DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON

BRUCE S. ANDERSON, PH.D.
KAMANA BEAMER, PH.D.
NEIL J. HANNAHS
WAYNE K. KATAYAMA
PAUL J. MEYER

M. KALEO MANUEL
DEPUTY DIRECTOR

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

July 16, 2019
Honolulu, Oahu

APPLICATION FOR A GROUND WATER USE PERMIT
Hinshaw Well (Well No. 3-3410-014), TMK (1) 6-8-003:009, GWUP No. 01086
New Irrigation Use for 0.081 mgd
Mokulē'ia Ground Water Management Area, O'ahu

APPLICANT:

Frank Hinshaw
1717 Ala Wai Blvd., #1106
Honolulu, HI 96815

LANDOWNER:

Frank Hinshaw
1717 Ala Wai Blvd., #1106
Honolulu, HI 96815

SUMMARY OF REQUEST:

The applicant requests that the Commission approve a water use permit for an allocation of **0.081** million gallons per day (mgd) of **potable basal** ground water from **a new** well to supply **38 acres of pasture, bermuda grass and alfalfa irrigation and 80 horses, drinking water and hygiene**.

LOCATION MAP: See Exhibit 1

BACKGROUND:

February 8, 2019	An incomplete ground water use permit application was received from Frank Hinshaw, proprietor of Hinshaw Skydiving School, Inc. by the Commission on Water Resource Management (Commission).
March 9, 2019	The application was completed with revised estimates of irrigation needs. Other information regarding the source, use, notification, objections, and field investigation(s) is provided in Exhibit 2.
April 1, 2019	Public Notice was issued for the Hinshaw application for a water use permit for potable water from the Mokulē'ia Aquifer System Area, and published in the Honolulu Star Advertiser April 10 and 17, 2019.

May 2, 2019 Deadline for comments and objections. The Department of Health, Safe Drinking Water and Wastewater Branches, reported "No comments". The Honolulu Board of Water Supply reported "No comments". The State Division of Historic Properties reported "No historic properties affected". No objections were filed.

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 Hawai'i Water Plan, the Commission has adopted 8 mgd as the sustainable yield for the Mokulē'ia 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. Mokulē'ia Aquifer System Area

ITEM	**Mokulē'ia** Aquifer System Area (mgd)
Sustainable Yield	8*
Less: Other Existing Water Use Permits (shown in Exhibit 4)	7.620*
Reservation to DHHL	0
Subtotal (Current Available Allocation)	**0.380**
Less: Other Completed Applications (shown in Exhibit 5)	0
Less: This Application	0.081
Subtotal (Potential Available Allocation/Allocation Deficit)	**0.299**

* NOTE: The proposed 2019 Water Resource Protection Plan raises the estimated sustainable yield for the Mokulē'ia Aquifer System Area from **8 mgd** to **17 mgd**, due to redistribution of spillover/leakage from Wahiawā Aquifer System Area among the aquifer systems within the North Aquifer Sector Area; Waialua and Kawailoa areas were accordingly updated and reduced.

There is adequate water available to accommodate this application request.

(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 agricultural use of potable ground water to irrigate pasture and alfalfa and provide water at equipment and farm structures. 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 stock and irrigation uses.

II. Quantity Justification
The applicant is requesting a total of **0.081** mgd for irrigating pasture and alfalfa (refer to Exhibit 6 for IWREDDS calculations; and to Exhibit 7 for total use request summary), at the rate of about 2,100 gallons per acre per day (gad). This is less than an average expectation for agricultural crops.

Staff uses an Irrigation Water Requirement Estimate Decision Support System (IWREDSS) irrigation model produced by the University of Hawaii College of Tropical Agriculture and Human Resources (CTAHR) as a "reasonable-beneficial standard". This model incorporates data related to the parcel in question, such as soil properties, historical parcel rainfall incidence in accordance with the Commission's *The Rainfall Atlas of Hawaii 2011 Final Report* and the *2014 Evapotranspiration of Hawai'i*, air temperature, and crop information including root depth and breadth, leaf parameters and typical water requirements, and the proposed method of irrigation to estimate gross irrigation requirements that include irrigation efficiencies. CTAHR recommends the 1-in-5-year drought, or the 80% GIR (gross irrigation requirement) estimation. Running the model for this parcel in Bermuda grass yielded a requirement of 4,103 gallons per acre per day (gad); running it for alfalfa yielded 2,850 gad.

However, the applicant is estimating lower irrigation needs at 2,100 gad. This may not be an unreasonable estimate, a choice of management priorities, but perhaps a little conservative. In the past where IWREDSS estimated higher duties than that requested by the applicant, specifically GWUP 826 for Larry Jefts' Kelena Farms, Inc., the Commission only approved the amounts requested by the applicant.

III. Efficiency of Use
The applicant states that its operations will involve monitoring the system for leaks and to minimize pumping time.

IV. Analysis of Practical Alternatives
The applicant has evaluated potential alternatives to the proposed use of fresh lens water, providing the following reasons why they are not practicable alternatives.
1. Municipal sources - unavailable
2. reusable wastewater - unavailable
3. ditch water - unavailable; ditch not maintained/usable
4. desalting - not feasible due to cost and the constraints of disposing effluent concentrate
5. surface (stream) water - unavailable at this site.

Given the above analysis for I-IV above, it appears the use is reasonable and beneficial.

(3) Interference with other existing legal uses

There are 5 other wells currently in use, plus one for observation, within 1 mile of this source which use water for municipal, irrigation, and domestic use. Pumping records for these wells show total withdrawals of 0.198 mgd for two wells and zero for three others. Most of these wells are arrayed laterally across the slope, evenly spaced, with little expectation of mutual interference and closer proximity to the ocean than most of the others. Reported data for chlorides and water levels in these few wells show that the lens is heterogeneous, with some wells showing high heads and others low, with chlorides ranging widely from very fresh to somewhat brackish. Because the data is scant and spanning a period of sugar cultivation and post-sugar, staff has been doing more regular monitoring to seek a better understanding of the nature of this aquifer. Given somewhat higher heads post-sugar and the low use expected even under full pumping, little interference between them would be expected.

(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.*"

This proposed horse boarding facility is allowed on agriculture zoned land. It will include polo ponies. Staff considers this commercial and recreational activity, allowed to achieve maximum beneficial use of agriculture land.

These are kula lands, former sugarcane land, adjacent to the Mokulē'ia Dillingham Airstrip, long-disturbed, and surrounded by other properties without preventing access to uplands or shoreline. There are no reported protected species or habitat. There are no streams.

Staff has received "no comment" comments from the Department of Health and the Honolulu Board of Water Supply, and "no historic properties affected" from Historic Preservation. Staff believes that the application is consistent with the public interest as defined under §174C-2(c).

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

The proposed uses are in the State Agriculture District, and the county zoning is Ag 2. Therefore, 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. Therefore, these proposed uses are consistent with the state and county general plans and land use designations.

Therefore, staff believes that this application meets the state & county general plans and land use designations.

(6) County land use plans and policies

Again, normal County review includes Office of the Mayor, Department of Planning and Permitting and the Board of Water Supply. No comments or objections have been made.

Therefore, this application appears to meet the county land use plans and policies.

(7) Interference with Hawaiian home lands rights

All permits are subject to the prior rights of Hawaiian home lands. 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 rights. The State Water Projects Plan indicates that no reservations are currently anticipated from the Mokulē'ia Aquifer System Area. The Department of Hawaiian Home Lands (DHHL) and the Office of Hawaiian Affairs have reviewed this application and made no comments or objections.

Therefore, staff does not believe that this application will interfere with Hawaiian home lands 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

The OHA Kipuka database shows no sites or crown lands involved; there are no objections from OHA. No sites were identified by the State Historic Preservation Division of DLNR (see Exhibit 9, screenshot from OHA Kipuka database)

RECOMMENDATION:

Staff recommends that the Commission approve the issuance of Water Use Permit No. 01086 to for the reasonable and beneficial use of 0.081 million gallons per day of fresh water for irrigating pasture and alfalfa from the Hinshaw Well (Well No. 3-3410-014), 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 invalid 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.

Staff also recommends that the Commission approve well construction and pump installation permits for Hinshaw Well (Well No. 3-3410-014), subject to the standard well construction permit conditions as described in Exhibit 9 and standard pump installation permit conditions as described in Exhibit 10.

Ola i ka wai,

M. KALEO MANUEL
Deputy Director

Exhibits:
1 (Location Maps – A to G)
2 (Water Use Permit Detailed Information)
3 (Public Notice)
4 (Existing Water Use Permits and Pending Water Use Permit Applications)
5 (Mokulē'ia Aquifer System 12-Month Moving Average Withdrawal)
6 (IWREDSS calculations – A & B)
7 (Summary of use request and recommended allocations)
8 (OHA Kipuka database screenshot)
9 (Water Use Permit Standard Conditions)
10 (Well Construction Permit Standard Conditions)
11 (Pump Installation Permit Standard Conditions)

APPROVED FOR SUBMITTAL:

SUZANNE D. CASE
Chairperson

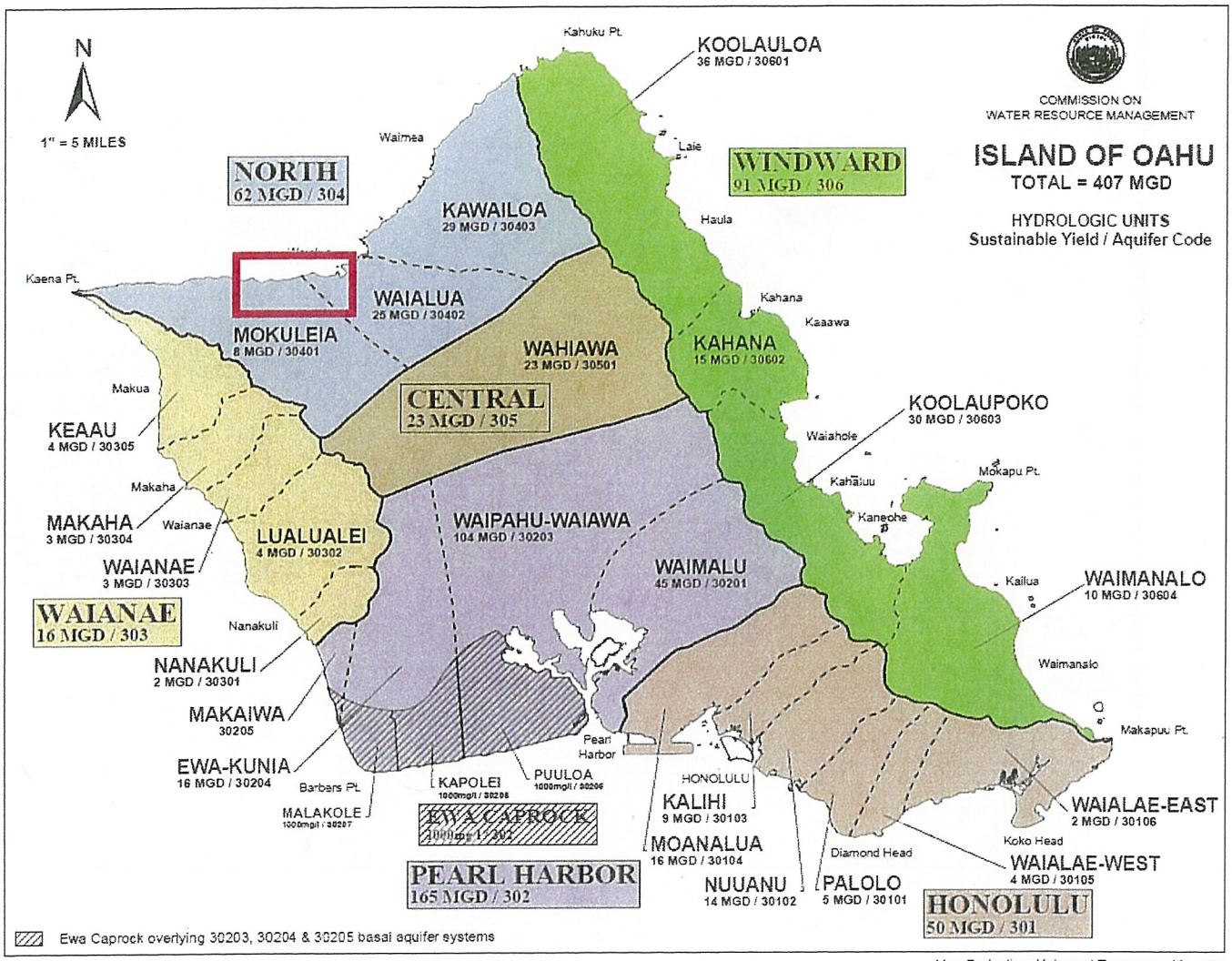


EXHIBIT 1A: Location – Oahu Aquifer System Areas, highlighting subject area

Staff Submittal
Hinshaw Well (Well No. 3-3410-014)

July 16, 2019

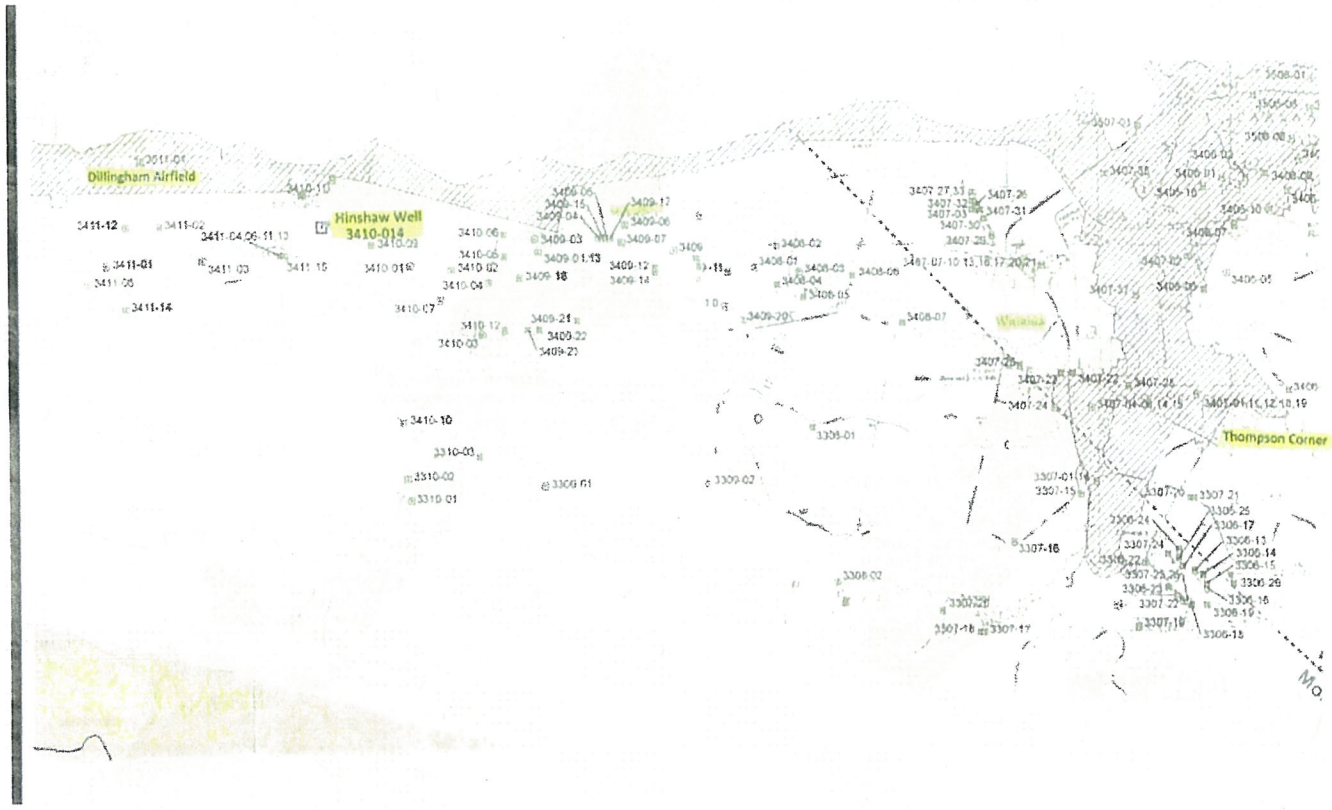


EXHIBIT 1B: Location – portions, Mokulē‘ia and Waialua ASAs

EXHIBIT 1C: Location – Satellite Image, Mokulē'ia Plain, Thompson Corner to Hinshaw Well

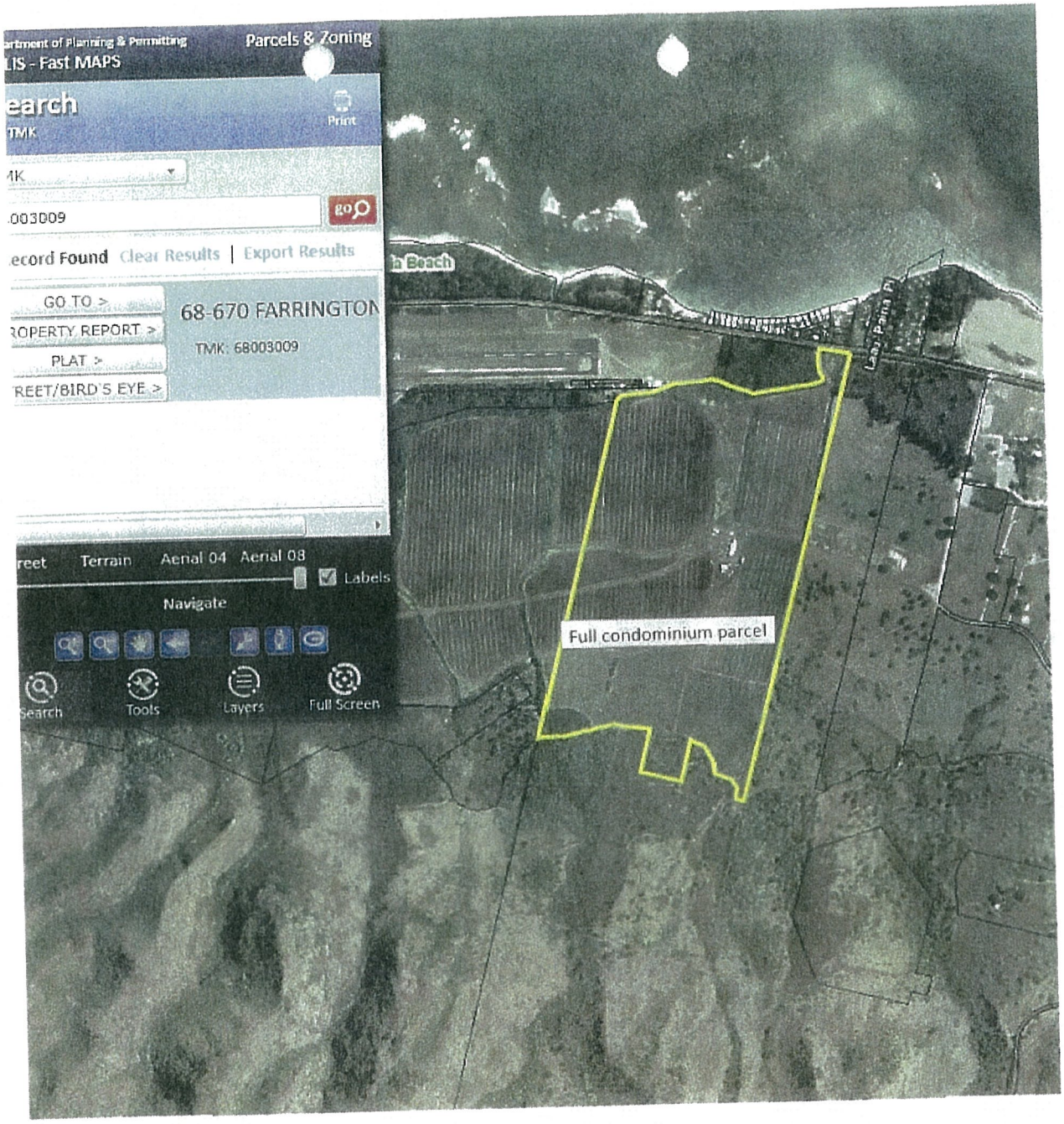


EXHIBIT 1D: Location – Kawaihapai Condominium Parcel

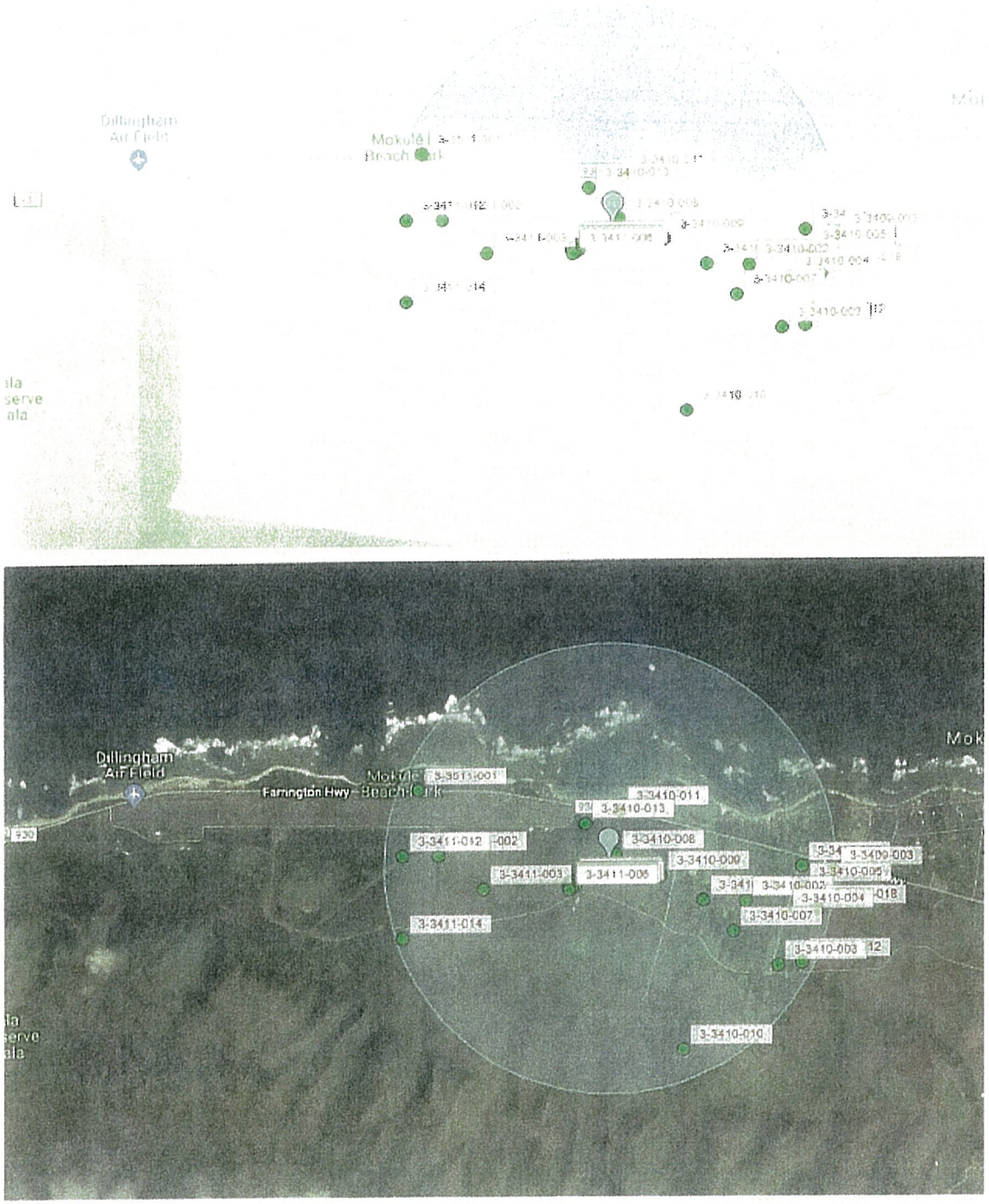
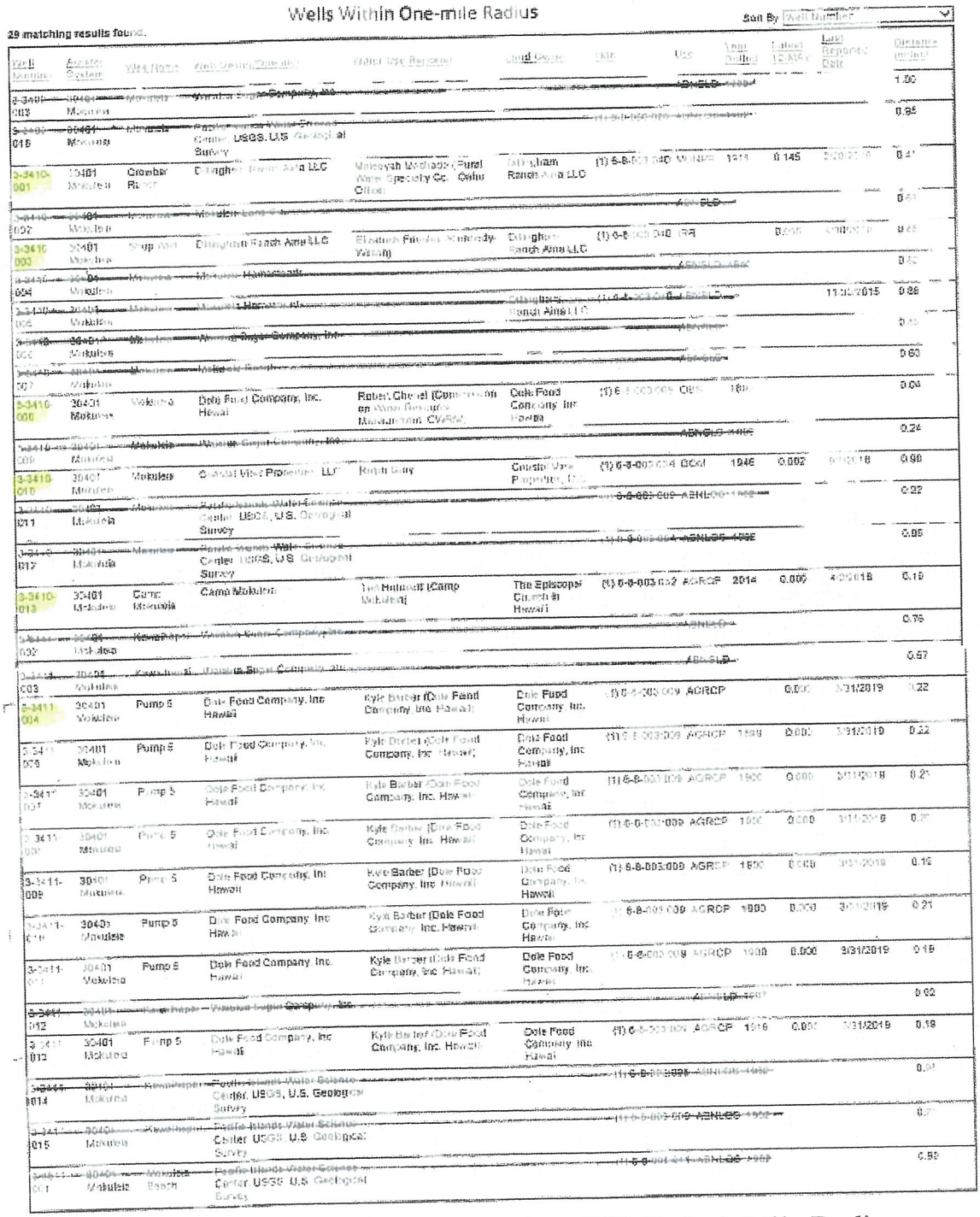


EXHIBIT 1E: Location – 1-mile Radius from Hinshaw Well

Staff Submittal
Hinshaw Well (Well No. 3-3410-014)

July 16, 2019



Wells Within One-mile Radius

Sort By: Well Number

29 matching results found.

Well Number	Aquifer System	Well Name	Well Owner/Operator	Water Use Reporter	Land Owner	TMK	Use	Year Drilled	Latest 12-MAY	Last Reported Date	Distance (miles)
3-3410-003	30401 Mokuleia	Mokuleia	Waialua Sugar Company, Inc.				ABNSLD	1900			1.00
3-3410-015	30401 Mokuleia	Mokuleia	Pacific Islands Water Science Center, USGS, U.S. Geological Survey			(1) 6-8-003:020	ABNLOG	1902			0.95
3-3410-001	30401 Mokuleia	Crowbar Ranch	Dillingham Ranch Area LLC	Mileoyah Machado (Rural Water Specialty Co., Oahu Office)	Dillingham Ranch Area LLC	(1) 6-8-003:040	MUNPR	1918	0.145	3/20/2018	0.41
3-3410-002	30401 Mokuleia	Mokuleia	Mokuleia Land Company				ABNSLD				0.63
3-3410-003	30401 Mokuleia	Shop Well	Dillingham Ranch Area LLC	Elizabeth Fitzgerald (Kennedy-Wilson)	Dillingham Ranch Area LLC	(1) 6-8-003:040	IRR		0.000	4/30/2018	0.45
3-3410-004	30401 Mokuleia	Mokuleia	Mokuleia Hamestrands				ABNSLD	1940			0.82
3-3410-005	30401 Mokuleia	Mokuleia	Mokuleia Hamestrands		Dillingham Ranch Area LLC	(1) 6-8-003:040	ABNSLD			11/30/2015	0.88
3-3410-006	30401 Mokuleia	Mokuleia	Waialua Sugar Company, Inc.				ABNSLD				0.85
3-3410-007	30401 Mokuleia	Mokuleia	Mokuleia Ranch				ABNSLD				0.63
3-3410-008	30401 Mokuleia	Mokuleia	Dole Food Company, Inc. Hawaii	Robert Chenel (Commission on Water Resource Management, CWRM)	Dole Food Company, Inc. Hawaii	(1) 6-8-003:009	OBS	1800			0.04
3-3410-009	30401 Mokuleia	Mokuleia	Waialua Sugar Company, Inc.				ABNSLD	1900			0.24
3-3410-010	30401 Mokuleia	Mokuleia	Coastal View Properties, LLC	Ralph Gray	Coastal View Properties, LLC	(1) 6-8-003:004	GCM	1946	0.002	3/1/2018	0.98
3-3410-011	30401 Mokuleia	Mokuleia	Pacific Islands Water Science Center, USGS, U.S. Geological Survey			(1) 6-8-003:009	ABNLOG	1902			0.22
3-3410-012	30401 Mokuleia	Mokuleia	Pacific Islands Water Science Center, USGS, U.S. Geological Survey			(1) 6-8-003:004	ABNLOG	1902			0.95
3-3410-013	30401 Mokuleia	Camp Mokuleia	Camp Mokuleia	Tim Hutchett (Camp Mokuleia)	The Episcopal Church in Hawaii	(1) 6-8-003:032	AGRCP	2014	0.000	4/2/2018	0.19
3-3411-002	30401 Mokuleia	Kawaihapai	Waialua Sugar Company, Inc.				ABNSLD				0.75
3-3411-003	30401 Mokuleia	Kawaihapai	Waialua Sugar Company, Inc.				ABNSLD				0.57
3-3411-004	30401 Mokuleia	Pump 5	Dole Food Company, Inc. Hawaii	Kyle Barber (Dole Food Company, Inc. Hawaii)	Dole Food Company, Inc. Hawaii	(1) 6-8-003:009	AGRCP		0.000	3/31/2019	0.22
3-3411-005	30401 Mokuleia	Pump 5	Dole Food Company, Inc. Hawaii	Kyle Barber (Dole Food Company, Inc. Hawaii)	Dole Food Company, Inc. Hawaii	(1) 6-8-003:009	AGRCP	1900	0.000	3/31/2019	0.22
3-3411-007	30401 Mokuleia	Pump 5	Dole Food Company, Inc. Hawaii	Kyle Barber (Dole Food Company, Inc. Hawaii)	Dole Food Company, Inc. Hawaii	(1) 6-8-003:009	AGRCP	1900	0.000	3/31/2019	0.21
3-3411-008	30401 Mokuleia	Pump 5	Dole Food Company, Inc. Hawaii	Kyle Barber (Dole Food Company, Inc. Hawaii)	Dole Food Company, Inc. Hawaii	(1) 6-8-003:009	AGRCP	1900	0.000	3/31/2019	0.20
3-3411-009	30401 Mokuleia	Pump 5	Dole Food Company, Inc. Hawaii	Kyle Barber (Dole Food Company, Inc. Hawaii)	Dole Food Company, Inc. Hawaii	(1) 6-8-003:009	AGRCP	1900	0.000	3/31/2019	0.19
3-3411-010	30401 Mokuleia	Pump 5	Dole Food Company, Inc. Hawaii	Kyle Barber (Dole Food Company, Inc. Hawaii)	Dole Food Company, Inc. Hawaii	(1) 6-8-003:009	AGRCP	1900	0.000	3/31/2019	0.21
3-3411-011	30401 Mokuleia	Pump 5	Dole Food Company, Inc. Hawaii	Kyle Barber (Dole Food Company, Inc. Hawaii)	Dole Food Company, Inc. Hawaii	(1) 6-8-003:009	AGRCP	1900	0.000	3/31/2019	0.19
3-3411-012	30401 Mokuleia	Kawaihapai	Waialua Sugar Company, Inc.				ABNSLD	1907			0.92
3-3411-013	30401 Mokuleia	Pump 5	Dole Food Company, Inc. Hawaii	Kyle Barber (Dole Food Company, Inc. Hawaii)	Dole Food Company, Inc. Hawaii	(1) 6-8-003:009	AGRCP	1916	0.000	3/31/2019	0.18
3-3411-014	30401 Mokuleia	Kawaihapai	Pacific Islands Water Science Center, USGS, U.S. Geological Survey			(1) 6-8-003:020	ABNLOG	1902			0.94
3-3411-015	30401 Mokuleia	Kawaihapai	Pacific Islands Water Science Center, USGS, U.S. Geological Survey			(1) 6-8-003:009	ABNLOG	1902			0.21
3-3411-001	30401 Mokuleia	Mokuleia Beach	Pacific Islands Water Science Center, USGS, U.S. Geological Survey			(1) 6-8-003:011	ABNLOG	1902			0.92

EXHIBIT 1F: Location – List of Wells in 1-Mile Radius

EXHIBIT 1G: Location – Kawaihapai Condominium Lot Map

Staff Submittal
Hinshaw Well (Well No. 3-3410-014)

July 16, 2019

WATER USE PERMIT DETAILED INFORMATION

Source Information

AQUIFER:	**Mokulē'ia** System, North Sector, Oahu0
Sustainable Yield:	8 mgd
Existing Water Use Permits:	5 mgd
Available Allocation:	3 mgd
Total other pending applications:	2 mgd
This application:	0.081 mgd
WELL:	Hinshaw Skydiving (Well No. 3-3410-014)
Location:	Mokuleia, Oahu, TMK: (1) 6-8-003:009
Year Drilled:	
Casing Diameter:	6 in.
Elevations (msl= 0 ft.)	
Water Level:	16 ft.*
Ground:	10 ft.
Bottom of Solid Casing:	-400 ft.*
Bottom of Perforated:	-440 ft.*
Bottom of Open Hole:	ft.
Total Depth:	450 ft.*
Grouted Annulus Depth:	300 ft.*
Pump Capacity	70 gpm

* estimate based upon period during sugar irrigation; water level and subsequent boring, casing, and grout to be determined at time of drilling; standards to be followed at drilling. The history of drilling in this area is that boreholes pass through the consolidated alluvium along the coast to underlying basalt, often going from elevations of 10-200 feet down 400 feet and more. Artesian pressure has yielded water levels of 15 to 20 feet.

Exhibit 2 (Water Use Permit Detailed Information)

Staff Submittal
Hinshaw Well (Well No. 3-3410-014)

July 16, 2019

Use Information

Quantity Requested:	0.081 gallons per day.
New Type of Water Use:	agriculture
Place of Water Use:	TMK: (1) 6-8-003:009
Reported Water Usage:	0 gpd
Nearby Similar Water Usage:	0 gpd

Mokulēʻia Aquifer System
Current 12-Month Moving Average Withdrawal (See Exhibit 2): 0.341 mgd

Nearby Surrounding Wells and Other Registered Ground Water Use

There are 29 other wells within a mile of the well (see Exhibit 1). Five of these wells are currently in use, plus one observation well, the rest abandoned. Information from the registration program indicates there are possibly 118 existing wells in the Mokulēʻia Aquifer System. Several of these wells have been initially field checked but many of the declarants, including the larger users, have not been completely field verified. Several are not in use or are rights claims. Current 2019 reported existing ground water use from the Mokulēʻia Aquifer System is approximately 0.341 mgd. Of course, there are several users which are not in complete use to date.

Exhibit 2 (Water Use Permit Detailed Information)

Staff Submittal
Hinshaw Well (Well No. 3-3410-014)

July 16, 2019

Public Notice

In accordance with HAR §13-171-17, a public notice was published in the Honolulu Advertiser on 04/10/2019 and 04/10/2019 and a copy of the notice was sent to the Office of the Mayor. Copies of the completed application were sent to the Honolulu Board of Water Supply, Department of Planning and Permitting, Department of Health, Department of Hawaiian Home Lands, Office of Hawaiian Affairs, the various divisions within the Department of Land and Natural Resources, and other interested parties for comments. Written comments and objections to the proposed permit were to be submitted to the Commission by May 2, 2019.

Objections

The public notice specifies that an objector meet the following requirements: (1) state property or other interest in the matter; (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; (3) state all grounds for objections to the proposed permits, (4) provide a copy of the objection letter(s) to the applicant, and (5) submit objections meeting the previous requirements to the Commission by May 2, 2019.

To the best of staff's knowledge there are no objectors who have property interest within the Mokulē'ia Aquifer System or who will be directly and immediately affected by the proposed water use.

Briefs in Support

Responses to objections, or briefs in support, regarding the application are required to be filed with the Commission ten (10) days after an objection is filed and, presumably, copies are served to the applicant. No briefs in support were filed with the Commission.

PUBLIC NOTICE

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

The Commission on Water Resource Management received the following water use permit application. Public Notice is given pursuant to Hawaii Administrative Rules, Section 13-171, "Designation and Regulation of Water Management Areas."

WUPA No. 01086 Hinshaw Skydiving Well (Well No. 3-3410-014)

Applicant: Frank Hinshaw
1717 Ala Wai Blvd., #1106
Honolulu, HI 96815

Landowner: Frank Hinshaw
1717 Ala Wai Blvd., #1106
Honolulu, HI 96815

Date Application Filed as Complete: March 12, 2019
Hydrologic Unit / Aquifer System Area: Mokuleia System, North Sector, Oahu
Water Source: Hinshaw Skydiving Well (Well No. 3-3410-014), Tax Map Key (1) 6-8-003:009
Quantity Requested: 0.081 million gallons per day
New Use: Agriculture and individual domestic
Place of Water Use: At Tax Map Key: (1) 6-8-003:009

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 2, 2019. 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: April 1, 2019

Publish in: Honolulu Star Advertiser issues of April 10, 2019 and April 17, 2019

EXHIBIT 3: PUBLIC NOTICE

Water Use Permit

Island of Oahu

Aquifer System Ground Water Management Area: 30401 Mokuleia

Sustainable Yield (mgd): 8

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 Keena Point	0.018	0.000	0.018	04/30/2019
00052	09/02/1993	Waialua Sugar Company, Inc.	3-3411-004	Pump 5	2.550	0.000	2.550	03/31/2019
			3-3411-006	Pump 5		0.000		03/31/2019
			3-3411-007	Pump 5		0.000		03/31/2019
			3-3411-008	Pump 5		0.000		03/31/2019
			3-3411-009	Pump 5		0.000		03/31/2019
			3-3411-010	Pump 5		0.000		03/31/2019
			3-3411-011	Pump 5		0.000		03/31/2019
			3-3411-013	Pump 5		0.000		03/31/2019
00053	09/11/1981	Directorate of Public Works, Environmental Division, DPW, U.S. Army Garrison	3-3412-002	Dillingham Airfield	0.055	0.122	-0.067	05/03/2019
00669	02/18/2004	Hawaii Fish Company Inc	3-3412-004	Hawaii Fish Co. 1	0.576			04/30/2019
00679	01/13/2004	KAALA RANCH	3-3309-002	Mokuleia	0.127	0.000 1	0.127	02/08/2019
00765	07/12/2006	Mark Hamamoto (Mohala Farms)	3-3306-016	Hamamoto 2005	0.013	0.001	0.012	01/31/2019
00777	12/14/1988	Dillingham Ranch Aina LLC	3-3310-002	Mokuleia 2	0.650	0.000 2	0.650	04/30/2019
00779	09/11/1981	Dillingham Ranch Aina LLC	3-3410-003	Shop Well	1.500	0.056	1.444	04/30/2019
00813	09/11/1981	North Shore Water Company, LLC	3-3410-001	Crowbar Ranch	0.500	0.145	0.355	02/26/2019
00941	09/17/2003	Stanhope Farms	3-3308-002	Stanhope Farms	0.056	0.057	-0.001	04/27/2019
00984	08/11/2015	Koalia Farms	3-3412-006	Koalia Farms	0.009	0.000 3	0.009	08/01/2018
00998	09/16/2015	Candace Chase	3-3208-001	Chase	0.068	0.000 1	0.068	03/31/2019
01002	09/16/2015	Kalea Properties LLC	3-3308-003	Kalea 2012	0.029	0.000 1	0.029	01/05/2019
01010	01/28/2016	G Tree Ranch, LLC	3-3308-007	G Tree	0.056	3		05/09/2019
01011	01/28/2016	G Tree Ranch, LLC	3-3307-026	Paly	0.130	0.000 1	0.130	03/31/2019
01012	01/28/2016	G Tree Ranch, LLC	3-3307-019	Waialua-Mauka	0.081	0.004	0.077	05/09/2019
01013	01/28/2016	Ka'ala Ranch LLC	3-3307-030	Pielsch	0.462	0.000 1	0.462	04/30/2019
01044	07/10/2018	Pioneer Hi-Bred International, Inc	3-3307-031	Gay and Ranch Exploratory	0.530			02/26/2019
Summary for Mokuleia (26 detail records)				Total:	7.620	0.585	7.235	
				SY Available:	0.380			

1 - rounding affect; pumpage less than 5.000 gpd
2 - reporting "zero"
3 - too few records

Pending Water Use Permit

WUPA No	Well No	Applicant	Well Name		mgd	Received	Accept
Aquifer System 30401 Mokuleia							
1003	3-3410-001	North Shore Water Company, LLC	Crowbar Ranch	inactive	1.700	07/02/2015	
1003	3-3410-003	North Shore Water Company, LLC	Shop Well			07/02/2015	
1004		North Shore Water Company, LLC	Well 1	inactive	1.300	07/02/2015	
1004		North Shore Water Company, LLC	Well 2			07/02/2015	
1086	3-3410-014	Frank Hinshaw	Hinshaw Skydiving		0.091	02/06/2019	03/12/2019
				3 WUPAs totaling	3.091		

EXHIBIT 4: EXISTING WATER USE PERMITS AND PENDING APPLICATIONS

Commission on Water Resource Management

Monthly Pumpage Chart

12 Month Moving Average

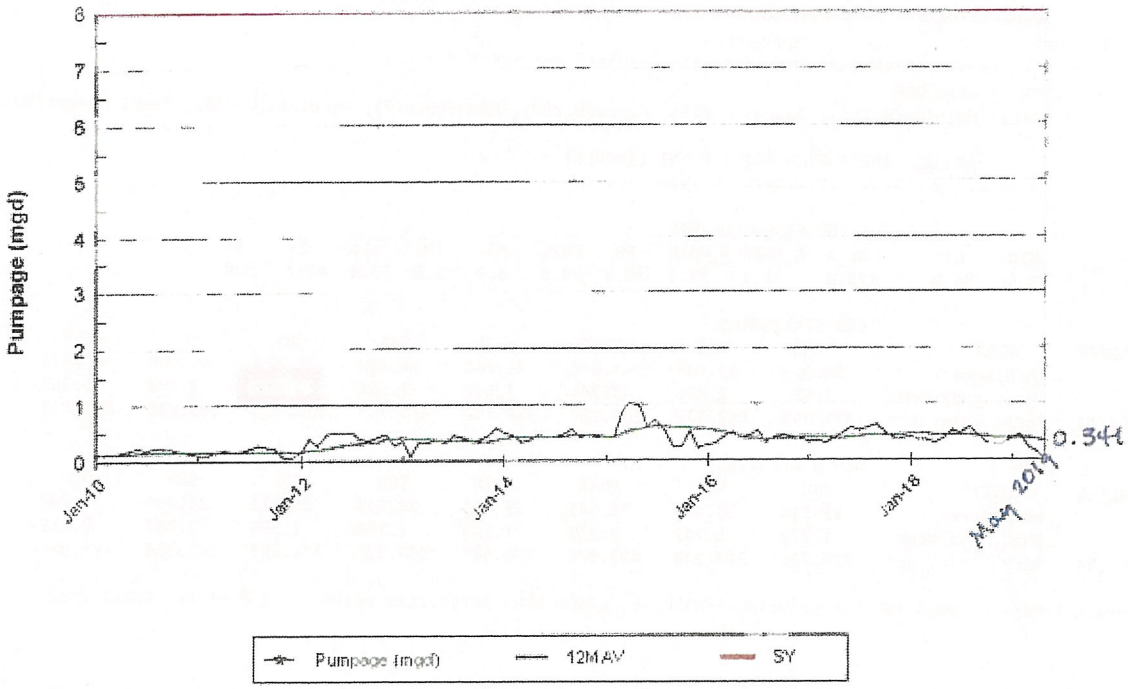


EXHIBIT 5: 12-MONTH MOVING AVERAGE WITHDRAWAL

TMK_68003009_Alfalfa - Notepad

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*****************************************************
*                    SUMMARY                        *
*****************************************************
TMK  : 68003009
SOILS: Haleiwa(0.151), Jaucas(0.013), Kaena(0.227), Kaena(0.072), Mokuleia(0.093), Pearl Harbor(0.448)

        ANNUAL  IRRIGATION REQUIREMENT (INCHES)
```

WATER BUDGET COMPONENTS

NIR	GIR	GAL_A	G_RAIN	N_RAIN	ER	ER21	RO	INT	ETo	ET	DR
23.8	34.0	923.8	38.1	27.3	19.3	20.9	8.9	1.8	53.4	44.7	8.0

GIR STATISTICS

ACRES	UNIT	MEAN	MED.	XMAX	XMIN	50%	80%	90%	95%
	inch/acre	34.020	33.448	43.630	22.740	34.428	38.303	40.080	41.439
	Thou. gpd/acre	2.531	2.488	3.246	1.692	2.561	2.850	2.982	3.083
186.14	Total thou. gpd	471.093	463.172	604.180	314.892	476.743	530.484	555.020	573.838

NIR STATISTICS

ACRES	UNIT	MEAN	MED.	XMAX	XMIN	50%	80%	90%	95%
	inch/acre	23.814	23.413	30.541	15.918	24.099	26.812	28.056	29.007
	Thou. gpd/acre	1.772	1.742	2.272	1.184	1.793	1.995	2.087	2.158
186.14	Total thou. gpd	329.765	324.228	422.926	220.425	333.720	371.283	388.514	401.686

Note:- Irrigated area for the selected SPRINKLER, LARGE GUNS irrigation system is 1.0 of the total area

EXHIBIT 6B: IWREDSS CALCULATIONS
(BERMUDA GRASS)

TMK_[illegible] Bermuda Notepad

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*****************************************************
*                      SUMMARY                      *
*****************************************************
TMK  : 68003009
SOILS: Haleiwa(0.151), Jaucas(0.013), Kaena(0.227), Kaena(0.022), Mokuleia(0.093), Pearl Harbor(0

      ANNUAL  IRRIGATION REQUIREMENT (INCHES)
 ------------------------------------------------------

                WATER BUDGET COMPONENTS
 NIR    GIR     GAL_A  G_RAIN N_RAIN   ER   ER21   RO    INT   ETo    ET    DR
 34.7   49.6    1347.0    38.1   26.9  18.7  25.8   8.9   2.2  53.4  53.5   8.2

                    GIR STATISTICS
ACRES     UNIT            MEAN      MED.      XMAX      XMIN      50%       80%       90%       95%
          inch/acre       49.687    49.645    63.599    31.053    50.260    55.152    57.374    59.063
          Thou. gpd/acre   3.691     3.693     4.731     2.318     3.739     4.103     4.268     4.394
186.14    Total thou. gpd 686.941   687.464   880.694   430.008   695.988   763.727   794.492   817.884

                    NIR STATISTICS
ACRES     UNIT            MEAN      MED.      XMAX      XMIN      50%       80%       90%       95%
          inch/acre       34.725    34.751    44.519    21.737    35.182    38.606    40.162    41.344
          Thou. gpd/acre   2.583     2.585     3.312     1.617     2.617     2.872     2.988     3.076
186.14    Total thou. gpd 480.859   481.275   616.486   301.006   487.191   534.609   556.144   572.519

Note:- Irrigated area for the selected SPRINKLER, LARGE GUNS irrigation system is 1.0 of the total area
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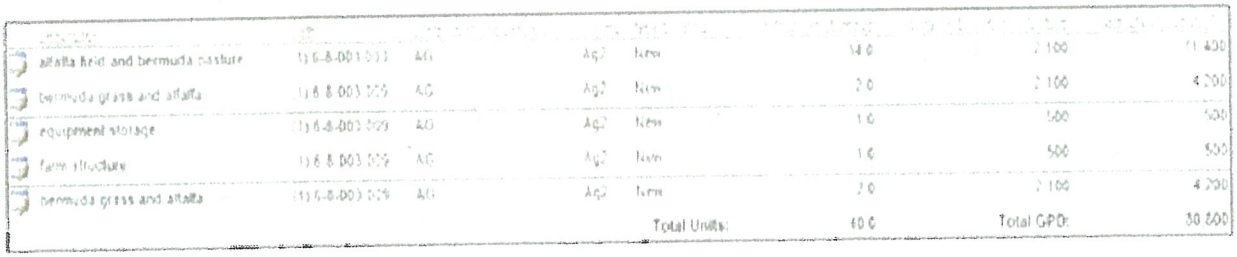
EXHIBIT 6B: IWREDSS CALCULATIONS
(BERMUDA GRASS)

Staff Submittal
Hinshaw Well (Well No. 3-3410-014)

July 16, 2019

USE	QUANTITY REQUESTED (MGD)	QUANTITY RECOMMENDED (MGD)
DOMESTIC	0	0
AGRICULTURAL	0	0
IRRIGATION	0.081	0.081
TOTAL	0.081	0.081



alfalfa field and bermuda pasture	(1) 6-8-003.003	AG	Ag2	New	14.0	2,100	71,400
bermuda grass and alfalfa	(1) 6-8-003.009	AG	Ag2	New	2.0	2,100	4,200
equipment storage	(1) 6-8-003.009	AG	Ag2	New	1.0	500	500
farm structure	(1) 6-8-003.009	AG	Ag2	New	1.0	500	500
bermuda grass and alfalfa	(1) 6-8-003.009	AG	Ag2	New	2.0	2,100	4,200
				Total Units:	40.0	Total GPD:	80,800

EXHIBIT 7: SUMMARY OF USE REQUEST AND RECOMMENDED ALLOCATIONS

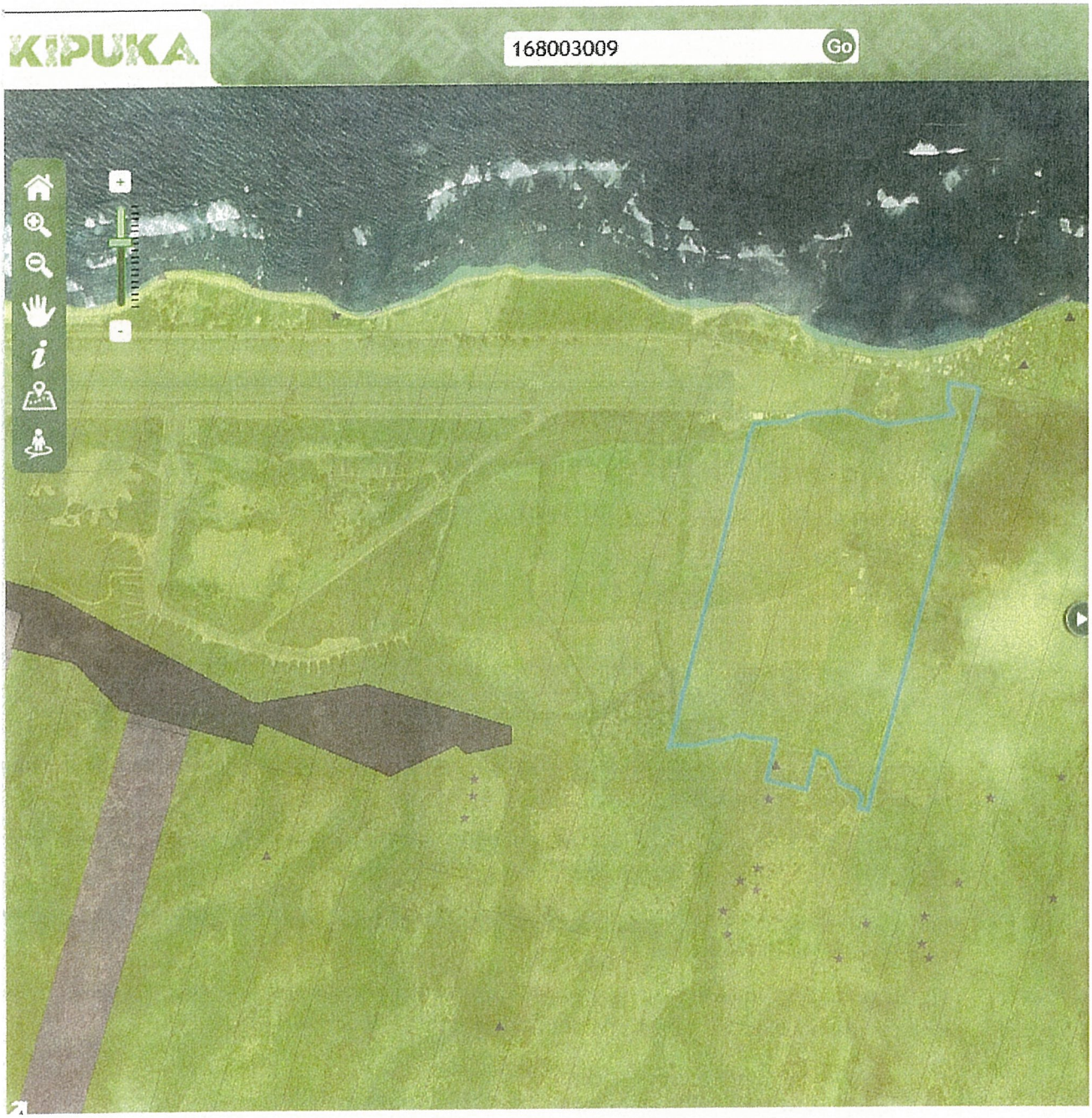


Exhibit 8 (OHA Kipuka database screenshot)

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 July16, 2019 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) need not 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 monthly basis (attached).

11. This permit shall be subject to the Commission's periodic review of the **Mokulē'ia** 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 **Mokulē'ia** 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 **Mokulē'ia** 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.

Staff Submittal
Hinshaw Well (Well No. 3-3410-014)

July 16, 2019

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/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 sixty (60) 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 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.

Exhibit 10: Well Construction Permit Standard Conditions

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.