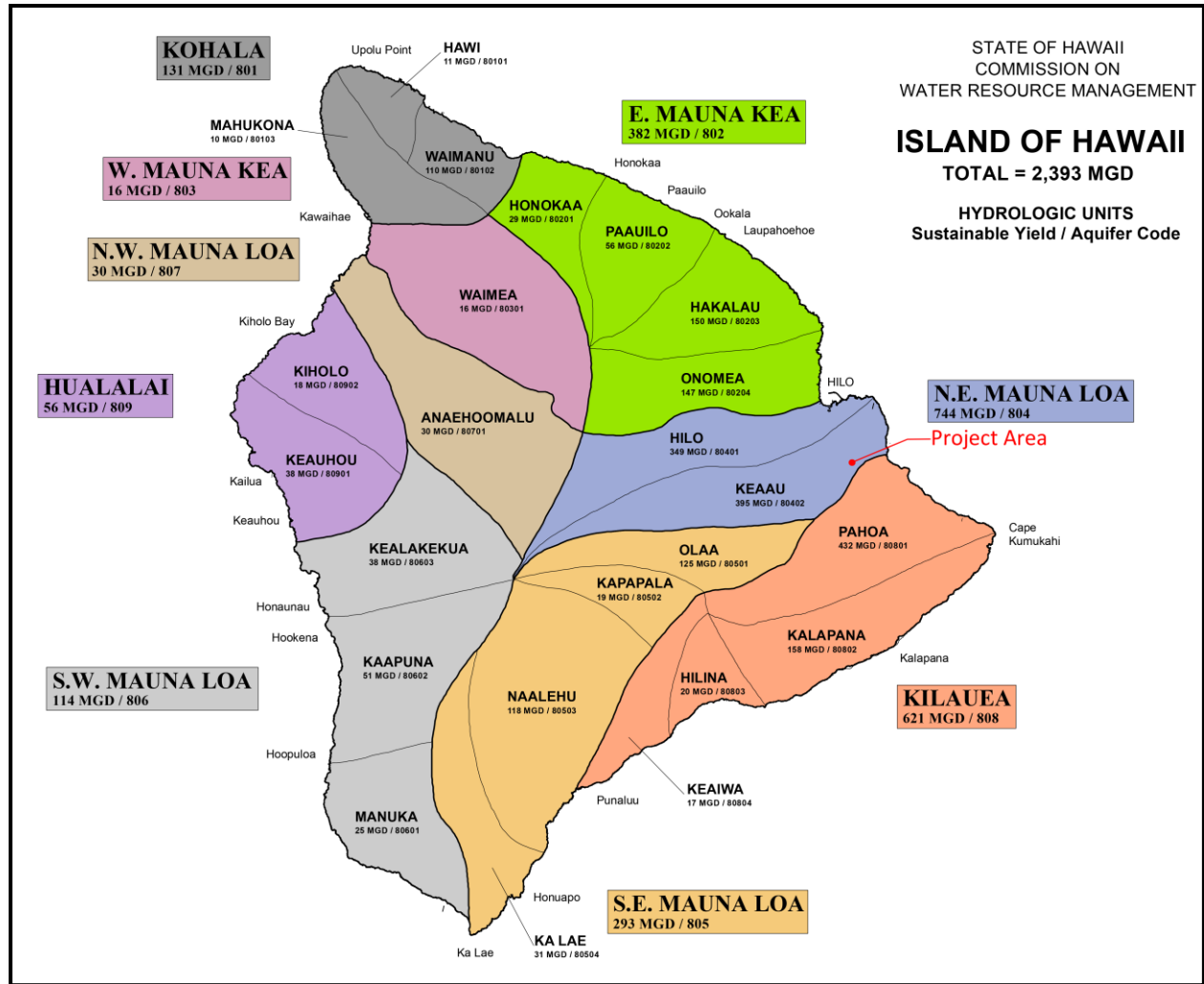


Figure 8. Hawai'i Island aquifers and calculated sustainable yields (WRPP 2019: F-109)

CONCLUSION

Discussion

The objective of this CIA is to identify any culturally significant resources or traditional cultural practices that occurred within the project area and its immediate vicinity. The CIA was conducted following the framework set forth by the Hawai'i Supreme Court in the case of *Ka Pa'akai O Ka 'Aina vs. the Hawai'i State Land Use Commission (LUC)*.

Waiakea Hawaiian Volcanic Water is proposing a new well in the project area that would be part of a new proposed beverage bottling facility to produce waters, coffees, and teas. The new proposed well and bottling facility will become their main production facility.

Previous ethnographic work conducted by Kepā Maly (1999) identified cultural resources along the coast of Kea'au. These resources included the Kea'au Fishpond, fishing grounds, the Shipman cemetery, sweet potato cultivating fields, petroglyphs, and *pūnāwai*. The marine resources that were harvested along the shoreline of Kea'au included fish such as *manini*, *moi*, and *'anae*, as well as *'ōpihi*, *wana*, *'a'ama*, and *limu*.

The proposed well will tap into the Kea'au aquifer which has a sustainable yield of 395 mgd. The projected maximum extraction for the proposed well is ca. 482,000 gallons per day or 0.12% of the daily sustainable yield of the Kea'au aquifer. The Northeast Mauna Loa Aquifer Sector Area includes the Kea'au aquifer and the Hilo aquifer and has a total sustainable yield of 744 mgd. According to the data that is currently available in the CHWUDP and the WRPP the extraction of water from the proposed well would not be a significant addition to the projected maximum water demands of the Northeast Mauna Loa Aquifer Sector and, based on the current data, would have no impact on the coastal resources of Kea'au.

The current examination of the project area indicates that mechanical activity has transformed the landscape. The project area was once part of pasturelands associated with a nearby slaughterhouse. The documentation of this land use is evident in aerial photographs from the 1950's and 1960's (see **Figure 7**) and County of Hawai'i Department of Taxation records.

Cattle ranching and industrial sugarcane have heavily impacted the landscape of the project area destroying any cultural sites or resources; therefore, there will be no adverse impact to any cultural resources within the project area. These agricultural activities would have historically restricted access to the parcel and no traditional and customary native Hawaiian practices were identified within the project area.

REFERENCES

- Cahill, Emmett
1996 *The Shipmans of East Hawai'i*. University of Hawai'i Press, Honolulu.
- County of Hawai'i
1987 Field Book Record TMK: (3)1-6-141:001.
<https://www.planning.hawaiicounty.gov/resources/field-books-records/-folder-1027/-npage-2>
- Dorrance, W.
2000 *Sugar Islands: The 165-Year Story of Sugar in Hawai'i*. Mutual Publishing, Honolulu.
- Ellis, W.
1963 *Journal of William Ellis: narrative of a tour of Hawaii, or Owhyhee*. Tuttle, Rutland
- Fukunaga & Associates, Inc.
2010 Hawaii County Water Use and Development Plan Update; Hawaii Water Plan, Final Report. Funded by the Department of Water Supply for the County of Hawaii.
- Handy, E. S. C., and E. G. Handy
1978 *Native Planters in Old Hawaii: Their Life, Lore, and Environment*. Bernice P. Bishop Museum Bulletin 233, Bishop Museum Press, Honolulu.
- Hurst, G. and A. Schilz
1994 "Archaeological Survey of the Kea'au Paho Road, Kea'au Town Section, Project No. 130B-01-92, Puna, Hawai'i (TMK 1-6-03). *Ogden*, Honolulu. For GK & Associates.
- Juvik, S. and Juvik, J.
1998 *Atlas of Hawaii* (Third Edition). University of Hawai'i Press, Honolulu.
- Kent, N.
1983 *Hawaii: Islands Under the Influence*. Monthly Review Press, New York.
- Kuykendall, R. and Day, A.
1976 *Hawaii: A History from Polynesian Kingdom to American State*. Prentice-Hall, Englewood.
- Maly, K.
1999 "The Historic Puna Trail-Old Government Road (Kea'au Section), Archival-Historical Documentary Research, Oral History and Consultation Study, and Limited Site Preservation Plan: Ahupua'a of Kea'au, Puna District, Island of Hawai'i." (TMK: 1-6-01) [On file at SHPD Library #H-1599]. *Kumu Pono Associates*. For Na Ala Hele Program Manager-Hawai'i Island.
- Masterson, I. And H. Hammatt
1998 Archaeological Inventory Survey for the Proposed Kea'au Elderly Housing Project, Kea'au, Puna District, Hawai'i Island (TMK: 1-6-143:por. 18 & 39). Cultural Surveys Hawaii report prepared for Hawaii Island Community Development Corporation.

Orr, M.

2004 Cultural Impact Study/Assessment, Kea'au By-Pass Road to Shower Drive Shoulder Land Conversion Project, Kea'au Ahupua'a, District of Puna, Island of Hawai'i., Hawaii. Prepared for Haun & Associates, Wilson Okamoto & Associates.

Pukui, M.

1983 *ʻŌlelo Noʻeau: Hawaiian Proverbs and Poetical Sayings*

Bernice P. Bishop Museum Special Publication No. 71. Bishop Museum Press, Honolulu.

Stokes, J.F. G.

1991 *Heiau of the Island of Hawai'i: A Historic Survey of native Hawaiian Temple Sites.* Bishop Museum Press, Honolulu

Townscape, Inc.

2019 Hawai'i Water Plan: Water Resource Protection Plan, 2019 Update. Prepared for the State of Hawai'i Commission on Water Resource Management.

USGS

1962 Aerial Photo Frame 1HAI00014007. <https://earthexplorer.usgs.gov>

WHSL - W. H. Shipman, Limited

2000 Shipman History. <http://www.whshipman.com/history.html>

Wolfe, E., and J. Morris

2001 Geological Map of the Island of Hawaii. U.S. Department of the Interior. U.S Geological Survey

APPENDIX A – *Ka Wai Ola* Public Notice



Ka Wai Ola
NEWS FOR THE LĀHUI
kawaiola.news

Malaki (March) 2023 | Vol. 40, No. 03

When Sacred Sites Become Tourist Attraction

**CULTURAL IMPACT
ASSESSMENT: PUNA,
HAWAII ISLAND**

Kulaiwi Archaeology, LLC is conducting a cultural impact assessment (CIA) for TMK: (3) 1-6-141:024, a 2.410-acre parcel located in Kea'au Ahupua'a, Puna District on the Island of Hawai'i. The landowner proposes to drill a commercial water well within the previously graded portion of the parcel. All persons having information on traditional cultural practices and places located within Kea'au Ahupua'a and the vicinity of the project parcel are hereby requested to contact Solomon Kailihiwa, skailihiwa@kulaiwiarchaeology.com, (808)493-8884, within thirty (30) days of this notice.

Hundreds of people c
Bay on Memorial Da
"Sand Bar" it has
by locals and tourist
(sacred place)
- Photo:

PAGES

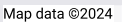
Well Check Program

3/23/21 - Revised for update to Well Standards (February 2004)

Data Input			
Date	3/9/2024		
Well Number	8-3802-016		
Well Name	Wai		
Ground Elevation (msl, feet)	247		
Cement Grout (feet)	184		
Grouting Method	other		
Hole Diameter (inches)	14		
Total Depth (feet)	262	262	okay
Water Level Elevation (feet msl)	6	Depth to water	241
Public Water Supply Well?	yes		
Solid Casing Material	stainless steel	not plastic	
Solid Casing Specification	ASTM A409		
Solid Casing Length (feet)	242		
Solid Casing Diameter (inches)	8		
Solid Casing Wall Thickness (inches)	0.322		
Open / Perforated / Screen Casing Length (feet)	20		
Open Hole Length (feet)	0		
Results			
Well Depth (1/4 thickness)			
Theoretical Thickness of Aquifer	246		
1/4 Aquifer Thickness	61.5		
Elevation of 1/4 thickness (msl)	-55.5		
<i>Elevation of total well depth</i>	-15	okay	Section 2.2
Well Depth (1/2 thickness)			
Theoretical Thickness of Aquifer	246		
1/2 Aquifer Thickness	123		
Elevation of 1/2 thickness (msl)	-117		
<i>Elevation of total well depth</i>	-15	okay	
Well Casing			
Minimum Wall Thickness			
Material	stainless steel		
Minimum Thickness per standards	0.28		
<i>Wall Thickness Provided</i>	0.322	okay	Section 2.4(b)
Minimum Length of Solid Casing			
90% of ground to top of aquifer	216.9		
<i>Length of solid casing Provided</i>	242	okay	Section 2.4(c)
<i>Casing Material</i>	ASTM A409	in compliance	Section 2.4(d)
<i>(for pvc only - check for 200' limit)</i>		okay	Section 2.4(d)
Annular Space			
Depth of Grouting			
Calculated Depth of Grouting	168.7		
<i>Depth of Grouting provided</i>	184	okay	Section 2.6(c)
Minimum Annular Space required	3		
<i>Thickness of Annular Space</i>	3	okay	Section 2.6(d)

1. Move the blue pin or right click on the map to select a center position.
2. Click on "Go" button to find a well within the specified radius from the center position.

20 wells found. [Download KML](#) | [Download Excel](#)



Sort By: Well Number

Exhibit 3 1-mile radius map

8-3802-015	80402 Keaau	Kai III	Ke'Aloha'Lani LLC	Cristine Kina (Waiakea Hawaiian Volcanic Water)	Ke'Aloha'Lani LLC	(3) 1-6-141:002	IRRLA	2021	0.039	5/31/2023
8-3803-001	80402 Keaau	Hawaii Natural Artesian Well Number 1	Hawaiian Water Holdings LLC	Brooks Oana (Hawaiian Water Holdings LLC)	Hawaiian Water Holdings LLC	(3) 1-6-148:037	DOMNCB	2017	0.000	1/31/2024

Exhibit 3 1-mile radius map

Komori, Queenie K

From: Miyahira, Michael M
Sent: Friday, April 22, 2022 2:48 PM
To: Komori, Queenie K
Cc: Corrigan, Joan
Subject: FW: Review for comments - 8-3802-016
Attachments: 8-3802-016.app.pdf; 8-3802-016.rev-doh.pdf

Aloha Queenie,

This is for a water bottling plant, which is not under our jurisdiction, so we will not be reviewing this application.

Michael Miyahira, P.E.
Engineering Section Supervisor
Hawaii Safe Drinking Water Branch
Uluakupu Building 4
2385 Waimano Home Road, Suite 110
Pearl City, HI 96782-1400
Ph: 586-4258

From: Hoagbin, Susan S <susan.s.hoagbin@hawaii.gov>
Sent: Friday, April 1, 2022 5:09 PM
To: Morikami, Lori <lori.morikami@doh.hawaii.gov>; DOH.SDWB <DOH.sdwb@doh.hawaii.gov>; Miyahira, Michael M <michael.miyahira@doh.hawaii.gov>
Cc: Komori, Queenie K <queenie.k.komori@hawaii.gov>
Subject: Review for comments - 8-3802-016

Aloha,

Please respond to this email request for comments to
queenie.k.komori@hawaii.gov

NOTE: In an effort to support the governor's initiative to go paperless, we will no longer be sending hard copies of correspondence to you. We will instead be sending you documents electronically via e-mail address that you provided.

Mahalo,

Groundwater Regulation Branch
Commission on Water Resource Management
State of Hawaii

Private Water Wells

WARNING! As the owner of a privately-owned well, you should **NOT** assume that water from your well is safe for consumption. It is your responsibility to make sure that your well water is safe to drink. The only way to do this is to have your well regularly tested for bacteriological and chemical contaminants.

There are no regulations controlling water quality in private wells serving individual residences as there are for public water systems (public or privately-owned utilities supplying water to 25 or more people or 15 service connections). In other words, there are no enforceable limits for contaminants and no requirements for regular testing. Private wells are often found in rural areas, where many activities such as onsite wastewater disposal can contaminate the ground water.

U.S. Environmental Protection Agency (EPA) Recommendations

The EPA recommends that private well owners test their well water each year for such contaminants as Total Coliform bacteria, Nitrates, as well as any other contaminants that may be of concern in your area. More frequent testing may be appropriate if you suspect a problem. EPA also suggests that you consider testing for pesticides, organic chemicals, and heavy metals before using it for the first time. Please refer to the EPA website on Private Drinking Water Wells at <http://www.epa.gov/privatewells>.

Other Contaminants

Water testing can be very expensive. It is important that you spend time to identify what other potential contaminants may be of concern. Please refer to the EPA website on Private Drinking Water Wells at <http://www.epa.gov/privatewells/key-steps-protect-your-well> for more information. Be aware of what and how you use and dispose of household and garden chemicals. Also determine the location of nearby septic tanks or cesspools, and agricultural or industrial activities in the area. General information on known chemical contamination of ground water in Hawaii can be found at the DOH website <http://health.hawaii.gov/sdwb/groundwater-contamination-viewer>.

Laboratories

Whenever possible, utilize a laboratory that is certified or approved for the specific drinking water tests and carefully follow their instructions for collecting, storing, and transporting the samples. Be sure to ask the lab to use EPA approved methods for drinking water analysis. A Directory of Drinking Water Laboratories Certified or Approved by the Hawaii Department of Health, State Laboratories Division can be found at <http://health.hawaii.gov/sdwb/files/2018/01/Labs2017Dec.pdf>. As lab certification status changes constantly, confirm their status when you contact the lab. Please note that the list is limited to currently regulated contaminants in public water systems.

Results

Once the lab provides you with the test results, you will be in a better position to determine if your well water is safe to drink or what contaminant you need to treat for. Generally, you should compare the results with Federal (www.epa.gov/safewater/mcl.html) and State (<http://health.hawaii.gov/sdwb/files/2014/07/MCL-Fct-2014-07-10.pdf>) Maximum Contaminant Level (MCL) drinking water standards. Where your test results are greater than the Federal or State maximum contaminant levels, your well water should be considered as **unsafe** for consumption.



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

April 1, 2022

TO: Elizabeth A. Char, M.D., Director
Department of Health
Attention: Sina Pruder, Chief, Wastewater Branch
Michael Miyahira, Acting Chief, Safe Drinking Water Branch

FROM: M. Kaleo Manuel, Deputy Director for
Suzanne D. Case, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
Wai Well (Well No. 8-3802-016) TMK: (3) 1-6-141:024
Well address: 16-331 Shipman Road

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. **Please respond by returning this cover memo form by April 14, 2022.** If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Queenie Komori of the Commission staff at 587-0251.

QK:ss
Attachment(s)

RESPONSE:

- ☐ This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and **must** receive Director of Health approval **prior** to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.
- ☐ This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner **should** test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required **prior** to implementation.
- ☐ If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.
- ☐ It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.
- ☒ For the applicant's information, a source of possible wastewater contamination **is** ☐ is **not** located near the proposed well site (information attached).
- ☐ An NPDES permit is required.
- ☒ Other relevant DOH rules/regulations, information, or recommendations are attached.
- ☐ In the event that the location of the well changes but is still within the parcel described **on this application, our division considers the comments to still be applicable, and we do not need to review the new location.**
- ☐ An injection well permit is required for the disposal of the effluent from this well.
- ☒ No comments/objections

Contact Person: Amy Cook, Engineer in Hilo 933-0930

Signed: Mark Tomomitsu, PD Supervisor 586-4294

Date: 4/4/2022

Exhibit 4 Agency comments

In Slaughterhouse Rd.

STATE OF HAWAII
DEPARTMENT OF HEALTH

4/13/81
SANITATION BRANCH
ENVIRONMENTAL PROTECTION AND HEALTH
SERVICES DIVISION

CESSPOOL SURVEY

ms. y.m. chee Harry Kim
Property Owner (Keanu Kemi Chee) Address Slaughterhouse Rd., Keanu
Tax Map Key 51-6-141-24 Lot No _____
Island Hawaii City _____ District Puna
Builder or Contractor K. Iwashita Intended For toilet + plant sewage
Primary ☒ Secondary _____ Other _____

Distance From Building 16' Boundary 19' Stream, Well, Body of Water, Etc _____
Diameter (Clear) Ft 6 Depth-Ft 10 1/2' Capacity (Gal.) 2221
No. Ft. Down to Water Table - Ground Slope level
Soil Profile (Starting from Surface) 12' boulders x gravel

Type of Wall or Curb mortared boulders Reinforced Concrete Cover ☒

Distance from Finished Ground to Top of Cover (Ft) /

Date Certificate Issued _____

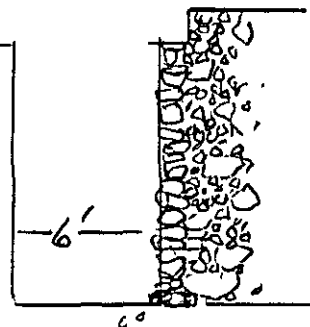
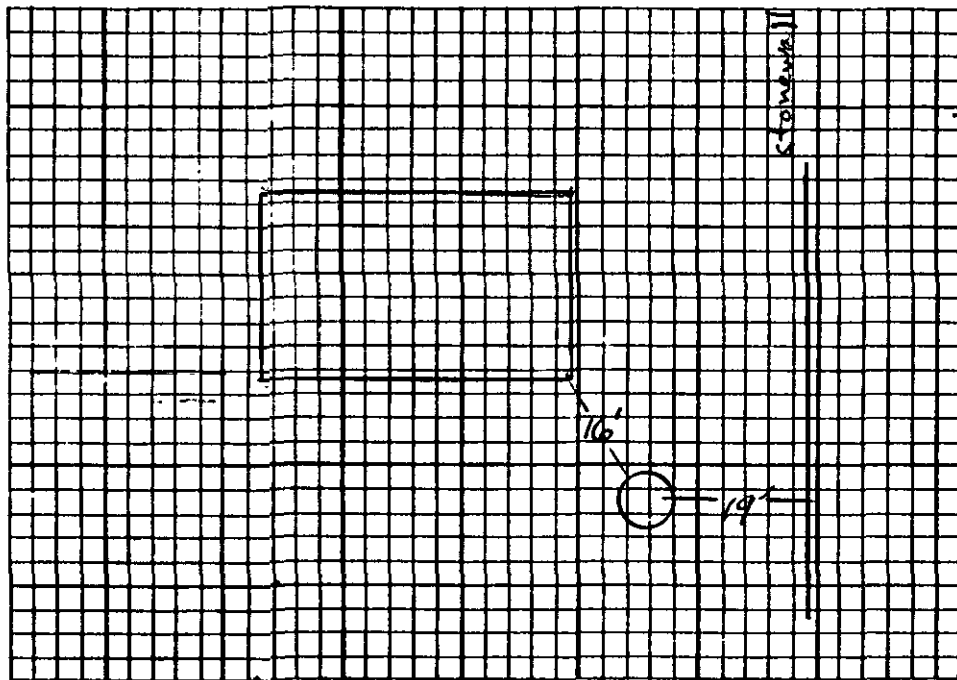
Date Approved 4/28, 1981 J. Iwasa
Sanitarian

Exhibit 4 Agency comments

SE
↑
DIRECTION

REMARKS

NE
←
DIRECTION





STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
EMD/CWB

05023PDCL.18

May 10, 2018

MEMORANDUM

SUBJECT: Clean Water Branch Standard Project Comments

TO: Agencies and Project Owners

FROM: ALEC WONG, P.E., CHIEF *Alec Wong*
Clean Water Branch

This memo is provided for your information and sharing. You are encouraged to share this memo with your project partners, team members, and appropriate personnel.

The Department of Health (DOH), Clean Water Branch (CWB) will no longer be responding directly to requests for comments on the following documents (Pre-consultation, Early Consultation, Preparation Notice, Draft, Final, Addendums, and/or Supplements):

- Environmental Impact Statements (EIS)
- Environmental Assessments (EA)
- Stream Channel Alteration Permits (SCAP)
- Stream Diversion Works Permits (SDWP)
- Well Construction/Pump Installation Permits
- Conservation District Use Applications (CDUA)
- Special Management Area Permits (SMAP)
- Shoreline Setback Areas (SSA)

For agencies or project owners requiring DOH-CWB comments for one or more of these documents, please utilize the DOH-CWB Standard Comments below regarding your project's responsibilities to maintain water quality and any necessary permitting. DOH-CWB Standard Comments are also available on the DOH-CWB website located at: <http://health.hawaii.gov/cwb/>.

Exhibit 4 Agency comments

DOH-CWB Standard Comments

The following information is for agencies and/or project owners who are seeking comments regarding environmental compliance for their projects with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program.

1. Any project and its potential impacts to State waters must meet the following criteria:
 - a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
 - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
 - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for point source water pollutant discharges into State surface waters (HAR, Chapter 11-55). Point source means any discernible, confined, and discrete conveyance from which pollutants are or may be discharged.

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for a NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee (\$1,000 for an individual NPDES permit or \$500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: <https://eha-cloud.doh.hawaii.gov/epermit/>. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

Some of the activities requiring NPDES permit coverage include, but, are not limited to:

a. Discharges of Storm Water

- i. For Construction Activities Disturbing One (1) or More Acres of Total Land Area.

By HAR Chapter 11-55, an NPDES permit is required before the start of the construction activities that result in the disturbance of one (1) or more acres of total land area, including clearing, grading, and excavation. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale.

- ii. For Industrial Activities for facilities with primary Standard Industrial Classification (SIC) Codes regulated in the Code of Federal Regulations (CFR) at 40 CFR 122.26(b)(14)(i) through (ix) and (xi). If a facility has more than one SIC code, the activity that generates the greatest revenue is the primary SIC code. If revenue information is unavailable, use the SIC code for the activity with the most employees. If employee information is also unavailable, use the SIC code for the activity with the greatest production.

- iii. From a small Municipal Separate Storm Sewer System (along with certain non-storm water discharges).

- b. Discharges to State surface waters from construction activity hydrotesting or dewatering
- c. Discharges to State surface waters from cooling water applications
- d. Discharges to State surface waters from the application of pesticides (including insecticides, herbicides, fungicides, rodenticides, and various other substances to control pest) to State waters
- e. Well-Drilling Activities

Any discharge to State surface waters of treated process wastewater effluent associated with well drilling activities is regulated by HAR Chapter 11-55. Discharges of treated process wastewater effluent (including well drilling slurries,

lubricating fluids wastewater, and well purge wastewater) to State surface waters requires NPDES permit coverage.

NPDES permit coverage is not required for well pump testing. For well pump testing, the discharger shall take all measures necessary to prevent the discharge of pollutants from entering State waters. Such measures shall include, if necessary, containment of initial discharge until the discharge is essentially free of pollutants. If the discharge is entering a stream or river bed, best management practices (BMPs) shall be implemented to prevent the discharge from disturbing the clarity of the receiving water. If the discharge is entering a storm drain, the discharger must obtain written permission from the owner of the storm drain prior to discharge. Furthermore, BMPs shall be implemented to prevent the discharge from collecting sediments and other pollutants prior to entering the storm drain.

3. A Section 401 Water Quality Certification (WQC) is required if your project/activity:
 - a. Requires a federal permit, license, certificate, approval, registration, or statutory exemption; and
 - b. May result in a discharge into State waters. The term "discharge" is defined in Clean Water Act, Subsections 502(16), 502(12), and 502(6).

Examples of "discharge" include, but are not limited to, allowing the following pollutants to enter State waters from the surface or in-water: solid waste, rock/sand/dirt, heat, sewage, construction debris, any underwater work, chemicals, fugitive dust/spray paint, agricultural wastes, biological materials, industrial wastes, concrete/sealant/epoxy, and washing/cleaning effluent.

Determine if your project/activity requires a federal permit, license, certificate, approval, registration, or statutory exemption by contacting the appropriate federal agencies (e.g. Department of the Army (DA), U.S. Army Corps of Engineers (COE), Pacific Ocean Division Honolulu District Office (POH) Tel: (808) 835-4303; U.S. Environmental Protection Agency, Region 9 Tel: (415) 947-8021; Federal Energy Regulatory Commission Tel: (866) 208-3372; U.S. Coast Guard Office of Bridge Programs Tel: (202) 372-1511). If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch regarding their permitting requirements.

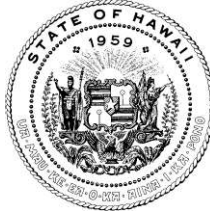
To request a Section 401 WQC, you must complete and submit the Section 401 WQC application. This application is available on the e-Permitting Portal website located at: <https://eha-cloud.doh.hawaii.gov/epermit/>.

Please see HAR, Chapter 11-54 for the State's Water Quality Standards and for more information on the Section 401 WQC. HAR, Chapter 11-54 is available on the CWB website at: <http://health.hawaii.gov/cwb/>.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation and up to two (2) years in jail.
5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:
 - a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.
 - b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g. minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.
 - c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.

- d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.
- e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

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

April 6, 2022

IN REPLY REFER TO:
Project No. 2022PR00446
Doc. No. 2204JG04

MEMORANDUM

TO: M. Kaleo Manuel, P.E., Deputy Director
State Commission on Water Resource Management
P.O. Box 621, Honolulu, Hawai'i 96809
c/o Queenie Komori, queenie.k.komori@hawaii.gov

FROM: Joshua Gastilo, Hawai'i Island Historic Preservation Archaeologist III

SUBJECT: Chapter 6E-42 Historic Preservation Review
Well Construction/Pump Installation Permit Application, Wai Well (Well No. 8-3802-016)
Kea'au, Puna District, Island of Hawai'i
TMK: (3) 1-6-141:024

RESPONSE:

☐ This is a ☐ public (county or state) project ☒ private project and ☐ will ☐ may affect historic properties.

☒ SHPD's determination is **no historic properties affected** for the work described under this permit
(no historic properties have been identified within or near the proposed project area)

Pursuant to HAR §13-284-7(e), when the SHPD agrees that the action will not affect any significant historic properties, this is the SHPD's written concurrence and historic preservation review ends. The historic preservation review process is ended. The permit issuance process may proceed.

Please attach to permit: In the unlikely event that subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sink holes are identified during the demolition and/or construction work, cease work in the immediate vicinity of the find, protect the find from additional disturbance, and contact the State Historic Preservation Division, at (808) 933-7651.

☐ SHPD requests additional information in order to determine whether historic properties will be affected.
Please submit the following information:

Contact Joshua Gastilo at (808) 933-7653 or at joshua.gastilo@hawaii.gov for any questions regarding this letter.

Signed: *Alan Downer*

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc. Marcus Bender, mb@kaivodka.com
Derrick Moreira, derrickswelldrilling07@gmail.com

Komori, Queenie K

From: Darrow, Jeff <Jeff.Darrow@hawaiicounty.gov>
Sent: Thursday, February 17, 2022 1:55 PM
To: Komori, Queenie K
Subject: [EXTERNAL] RE: TMK (3) 1-6-141:024 well application for water bottling plant
Attachments: SPP 842.pdf

Aloha Queenie,

This is not in the SMA so no SMA permit needed. They did get a Special permit for the bottling facility (attached).

Thanx,

Jeff

From: Komori, Queenie K <queenie.k.komori@hawaii.gov>
Sent: Thursday, February 17, 2022 1:25 PM
To: Darrow, Jeff <Jeff.Darrow@hawaiicounty.gov>
Subject: TMK (3) 1-6-141:024 well application for water bottling plant

Aloha Jeff,

Hope all is well with you. Happy New Year!
I have a pending well permit application for a water bottling plant.
The proposed well location is TMK is (3) 1-6-141:024.

Have the Hawaii Department of Planning review/approve this site for water bottling operation?

Mahalo,
Queenie Komori, P.E.
Dept. of Land & Natural Resources
Commission on Water Resource Management
1151 Punchbowl Street, Room 227
Honolulu, HI 96813
Cell (808) 636-8503

Exhibit 4 Agency comments

Komori, Queenie K

From: Beck, Lawrence <LBeck@hawaiidws.org>
Sent: Tuesday, April 26, 2022 8:58 AM
To: Komori, Queenie K
Cc: Quitoriano, Ryan; Inaba, Kurt
Subject: [EXTERNAL] Review for Comments - 8-3802-016

Aloha Queenie,

Hawaii County Department of Water Supply has reviewed the application for the Well Construction/Pump Installation Permit for Well 8-3802-16 on TMK 1-6-141:024. The location is approximately 3,000 feet from our two nearest wells, Olaa Well A and Olaa Well B, both of which are planned to be abandoned. Three future DWS wells in the general area are all more than two miles away from the location of the proposed site for Well 8-3802-16 on TMK 1-6-141:024. Therefore, Well 8-3802-16 should have no discernable impact on DWS pumping and does not present a concern for DWS.

Thank you.

Lawrence E. Beck, P.E.

Civil Engineer - Water Resources and Planning Branch
Department of Water Supply - County of Hawaii
345 Kekuanaoa Street, Suite 20 Hilo, HI 96720
Phone: 808-961-8070 X260 Fax: 808-961-8080
Email: lbeck@hawaiidws.org Web: www.hawaiidws.org

The Department of Water Supply is an Equal Opportunity Provider and Employer

All comments in this email are basic/non-binding information. All binding comments must be in writing and signed by the Manager-Chief Engineer.

Exhibit 4 Agency comments

WELL CONSTRUCTION PERMIT

Wai Well, Well No. 8-3802-016

Note: This permit shall be prominently displayed at the construction site until the work is completed

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Wai Well (Well No. 8-3802-016) at TMK (3) 1-6-141:024, Island of Hawaii, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules (HAR).
2. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.
3. The well construction permit shall be for construction and testing of the well only. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the HWCPIIS (the latest pump test worksheet can be obtained by contacting Commission staff or at <http://files.hawaii.gov/dlnr/cwrm/forms/APTR.pdf>). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson. No withdrawal of water shall be made for purposes other than testing without a Certificate of Pump Installation Completion. The permitted pump capacity described on the pump installation permit **may be reduced** in the event that the pump test does not support the capacity.
4. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson. If it can be shown that the well does not tap basal ground water then this condition may be waived after consultation with and acceptance by Commission staff. However, in no instance can the well be drilled deeper than one-half (1/2) of the theoretical thickness without Commission approval.
5. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.
6. In the event that historically significant remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and immediately contact the Department of Land and Natural Resources' State Historic Preservation Division. Work may recommence only after written concurrence by the State Historic Preservation Division.
7. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.
8. The Well Completion Report Part I shall be submitted to the Chairperson within thirty (30) days after completion of work (please contact staff or visit <http://files.hawaii.gov/dlnr/cwrm/forms/WCR1.pdf> for current form).
9. The permittee shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.
10. The well construction permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.
11. If the HWCPIIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.
12. Any variances from the HWCPIIS shall be approved by the Chairperson prior to invoking the variance.
13. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.
14. If the well is not to be used it must be properly capped. If the well is to be abandoned during the course of the project then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f), HAR, prior to any well sealing or plugging work.
15. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.
16. This permit shall apply to the location shown on the application only. If the well is to be relocated, the permittee shall apply for a new well construction/pump installation permit in accordance with §13-168-12(f), HAR.
17. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval:

Expiration Date: **Two (2) years from approval date**

Dawn N.S. Chang, Chairperson

Commission on Water Resource Management

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to \$5,000 per day starting from the permit date of approval.

Driller's Signature: _____ C-57 License #: C-28001 Date: _____

Printed Name: Derrick Moreira Firm or Title: Derrick's Well Drilling & Pump Services, LLC

Please sign both copies of this permit, return one copy to the Commission office, and retain the other for your records.

Attachment

PUMP INSTALLATION PERMIT
Wai Well, Well No. 8-3802-016

Note: This permit shall be prominently displayed at the site until the work is completed

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for Wai Well (Well No. 8-3802-016) at TMK (3) 1-6-141:024, Island of Hawaii, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules (HAR).
2. No withdrawal of water shall be made other than for testing until a Certificate of Pump Installation Completion has been issued by the Commission.
3. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.
4. The pump installation permit shall be for installation of a 450gpm rated capacity, or less, pump in the well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.
5. A water-level measurement access shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels.
6. The permittee shall install an approved meter or other appropriate means for measuring and reporting withdrawals and appropriate devices or means for measuring chlorides and temperature at the well head.
7. Well Completion Report Part II shall be submitted to the Chairperson within thirty (30) days after completion of work (please contact staff or visit <http://files.hawaii.gov/dlnr/cworm/forms/WCR2.pdf> for current form).
8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.
9. The pump installation permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.
10. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.
11. Any variances from the HWCPIS shall be approved by the Chairperson **prior** to invoking the variance.
12. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.
13. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.
14. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval:

Dawn N.S. Chang, Chairperson

Expiration Date: **Two (2) years from approval date**

Commission on Water Resource Management

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to \$5,000 per day starting from the permit date of approval.

Installer's Signature: _____ C-57, C-57a, or A License #: C-28001 Date: _____

Printed Name: Derrick Moreira

Derrick's Well Drilling & Pump Services,
Firm or Title: LLC

Please sign both copies of this permit, return one copy to the Commission office, and retain the other for your records.