



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

STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

May 17, 2022
Honolulu, Oahu

Paul Alston and Valley Well Drilling
APPLICATION FOR WELL CONSTRUCTION, PUMP INSTALLATION, REQUEST FOR VARIANCE
AND WATER USE PERMITS
Alston Well (Well No. 3-3409-026), TMK (1) 6-8-003:045, WUP No. 1108
New Agricultural Use for 0.025 mgd
Mokuleia Ground Water Management Area, Oahu

APPLICANT AND LANDOWNER (FOR
WATER USE PERMIT)

Paul Alston
[REDACTED]
[REDACTED]

CONTRACTOR (FOR WELL CONSTRUCTION
AND WATER USE PERMITS)

Valley Well Drilling
111 Hekili St., Ste. A PMB 2761
Kailua, HI 96734

SUMMARY OF REQUEST:

The applicant requests approval of a water use permit for an allocation of 0.025 million gallons per day (mgd) of fresh ground water from a proposed new well to supply 7.9 acres of various crop irrigation. The contractor, on behalf of the landowner, is requesting well and pump permits, as well as a variance from the standards to drill deeper than the standards allow.

LOCATION MAP: See Exhibit 1

BACKGROUND:

On March 22, 2021, Valley Well Drilling submitted completed water use, well construction and pump installation permit applications to the Commission on Water Resource Management (Commission). These applications are attached in Exhibit 2.

The public notice (Exhibit 3) for this application was published in the Star Advertiser on May 17 and 24, 2021.

No objections were received in response to the public notice.

ANALYSIS/ISSUES:

Section 174C-49(a) of the State Water Code establishes seven (7) criteria that must be met to obtain a water use permit. An analysis of the proposed permit in relation to these criteria follows:

(1) Water availability

Through the Hawaii Water Plan, the Commission has adopted 17 mgd as the sustainable yield for the Mokuleia Aquifer System Area. Individual existing water use permits in this aquifer system area are shown in Exhibit 4. A summary of the current ground water conditions in the aquifer is provided in Table 1:

Table 1. Mokuleia Aquifer System Area

<u>ITEM</u>	Mokuleia Aquifer System Area (mgd)
Sustainable Yield	17
Less: Other Existing Water Use Permits (shown in Exhibit 4)	7.792
Reservation to DHHL	0
Subtotal (Current Available Allocation)	9.208
Less: Other Completed Applications (shown in Exhibit 5)	0.454
Less: This Application	0.025
Subtotal (Potential Available Allocation/Allocation Deficit)	8.729

Therefore, there is adequate water available to accommodate the requested allocation.

(2) Reasonable-beneficial

Section 174C-3 HRS defines "reasonable-beneficial use" is

"...the use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and the public interest".

I. Purpose of Use

The applicant is requesting the use of fresh potable ground water for agricultural uses. The Declaration of Policy section, §174C-2(c) HRS, states that the Water Code shall be liberally interpreted to obtain maximum beneficial use of the waters of the State for various purposes including agricultural uses.

The Commission's policy is that in general, water shall be used for its highest and best use. The use of potable water for agriculture where potable quality is not necessary is not in accordance with this policy. However, a discussion of the alternatives below will address this concern.

II. Quantity Justification

The applicant is requesting a total of 0.025 mgd for agricultural uses (plumeria, mango, Bermuda grass and hula plants). Refer to Exhibit 6 for IWREDDSS calculations, and Exhibit 7 for total use request summary.

Staff uses the Irrigation Water Requirement Estimate Decision Support System (IWREDSS Version 2.1) model produced by the University of Hawaii College of Tropical Agriculture and Human Resources (CTAHR) as a "reasonable-beneficial estimate". IWREDSS incorporates data specific to the parcel in question, such as soil properties, synthesizes historical daily rainfall incidence and evapotranspiration averages, ambient temperature; and crop information including root depth and breadth, leaf parameters and typical water requirements; and the proposed method of irrigation, the source of the widest variation in irrigation requirements within IWREDSS. Despite the sensitivity of this model, it cannot necessarily account for the peculiarities of microclimate or for wind effects on irrigation and on evaporation; it also makes certain unspecified assumptions about commercial agriculture such as plant spacing and maturity of crop that may not apply to more intensive or more casual agriculturalists. As any given application can vary from assumed parameters and the acreage may not fall homogeneously within the area's climatic averages, some variation in outcome is expected. IWREDSS gives us a ballpark comparison.

In Exhibit 6, some differences are noted in the duties but the quantities are generally in alignment. Therefore, staff recommends that the Commission approve the requested total allocation.

III. Efficiency of Use

The applicant states that its operations are as water efficient as possible because the irrigation schedule will be based on the crop evapotranspiration (ET) and soil water content or soil water tension. Monitoring of the irrigation system will be visual and the applicant will compare the calculated amount of water to the flowmeter totalizer readings. Staff agrees that these are good measures to make the use as efficient as possible.

IV. Analysis of Practical Alternatives

The applicant addressed alternatives to their need for non-potable water.

Municipal sources The applicant stated that no municipal sources are available for agriculture in this area. Because hypothetically this alternative would trade one potable source (the applicant's proposed well) with another potable source (the BWS system), staff did not investigate this further. Therefore, staff agrees that a municipal source, if even available, would not be a practical alternative.

Wastewater reuse The applicant states that no sources are available in this area. Staff confirmed that there are no sources of reuse water available nearby. Therefore, staff agrees that wastewater reuse is not a practical alternative.

Ditch system The applicant states that the Wahiawa Ditch System is a few miles away and that there are no other ditch systems in the area. Parcel 6-8-003:045 is located between Farrington hwy and the coastline in Mokolē'ia. The service area of the Helemano-Wahiawa Ditch system is mauka of the highway (Wahiawa Ditch to Ito Ditch to unnamed ditches). The ditch continues to serve parcels as far as the Pioneer Hi-Bred-owned lands, but does not carry water to Dillingham Ranch located immediately across the highway from the parcel of interest. Therefore, staff agrees with the applicant's assertion that ditch water is not a practical alternative.

Desalinization The applicant states that "*our goal is to drill through the caprock later into the lower aquifer for higher quality groundwater. We would be jeopardizing the aquifer if we were to drill a well for desalinization.*" Staff doesn't believe this to be true. A properly cased off well to isolate any confined aquifer would not cause a cross connection that would potentially salt that lens. However, in general the feasibility of desalinization does not appear to be a valid alternative in terms of energy cost and the disposal of the effluent. Therefore, staff agrees that desalinization is not a practicable alternative.

Surface water The applicant states that there are no streams in the vicinity. The nearest stream is Makaleha (approximately 800 feet away), which is perennial in the headwaters but intermittent in the lower elevations due to groundwater recharge.

There is little information regarding natural discharge in this stream as historically it was used to convey excess ditch water and runoff from the mountains away from fields to the ocean. Therefore, staff agrees with the applicant's assertion that surface water is not a practical alternative.

(3) Interference with other existing legal uses

There are 33 wells within 1 mile of this source (refer to Exhibit 1). The proposed pump capacity of 40 gallons per minute is relatively small, and in fact falls below the threshold established in the Hawaii Well Construction and Pump Installation Standards that requires a pump test. Staff does not anticipate that this relatively small pumpage will have impacts on the adjacent wells, but will require a pump test anyway, as staff needs to assess the impact of granting the variance discussed below.

(4) Public interest

Public interest is defined under §174C-2 - Declaration of policy, as follows:

“(c) The state water code shall be liberally interpreted to obtain maximum beneficial use of the waters of the State for purposes such as domestic uses, aquaculture uses, irrigation and other agricultural uses, power development, and commercial and industrial uses. However, adequate provision shall be made for the protection of traditional and customary Hawaiian rights, the protection and procreation of fish and wildlife, the maintenance of proper ecological balance and scenic beauty, and the preservation and enhancement of waters of the State for municipal uses, public recreation, public water supply, agriculture, and navigation. Such objectives are declared to be in the public interest.”

The use of this well for agricultural uses falls under the definition in the first sentence. The public interest allowance is addressed in the second sentence is addressed by no anticipated impacts due to the relatively small pump. Additional analysis on traditional and customary Hawaiian rights are addressed in the Ka Pa’akai analysis in a later section of this submittal.

(5) State & county general plans and land use designations

The proposed uses are in the State AG District, and the county zoning is AG-2. The proposed use is consistent with these land use designations.

Normal agency review includes:

- 1) the State’s Department of Land and Natural Resources (DLNR) and its State Parks, Aquatic Resources, Historic Preservation, and Land Divisions; the Department of Health (DOH) with its Clean Water, Safe Drinking Water, and Wastewater Branches; the Department of Hawaiian Home Lands (DDHL), and Land Use Commission (LUC); and the Office of Hawaiian Affairs (OHA).
- 2) the Office of the Mayor, Department of Planning and Permitting, and the Board of Water Supply;

No comments or objections have been made through this review. These proposed uses are consistent with the state and county general plans and land use designations.

Therefore, to the best of staff’s knowledge, this application meets this criteria.

(6) County land use plans and policies

No comments or objections have been made from the agencies consulted in item (5) above.

Additionally, the Honolulu Board of Water Supply prepared the North Shore Water Management Plan (NSWMP) in 2016, as part of their requirement to fulfill their Water Use and Development Plan requirement. While there is no specific reference to this project in the NSWMP, the application is generally consistent with the plan in that the expectation is that ground water may be needed for some agricultural irrigation in Mokulē’ia.

Therefore, to the best of staff’s knowledge, this application meets this criteria.

(7) Interference with Hawaiian home lands rights

All permits are subject to the prior rights of Hawaiian Home Lands. The Department of Hawaiian Home Lands (DHHL) and the Office of Hawaiian Affairs have reviewed this application and made no comments or objections. DHHL doesn't have a reservation of water in Mokulē'ia. Further, standard water use permit conditions 3.g., 6., and 9.f. notify all water use permittees that their permits are subject to and cannot interfere with Hawaiian Home Land's rights.

Therefore, staff anticipates that this application won't interfere with Hawaiian Home Land's rights.

(8) Other issues

I. Chapter 343 – Environmental Assessment (EA) Compliance

EA Triggers

In accordance with §HRS 343-5(a), the applicant's proposed action does not trigger the need for an EA.

II. 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 CWRM 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;

The project site is located in the island of O'ahu, moku of Waialua within ahupua'a Mokulē'ia 2. The ahupua'a of Mokuleia is known for its lo'i kalo and marine resources. Historic references confirm the legendary accounts of fertile lands of Mokulē'ia. Kamehameha worked extensive fields stretching from Mokulē'ia to Waimea for three or four days in 1806 (Alameida 1993:39). There are few archaeological sites in Mokulē'ia 2 ahupua'a. The largest is a

village at the base of the Waianae mountains. Several legends in the ahupua'a of Mokulē'ia concern marine resources, fishing practices and ceremonial rites relating to fishing. An archeological survey conducted in 1920s and 1930s, four surviving ko'a (natural boulders or rock mounds used as shrines where fishermen could beseech the gods for a good catch or place offerings to thank the gods) were recorded (McAllister 1933).

Fishing, crabbing, diving, throw net and gathering of other marine resources are presently practiced in the area.

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

In the early 1900s sugarcane plantation and large ranches dominated the lands of western Waialua. Cattle were known to have grazed on the lowlands as early as 1840. The O'ahu Railway and Land Co. was constructed around 1898 and had a station in Mokuleia. Most of the area had been altered by sugarcane production and cattle ranching.

This project consists of drilling an irrigation well near the mauka side of the property. There are no bodies of water on the property or streams nearby. The property is located on the coast of Mokulē'ia. No traditional, customary uses have been identified on this project site. The drilling of the well will not alter the coastline and or the marine resources.

(staff note: though the last sentence is not substantiated with evidence or data, staff will analyze the pump test to determine if there is a recharge boundary that suggests that the coastline and/or marine resources may be impacted).

Fishing, crabbing, diving, throw net and gathering of other marine resources are presently practiced in the area and will not be affected.

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

Should significant archaeological features be uncovered, construction will be halted and archeological consultation will be sought by the DLNR historical preservation divisions. According to the Hawaii Ground Water Use Permit conditions, we understand that these conditions apply 3g. "Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Acts", 6. "The ground water use authorized here is subject to the requirements of the Hawaiian Homes Commission Act, as amended, if applicable", 9f. "This permit may be modified by the Commission and the amount of the water initially granted to the permittee may be reduced if the Commission determines it is necessary to meet legal obligations to the Department of Hawaiian Home Lands, if applicable".

III. Well Construction and Pump Installation Permits

DEC-ADM92-G0 states that Water Use Permits should be obtained before approval of Well Construction and Pump Installation permits. Though approval of well construction and pump installation permits is delegated to the Chairperson through that Declaratory Ruling, staff typically presents well and pump permit applications that are concurrently submitted with the Water Use Permit applications to the Commission. The reason for this is that assurance that the well is drilled in accordance with the Hawaii Well Construction and Pump Installation Standards (HWCPIS) helps to support the statement of no adverse impacts. Additionally, there is a layer of protection that if a water use permit is not approved, no pump should be installed and CWRM should not issue a pump installation permit.

Valley Well Drilling is requesting a variance from the HWCPIS, to drill deeper than a $\frac{1}{4}$ of the thickness of the aquifer.

The standard of drilling no deeper than a $\frac{1}{4}$ of the aquifer thickness was developed to prevent upconing of salt water. However, it was designed for a typical unconfined basal lens.

The theoretical aquifer thickness is 41 times the initial head encountered above mean sea level, which again, is applicable to an unconfined situation. In a confined aquifer, sometimes the confining layer must be penetrated beyond the $\frac{1}{4}$ thickness depth, to just encounter water.

Staff analyzed wells within a mile of the proposed well and found that all of the wells are drilled deeper than $\frac{1}{2}$ of the “theoretical aquifer thickness”, yet salinity for those wells is generally stable.

What that data suggests is that the application of the $\frac{1}{4}$ aquifer thickness standard does not apply towards protecting the confined lens in the Mokolē‘ia area.

However, staff is still concerned about how deep is too deep, and what are the thresholds with which we would either ask the applicant to downsize the pump or backfill the well.

Typically, a 40 gallon-per-minute pump would not require a pump test. However, because we are recommending granting this variance, staff feels that a pump test should be done even though it’s not typically required for this capacity.

Further, the depth of the well should not hit the brackish zone. Therefore, staff recommends that in conjunction with this variance approval, staff recommends a condition that the initial chlorides shall be no greater than 250 ppm at the final depth.

Staff feels if these conditions are met, given the similar depths that wells in the area had to penetrate, that the Commission should approve this variance.

Staff will also amend the Hawaii Well Construction and Pump Installation Standards to address this recurring issue, at a later date.

RECOMMENDATION:

Staff recommends that the Commission:

- A. Approve the issuance of water use permit no. 1108 to Paul Alston for the reasonable and beneficial use of 0.025 million gallons per day of potable water for agricultural use from the Alston Well (Well No. 3-3409-026), as described in the recommended allocation portion of Exhibit 7, and subject to the standard water use permit conditions listed in Exhibit 8 and the following special conditions:
 1. This permit is subject to suspension and/or revocation if the use as described in Exhibit 7 changes. This includes, but is not limited to: type of use, location of use, land use classification changes, or anything that varies from the application.
 2. Should an alternate permanent source of water be found for this use, then the Commission reserves the right to revoke this permit, after a hearing.
 3. In the event that the tax map key at the location of the water use is changed, the permittee shall notify the Commission in writing of the tax map key change within thirty (30) days after the permittee receives notice of the tax map key change.
- B. Approve a well construction permit for Alston Well (Well No. 3-3409-026), subject to the standard well construction permit conditions as described in Exhibit 9 (with the elimination of condition 4) and the following special conditions:
 1. The request for a variance to drill greater than $\frac{1}{4}$ of the theoretical aquifer thickness is approved, subject to condition 2 below.
 2. The initial chlorides can be no greater than 250 ppm.
 3. If the initial chlorides are higher than 250 ppm, the Commission delegates authority to the Deputy to require the driller to backfill the well to a more appropriate depth.
- C. Approve a pump installation permit for Alston Well (Well No. 3-3409-026), subject to the standard pump installation permit conditions as described in Exhibit 10 and the following special conditions:
 1. Constant rate and step drawdown tests must be done for the minimum duration identified in the Hawaii Well Construction and Pump Installation Standards.

2. If the pump test shows excessive drawdown or salinity increases, the Commission delegates authority to the Deputy to require the driller to downsize the pump and/or backfill the well to a more appropriate depth.

Respectfully submitted,



M. KALEO MANUEL
Deputy Director

- Exhibits:
- 1 (Location Map)
 - 2 (Applications)
 - 3 (Public Notice)
 - 4 (Existing Water Use Permits and 12-Month Moving Average Withdrawal)
 - 5 (Pending Water Use Permit Applications)
 - 6 (IWREDSS calculations)
 - 7 (Summary of use request and recommended allocations)
 - 8 (Water Use Permit Standard Conditions)
 - 9 (Well Construction Permit Standard Conditions)
 - 10 (Pump Installation Permit Standard Conditions)

APPROVED FOR SUBMITTAL:



SUZANNE D. CASE
Chairperson

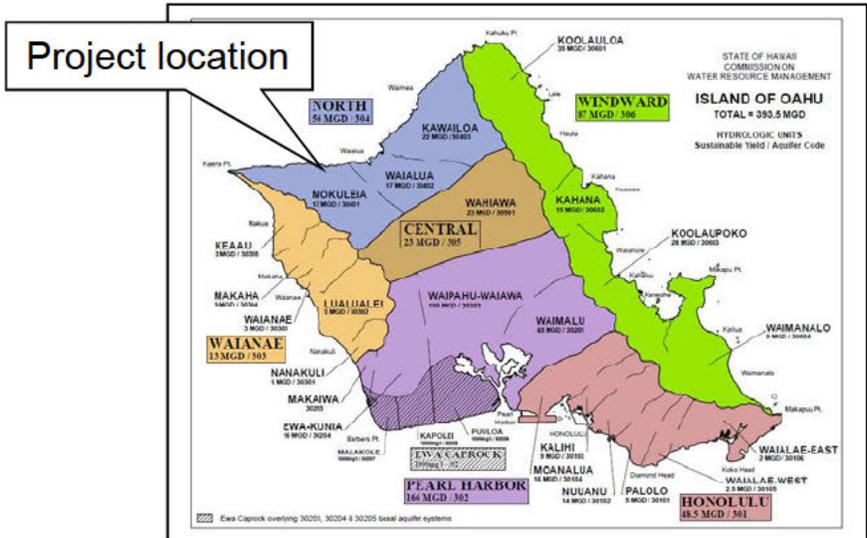
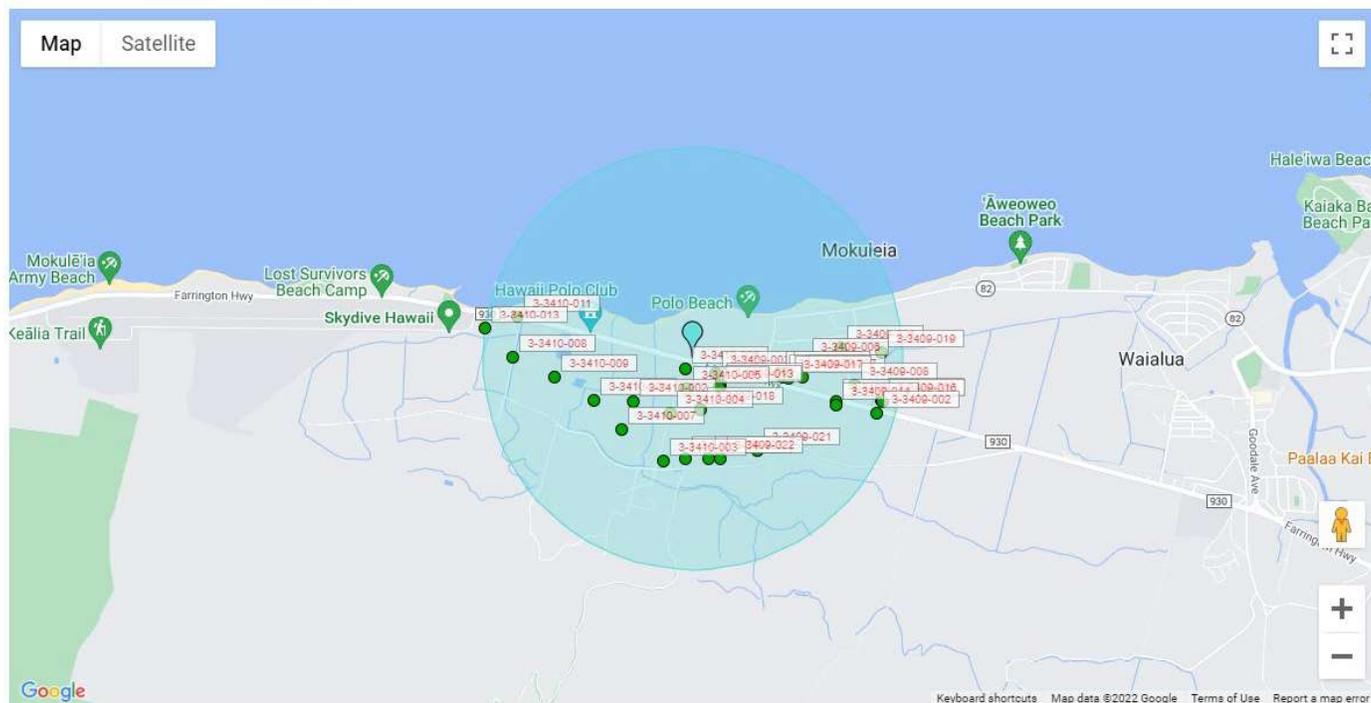


EXHIBIT 1: LOCATION MAP

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



33 matching results found.

Sort By: Well Number

EXHIBIT 1: LOCATION MAP

Well Number	Aquifer System	Well Name	Well Owner/Operator	Water Use Reporter	Land Owner	TMK	Use	Year Drilled	Latest 12-Month	Last Reported Date	Distance (miles)
3-3409-001	30401 Mokuleia	Mokuleia Battery	Pioneer Hi-Bred International, Inc.		Pioneer Hi-Bred International, Inc.	(1) 6-8-003:043	ABNSLD		0.000	6/30/1996	0.20
3-3409-002	30401 Mokuleia	Mokuleia	J. Mendonca				ABNSLD	1887			0.93
3-3409-003	30401 Mokuleia	Mokuleia	Waialua Sugar Company, Inc.				ABNSLD	1890			0.15
3-3409-004	30401 Mokuleia	Mokuleia	Waialua Sugar Company, Inc.				ABNSLD	1890			0.43
3-3409-005	30401 Mokuleia	Mokuleia	Josephine K Williams TR			(1) 6-8-013:059	ABNSLD	1890			0.46
3-3409-006	30401 Mokuleia	Mokuleia	J. Mendonca				ABNSLD	1890			0.54
3-3409-007	30401 Mokuleia	Mokuleia	J. Mendonca				ABNSLD	1890			0.54
3-3409-008	30401 Mokuleia	Mokuleia	Waialua Sugar Company, Inc.				ABNSLD	1890			0.79
3-3409-009	30401 Mokuleia	Mokuleia	Mahiko Farms, LLC	David Taogoshi (Mahiko Farms, LLC)	Mahiko Farms, LLC	(1) 6-8-006:010	ABN	1890	0.000	12/15/2017	0.93
3-3409-012	30401 Mokuleia	Mokuleia	J. Mendonca				ABNSLD	1899			0.72
3-3409-013	30401 Mokuleia	Pump 11	Pioneer Hi-Bred International, Inc.	Waialua Sugar Company, Inc.	Pioneer Hi-Bred International, Inc.	(1) 6-8-003:043	ABNSLD	1913	0.000	2/28/2019	0.21
3-3409-014	30401 Mokuleia	Mokuleia	Waialua Sugar Company, Inc.				ABNSLD	1917			0.73
3-3409-015	30401 Mokuleia	Mokuleia	Josephine K Williams TR	Josephine Williams (Josephine K Williams TR)	Josephine K Williams TR	(1) 6-8-013:059	UNU	1918	0.000	12/31/2015	0.45
3-3409-016	30401 Mokuleia	Mokuleia	Mahiko Farms, LLC	Robert F Chenet (Commission on Water Resource Management, CWRM)	Mahiko Farms, LLC	(1) 6-8-006:010	OBSWL	1924	0.000	2/29/2016	0.93
3-3409-017	30401 Mokuleia	Mokuleia-Miyake	Kathleen R Miyake & Colleen H Mau	Colleen Mau	Kathleen R Miyake & Colleen H Mau	(1) 6-8-013:060	AGRCP	1937	0.000	2/28/2022	0.48
3-3409-018	30401 Mokuleia	Mokuleia	Pacific Islands Water Science Center, USGS, U.S. Geological Survey		Felix & WF Pivec	(1) 6-8-006:020	ABNLOS	1962			0.28
3-3409-019	30401 Mokuleia	Mokuleia	Pacific Islands Water Science Center, USGS, U.S. Geological Survey		William D. Robertson	(1) 6-8-006:010	ABNLOS	1962			0.90
3-3409-021	30401 Mokuleia	Mokuleia	Pacific Islands Water Science Center, USGS, U.S. Geological Survey		Pioneer Hi-Bred International, Inc.	(1) 6-8-007:002	ABNLOS	1962			0.56
3-3409-022	30401 Mokuleia	Mokuleia	Pacific Islands Water Science Center, USGS, U.S. Geological Survey		State of Hawaii	(1) 6-8-003:020	ABNLOS	1962			0.52
3-3409-023	30401 Mokuleia	Mokuleia	Pacific Islands Water Science Center, USGS, U.S. Geological Survey		State of Hawaii	(1) 6-8-003:020	ABNLOS	1962			0.51
3-3409-024	30401 Mokuleia	MAF 1	Mokuleia Aquafarm		Jeffrey A & Linda A A Koch	(1) 6-8-013:044	UNU	2000			0.71
3-3410-001	30401 Mokuleia	Crowbar Ranch	Dillingham Ranch Aina LLC	Maleeyah Machado (Pural Water Specialty Co., Oahu Office)	Dillingham Ranch Aina LLC	(1) 6-8-003:040	MUNPR	1911	0.061	2/28/2022	0.52
3-3410-002	30401 Mokuleia	Mokuleia	Mokuleia Land Co.				ABNSLD				0.37
3-3410-003	30401 Mokuleia	Shop Well	Dillingham Ranch Aina LLC	Maleeyah Machado (Pural Water Specialty Co., Oahu Office)	Dillingham Ranch Aina LLC	(1) 6-8-003:040	IRR		0.138	2/28/2022	0.53
3-3410-004	30401 Mokuleia	Mokuleia	Mokuleia Homesteads				ABNSLD	1946			0.31
3-3410-005	30401 Mokuleia	Mokuleia	Mokuleia Homesteads		Dillingham Ranch Aina LLC	(1) 6-8-003:040	ABNSLD			11/30/2015	0.18
3-3410-006	30401 Mokuleia	Mokuleia	Waialua Sugar Company, Inc.				ABNSLD				0.09
3-3410-007	30401 Mokuleia	Mokuleia	Mokuleia Ranch				ABNSLD				0.50
3-3410-008	30401 Mokuleia	Mokuleia	Dole Food Company, Inc. Hawaii	Robert F Chenet (Commission on Water Resource Management, CWRM)	Dole Food Company, Inc. Hawaii	(1) 6-8-003:009	OBSWL	1890			0.86
3-3410-009	30401 Mokuleia	Mokuleia	Waialua Sugar Company, Inc.				ABNSLD	1890			0.67
3-3410-011	30401 Mokuleia	Mokuleia	Pacific Islands Water Science Center, USGS, U.S. Geological Survey		Kawaihapai Farms I	(1) 6-8-003:009	ABNLOS	1962			0.85
3-3410-012	30401 Mokuleia	Mokuleia	Pacific Islands Water Science Center, USGS, U.S. Geological Survey		Pioneer Hi-Bred International, Inc.	(1) 6-8-003:043	ABNLOS	1962			0.50
3-3410-013	30401 Mokuleia	Camp Mokuleia	Camp Mokuleia	Ted Hubbard (Camp Mokuleia)	The Episcopal Church in Hawaii	(1) 6-8-003:032	AGRCP	2014	0.000	4/2/2018	0.99

EXHIBIT 1: LOCATION MAP



**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 521, 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/wrm>.

WELL LOCATION INFORMATION

1. STATE WELL NO. (if assigned)	2. WELL NAME Alston	3. ISLAND Oahu	4. TRAK 1 6 8 003 045 WARD ZONE SEC PARCEL LOT
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5. WELL COORDINATES (latitude and longitude, referenced to NAD 83, degrees, minutes, seconds to 1 decimal place) and ADDRESS (street, city, zip code)
21 degrees 34' 36.2"N 158 degrees 09' 51.3"W 68-431 Farrington Hwy Waiialua, HI 96791

- The following must be attached below this application is accepted as complete:
- Property tax map, showing well location referenced to established property boundaries
 - Photograph of the proposed well site
 - A schematic diagram showing the well site, access road and proposed well infrastructure
 - 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 Paul Alston	Well Operator's Contact Paul Alston	7. LANDOWNER'S NAME/COMPANY Paul Alston	Landowner's Contact Paul Alston
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Well Operator's Mailing Address [Redacted]	Landowner's Mailing Address [Redacted]
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Well Operator's Phone 722-6000	Well Operator's Fax NA	Landowner's Phone 722-6000	Landowner's Fax NA	Landowner's E-mail [Redacted]
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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) 40
10. Is this well part of a battery of wells? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		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) 25300

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)
Deferred

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.

16. Municipal (water systems serving greater than 25 individuals or 15 service connections)

17. Domestic Number of units to be served: _____

18. Industrial (describe)

19. Irrigation (describe crop and no. of acres) 2 acres mangos, 2 acres plumeria, 2 acres "hula plants" (flowers used for lei), 2 acres grass

20. Military (describe)

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 OCLC)	23. Special Management Area Permit (SMA/P) <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)
---	---

Well is not in Conservation District

Well is not in the Special Management Area

24. State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources (Hawaii Revised Statutes, Chapter 6E, Section 104)
 I have filed in the SHPD 6E form (<https://dlnr.hawaii.gov/shpd/files/2020/04/12018-SHPC-HRS-4E-Submittal-Info-Form-2.pdf>) and attached it. OR
 I have attached documentation from SHPD indicating that there are no historic sites affected.

25. Chapter 343
 An Environmental Assessment was completed, and
 An Environmental Impact Statement was required and has been accepted (attach letter of acceptance). Publication date in The Environmental Notice: _____
 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"/> A wastewater treatment unit
<input type="checkbox"/> Use within a state conservation district	<input type="checkbox"/> Waste-to-energy facility
<input type="checkbox"/> Use within a shoreline setback area	<input type="checkbox"/> Landfill
<input type="checkbox"/> Use within a national or Hawaii registered historic site	<input type="checkbox"/> Oil refinery
<input type="checkbox"/> Use within the Waikiki Special District	<input type="checkbox"/> Power-generating facility
<input type="checkbox"/> The construction, expansion or modification of helicopter facility	<input checked="" type="checkbox"/> None of the above 11 items

26. Water Use Permit No. (if applicable): See Attached

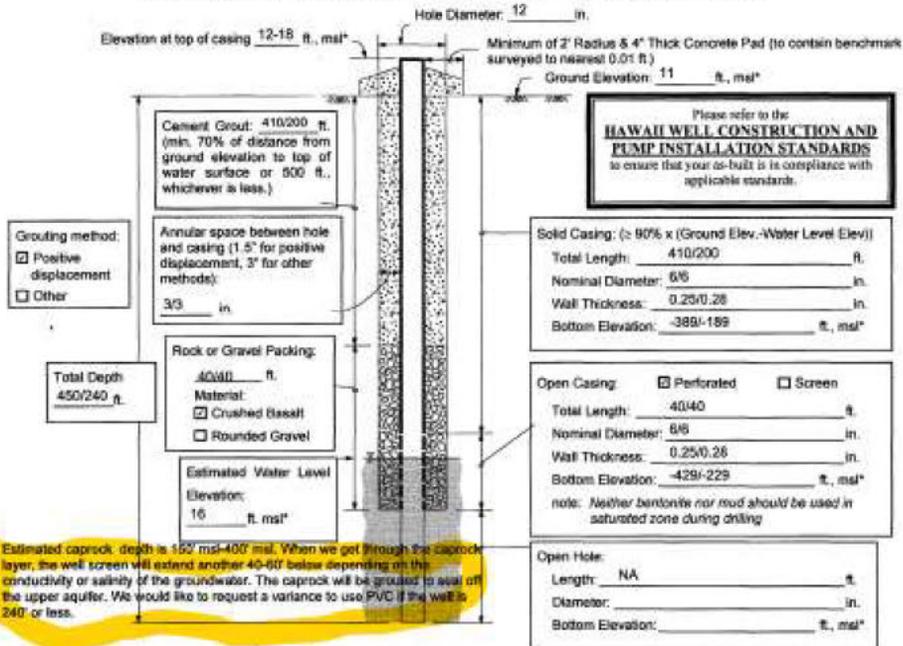
Additional remarks, explanations, etc. (attach additional sheet if more space is needed)

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 \$500/day.

27. WELL DRILLER (Must be filled out if application is for Well Construction) Valley Well Drilling, LLC 24947 Licensee business name C-57 License No. Tracie Sober 12/22/20 Signature Print Date 111 Hekili St. #A PMB 2761 Kailua, HI 96734 Address 808-682-1767 808-682-1768 vwdhi@lava.net Phone Fax E-mail	28. PUMP INSTALLER (Must be filled out if application is for Pump Installation) Valley Well Drilling, LLC 24947 Licensee business name C-57/C-57a/A License No. Tracie Sober 12/22/20 Signature Print Date 111 Hekili St. #A PMB 2761 Kailua, HI 96734 Address 808-682-1767 808-682-1768 vwdhi@lava.net Phone Fax E-mail
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EXHIBIT 2: APPLICATIONS

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.)



Estimated caprock depth is 150-400' msl. When we get through the caprock layer, the well screen will extend another 40-60' below depending on the conductivity or salinity of the groundwater. The caprock will be grouted to seal off the upper aquifer. We would like to request a variance to use PVC if the well is 240' or less.

* 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,
 Bottom Elevation of Well Limit = (Water Elevation - 1/4 x Water Level Elevation)

Example: Estimated + 2 ft. Water Level Elev. → Bottom Elevation of Well Limit = (2 - 1/4 x 2) = -18.5 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 A506) 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 A506) 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



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

APPLICATION FOR GROUND WATER USE PERMIT FOR
 PROPOSED NEW USE IN A DESIGNATED GROUND WATER
 MANAGEMENT AREA

FORM GWUPA-N

Application for New Use
 Application to Modify WUP No. _____

For Official Use Only:

For detailed instructions on filing out this application form completely, refer to the attached instructions. Incomplete applications will not be accepted for processing.

The following must be attached before this application is accepted as complete:

- Portion of 7.5-Minute Series USGS topographic map (scale 1:24,000) with source location labeled and include the name of the quad map.
- Property tax map, showing source location referenced to established property boundaries.
- Photograph(s) of the source(s) and location(s) of proposed end use(s), if applicable.

APPLICANT INFORMATION
 Note 1: In accordance with HRS § 174C-51(1), the landowner shall be the joint applicant in the event the applicant is a lessee, licensee, developer or any person with a terminable interest or estate in the land that is the water source of the permitted water.

1. APPLICANT'S INFORMATION			2. SOURCE LANDOWNER'S INFORMATION		
Name/Company Paul Aston	Contact Person Paul Aston		Name/Company Paul Aston	Contact Person Paul Aston	
Mailing Address [REDACTED]			Mailing Address [REDACTED]		
Phone 808-722-6000	Fax NA	E-mail [REDACTED]	Phone 808-722-6000	Fax NA	E-mail [REDACTED]

SOURCE INFORMATION

3. ISLAND
Oahu

4. GROUND WATER MANAGEMENT AREA
Mokuaiaia

4A. SUSTAINABLE YIELD FOR ITEM 4
17 MGD

5. SOURCE INFORMATION
 Attach additional sheets, if necessary.

Well Number (if known)	Well Name	Existing or Proposed?	TMK	Flowmeter installed?
	Aston	Proposed	6-8-003-045	<input type="checkbox"/> Yes, date installed ___/___/___ <input checked="" type="checkbox"/> No
				<input type="checkbox"/> Yes, date installed ___/___/___ <input type="checkbox"/> No
				<input type="checkbox"/> Yes, date installed ___/___/___ <input type="checkbox"/> No
				<input type="checkbox"/> Yes, date installed ___/___/___ <input type="checkbox"/> No
				<input type="checkbox"/> Yes, date installed ___/___/___ <input type="checkbox"/> No
				<input type="checkbox"/> Yes, date installed ___/___/___ <input type="checkbox"/> No
				<input type="checkbox"/> Yes, date installed ___/___/___ <input type="checkbox"/> No

PROPOSED USE INFORMATION §§174C-51(4), (5), (6), HRS

6. TOTAL QUANTITY OF WATER REQUESTED: In the space below, enter total from Box M in item 11 (Table 1) of this application.
 GPM gals per day, averaged over 1 year REVISED 3/23/21 24,487.2

7. PROPOSED USE(S): Agriculture Domestic Industrial
 Irrigation Military Municipal
 Check all that apply.

8. LOCATION OF PROPOSED WATER USE(S): Show the location of the proposed use on the same USGS and TMK maps as the proposed source location. Otherwise, attach similar maps. See item 11 (Table 1, column B) of this application.

Note 2: Signing below indicates that the signatories understand and affirm that the information provided on this application is accurate and true to the best of their knowledge. Further, the signatories understand that: (1) if necessary, further information may be required before the application is considered complete; (2) if a water use permit is granted by the Commission, this permit is subject to any existing legal uses, changes in sustainable yields and instream flow standards, reserved uses as defined by the Commission, and Hawaiian Home Lands' future uses; and (3) the applicant is responsible for paying the public notice fees associated with this application. Additionally, as stated in Note 1, above, HRS § 174C-51(1) the landowner shall be the joint applicant in the event the applicant is a lessee, licensee, developer or any person with a terminable interest or estate in the land that is the water source of the permitted water.

9. APPLICANT Signature: Paul Aston Print Name	10. SOURCE LANDOWNER/JOINT APPLICANT (if applicable) Signature: Paul Aston Print Name Date: 11/8/21 Date
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EXHIBIT 2: APPLICATIONS

PROPOSED NEW USE OR MODIFIED USE INFORMATION

11. TABLE 1: LAND USE CONSISTENCY / EFFICIENCY OF USE (Attach additional copies, if necessary.)

LAND USE CONSISTENCY				EFFICIENCY OF USE						
A	B	C	D	E	F	G	H	I	J	
PURPOSE (WATER USE CATEGORY) (Use the instructions for water use category descriptions.)	MAP FOR PROPOSED LOCATION OF USE ATTACHED FOLLOWING: * Property line map showing proposed location of use overlaid on registered property boundaries. * Photograph of the area of proposed use.	STATE/LAND USE DISTRICT	CDLP REQUIRED? Check the appropriate box, indicating if the use approves if applicable.	COUNTY COUNTY CODE	SMAP REQUIRED? Check the appropriate box, indicating if the use approves if applicable.	LIMITS OR NET ACREAGE	SFO/CAFT or SFO/CAFE	QUANTITY OF USE (GPD)	JUSTIFICATION FOR QUANTITY OF WATER REQUESTED (If applicable, attach additional sheets showing how the quantity was calculated.) (For irrigation, see Table 2.)	
USES THAT REQUIRE POTABLE (DRINKING) WATER										
			<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No		<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No					
			<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No		<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No					
			<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No		<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No					
			<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No		<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No					
TOTAL POTABLE USE								K	0	GPD
USES THAT DO NOT REQUIRE POTABLE WATER										
AGRCP	0 8 003 040 State Sector Plot Parcel	AG	<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No	AG-2	<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No	2,266	5000/ACRE	11,280	Mango Orchard/Field Stock	
AGRON	8 8 003 045 State Sector Plot Parcel	AG	<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No	AG-7	<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No	7,064	2400/ACRE	4,663.80	Flumeria Orchard/Field Stock	
AORN	8 8 003 045 State Sector Plot Parcel	AG	<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No	AG-2	<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No	1,064	2400/ACRE	2,553.60	Hula Plants (Flowers used for lei)	
AGROTH	8 8 003 045 State Sector Plot Parcel	AG	<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No	AG-2	<input type="checkbox"/> Yes, state approved <input type="checkbox"/> Yes, not approved <input type="checkbox"/> No	1.9	3000/ACRE	5,700	Bermuda grass	
TOTAL NON-POTABLE USE								L	24,467.2	GPD
TOTAL QUANTITY OF WATER REQUESTED (sum of total potable use and total non-potable use) -								M	24,467.2	GPD

Please explain if there are any limitations (e.g., legal, contractual) on the proposed water use(s) described in Table 1. Ref. HFD § 174C-5(1).
None

FORM DWLPA-4 (January 20, 2015)
Page 2 of 7

PROPOSED NEW USE OR MODIFIED USE INFORMATION (continued)

12. TABLE 2: IRRIGATION INFORMATION
List all crops that will be grown, including landscape and golf course irrigation uses. Copy Table 2 and attach additional sheets to complete your list, if necessary.

MAP FOR PROPOSED LOCATION OF USE ATTACH THE FOLLOWING: * Property line map with water proposed on the area of each proposed irrigation use listed in this table. * Photograph of the area of each proposed use.				D	E	F	G	H	I
A	B	C	D	BEEN IRRIGATED PREVIOUSLY (month)	END IRRIGATION PREVIOUSLY (month)	IRRIGATION SYSTEM (SWR to include SW)	IRRIGATION PRACTICE (refer to Table 1)	COMMENTS (Circle the correct box, if more space is needed.)	
0 8 003 040 State Sector Plot Parcel	Mango Orchard/Field Stock	7,004	2,266	Jan	Dec	Multiple Sprinklers	Deficit		
8 8 003 045 State Sector Plot Parcel	Flumeria Orchard/Field Stock	7,004	2,064	Jan	Dec	Multiple Sprinklers	Deficit		
8 8 003 045 State Sector Plot Parcel	Hula Plants (Flowers used for lei)	7,004	1,064	Jan	Dec	Multiple Sprinklers	Deficit		
8 8 003 045 State Sector Plot Parcel	Bermuda Grass	7,004	1.9	Jan	Dec	Multiple Sprinklers	Deficit		

Comments (continued from Column I). Please clearly indicate the crop (i.e., the row in table) these comments relate to.

FORM DWLPA-4 (January 20, 2015)
Page 2 of 7

EXHIBIT 2: APPLICATIONS

OTHER PERTINENT INFORMATION

13. TABLE 3: ALTERNATIVES ANALYSIS

	A. Analysis of potable alternatives Attach additional sheets if necessary.	B. Analysis of non-potable alternatives Attach additional sheets if necessary.
Municipal sources	NA	None available for agriculture in this area
Wastewater reuse	NA	There is not any municipal sewer system available in this area. This parcel will require an individual septic system.
Ditch system	NA	The Waialua ditch is a few miles away. There are no ditch systems in the area.
Desalination	NA	Our goal is to drill through the caprock layer into the lower aquifer for higher quality groundwater. We would be jeopardizing the aquifer if we were to drill a well for desalination.
Surface water	NA	There are no streams in the vicinity.
Conservation Measures	NA	Monitor the flowmeter and system for leaks.
Other (specify)		

14. PUBLIC INTEREST

§174C-2(C), HRS states: *The state water code shall be liberally interpreted to [a] obtain maximum beneficial use of the waters of the State for purposes such as domestic uses, aquaculture uses, irrigation and other agricultural uses, power development, and commercial and industrial uses. However, [b] adequate provision shall be made for the protection of traditional and customary Hawaiian rights, the protection and promotion of fish and wildlife, the maintenance of proper ecological balance and scenic beauty, and the preservation and enhancement of waters of the State for municipal uses, public recreation, public water supply, agriculture, and navigation. Such objectives are declared to be in the public interest.*

Explain how the proposed new use(s) in your application are consistent with items [a] and [b] above.

The proposed use is for agriculture which falls under the state water code. No streams will be affected as there are none in the vicinity. No traditional or customary uses have been found. Although fishing is common in this area, the coast line and ocean will not be affected.

15. INTERFERENCE WITH THE RIGHTS OF THE DEPARTMENT OF HAWAIIAN HOME LANDS

Explain how the proposed new use(s) of water will not interfere with the rights of the Department of Hawaiian Home Lands, as provided in section 221 of the Hawaiian Homes Commission Act.

There are no DHHL reservations for ground water in this aquifer. According to the State Water Project Plan, DHHL has no demand for water to 2051. We had emailed the WCPA and GWMP to Mr. Andrew Choy on January 12, 2021 and have not received a response.

16. INTERFERENCE WITH ANY EXISTING LEGAL USES

Explain how the proposed new use(s) of water will not interfere with any other existing legal use(s) of water.

The proposed use is in State Agriculture District and county zoning is AO-2. The groundwater flow through this area is estimated to be large. The 0.025 mgd withdrawal is quite considering the overall recharge rates.

17. PUBLIC WATER SYSTEM INFORMATION

Check the appropriate box or boxes.

- PUC-Regulated Private System / Non-PUC-Regulated Private System / Not a Public Water System
 Intended dedication to Honolulu Board of Water Supply or to County of Maui, Department of Water Supply.

18. CHAPTER 343

- An Environmental Assessment was completed, and
 An Environmental Impact Statement was required and has been accepted (attach letter of acceptance). Publication date in The Environmental Notice: _____

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"/> A wastewater treatment unit |
| <input type="checkbox"/> Use within a state conservation district | <input type="checkbox"/> Waste-to-energy facility |
| <input type="checkbox"/> Use within a shoreline setback area | <input type="checkbox"/> Landfill |
| <input type="checkbox"/> Use within a national or Hawaii registered historic site | <input type="checkbox"/> Oil refinery |
| <input type="checkbox"/> Use within the Waikiki Special District | <input type="checkbox"/> Power-generating facility |
| <input type="checkbox"/> The construction, expansion or modification of helicopter facility | <input checked="" type="checkbox"/> None of the above 11 items |

EXHIBIT 2: APPLICATIONS

PUBLIC NOTICE

Application for Water Use Permit
Mokuleia Ground Water Management Area, Oahu

The Commission on Water Resource Management received the following Ground Water Use Permit Application. Public Notice is given pursuant to Hawaii Administrative Rules, Section 13-171, "Designation and Regulation of Water Management Areas."

GWUPA No. 01108 Alston well (Well No. 3-3409-026)

Full application link: <https://dlnr.hawaii.gov/cwrm/newsevents/notices>

Applicant: Paul Alston
[Redacted]

Landowner: Paul Alston
[Redacted]

Date Application Filed as Complete: April 7, 2021
Hydrologic Unit / Aquifer System Area: Mokuleia System Area, North Sector, Oahu

Water Source

Well No.	Well Name	Tax Map Key	Aquifer System Area
3-3409-026	Alston	(1) 6-8-003:045	Mokuleia System, North Sector, Oahu

Quantity Requested: 0.025 million gallons per day.

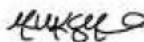
Proposed Use: Agriculture

End Use

New/Existing	Description	Place of Water Use	Qty of Use (GPD)
New	Plumeria Orchard/Field Stock	at Tax Map Key: (1) 6-8-003:045	4,800
New	Mango Orchard/Field Stock	at Tax Map Key: (1) 6-8-003:045	10,000
New	Bermuda grass	at Tax Map Key: (1) 6-8-003:045	5,700
New	Hula Plants (Flowers used for lei)	at Tax Map Key: (1) 6-8-003:045	4,800

Written objections or comments on this application may be filed by any person who has property interest in any land within the hydrologic unit of the source of water supply, any person who will be directly and immediately affected by the proposed water use, or any other interested person. Written objections must (1) state the property or other interest in the matter (provide TMK information); (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; and (3) state all grounds for objections to the proposed permit. Written objections must be received by May 24, 2021. Objections must be sent to 1) the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809 and 2) the applicant at the above address.

COMMISSION ON WATER RESOURCE MANAGEMENT



M. KALEO MANUEL, Deputy Director for
SUZANNE D. CASE, Chairperson

Dated: May 7, 2021

Publish in: Honolulu Star Advertiser issues of May 17, 2021 and May 24, 2021



Report Parameters

WUP Type:	Water Use Permit, Administrative Modification, Reservation, Transfer, C/WRM Decision and Orders, Court Orders, Other
Island:	Oahu
Applicant:	All
Well # Prefix:	All
Date:	All
Issued Date:	All
Date Accepted:	All
Aquifer Sector:	All
Aquifer:	30401 Mokuleia
Source or End Use TMK:	All
Aquifer Type:	Alluvial, Basal, Dike, Perched, Not Specified
Water Quality:	Fresh, Brackish, Potable, Non-Potable, Not Specified
Not Proposed Use:	Salt
Proposed Use:	All

WUP = Water Use Permit, 12-MAV = 12 month moving average, Diff = WUP-12-MAV, mgd = million gallons per day

Island of Oahu

Aquifer System Ground Water Management Area: 30401 Mokuleia

Sustainable Yield (mgd): 17

Wup No	Approved	Permittee	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff (mgd)	Date Last Reported
00038	09/11/1981	United States Air Force	3-3314-003	USAF Kaena Point	0.018	0.000	0.018	02/28/2022
00052	06/02/1993	Wai'alea Sugar Company, Inc.	3-3411-004	Pump 5	2.550	0.000	2.469	04/30/2021
			3-3411-006	Pump 5		0.065		04/30/2021
			3-3411-007	Pump 5		0.016		04/30/2021
			3-3411-008	Pump 5		0.000		04/30/2021
			3-3411-009	Pump 5		0.000		04/30/2021
			3-3411-010	Pump 5		0.000		04/30/2021
			3-3411-011	Pump 5		0.000		04/30/2021
00053	09/11/1981	Directorate of Public Works, Environmental Division, DPW, U.S. Army Garrison	3-3411-013	Pump 5		0.000		04/30/2021
			3-3412-002	Dillingham Airfield	0.055	0.100	-0.045	04/01/2022
00669	02/18/2004	Hawaii Fish Company Inc	3-3412-004	Hawaii Fish Co. 1	0.576			02/28/2022
00679	01/13/2004	Ka'ala Ranch LLC	3-3309-002	Mokuleia	0.127	0.002	0.125	03/31/2022
00766	07/12/2006	Mark H Hamamoto (Mohala Farms)	3-3306-016	Hamamoto 2006	0.013	0.003	0.010	02/28/2022
00777	12/14/1988	Dillingham Ranch Aina LLC	3-3310-002	Mokuleia 2	0.850	0.000	0.850	03/31/2022
00779	09/11/1981	Dillingham Ranch Aina LLC	3-3410-003	Shop Well	1.500	0.152	1.348	03/31/2022
00813	09/11/1981	North Shore Water Company, LLC	3-3410-001	Crowbar Ranch	0.500	0.072	0.428	03/31/2022
00896	08/25/2010	Brent Cullinan	3-3104-003	Brent's	0.029			
00941	09/17/2003	Stanhope Farms	3-3308-002	Stanhope Farms	0.056	0.013	0.043	03/26/2022
00984	08/11/2015	Kealia Farms	3-3412-006	Kealia Farms	0.009			02/16/2022
00999	09/16/2015	Candace Chase	3-3208-001	Chase	0.068			09/30/2021
01002	09/16/2015	Kalea Properties LLC	3-3308-003	Kalea 2012	0.029	0.000	0.029	11/23/2021
01010	01/28/2016	G Tree Ranch, LLC	3-3308-007	G Tree	0.066	0.003	0.063	03/03/2022
01011	01/28/2016	G Tree Ranch, LLC	3-3307-026	Paty	0.130			01/31/2022
01012	01/28/2016	G Tree Ranch, LLC	3-3307-019	Wai'alea-Mauka	0.081	0.002	0.079	03/18/2022
01013	01/28/2016	Ka'ala Ranch LLC	3-3307-030	Pietsch	0.462	0.008	0.454	12/06/2021
01044	07/10/2018	Pioneer HI-Bred International, Inc.	3-3307-031	Gay and Ranch Exploratory	0.530	0.117	0.413	03/31/2022
01086	07/16/2019	Frank M Hinshaw (Island Skydiving, LLC)	3-3410-014	Hinshaw	0.081			
01091	09/17/2019	Mokuleia Ag Lands LLC	3411-016	4Rs	0.058			
01092	07/21/2020	Maja Holdings, LLC	3-3409-025	Maja 2019	0.004			
01107	03/15/2022	Charles & Fay Beasley (Legend Farms USA, Inc.)	3-3308-009	Legend	0.000			
Summary for Mokuleia (30 detail records)					Total:	7.792	0.553	7.239
					SY Available:	9.208		



WUPA No	Well No.	Applicant	Well Name	mgd	Received	Accept
Aquifer System: 30401 Mokuleia						
1088	3-3310-001	Dillingham Ranch Aina LLC	Mokuleia 1	0.417	04/24/2019	04/29/2020
1088	3-3310-002	Dillingham Ranch Aina LLC	Mokuleia 2		04/24/2019	04/29/2020
1090	3-3208-002	David L Summers	Summers 2019	0.037	05/13/2019	
1108	3-3409-026	Paul Alston (Dentons US LLP)	Alston	0.025	03/22/2021	04/07/2021

3 WUPAs totalling 0.479

Number of Wells: 4

Plumeria (substituted quava)

Total Parcel Area in Acres: 7.890

Drought Frequency:	1 in 2 years	1 in 5 years (recommended)	1 in 10 years	1 in 20 years
Inches per acre:	41.320	46.531	48.942	50.793
gpd/acre:	3,074	3,462	3,641	3,779
Total Parcel Mgd:	0.024	0.027	0.029	0.030

Mango

Total Parcel Area in Acres: 7.890

Drought Frequency:	1 in 2 years	1 in 5 years (recommended)	1 in 10 years	1 in 20 years
Inches per acre:	41.281	46.512	48.934	50.793
gpd/acre:	3,071	3,460	3,640	3,779
Total Parcel Mgd:	0.024	0.027	0.029	0.030

Hula plants (used heliconia)

Total Parcel Area in Acres: 7.890

Drought Frequency:	1 in 2 years	1 in 5 years (recommended)	1 in 10 years	1 in 20 years
Inches per acre:	48.643	53.970	56.410	58.272
gpd/acre:	3,619	4,015	4,197	4,335
Total Parcel Mgd:	0.029	0.032	0.033	0.034

Bermuda grass

Total Parcel Area in Acres: 7.890

Drought Frequency:	1 in 2 years	1 in 5 years (recommended)	1 in 10 years	1 in 20 years
Inches per acre:	48.287	53.055	55.224	56.873
gpd/acre:	3,592	3,947	4,108	4,231
Total Parcel Mgd:	0.028	0.031	0.032	0.033

Crop	Area	Duty requested	Total requested	Duty calculated	Total calculated
Mango Orchard/Field Stock	2	5000	10000	3462	6924
Plumeria Orchard/Field Stock	2	2400	4800	2460	4920
Hula Plants	2	2400	4800	4015	8030
Bermuda Grass	1.9	3000	5700	3947	7499.3
Total	7.9		25300		27373.3

EXHIBIT 7: SUMMARY OF USE REQUEST AND RECOMMENDED ALLOCATIONS

STANDARD WATER USE PERMIT CONDITIONS

1. The water described in this water use permit may only be taken from the location described and used for the reasonable beneficial use described at the location described above. Reasonable beneficial uses means "the use of water in such a quantity as is necessary for economic and efficient utilization which is both reasonable and consistent with State and County land use plans and the public interest." (HRS § 174C-3)
2. The right to use ground water is a shared use right.
3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
 - a. Can be accommodated with the available water source;
 - b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
 - c. Will not interfere with any existing legal use of water;
 - d. Is consistent with the public interest;
 - e. Is consistent with State and County general plans and land use designations;
 - f. Is consistent with County land use plans and policies; and
 - g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).
4. The ground water use here must not interfere with surface or other ground water rights or reservations.
5. The ground water use here must not interfere with interim or permanent instream flow standards. If it does, then:
 - a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
 - b. The interim or permanent instream flow standard, as applicable, must be amended.
6. The water use authorized here is subject to the requirements of the Hawaiian Homes Commission Act, as amended, if applicable.
7. The water use permit application and submittal, as amended, approved by the Commission at its meeting are incorporated into this permit by reference.
8. Any modification of the permit terms, conditions, or uses may only be made with the express written consent of the Commission.
9. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
 - a. protect the water sources (quantity or quality);
 - b. meet other legal obligations including other correlative rights;
 - c. insure adequate conservation measures;
 - d. require efficiency of water uses;
 - e. reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
 - f. meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
 - g. carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

Prior to any reduction, the Commission shall give notice of its proposed action to the permittee and provide the permittee an opportunity to be heard.

10. An approved flowmeter(s) must be installed to measure monthly withdrawals and a monthly record of withdrawals, salinity, temperature, and pumping times must be kept and reported to the Commission on Water Resource Management on forms provided by the Commission on a basis (attached).
11. This permit shall be subject to the Commission's periodic review of the **Mokuleia** Aquifer System Area's sustainable yield. The amount of water authorized by this permit may be reduced by the Commission if the sustainable yield of the **Mokuleia** Aquifer System Area, or relevant modified aquifer(s), is reduced.
12. A permit may be transferred, in whole or in part, from the permittee to another, if:
 - a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
 - b. The Commission is informed of the transfer within ninety days.

Failure to inform the department of the transfer invalidates the transfer and constitutes a ground for revocation of the permit. A transfer which involves a change in any condition of the permit, including a change in use covered in HRS § 174C-57, is also invalid and constitutes a ground for revocation.
13. The use(s) authorized by law and by this permit do not constitute ownership rights.
14. The permittee shall request modification of the permit as necessary to comply with all applicable laws, rules, and ordinances which will affect the permittee's water use.
15. The permittee understands that under HRS § 174C-58(4), that partial or total nonuse, for reasons other than conservation, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period of forfeiture.
16. The permittee shall prepare and submit a water shortage plan within 30 days of the issuance of this permit as required by HAR § 13-171-42(c). The permittee's water shortage plan shall identify what the permittee is willing to do should the Commission declare a water shortage in the **Mokuleia** Ground Water Management Area.
17. The water use permit shall be subject to the Commission's establishment of instream standards and policies relating to the Stream Protection and Management (SPAM) program, as well as legislative mandates to protect stream resources.
18. Special conditions in the attached cover transmittal letter are incorporated herein by reference.
19. The permittee understands that any willful violation of any of the above conditions or any provisions of HRS § 174C or HAR § 13-171 may result in the suspension or revocation of this permit.

STANDARD WELL CONSTRUCTION PERMIT 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 HWCPIS (the latest pump test worksheet can be obtained by contacting Commission staff or at <http://files.hawaii.gov/dlnr/cwrp/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 sixty (60) days after completion of work (please contact staff or visit <http://files.hawaii.gov/dlnr/cwrp/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 HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.
12. Any variances from the HWCPIS 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.

STANDARD PUMP INSTALLATION PERMIT 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 40 gpm 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 sixty (60) days after completion of work (please contact staff or visit <http://files.hawaii.gov/dlnr/cwrp/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.