



August 5, 2023

Kaleo Manuel, Deputy Director
State of Hawaii, Department of Land and Natural Resources,
Commission of Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Subject: Notice of Designation of Ground Water Management Areas
Lāhainā Aquifer Sector
Honokohau, Honolua, Honokowai, Launiupoko, Olowalu and Ukumehame Aquifer
System Areas, Maui, State of Hawaii

Application for Ground Water Use Permit for Existing Use

Well Nos.: 6-5537-001, 6-5537-002, 6-5540-001

TMKs: (2) 4-4-007-001, (2) 4-4-015-061

Aquifer System Area: Honokowai

CWRM.5962.6

Notice of Designation of Surface Water Management Areas

Honokohau, Honolua, Honokahua, Kahana, Honokowai, Wahikuli, Kahoma, Kauaula,
Launiupoko, Olowalu and Ukumehame Surface Hydrologic Units, Maui

**Application for Surface Water Use Permit for Existing Use in the Lahaina Aquifer Sector
Area, West Maui, Surface Water Management Areas**

File Reference: PIONEER MILL

Diversion No.: 959

TMK: (2) 4-4-007-001

Source: Kapaloa

Dear Deputy Director Manuel,

In response to the subject notices, please see the enclosed completed application forms (Form GWUPA-E) for the continuing use of three wells in Honokowai Aquifer and (Form SWUPA-E) Diversion No. 959 in (Honokowai) Kapaloa Valley.

Honokowai Water System: Honokowai Tunnel 1 (6-5537-001) and Honokowai Tunnel 2 (6-5537-02), and Diversion No. 959 (Kapaloa). Honokowai Tunnels 1 and 2 and Diversion No. 959 were developed along with other water resources a century ago to support thousands of acres of plantation agricultural lands in west Maui.

The development tunnels discharge ground water into the Honokowai Stream and augment surface flow, which is diverted by Diversion No. 959. We are concurrently submitting a groundwater

application for the tunnels and surface water application for Diversion 959. The use of these development tunnels and diversion continues today, transporting water by gravity flow in a series of open-channel ditches, tunnels, flumes, and pipelines to reservoirs for irrigation storage. Water is then distributed to large acres of agriculture fields, orchards, and pastures via underground piping with filtration units and utilizing primarily drip and sprinkler irrigation. This system is critical to sustain a wide range of agriculture on lands in the Honokowai area.

Land Use. Prior to recent statewide drought conditions, the Honokowai Tunnel wells, along with the interconnected supply of water from the Honokohau ditch, provided irrigation to approximately two thousand acres of agricultural lands in the Honokowai area. Agriculture in this area was able to diversify from sugar, anchored by coffee orchards and corn fields. Today, with the current drought conditions and the related effects of change to and by upstream users, the Honokohau ditch no longer flows continuously to the Honokowai area. This has drastically reduced the arable lands in the Honokowai area from two thousand acres to less than one thousand acres. The Honokowai Tunnel wells are now the sole resource supply of water to sustain the anchor coffee crop with bananas and other smaller plots of fruits and vegetables. A large portion of the corn fields have been forced to become pastureland for livestock.

Puukolii Well (6-5540-001). This well is situated near the Kaanapali Coffee Farms. It is the main source of water for irrigation of a large portion of the Kaanapali Golf Course.¹ The well discharges into two open reservoirs interconnected with an underground pipeline that extends water delivery to the golf course. Water from the well is also used in emergency community situations, including fire control.

KLM's Uses Are Consistent with the Public Interest, Do Not Interfere with DHHL and Do Not Interfere with Existing Uses (GWUPA Nos. 14, 16 and 17) (SWUPA Nos. 20, 21 and 22). As noted above, Puukolii Well water is used for irrigation. KLM uses the groundwater (Tunnels 1 and 2) and stream water (Diversion 959) via open ditches for agricultural purposes, including for crops (coffee, orchards and various fruits and vegetables) and to sustain livestock (and pasture). A smaller amount of the water is used for irrigation. Agricultural uses, including diversified agriculture, and irrigation are reasonable and beneficial uses. Additionally, the Water Code presumes that the uses are reasonable and beneficial because they are existing uses.

In 2018, CWRM approved DHHL's reservation of 0.770 mgd of groundwater to meet their foreseeable groundwater needs in the Honokowai Aquifer. See WMA Submittal at 30. Because DHHL is a public trust purpose, it is KLM's understanding that DHHL's use will be prioritized. Accordingly, KLM's use does not interfere with the rights of DHHL.

The sustainable yield of the Honokowai Aquifer is 6.0 mgd. As of December 2021, the average groundwater from the Aquifer was 4.008 mgd, including Puukolii Well and other active wells owned by the County of Maui, HWSC/Kaanapali and individual well owners. Taking together the 4.008 mgd for existing uses, DHHL reservation (0.770 mgd) and Honokowai Tunnels 1 and 2 (CWRM estimated in its Submittal the amount of 2.5 mgd) totals 7.28 mgd, or approximately 121% of the sustainable yield of the Aquifer. Because DHHL has not exercised its reservation, KLM's uses do not interfere with DHHL's use.

¹ Kaanapali Golf Course is also serviced by reclaimed (R1) water, which is supplied by the County WWRD. The County WWRD distribution system only reaches a portion of the golf course. The remainder of the golf course is serviced by the Puukolii Well.

In designating the Lahaina Sector as a water management area, the WMA FOF concluded that “there is lower hydraulic conductivity in the coastal alluvium and weathered basalt relative to the north-south conductivity of the basalt aquifer system that connects the Honokowai Aquifer System to the neighboring Honolua and Honokohau Aquifer System Areas.” WMA Submittal at 35. Based on this conclusion, the Honolua (SY 8) and Honokohau (SY 9) Aquifer Systems were also designated as water management areas, even though the percentage of use of the sustainable yield of those Systems is 56% and 42%, respectively. Therefore, the sustainable yield for these three Systems is a combined SY 23, and reported pumpage, development tunnel discharge and the DHHL reservation totals approximately 60% of the sustainable yield for these three Systems. Thus, KLM’s uses do not interfere with other existing uses located within these three Systems.

DHHL does not have a reservation of surface water from Honokowai Stream. Accordingly, KLM’s use of Honokowai Stream Water does not interfere with the rights of DHHL.

There are no other off-stream users as far as KLM is aware. Accordingly, KLM’s use of Honokowai Stream Water does not interfere with other off-stream existing uses.

Respectfully,



Chad Fukunaga
Vice President



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
APPLICATION FOR GROUND WATER USE PERMIT

For Official Use Only:

FORM GWUPA

- ☐ New Use
☐ Modification of WUP No. _____
☒ Existing Use

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

APPLICANT INFORMATION

1. APPLICANT INFORMATION			2. SOURCE LANDOWNER INFORMATION		
Name/Company	Kaanapali Land Management Corp	Contact Person	Jeff Rebugio	Name/Company	Kaanapali Land Management Corp
		Contact Person	Jeff Rebugio		
Mailing Address	275 Lahainaluna Road Lahaina, HI 96761		Mailing Address	275 Lahainaluna Road Lahaina, HI 96761	
Phone		Fax		Phone	
		E-mail			

SOURCE INFORMATION

3. ISLAND	Maui
4. AQUIFER SYSTEM AREA	Honokowai
4A. SUSTAINABLE YIELD FOR ITEM 4	6
	MGD

5. SOURCE INFORMATION
Attach additional sheets, if necessary.

Well Number (if known)	Well Name	Existing or Proposed?	TMK	Flowmeter installed?
5537-001	Honokowai Tunnel 1	Existing	4 - 4 - 007 : 001 zone sector plat parcel	<input checked="" type="checkbox"/> Yes, date installed ____ / ____ / ____ <input type="checkbox"/> No
5537-002	Honokowai Tunnel 2	Existing	4 - 4 - 007 : 001 zone sector plat parcel	<input checked="" type="checkbox"/> Yes, date installed ____ / ____ / ____ <input type="checkbox"/> No
5540-001	Puukolii Well	Existing	4 - 4 - 015 : 061 zone sector plat parcel	<input checked="" type="checkbox"/> Yes, date installed ____ / ____ / ____ <input type="checkbox"/> No
			zone - sector - plat : parcel	<input type="checkbox"/> Yes, date installed ____ / ____ / ____ <input type="checkbox"/> No
			zone - sector - plat : parcel	<input type="checkbox"/> Yes, date installed ____ / ____ / ____ <input type="checkbox"/> No
			zone - sector - plat : parcel	<input type="checkbox"/> Yes, date installed ____ / ____ / ____ <input type="checkbox"/> No

USE INFORMATION

6. TOTAL QUANTITY OF WATER REQUESTED: In the space below, enter total from Box M in Item 11 (Table 1) of this application. gallons per day, averaged over 1 year 4,468,583	
7. USE:	<input checked="" type="checkbox"/> Agriculture <input type="checkbox"/> Domestic <input type="checkbox"/> Industrial Check all that apply. <input checked="" type="checkbox"/> Irrigation <input type="checkbox"/> Military <input type="checkbox"/> Municipal
8. LOCATION OF WATER USE: Show the location of the use on a map, attached as a .pdf to this application. 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	10. SOURCE LANDOWNER/JOINT APPLICANT (if applicable)
Signature	Signature
Jeffrey Rebugio	Chad Fukunaga
Print Name	Print Name
8/4/2023	8/4/2023
Date	Date

USE INFORMATION

11. TABLE 1: LAND USE CONSISTENCY (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 (See the Instructions for water use category descriptions.)	TMK FOR LOCATION OF USE ATTACH THE FOLLOWING: • Property tax map, showing location of use referenced to established property boundaries. • Photograph of the area of use.			STATE LAND USE DISTRICT	CDUP REQUIRED? Check the appropriate box and write in the date approved, if applicable.	COUNTY ZONING CODE	SMAP REQUIRED? Check the appropriate box and write in the date approved, if applicable.	UNITS OR NET ACREAGE	GPD/UNIT or GPD/ACRE	QUANTITY OF USE (GPD)	JUSTIFICATION FOR QUANTITY OF WATER REQUESTED (If applicable attach additional sheets showing how the quantity was calculated.) For irrigation uses, fill in Table 2.
USES THAT REQUIRE POTABLE (DRINKING) WATER											
None	zone	-	-	:			<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
	zone	-	-	:			<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
	zone	-	-	:			<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
	zone	-	-	:			<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
TOTAL POTABLE USE											
K											
GPD											
USES THAT DO NOT REQUIRE POTABLE WATER											
See Appendix 1 for data.	zone	-	-	:			<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
See Appendix 5 for photos	zone	-	-	:			<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
See Appendix 6 for exhibit maps	zone	-	-	:			<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
	zone	-	-	:			<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
TOTAL NON-POTABLE USE											
L											
GPD											
TOTAL QUANTITY OF WATER REQUESTED (sum of total potable use and total non-potable use) =											
M											
GPD											

Please explain if there are any limitations (e.g., legal, contractual) on the proposed water use(s) described in Table 1. Ref. HRS § 174C-51(5).

See Appendix 4.

USE INFORMATION (continued)

12. TABLE 2: AGRICULTURE/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.

A TMK FOR LOCATION OF USE ATTACH THE FOLLOWING: • Property tax map with an outline around the area of each irrigation use listed in this table. • Photograph of the area of each use.			B CROP	C TOTAL ACREAGE	D NET IRRIGATED ACREAGE	E BEGIN GROWTH PERIOD (month)	F END GROWTH PERIOD (month)	G IRRIGATION SYSTEM (refer to instructions)	H IRRIGATION PRACTICE (refer to instructions)	I COMMENTS (Continue comments below, if more space is needed.)
zone	sector	plat	parcel							
	-	-	:							
zone	sector	plat	parcel							
	-	-	:							
zone	sector	plat	parcel							
	-	-	:							
zone	sector	plat	parcel							
	-	-	:							
zone	sector	plat	parcel							
	-	-	:							
zone	sector	plat	parcel							
	-	-	:							
zone	sector	plat	parcel							
	-	-	:							
zone	sector	plat	parcel							
	-	-	:							
zone	sector	plat	parcel							
	-	-	:							

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

See Appendix 4

OTHER PERTINENT INFORMATION

13. TABLE 3: ALTERNATIVES ANALYSIS

	A. Analysis of <i>potable</i> alternatives Attach additional sheets if necessary.	B. Analysis of <i>non-potable</i> alternatives Attach additional sheets if necessary.
Municipal sources	(Generally, potable water is not commonly encouraged as an alternative for non-potable water uses.)	Relative to the agriculture areas, there are no municipal water purveyors with a separate non-potable water supply and delivery system. Relative to the golf course areas, Kaanapali Golf Course is already being supplied by the County WWRD with reclaimed (R1) water to irrigate portions of the golf courses. See below, Wastewater reuse. County WWRD is working to expand its R1 delivery capacity, however, final integration to irrigate requires complex infrastructure changes within the golf course.
Wastewater reuse	n/a	The only wastewater reuse system is managed and operated by the County WWRD, and its distribution system only serves a portion of Kaanapali Golf Course.
Ditch system	n/a	The Honokohau ditch historically provided water to some of the use areas identified in this application. Ditch water no longer continuously flows beyond the County DWS's Mahinahina WTP intake. Honokohau stream (also a part of the designated water management area) is the main source of the ditch water. The Stream IFS has decreased the amount of water available to offstream users. KLM occasionally receives some ditch water (more or less during high ditch flow conditions). See SWUPA-E Honokohau Stream via Honokohau Ditch.
Desalinization	n/a	There is no desalinization system nearby. Permitting and developing such is not commonly recommended, cost prohibitive.
Surface water	n/a	See above, ditch system. KLM concurrently submits its SWUPA-E for its existing uses of Honokowai Stream. There are no alternative surface water sources available.
Other	n/a	n/a

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 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.*

Explain how the use in your application is consistent with items **[a]** and **[b]** above.

See Cover Letter

15. KA PA'AKAI ANALYSIS:

a. Please provide the identity and scope of cultural, historical, and natural resources in which traditional and customary Native Hawaiian rights are exercised in this area.

See Appendix 7

b. Identify the extent to which those resources, including traditional and customary Native Hawaiian rights, will be affected or impaired by the proposed action.

See Appendix 7

c. What feasible action, if any, could be taken to reasonably protect Native Hawaiian rights?

See Appendix 7

OTHER PERTINENT INFORMATION

16. INTERFERENCE WITH THE RIGHTS OF THE DEPARTMENT OF HAWAIIAN HOME LANDS
Explain how the use 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.

See Cover Letter

17. INTERFERENCE WITH ANY EXISTING LEGAL USES
Explain how the use of water will not interfere with any other existing legal use(s) of water.

See Cover Letter

18. EFFICIENCY

☐ If a water conservation plan was prepared, please attach to this application.

☒ If no water conservation plan was prepared, please explain how your use of water will be as efficient as possible.

Refer to Appendix 4

19. 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.

☒ If a Level-1 validated AWWA water loss audit was completed, please attach.

20. CHAPTER 343

This project proposes:

☐ Use of state or county lands, or use of state or county funds

☐ Use within a state conservation district

☐ Use within a shoreline setback area

☐ Use within a national or Hawaii registered historic site

☐ Use within the Waikiki Special District

☐ The construction, expansion or modification of helicopter facility

☐ A wastewater treatment unit

☐ Waste-to-energy facility

☐ Landfill

☐ Oil refinery

☐ Power-generating facility

☐ None of the above 11 items

☒ If none of the above 11 items are applicable, no 343 compliance is necessary

☐ 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:

21. TABLE 4: 12-MONTH AVERAGE CALCULATION AS OF THE DATE OF DESIGNATION. FOR EXISTING USES ONLY.

MM/YY	AVERAGE DAILY PUMPAGE FOR THE MONTH (GALLONS PER DAY)	Check one per row			
		Metered	Estimated	Active but unknown	Inactive
Refer to Appendix 3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

INSTRUCTIONS FOR FILLING OUT APPLICATION FOR GROUND WATER USE PERMIT

This application form is to be used for **both** existing uses in newly designated ground water management areas and proposed new uses, including modifications of existing ground water use permits.

Most questions can be addressed by visiting our website at <http://www.hawaii.gov/dlnr/cwrn> or by contacting the Ground Water Regulation Branch at 587-0225 or by e-mail at dlnr.cwrn@hawaii.gov.

The current application form link is here: <https://files.hawaii.gov/dlnr/cwrn/forms/GWUPA.pdf>

REQUIREMENTS FOR A COMPLETE APPLICATION

- a. Fill in the most recent application form. An updated fillable PDF can be found at <https://files.hawaii.gov/dlnr/cwrn/forms/GWUPA.pdf>
- b. We require a digital copy to be circulated for review. If you are unable to submit a digital copy, print in ink or type the information on the application form but be aware that there will be delays in processing your application.
- c. E-mail a PDF of the application to dlnr.cwrn@hawaii.gov A check for the non-refundable filing fee of \$25 payable to Department of Land and Natural Resources can be dropped off at 1151 Punchbowl Street, Room 227, Honolulu 96813, or mailed to P.O. Box 621, Honolulu, HI 96809. Please attach a printed copy to this filing fee check. Note that government agencies as applicants are not required to pay this filing fee.
- d. The applicant is responsible for paying the cost of publishing any required public notices associated with this application, and unlike the application fee, government agencies are *not* exempt from this. The cost for public notices is approximately \$1000.00. Commission staff will pay this fee up front and will provide instructions later regarding your reimbursement of this cost. Failure to reimburse the Commission will result in non-action on your water use permit application.
- e. Attach photos showing the well source(s), meter(s) (if applicable), and end use area(s).
- f. The water user and the landowner of the source location (“source landowner”) must sign the application form.

INSTRUCTIONS FOR COMPLETING THE APPLICATION FORM

PAGE 1

APPLICANT INFORMATION

In accordance with the Hawaii Water Code, both the applicant and the person who owns the property where the water source is located are required to apply for a water use permit. §174C-51(1)(B), HRS, states, *In the event a lessee, licensee, developer, or any other person with a terminable interest or estate in the land, which is the water source of the permitted water, applies for a water permit, the landowner shall also be stated as a joint applicant for the water permit.*

- 1. **APPLICANT INFORMATION** Fill in the applicant’s contact information. This should be the person who will be responsible for all conditions of the water use permit. If this is for multiple sources and it doesn’t fit on the table, please attach a separate sheet listing these sources.
- 2. **SOURCE LANDOWNER INFORMATION** Fill in the information for the landowner of the property where the proposed ground water source (e.g., well, modified spring, tunnel, shaft, etc.) is located. If this is for multiple sources and different landowners, please attach a separate sheet listing these landowners and their acknowledgement regarding this application.

SOURCE INFORMATION

- 3. **ISLAND** Indicate the island on which the source is located.
- 4. **AQUIFER SYSTEM AREA** The name of the aquifer system area where the source is located. <https://dlnr.hawaii.gov/cwrn/info/maps/>
- 4A. **SUSTAINABLE YIELD** The sustainable yield for the aquifer system area.
- 5. **SOURCE INFORMATION**
 - **WELL NUMBER** If the source already has a state-assigned well number, enter the state well number here.
 - **WELL NAME** If the source has a name, enter the name here. Otherwise, assign a short name that will differentiate it from other wells. This should be the same as the name listed on the accompanying well construction / pump installation permit application, where applicable.
 - **SOURCE TMK** Fill in the current Tax Map Key number of the parcel on which the source resides.
 - **FLOWMETER INFORMATION** You must have a flowmeter to accurately indicate that your water usage is in compliance with your proposed approved allocation. Check either “Yes” or “No.” If you answer “Yes,” write in the date the flowmeter was installed month/day/year in the space provided. The definition of a working flowmeter is a water meter with a totalizer that gives the total quantity of water used from a source.

WATER USE INFORMATION

- 6. **TOTAL QUANTITY OF WATER REQUESTED** Enter the amount of water requested as gallons per day (GPD) averaged over one year from Box M of Table 1.
- 7. **USE(S)** Check all the boxes that apply for the use. Refer to the instructions for Table 1: Land Use Consistency/Efficiency of Use, Item 1: Purpose/Water Use Category below to determine which water use categories to use.
- 8. **LOCATION OF WATER USE(S)** Show the location of the use on a map. This is essential for agricultural uses and will be attached to your water use permit, if approved.

APPLICANT SIGNATURES REQUIRED

- 9. **APPLICANT** The applicant must sign and date the application.
- 10. **SOURCE LANDOWNER** The source landowner must also sign and date the application.

PAGE 2

USE INFORMATION

Note that you will need to fill out each section for potable and non-potable needs separately. This means that even though your source is defined as potable, you may have end use needs that don’t require potable water, such as landscape irrigation. This will help the Commission determine whether or not non-potable alternatives are available for your non-potable needs.

- 11. **Table 1: USE INFORMATION** Provide information on all of the uses you are applying for or seeking to modify to. In the space provided below the table or on a separate sheet, explain whether there are any limitations [e.g., a contract or other legal agreement(s)] on your water use(s), as required by §174C-51(5), HRS.

A. PURPOSE / WATER USE CATEGORY For each purpose of use, choose one of the categories listed in the table below and enter the appropriate code in the space provided (e.g., AGRAQ, IRRGC, etc.)

AGRICULTURE AGRAQ Aquatic Plants & Animals AGRCP Crops & Processing AGRLI Livestock & Processing, and Pasture AGRON Ornamental & Nursery Plants AGROTH Other	DOMESTIC DOM Single & Multi Low-Rise & High-Rise Household DOMN Domestic (Non-residential) DOMNCB Commercial Businesses DOMNRI Religious Institutions DOMNHOS Hospitals DOMNHOT Hotels DOMNOB Office buildings DOMNOTH Domestic Non-Residential - Other DOMNSC Schools
IRRIGATION IRRGC Golf Course IRRHM Habitat Maintenance IRRHOT Hotel IRRLA Landscape/Water Features IRROTH Other IRRPCA Parks IRRSC Schools	INDUSTRIAL INDEL Geothermal, Thermoelectric Cooling, Power Development INDFP Fire Protection INDMI Mining, Dust Control INDOTH Industrial – Other
MILITARY MIL Military	MUNICIPAL MUNCO County MUNPR Privately-owned but defined as public water system by MUNST DOH State

- B. USE TMK** Enter the tax map key (TMK) number for the parcel of land over which the use is applied. There should only be one parcel for each line. Also, attach:
- C. STATE LAND USE DISTRICT** Write in the name of the current land use district. To find the Land Use District, contact the Land Use Commission at (808) 587-3822.
- D. CDUP REQUIRED?** Check the appropriate box. If a Conservation District Use Permit (CDUP) is required and you have a CDUP applicable to this project, check “Yes” and write in the date approved in the space provided (month/day/year). If your parcel is in a conservation district, as indicated in Column C of this table, contact the Office of Conservation and Coastal Lands at (808) 587-0328 to find out if a CDUP is required.
- E. COUNTY ZONING CODE** To find out the County Zoning Code for Oahu, contact the City and County of Honolulu at 768-8041. For Maui County, contact at 270-7253.
- F. SMAP REQUIRED?** Check the appropriate box. If a Special Management Area Permit (SMAP) is required, and you have an SMAP applicable to this project, check “Yes” and write in the date approved in the space provided (month/day/year). To find out if your parcel is in a Special Management Area and requires an SMAP, for Oahu contact the City and County of Honolulu Department of Planning and Permitting or for Maui County contact the Planning Department.
- G. UNITS or NET ACREAGE** This is the total number of units or the net number of acres as a basis for calculating your requested allocation. “Unit” can mean a dwelling unit, number of people, acres, number of animals, etc. Some examples of units or acreages to enter in this column would be 400 dwelling units, 500 people, or 3.74 acres.
- H. GPD/UNIT or GPD/ACRE** (GPD = gallons per day) Enter the gallons per day per unit (GPD/unit) or gallons per day per acre (GPD/acre) for each water use category listed in Column A.
- I. QUANTITY OF USE** Enter the quantity of water use in gallons per day (GPD). Justification (see Column J) for the quantity requested may depend on the information provided in columns G and H of this table.
- J. JUSTIFICATION FOR QUANTITY OF WATER REQUESTED** Explain how you are justifying the quantity of water requested for each use, in Column I of this table. Attach additional sheets, if necessary, showing how the proposed quantity was calculated. For all proposed irrigation uses, you are required to also complete Item 12 (Table 2) of the application.
- K. TOTAL POTABLE USE NEEDS** Add the quantities listed in the Column I for proposed potable water use. Enter the total quantity in gallons per day (GPD) in Box K.
- L. TOTAL NON-POTABLE USE NEEDS** Add the quantities listed in Column I for proposed uses that do not require potable water. Enter the total quantity of proposed non-potable water use in gallons per day (GPD) in Box L.
- M. TOTAL QUANTITY OF WATER REQUESTED** Add the totals in Box K and Box L, and enter the sum in Box M. The quantity in Box M should be the same as the amount entered under Item 6 on the page 1 of the application.

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12. TABLE 2: AGRICULTURE/IRRIGATION INFORMATION

On Table 2, provide the information requested for all of the plant types or other needs such as aquaculture, etc. Enter only one plant and one parcel number (TMK) per line. For multiple crops, list each one as a separate line item. All uses you are applying for must be listed. Attach additional copies of Table 2, if necessary.

- A. TMK FOR LOCATION OF USE** Enter the parcel number where the crop is/will be grown. Also, attach a map with an outline around the area(s) of use(s) and a photograph of each area of proposed use.
- B. CROP** Enter the crop type
- C. TOTAL ACREAGE** Enter the total acreage of the parcel listed.
- D. NET IRRIGATED ACREAGE** Enter the acreage that the specific crop will be grown.
- E. BEGIN GROWTH PERIOD (MONTH)** This is the month of the start of the growth cycle.
- F. END GROWTH PERIOD (MONTH)** This is the month of the end of the growth cycle.
- G. IRRIGATION SYSTEM** Enter one of the following:
- TRICKLE, DRIP
TRICKLE, SPRAY
MULTIPLE SPRINKLERS

SPRINKLER, CONTAINER NURSERY
SPRINKLER, LARGE GUNS
SEEPAGE, SUBIRRIGATION
CROWN FLOOD
FLOOD (TARO)
OTHER – Please describe in the space provided for comments (Column I and/or below the table).

- H. IRRIGATION PRACTICE** Enter one of the following:
IRRIGATE TO FIELD CAPACITY
APPLY A FIXED DEPTH PER IRRIGATION
DEFICIT IRRIGATION
OTHER – Please describe in the space provided for comments (Column I and/or below the table).

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13. TABLE 3: ALTERNATIVES ANALYSIS

You should address every alternative and explain why each alternative is or is not available for your potable and non-potable water needs. Note that simple “not available” answers are not acceptable. If the alternative is not feasible, please explain.

Municipal sources Please contact your County’s Department of Water Supply to identify if a municipal source is available to supply water to your area of need.

Wastewater reuse Please contact your County’s Wastewater Division to identify if reuse water is available to supply water to your area of need.

Ditch system Please identify whether a ditch system is available to supply water to your area of need. You can contact the Department of Agriculture, but you should also identify private ditch systems and the availability of that source as well.

Desalinization Please explain why drilling a well deeper or finding an alternative source of saline water and desalinizing is not a feasible alternative.

Surface water is defined in §174C-3, HRS as: *...both contained surface water—that is, water upon the surface of the earth in bounds created naturally or artificially including, but not limited to, streams, other watercourses, lakes, reservoirs, and coastal waters subject to state jurisdiction—and diffused surface water—that is, water occurring upon the surface of the ground other than in contained waterbodies. Water from natural springs is surface water when it exits from the spring onto the earth’s surface.*

Other Other alternatives may include stormwater reclamation, rainwater catchment, or other alternatives not already listed above.

14. PUBLIC INTEREST

Explain in the space provided or on a separate sheet why the use(s) on your application are consistent with the public interest.

15. KA PA’AKAI ANALYSIS

In the case of Ka Pa’akai O Ka’Aina vs. the Land Use Commission, State of Hawaii, it was determined that an analysis must be conducted for the following items:

- a. The identification and scope of cultural, historical, and natural resources in which traditional and customary Native Hawaiian rights are exercised in the area.
- b. The identification of the extent to which those resources listed in item a., including traditional and customary Native Hawaiian rights, will be affected or impaired by the proposed action.
- c. The determination of the feasible action, if any, that could be taken to reasonably protect Native Hawaiian rights.

PAGE 5

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

Explain in the space provided or on a separate sheet how the 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. To inquire about potential interference, you may contact the Department of Hawaiian Home Lands main line at 620-9500, or the DHHL Planning Office at 620-9480. You may also visit their website at dhhl.hawaii.gov, where you can review DHHL’s Island Plans, Regional Plans, and their Water Policy Plan.

The State Water Code in §174C-101(a), HRS [Native Hawaiian water rights], states: *Provisions of this chapter shall not be construed to amend or modify rights or entitlements to water as provided for by the Hawaiian Homes Commission Act, 1920, as amended, and by chapters 167 and 168, relating to the Molokai irrigation system. Decisions of the commission on water resource management relating to the planning for, regulation, management, and conservation of water resources in the State shall, to the extent applicable and consistent with other legal requirements and authority, incorporate and protect adequate reserves of water for current and foreseeable development and use of Hawaiian home lands as set forth in section 221 of the Hawaiian Homes Commission Act.*

17. INTERFERENCE WITH ANY EXISTING LEGAL USES

Explain in the space provided or on a separate sheet how the use(s) of water will not interfere with any other existing legal use(s) of water.

18. EFFICIENCY

A **conservation plan** should describe any conservation measures that will be used to ensure that your water use is or will be efficient, and is different from a water shortage plan. Conservation measures may include, but are not limited to, water reuse or recycling systems, monitoring the water distribution system for pressure drops that are indicative of leaks or line breaks, or use of drought-tolerant and xeriscape landscape plants.

19. PUBLIC WATER SYSTEM INFORMATION

Check the appropriate box or boxes relating to your water system.

20. **CHAPTER 343** If an Environmental Assessment was completed, fill in the dates of publication and acceptance. For additional information about the proposed uses checkboxes, refer to http://luc.state.hi.us/docs/hrs_343.pdf
21. **TABLE 4: 12-MONTH MOVING AVERAGE CALCULATION AS OF THE DATE OF DESIGNATION. FOR EXISTING USES ONLY.**
- For existing use permit applications, list the pumpage for the 12 months prior to designation. Also identify how that measurement was taken.

APPENDIX 1

Use Information

Reference:

Item 11, Table 1: Land Use Consistency

Application for Ground Water Use Permit for Existing Use

Well Nos.: 6-5537-001, 6-5537-002, 6-5540-001

TMKs: (2) 4-4-007-001, (2) 4-4-015-061

Aquifer System Area: Honokowai

Line

11 Use InformationTable 1

	A	B	C	D	E	F	G	H	I	J	K		
5	Land use Consistency (Table 1)						Efficiency of Use		NP	P			
6	P / NP	Purpose	TMK	SLUD	CDUP	Zoning	SMAP	Units/Ac	GPD/Unit/Ac	avg GPD	avg GPD	Sub-metered	Justification
7	NP	AGRCP	44004013 Ag	No	Ag	No		35.79 ac	5819	208,267	-	N	Coffee orchard; 1 5 ac-in/wk
8	NP	AGRCP	44004013 Ag	No	Ag	No		26.22 ac	5819	152,578	-	N	Coffee orchard; 1 5 ac-in/wk
9	NP	AGRCP	44004013 Ag	No	Ag	No		0.44 ac	5819	2,560	-	N	Citrus orchard; 1.5 ac-in/wk
10	NP	AGRCP	44002002 Ag	No	Ag	No		57.73 ac	5819	335,939	-	N	Coffee orchard; 1 5 ac-in/wk
11	NP	AGRCP	44002002 Ag	No	Ag	No		52.41 ac	5819	304,982	-	N	Coffee orchard; 1 5 ac-in/wk
12	NP	AGRCP	44002002 Ag	No	Ag	No		78.59 ac	5819	457,327	-	N	Coffee orchard; 1 5 ac-in/wk
13	NP	AGRCP	44002002 Ag	No	Ag	No		52.57 ac	5819	305,913	-	N	Coffee orchard; 1 5 ac-in/wk
14	NP	AGRCP	44002002 Ag	No	Ag	No		1.02 ac	5819	5,936	-	N	Citrus orchard; 1.5 ac-in/wk
15	NP	AGRCP	44002002 Ag	No	Ag	No		1 un	4000	4,000	-	N	Farm ops (process/cleaning)
16	NP	AGRCP	44015038 U	No	Ag	No		0 945 ac	5819	5,499	-	N	Coffee orchard; 1 5 ac-in/wk
17	NP	AGRLI	44015039 U	No	Ag	No		1.65 un	2020	3,333	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
18	NP	AGRLI	44015040 U	No	Ag	No		6.22 un	2020	12,564	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
19	NP	AGRLI	44015041 U	No	Ag	No		14.20 un	2020	28,684	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
20	NP	AGRLI	44015042 U	No	Ag	No		10.97 un	2020	22,159	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
21	NP	AGRLI	44015043 U	No	Ag	No		11.59 un	2020	23,412	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
22	NP	AGRLI	44015044 U	No	Ag	No		18.00 un	2020	36,360	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
23	NP	AGRLI	44015045 U	No	Ag	No		17.72 un	2020	35,794	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
24	NP	AGRLI	44015046 U	No	Ag	No		1.88 un	2020	3,798	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
25	NP	AGRCP	44015048 U	No	Ag	No		2.28 ac	5819	13,268	-	N	Coffee orchard; 1 5 ac-in/wk
26	NP	AGRLI	44015051 U	No	Ag	No		1.67 un	2020	3,373	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
27	NP	AGRLI	44015052 U	No	Ag	No		0.89 un	2020	1,798	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
28	NP	AGRLI	44015053 U	No	Ag	No		2.71 un	2020	5,474	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
29	NP	AGRLI	44015054 U	No	Ag	No		8.04 un	2020	16,241	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
30	NP	AGRLI	44015055 U	No	Ag	No		6.96 un	2020	14,059	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
31	NP	AGRLI	44015056 U	No	Ag	No		10.13 un	2020	20,463	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
32	NP	AGRLI	44015057 U	No	Ag	No		13.40 un	2020	27,068	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
33	NP	AGRLI	44015058 U	No	Ag	No		8.11 un	2020	16,382	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
34	NP	AGRLI	44015059 U	No	Ag	No		1.34 un	2020	2,707	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
35	NP	AGRLI	44015060 U	No	Ag	No		0.03 un	2020	61	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
36	NP	IRRLA	44015066 U	No	Ag	No		0.42 ac	1940	810	-	N	Landscape/grass irrig ~0.5 ac-in/wk
37	NP	IRRLA	44002041 Ag	No	Ag	No		0.48 ac	1940	926	-	N	Landscape/grass irrig ~0.5 ac-in/wk
38	NP	AGRLI	44015067 U	No	Ag	No		2.58 un	2020	5,212	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
39	NP	AGRLI	44015068 U	No	Ag	No		1.97 un	2020	3,979	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
40	NP	AGRLI	44015069 U	No	Ag	No		2.23 un	2020	4,505	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
41	NP	AGRLI	44015070 U	No	Ag	No		1.01 un	2020	2,040	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
42	NP	AGRLI	44015072 U	No	Ag	No		1.23 un	2020	2,485	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
43	NP	AGRCP	44020001 Ag	No	Ag	No		3.1 ac	5819	18,039	-	N	Coffee orchard; 1 5 ac-in/wk
44	NP	IRRLA	44020001 Ag	No	Ag	No		1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
45	NP	AGRCP	44020002 Ag	No	Ag	No		3.48 ac	5819	20,251	-	N	Coffee orchard; 1 5 ac-in/wk
46	NP	IRRLA	44020002 Ag	No	Ag	No		1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
47	NP	AGRCP	44020003 Ag	No	Ag	No		4.03 ac	5819	23,451	-	N	Coffee orchard; 1 5 ac-in/wk
48	NP	AGRCP	44020004 Ag	No	Ag	No		2.91 ac	5819	16,934	-	N	Coffee orchard; 1 5 ac-in/wk
49	NP	IRRLA	44020004 Ag	No	Ag	No		1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
50	NP	AGRCP	44020005 Ag	No	Ag	No		2.1 ac	5819	12,220	-	N	Coffee orchard; 1 5 ac-in/wk

Line

11 Use InformationTable 1

	A	B	C	D	E	F	G	H	I	J	K		
5	Land use Consistency (Table 1)						Efficiency of Use		NP	P			
6	P / NP	Purpose	TMK	SLUD	CDUP	Zoning	SMAP	Units/Ac	GPD/Unit/Ac	avg GPD	avg GPD	Sub-metered	Justification
51	NP	IRRLA	44020005	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
52	NP	AGRCP	44020006	Ag	No	Ag	No	4.71 ac	5819	27,408	-	N	Coffee orchard; 1 5 ac-in/wk
53	NP	AGRCP	44020007	Ag	No	Ag	No	3.31 ac	5819	19,261	-	N	Coffee orchard; 1 5 ac-in/wk
54	NP	IRRLA	44020007	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
55	NP	AGRCP	44020008	Ag	No	Ag	No	2.03 ac	5819	11,813	-	N	Coffee orchard; 1 5 ac-in/wk
56	NP	IRRLA	44020008	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
57	NP	IRROTH	44020009	Ag	No	Ag	No	1.5 ac	970	1,455	-	N	General use/maintenance
58	NP	AGRCP	44020010	Ag	No	Ag	No	1.2 ac	5819	6,983	-	N	Coffee orchard; 1 5 ac-in/wk
59	NP	IRRLA	44020010	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
60	NP	AGRCP	44020011	Ag	No	Ag	No	3.94 ac	5819	22,927	-	N	Coffee orchard; 1 5 ac-in/wk
61	NP	IRRLA	44020011	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
62	NP	AGRCP	44020012	Ag	No	Ag	No	3.83 ac	5819	22,287	-	N	Coffee orchard; 1 5 ac-in/wk
63	NP	AGRCP	44020013	Ag	No	Ag	No	2.27 ac	5819	13,209	-	N	Coffee orchard; 1 5 ac-in/wk
64	NP	AGRCP	44020014	Ag	No	Ag	No	3.44 ac	5819	20,018	-	N	Coffee orchard; 1 5 ac-in/wk
65	NP	AGRCP	44020015	Ag	No	Ag	No	1.08 ac	5819	6,285	-	N	Coffee orchard; 1 5 ac-in/wk
66	NP	IRRLA	44020015	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
67	NP	AGRCP	44020016	Ag	No	Ag	No	0.76 ac	5819	4,423	-	N	Coffee orchard; 1 5 ac-in/wk
68	NP	IRRLA	44020016	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
69	NP	AGRCP	44020017	Ag	No	Ag	No	3.08 ac	5819	17,923	-	N	Coffee orchard; 1 5 ac-in/wk
70	NP	AGRCP	44020018	Ag	No	Ag	No	2.39 ac	5819	13,908	-	N	Coffee orchard; 1 5 ac-in/wk
71	NP	AGRCP	44020019	Ag	No	Ag	No	2.73 ac	5819	15,886	-	N	Coffee orchard; 1 5 ac-in/wk
72	NP	IRRLA	44020019	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
73	NP	AGRCP	44020020	Ag	No	Ag	No	2.14 ac	5819	12,453	-	N	Coffee orchard; 1 5 ac-in/wk
74	NP	IRRLA	44020020	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
75	NP	AGRCP	44020021	Ag	No	Ag	No	3.66 ac	5819	21,298	-	N	Coffee orchard; 1 5 ac-in/wk
76	NP	AGRCP	44020022	Ag	No	Ag	No	1.86 ac	5819	10,824	-	N	Coffee orchard; 1 5 ac-in/wk
77	NP	IRRLA	44020022	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
78	NP	AGRCP	44020023	Ag	No	Ag	No	4.33 ac	5819	25,197	-	N	Coffee orchard; 1 5 ac-in/wk
79	NP	AGRCP	44020024	Ag	No	Ag	No	2.67 ac	5819	15,537	-	N	Coffee orchard; 1 5 ac-in/wk
80	NP	IRRLA	44020024	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
81	NP	AGRCP	44020025	Ag	No	Ag	No	3.47 ac	5819	20,192	-	N	Coffee orchard; 1 5 ac-in/wk
82	NP	AGRCP	44020026	Ag	No	Ag	No	1.1 ac	5819	6,401	-	N	Coffee orchard; 1 5 ac-in/wk
83	NP	IRRLA	44020026	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
84	NP	AGRCP	44020027	Ag	No	Ag	No	1.43 ac	5819	8,321	-	N	Coffee orchard; 1 5 ac-in/wk
85	NP	IRRLA	44020027	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
86	NP	AGRCP	44020028	Ag	No	Ag	No	1.95 ac	5819	11,347	-	N	Coffee orchard; 1 5 ac-in/wk
87	NP	IRRLA	44020028	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
88	NP	AGRCP	44020029	Ag	No	Ag	No	2.51 ac	5819	14,606	-	N	Coffee orchard; 1 5 ac-in/wk
89	NP	AGRCP	44020030	Ag	No	Ag	No	1.81 ac	5819	10,533	-	N	Coffee orchard; 1 5 ac-in/wk
90	NP	IRRLA	44020030	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
91	NP	AGRCP	44020031	Ag	No	Ag	No	3.14 ac	5819	18,272	-	N	Coffee orchard; 1 5 ac-in/wk
92	NP	AGRCP	44020032	Ag	No	Ag	No	3.02 ac	5819	17,574	-	N	Coffee orchard; 1 5 ac-in/wk
93	NP	AGRCP	44020033	Ag	No	Ag	No	2.75 ac	5819	16,003	-	N	Coffee orchard; 1 5 ac-in/wk
94	NP	AGRCP	44020034	Ag	No	Ag	No	1.79 ac	5819	10,416	-	N	Coffee orchard; 1 5 ac-in/wk

Line

11 Use InformationTable 1

	A	B	C	D	E	F	G	H	I	J	K		
5	Land use Consistency (Table 1)				Efficiency of Use				NP	P			
6	P / NP	Purpose	TMK	SLUD	CDUP	Zoning	SMAP	Units/Ac	GPD/Unit/Ac	avg GPD	avg GPD	Sub-metered	Justification
95	NP	IRRLA	44020034	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
96	NP	AGRCP	44020035	Ag	No	Ag	No	2.83 ac	5819	16,468	-	N	Coffee orchard; 1 5 ac-in/wk
97	NP	IRRLA	44020035	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
98	NP	AGRCP	44020036	Ag	No	Ag	No	1.79 ac	5819	10,416	-	N	Coffee orchard; 1 5 ac-in/wk
99	NP	IRRLA	44020036	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
100	NP	AGRCP	44020037	Ag	No	Ag	No	1.69 ac	5819	9,834	-	N	Coffee orchard; 1 5 ac-in/wk
101	NP	IRRLA	44020037	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
102	NP	AGRCP	44020038	Ag	No	Ag	No	1.82 ac	5819	10,591	-	N	Coffee orchard; 1 5 ac-in/wk
103	NP	IRRLA	44020038	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
104	NP	AGRCP	44020039	Ag	No	Ag	No	1.54 ac	5819	8,961	-	N	Coffee orchard; 1 5 ac-in/wk
105	NP	IRRLA	44020039	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
106	NP	AGRCP	44020040	Ag	No	Ag	No	1.72 ac	5819	10,009	-	N	Coffee orchard; 1 5 ac-in/wk
107	NP	IRRLA	44020040	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
108	NP	AGRCP	44020041	Ag	No	Ag	No	2.49 ac	5819	14,490	-	N	Coffee orchard; 1 5 ac-in/wk
109	NP	IRRLA	44020041	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
110	NP	AGRCP	44020042	Ag	No	Ag	No	4.37 ac	5819	25,430	-	N	Coffee orchard; 1 5 ac-in/wk
111	NP	AGRCP	44020043	Ag	No	Ag	No	1.95 ac	5819	11,347	-	N	Coffee orchard; 1 5 ac-in/wk
112	NP	AGRCP	44020044	Ag	No	Ag	No	1.06 ac	5819	6,168	-	N	Coffee orchard; 1 5 ac-in/wk
113	NP	IRRLA	44020044	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
114	NP	AGRCP	44020045	Ag	No	Ag	No	1.88 ac	5819	10,940	-	N	Coffee orchard; 1 5 ac-in/wk
115	NP	AGRCP	44020046	Ag	No	Ag	No	3.11 ac	5819	18,098	-	N	Coffee orchard; 1 5 ac-in/wk
116	NP	AGRCP	44020047	Ag	No	Ag	No	3.57 ac	5819	20,774	-	N	Coffee orchard; 1 5 ac-in/wk
117	NP	AGRCP	44020048	Ag	No	Ag	No	1.39 ac	5819	8,089	-	N	Coffee orchard; 1 5 ac-in/wk
118	NP	IRRLA	44020048	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
119	NP	AGRCP	44020049	Ag	No	Ag	No	2.4 ac	5819	13,966	-	N	Coffee orchard; 1 5 ac-in/wk
120	NP	IRRLA	44020049	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
121	NP	AGRCP	44020050	Ag	No	Ag	No	2.21 ac	5819	12,860	-	N	Coffee orchard; 1 5 ac-in/wk
122	NP	IRRLA	44020050	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
123	NP	AGRCP	44020051	Ag	No	Ag	No	3.53 ac	5819	20,542	-	N	Coffee orchard; 1 5 ac-in/wk
124	NP	IRRLA	44020051	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
125	NP	AGRCP	44020052	Ag	No	Ag	No	3.7 ac	5819	21,531	-	N	Coffee orchard; 1 5 ac-in/wk
126	NP	IRRLA	44020052	Ag	No	Ag	No	1 ac	2300	2,300	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
127	NP	AGRCP	44020053	Ag	No	Ag	No	8.91 ac	5819	51,849	-	N	Coffee orchard; 1 5 ac-in/wk
128	NP	IRRLA	44020061	Ag	No	Ag	No	0.66 ac	1940	1,274	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
129	NP	IRRLA	44020062	Ag	No	Ag	No	5.70 ac	1940	11,057	-	N	Landscape irrig; ~0.5 ac-in/wk, ref water agreemen
130	NP	AGRCP	44002003	Ag	No	Ag	No	15.09 ac	5819	87,811	-	N	Coffee orchard; 1 5 ac-in/wk
131	NP	AGRCP	44002008	Ag	No	Ag	No	11.81 ac	5819	68,724	-	N	Coffee orchard; 1 5 ac-in/wk
132	NP	AGRLI	44006087	Ag	No	Ag	No	2.88 un	20	58	-	N	Livestock (non-irrig); 20gpd/head
133	NP	AGRCP	44002039	Ag	No	R3	No	6.07 ac	3879	23,548	-	N	fruits/veg/taro; ~1 ac-in/wk
134	NP	AGRCP	44002039	Ag	No	R3	No	11.98 ac	4849	58,095	-	N	Banana; ~1.25 ac-in/wk
135	NP	AGRCP	44002051	Ag	No	R3	No	1.91 ac	4849	9,262	-	N	Banana; ~1.25 ac-in/wk
136	NP	AGRCP	44002051	Ag	No	R3	No	5.96 ac	3879	23,121	-	N	fruits/veg/taro; ~1 ac-in/wk
137	NP	AGRCP	44002045	Ag, U	No	Ag, R3	No	3.75 ac	4849	18,185	-	N	Banana; ~1.25 ac-in/wk
138	NP	AGRCP	44002049	Ag	No	R3	No	4.74 ac	4849	22,986	-	N	Banana; ~1.25 ac-in/wk

Line

11 Use Information

Table 1

	A	B	C	D	E	F	G	H	I	J	K		
	Land use Consistency (Table 1)						Efficiency of Use		NP	P			
	P / NP	Purpose	TMK	SLUD	CDUP	Zoning	SMAP	Units/Ac	GPD/Unit/Ac	avg GPD	avg GPD	Sub-metered	Justification
139	NP	AGRCP	44002049 Ag	No	R3	No		0.33 ac	3879	1,280	-	N	fruits/veg; ~1 ac-in/wk
140	NP	IRRLA	44002049 Ag	No	R3	No		0.45 ac	2300	1,035	-	N	Landscape irrig; ~0.5 ac-in/wk
141	NP	AGRCP	44002050 Ag	No	R3	No		2.66 ac	4849	12,899	-	N	Banana; ~1.25 ac-in/wk
142	NP	AGRCP	44002050 Ag	No	R3	No		0.18 ac	3879	698	-	N	fruits/veg; ~1 ac-in/wk
143	NP	AGRON	44002050 Ag	No	R3	No		2.93 ac	3879	11,367	-	N	Ornamental/other; ~1 ac-in/wk
144	NP	AGRON	44002050 Ag	No	R3	No		0.1 ac	1940	194	-	N	Ornamental/other; ~0.5 ac-in/wk
145	NP	AGRCP	44002040 Ag	No	R3	No		2.76 ac	3879	10,707	-	N	fruits/veg; ~1 ac-in/wk
146	NP	AGRLI	44002040 Ag	No	R3	No		22.35 un	2005	44,812	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
147	NP	AGRLI	44002048 Ag, U	No	Ag, R3	No		19.91 un	2005	39,920	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
148	NP	IRRLA	44002053 Ag, U	No	Ag, R3	No		4.29 ac	1940	8,313	-	N	Landscape/grass irrig/constr; ~0.5 ac-in/wk
149	NP	AGRCP	44006086 Ag	No	Ag	No		4.94 ac	5819	28,747	-	N	Coffee orchard; 1 5 ac-in/wk
150	NP	AGRLI	44006086 Ag	No	Ag	No		13.75 un	2020	27,775	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
151	NP	AGRCP	44006070 Ag	No	Ag	No		10.31 ac	5819	59,995	-	N	Coffee orchard; 1 5 ac-in/wk
152	NP	AGRCP	44006070 Ag	No	Ag	No		20.5 ac	3879	79,528	-	N	fruits/veg; ~1 ac-in/wk
153	NP	AGRLI	44006070 Ag	No	Ag	No		151.76 un	2020	306,555	-	N	Livestock, partial pasture irrig ~0.5 ac-in/wk
154	NP	AGRLI	44006070 Ag	No	Ag	No		17.00 un	20	340	-	N	Livestock (non-irrig); 20gpd/head
155	NP	AGRLI	44006084 Ag	No	Ag	No		4.93 un	20	99	-	N	Livestock (non-irrig); 20gpd/head
156	NP	AGRLI	44006001 Ag	No	Ag	No		9.91 un	20	198	-	N	Livestock (non-irrig); 20gpd/head
157	NP	IRRG	44006010 U	No	R3	No		60.7 ac	4267	259,030	-	N	Golf course irrig
158	NP	IRRG	44006009 U	No	R3	No		63.6 ac	4267	271,405	-	N	Golf course irrig
159													
160									L	K			
161										4,468,583	-		
162											M		
163								Total _requested			4,468,583		

APPENDIX 2

Use Information

Reference:

Item 12, Table 2: Agriculture/Irrigation Information

Application for Ground Water Use Permit for Existing Use

Well Nos.: 6-5537-001, 6-5537-002, 6-5540-001

TMKs: (2) 4-4-007-001, (2) 4-4-015-061

Aquifer System Area: Honokowai

Line

1 12 Use Information2 Table 2: Agriculture / Irrigation Information

3

4

5	A	B	C	D	E	F	G	H
6	TMK	Crop	Total Ac	Net Irrig Ac	Begin Grow	End Grow	Irrig Sys	Irrig Practice
7	44004013	Coffee	347.08	35.79	Jan	Dec	Trickle, Drip	Apply fixed depth
8	44004013	Coffee	347.08	26.22	Jan	Dec	Trickle, Drip	Apply fixed depth
9	44004013	Citrus	347.08	0.44	Jan	Dec	Trickle, Drip	Apply fixed depth
10	44002002	Coffee	295.48	57.73	Jan	Dec	Trickle, Drip	Apply fixed depth
11	44002002	Coffee	295.48	52.41	Jan	Dec	Trickle, Drip	Apply fixed depth
12	44002002	Coffee	295.48	78.59	Jan	Dec	Trickle, Drip	Apply fixed depth
13	44002002	Coffee	295.48	52.57	Jan	Dec	Trickle, Drip	Apply fixed depth
14	44002002	Citrus	295.48	1.02	Jan	Dec	Trickle, Drip	Apply fixed depth
15	44015038	Coffee	7.36	0.945	Jan	Dec	Trickle, Drip	Apply fixed depth
16	44015039	Pasture	1.87	1.65	Jan	Dec	Multiple Sprinklers	Apply fixed depth
17	44015040	Pasture	6.22	6.22	Jan	Dec	Multiple Sprinklers	Apply fixed depth
18	44015041	Pasture	14.2	14.2	Jan	Dec	Multiple Sprinklers	Apply fixed depth
19	44015042	Pasture	10.97	10.97	Jan	Dec	Multiple Sprinklers	Apply fixed depth
20	44015043	Pasture	11.59	11.59	Jan	Dec	Multiple Sprinklers	Apply fixed depth
21	44015044	Pasture	18	18	Jan	Dec	Multiple Sprinklers	Apply fixed depth
22	44015045	Pasture	18.53	17.72	Jan	Dec	Multiple Sprinklers	Apply fixed depth
23	44015046	Pasture	14.65	1.88	Jan	Dec	Multiple Sprinklers	Apply fixed depth
24	44015048	Coffee	3.21	2.28	Jan	Dec	Trickle, Drip	Apply fixed depth
25	44015051	Pasture	6.45	1.67	Jan	Dec	Multiple Sprinklers	Apply fixed depth
26	44015052	Pasture	5.46	0.89	Jan	Dec	Multiple Sprinklers	Apply fixed depth
27	44015053	Pasture	3.67	2.71	Jan	Dec	Multiple Sprinklers	Apply fixed depth
28	44015054	Pasture	8.04	8.04	Jan	Dec	Multiple Sprinklers	Apply fixed depth
29	44015055	Pasture	6.96	6.96	Jan	Dec	Multiple Sprinklers	Apply fixed depth
30	44015056	Pasture	10.13	10.13	Jan	Dec	Multiple Sprinklers	Apply fixed depth
31	44015057	Pasture	13.4	13.4	Jan	Dec	Multiple Sprinklers	Apply fixed depth
32	44015058	Pasture	8.11	8.11	Jan	Dec	Multiple Sprinklers	Apply fixed depth
33	44015059	Pasture	1.34	1.34	Jan	Dec	Multiple Sprinklers	Apply fixed depth
34	44015060	Pasture	0.58	0.03	Jan	Dec	Multiple Sprinklers	Apply fixed depth

Line

1 12 Use Information2 Table 2: Agriculture / Irrigation Information

3

4

5	A	B	C	D	E	F	G	H
6	TMK	Crop	Total Ac	Net Irrig Ac	Begin Grow	End Grow	Irrig Sys	Irrig Practice
35	44015066	Landscape	1.48	0.417	815 Jan	Dec	Multiple Sprinklers	Apply fixed depth
36	44002041	Landscape	2.28	0.477	502 Jan	Dec	Multiple Sprinklers	Apply fixed depth
37	44015067	Pasture	5.75	2.58	Jan	Dec	Multiple Sprinklers	Apply fixed depth
38	44015068	Pasture	4.47	1.97	Jan	Dec	Multiple Sprinklers	Apply fixed depth
39	44015069	Pasture	2.23	2.23	Jan	Dec	Multiple Sprinklers	Apply fixed depth
40	44015070	Pasture	1.01	1.01	Jan	Dec	Multiple Sprinklers	Apply fixed depth
41	44015072	Pasture	1.23	1.23	Jan	Dec	Multiple Sprinklers	Apply fixed depth
42	44020001	Coffee	5.13	3.1	Jan	Dec	Trickle, Drip	Apply fixed depth
43	44020001	Landscape	5.13	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
44	44020002	Coffee	5.06	3.48	Jan	Dec	Trickle, Drip	Apply fixed depth
45	44020002	Landscape	5.06	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
46	44020003	Coffee	5.22	4.03	Jan	Dec	Trickle, Drip	Apply fixed depth
47	44020004	Coffee	5.12	2.91	Jan	Dec	Trickle, Drip	Apply fixed depth
48	44020004	Landscape	5.12	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
49	44020005	Coffee	5.58	2.1	Jan	Dec	Trickle, Drip	Apply fixed depth
50	44020005	Landscape	5.58	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
51	44020006	Coffee	5.45	4.71	Jan	Dec	Trickle, Drip	Apply fixed depth
52	44020007	Coffee	8.32	3.31	Jan	Dec	Trickle, Drip	Apply fixed depth
53	44020007	Landscape	8.32	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
54	44020008	Coffee	5.72	2.03	Jan	Dec	Trickle, Drip	Apply fixed depth
55	44020008	Landscape	5.72	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
56	44020009	Landscape	7.98	1.5	Jan	Dec	Other: Hose Bibb	Occasional
57	44020010	Coffee	4.42	1.2	Jan	Dec	Trickle, Drip	Apply fixed depth
58	44020010	Landscape	4.42	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
59	44020011	Coffee	6.44	3.94	Jan	Dec	Trickle, Drip	Apply fixed depth
60	44020011	Landscape	6.44	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
61	44020012	Coffee	5.04	3.83	Jan	Dec	Trickle, Drip	Apply fixed depth
62	44020013	Coffee	4.69	2.27	Jan	Dec	Trickle, Drip	Apply fixed depth

Line

1 12 Use Information2 Table 2: Agriculture / Irrigation Information

3

4

5	A	B	C	D	E	F	G	H
6	TMK	Crop	Total Ac	Net Irrig Ac	Begin Grow	End Grow	Irrig Sys	Irrig Practice
63	44020014	Coffee	4.58	3.44	Jan	Dec	Trickle, Drip	Apply fixed depth
64	44020015	Coffee	5.75	1.08	Jan	Dec	Trickle, Drip	Apply fixed depth
65	44020015	Landscape	5.75	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
66	44020016	Coffee	4.08	0.76	Jan	Dec	Trickle, Drip	Apply fixed depth
67	44020016	Landscape	4.08	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
68	44020017	Coffee	4.27	3.08	Jan	Dec	Trickle, Drip	Apply fixed depth
69	44020018	Coffee	5.45	2.39	Jan	Dec	Trickle, Drip	Apply fixed depth
70	44020019	Coffee	5.33	2.73	Jan	Dec	Trickle, Drip	Apply fixed depth
71	44020019	Landscape	5.33	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
72	44020020	Coffee	4.95	2.14	Jan	Dec	Trickle, Drip	Apply fixed depth
73	44020020	Landscape	4.95	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
74	44020021	Coffee	4.9	3.66	Jan	Dec	Trickle, Drip	Apply fixed depth
75	44020022	Coffee	4.65	1.86	Jan	Dec	Trickle, Drip	Apply fixed depth
76	44020022	Landscape	4.65	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
77	44020023	Coffee	5.04	4.33	Jan	Dec	Trickle, Drip	Apply fixed depth
78	44020024	Coffee	5.64	2.67	Jan	Dec	Trickle, Drip	Apply fixed depth
79	44020024	Landscape	5.64	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
80	44020025	Coffee	5.46	3.47	Jan	Dec	Trickle, Drip	Apply fixed depth
81	44020026	Coffee	5.65	1.1	Jan	Dec	Trickle, Drip	Apply fixed depth
82	44020026	Landscape	5.65	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
83	44020027	Coffee	4.98	1.43	Jan	Dec	Trickle, Drip	Apply fixed depth
84	44020027	Landscape	4.98	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
85	44020028	Coffee	4.46	1.95	Jan	Dec	Trickle, Drip	Apply fixed depth
86	44020028	Landscape	4.46	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
87	44020029	Coffee	4.14	2.51	Jan	Dec	Trickle, Drip	Apply fixed depth
88	44020030	Coffee	4.74	1.81	Jan	Dec	Trickle, Drip	Apply fixed depth
89	44020030	Landscape	4.74	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
90	44020031	Coffee	4.93	3.14	Jan	Dec	Trickle, Drip	Apply fixed depth

Line

1 12 Use Information2 Table 2: Agriculture / Irrigation Information

3

4

5	A	B	C	D	E	F	G	H
6	TMK	Crop	Total Ac	Net Irrig Ac	Begin Grow	End Grow	Irrig Sys	Irrig Practice
91	44020032	Coffee	4.95	3.02	Jan	Dec	Trickle, Drip	Apply fixed depth
92	44020033	Coffee	4.04	2.75	Jan	Dec	Trickle, Drip	Apply fixed depth
93	44020034	Coffee	4.32	1.79	Jan	Dec	Trickle, Drip	Apply fixed depth
94	44020034	Landscape	4.32	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
95	44020035	Coffee	5.19	2.83	Jan	Dec	Trickle, Drip	Apply fixed depth
96	44020035	Landscape	5.19	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
97	44020036	Coffee	4.47	1.79	Jan	Dec	Trickle, Drip	Apply fixed depth
98	44020036	Landscape	4.47	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
99	44020037	Coffee	4.58	1.69	Jan	Dec	Trickle, Drip	Apply fixed depth
100	44020037	Landscape	4.58	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
101	44020038	Coffee	4.03	1.82	Jan	Dec	Trickle, Drip	Apply fixed depth
102	44020038	Landscape	4.03	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
103	44020039	Coffee	3.66	1.54	Jan	Dec	Trickle, Drip	Apply fixed depth
104	44020039	Landscape	3.66	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
105	44020040	Coffee	4.77	1.72	Jan	Dec	Trickle, Drip	Apply fixed depth
106	44020040	Landscape	4.77	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
107	44020041	Coffee	5.82	2.49	Jan	Dec	Trickle, Drip	Apply fixed depth
108	44020041	Landscape	5.82	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
109	44020042	Coffee	5.42	4.37	Jan	Dec	Trickle, Drip	Apply fixed depth
110	44020043	Coffee	6.37	1.95	Jan	Dec	Trickle, Drip	Apply fixed depth
111	44020044	Coffee	4.8	1.06	Jan	Dec	Trickle, Drip	Apply fixed depth
112	44020044	Landscape	4.8	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
113	44020045	Coffee	5.57	1.88	Jan	Dec	Trickle, Drip	Apply fixed depth
114	44020046	Coffee	3.88	3.11	Jan	Dec	Trickle, Drip	Apply fixed depth
115	44020047	Coffee	4.23	3.57	Jan	Dec	Trickle, Drip	Apply fixed depth
116	44020048	Coffee	5.08	1.39	Jan	Dec	Trickle, Drip	Apply fixed depth
117	44020048	Landscape	5.08	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
118	44020049	Coffee	6.62	2.4	Jan	Dec	Trickle, Drip	Apply fixed depth

Line

1 12 Use Information2 Table 2: Agriculture / Irrigation Information

3

4

5	A	B	C	D	E	F	G	H
6	TMK	Crop	Total Ac	Net Irrig Ac	Begin Grow	End Grow	Irrig Sys	Irrig Practice
119	44020049	Landscape	6.62	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
120	44020050	Coffee	5.1	2.21	Jan	Dec	Trickle, Drip	Apply fixed depth
121	44020050	Landscape	5.1	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
122	44020051	Coffee	7.86	3.53	Jan	Dec	Trickle, Drip	Apply fixed depth
123	44020051	Landscape	7.86	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
124	44020052	Coffee	6.36	3.7	Jan	Dec	Trickle, Drip	Apply fixed depth
125	44020052	Landscape	6.36	1	Jan	Dec	Sprinkler, Drip	Apply fixed depth
126	44020053	Coffee	55.31	8.91	Jan	Dec	Trickle, Drip	Apply fixed depth
127	44020061	Landscape	1.02	0.656566	Jan	Dec	Multiple Sprinklers	Apply fixed depth
128	44020062	Landscape	10.48	5.700184	Jan	Dec	Multiple Sprinklers	Apply fixed depth
129	44002003	Coffee	165.21	15.09	Jan	Dec	Trickle, Drip	Apply fixed depth
130	44002008	Coffee	86.28	11.81	Jan	Dec	Trickle, Drip	Apply fixed depth
131	44006087	Livestock	43.7	0	Jan	Dec	Multiple Sprinklers	Apply fixed depth
132	44002039	Banana, taro, etc	108.61	6.07	Jan	Dec	Trickle, Drip	Apply fixed depth
133	44002039	Banana	108.61	11.98	Jan	Dec	Trickle, Drip	Apply fixed depth
134	44002051	Banana	18.54	1.91	Jan	Dec	Trickle, Drip	Apply fixed depth
135	44002051	peanut, taro, etc	18.54	5.96	Jan	Dec	Trickle, Drip	Apply fixed depth
136	44002045	Banana	29.73	3.75	Jan	Dec	Trickle, Drip	Apply fixed depth
137	44002049	Banana	25.59	4.74	Jan	Dec	Trickle, Drip	Apply fixed depth
138	44002049	beans, squash, etc	25.59	0.33	Jan	Dec	Trickle, Drip	Apply fixed depth
139	44002049	Landscape	25.59	0.45	Jan	Dec	Multiple Sprinklers	Apply fixed depth
140	44002050	Banana	25.11	2.66	Jan	Dec	Trickle, Drip	Apply fixed depth
141	44002050	peanut, pumpkin, etc	25.11	0.18	Jan	Dec	Trickle, Drip	Apply fixed depth
142	44002050	Ornamental	25.11	2.93	Jan	Dec	Multiple Sprinklers	Apply fixed depth
143	44002050	Ornamental	25.11	0.1	Jan	Dec	Trickle, Drip	Apply fixed depth
144	44002040	potato, banana, etc	59.85	2.76	Jan	Dec	Trickle, Drip	Apply fixed depth
145	44002040	Pasture	59.85	22.35	Jan	Dec	Multiple Sprinklers	Apply fixed depth
146	44002048	Pasture	25.09	19.91	Jan	Dec	Multiple Sprinklers	Apply fixed depth

Line

1 12 Use Information2 Table 2: Agriculture / Irrigation Information

3

4

5	A	B	C	D	E	F	G	H
6	TMK	Crop	Total Ac	Net Irrig Ac	Begin Grow	End Grow	Irrig Sys	Irrig Practice
147	44002053	Landscape	15.05	4.285583	Jan	Dec	Multiple Sprinklers	Apply fixed depth
148	44006086	Coffee	36.6	4.94	Jan	Dec	Trickle, Drip	Apply fixed depth
149	44006086	Livestock	36.6	13.75	Jan	Dec	Multiple Sprinklers	Apply fixed depth
150	44006070	Coffee	441.62	10.31	Jan	Dec	Trickle, Drip	Apply fixed depth
151	44006070	avocado, banana, etc	441.62	20.5	Jan	Dec	Trickle, Drip	Apply fixed depth
152	44006070	Pasture	441.62	151.76	Jan	Dec	Multiple Sprinklers	Apply fixed depth
153	44006010	golf course	60.7	60.7	Jan	Dec	Multiple Sprinklers	Apply fixed depth
154	44006009	golf course	63.6	63.6	Jan	Dec	Multiple Sprinklers	Apply fixed depth

APPENDIX 3

Other Pertinent Information

Reference:

Item 21, Table 4: 12-Month Average Calculation as of the
Date of Designation

Application for Ground Water Use Permit for Existing Use

Well Nos.: 6-5537-001, 6-5537-002, 6-5540-001

TMKs: (2) 4-4-007-001, (2) 4-4-015-061

Aquifer System Area: Honokowai

Line						
1	<u>21 Table 4: 12-mo avg calc</u>		Honokowai Tunnels		Puukolii Well	
2		Mo-YY	5537-001	5537-002	5540-001	Total
3		Aug-21	3828449		500293	4328742
4		Sep-21	3458976		500293	3959269
5		Oct-21	3645615		500293	4145908
6		Nov-21	3066864		500293	3567157
7		Dec-21	2984609		500293	3484902
8		Jan-22	2817615		592725	3410340
9		Feb-22	2845903		316891	3162794
10		Mar-22	2839401		510459	3349861
11		Apr-22	3626784		409825	4036609
12		May-22	3434679		580003	4014682
13		Jun-22	2953008		601492	3554500
14		Jul-22	4045750		500293	4546043
15						
16		Totals	39547654		6013153	45560806

APPENDIX 4

Supplemental Notes to the following:

Item 5: Source Information

Item 7: Use

Item 11, Table 11: Land Use Consistency

Item 12, Table 2: Agriculture/Irrigation Information

Item 18: Efficiency

Item 21, Table 4: 12-Month Average Calculation

Application for Ground Water Use Permit for Existing Use

Well Nos.: 6-5537-001, 6-5537-002, 6-5540-001

TMKs: (2) 4-4-007-001, (2) 4-4-015-061

Aquifer System Area: Honokowai

Appendix 4

Supplemental Notes for State DLNR-CWRM, Form GWUPA

Applicant: Kaanapali Land Management Corp

Aquifer System Area: Honokowai

1. Item 5, Flow Measurement Information, Well Nos. 5537-001 and 5537-002
Previous communications with CWRM Staff resulted in a recommended location for a point of measure to be the Honokowai ditch tunnel outlet just prior and upstream of the first ditch branch-off (to Hanakao Reservoir). A pressure transducer instrument was recently (July 2023) installed to record water depth, combined with a rectangular weir, translates water level to flow.
2. Item 5, Flow Measurement Information, Well No. 5540-01
Last replacement flow meter installation is circa September 2021.
3. Item 7, Use. The water is also used for wildfire protection.
4. Item 11, Table 1, Limitations.
 - a. Related to item 21 and to further clarify, the existing use information reflects the changes made to the agricultural uses in response to the current drought conditions.
 - b. Kaanapali Coffee Farms subdivision, a working coffee farm that includes contract farming included a water delivery agreement. The water use application rates were established with many years of experience in growing coffee orchards to maximize crop yields. These rates are also limited by the irrigation infrastructure, flow restricted by pipe size, filtration and primarily drip-irrigate.
 - c. The identified use areas are made arable by underground irrigation system and primarily drip-irrigated.
5. Item 12, Table 2, Comments:
 - a. Redundant to and in support of Item 11.a. noted above, the existing use information reflects the changes made to the agricultural uses in response to the current drought conditions. The drought forced an adjustment of agricultural use, essentially suspending certain crop growing areas and replacing them with pasture for livestock.
 - b. Notwithstanding the shift from crop growing to pasture, the Honokohau ditch water, supplemented on occasion by the Honokowai Water System, is used to pasture irrigate a large area. Since the Honokohau ditch no longer flows continuously, and given the on-going drought conditions, for the purpose of quantifying water used for pasture irrigation, 2000 gpd/acre is used. This is 25% of the estimated amount referenced in the State Department of Agriculture's Agricultural Water Use and Development Plan (AWUDP 2019 Update) for full (100%) pasture irrigation and that would support a 1 head to 1 acre of livestock. 2000 gpd/acre is a reasonable application rate given the practical means of pasture irrigation to such a large area. In other words, 25% of full irrigated pasture is a reasonable representation to address an intermittent to no-supply condition

yet provide for some livestock. The practice of varying livestock heads and partial irrigation to varying areas provides the best alternative and prevents waste of the water.

6. Item 18, Efficiency, checked box (statement of efficiency)
 - Use of drip irrigation is the primary method of irrigation.
 - Avoid sprinkler irrigation during midday and in high winds to reduce evaporative loss.
 - Utilize more efficient sprinkler head types and adjust system pressure to avoid “misting.”
 - Active farming operations include dedicated personnel assigned to irrigation, including daily monitoring, maintenance, and repairs/replacement to minimize leaks and inefficiencies.
 - An established, fixed irrigation schedule is followed, that includes adjusting for rainy conditions.
 - Maintain stock of common irrigation material for better preparedness of repairs.
 - Actively monitor systems and practice preventive maintenance.

7. Item 21, Table 4. The average daily pumpage information provided is for the specific 12-month period indicated on the application form. Please consider that Maui (and statewide) has been experiencing extreme drought conditions for a prolonged period that forced changes to the various agriculture uses. This pumpage information is perhaps less than normal which has suspended plans to expand agriculture.

[end]

APPENDIX 5

Photos of:

- Well Sources
- Meter
- End Use Areas

Application for Ground Water Use Permit for Existing Use

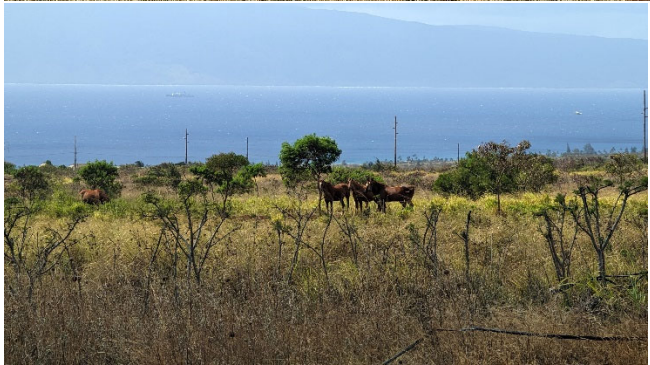
Well Nos.: 6-5537-001, 6-5537-002, 6-5540-001

TMKs: (2) 4-4-007-001, (2) 4-4-015-061

Aquifer System Area: Honokowai

Appendix 5

TMK: 4-4-015- 034 thru 072



Appendix 5

TMK: 4-4-020- 001 thru 053



Appendix 5

TMK: 4-4-002-002



Appendix 5

TMK: 4-4-002-039



TMK: 4-4-002-040



TMK: 4-4-02-045



Appendix 5

TMK: 4-4-002-048



TMK: 4-4-002-049



TMK: 4-4-002-050



Appendix 5

TMK: 4-4-002-051



TMK: 4-4-002-053



Appendix 5

TMK: 4-4-004-013



Appendix 5

TMK: 4-4-006-070



Appendix 5

TMK: 4-4-006-070



Appendix 5

TMK: 4-4-006-070



TMK: 4-4-006-086



Appendix 5

TMK: 4-4-007-001

Honokowai Tunnel No. 1 (5537-001)



TMK: 4-4-007-001

Honokowai Tunnel No. 2 (5537-002)



Appendix 5

TMK: 4-4-004-001

Honokowai Tunnel Weir



Appendix 5

TMK: 4-4-015-061

Puukolii Well (5540-001)



APPENDIX 6

Use Area Map Exhibits

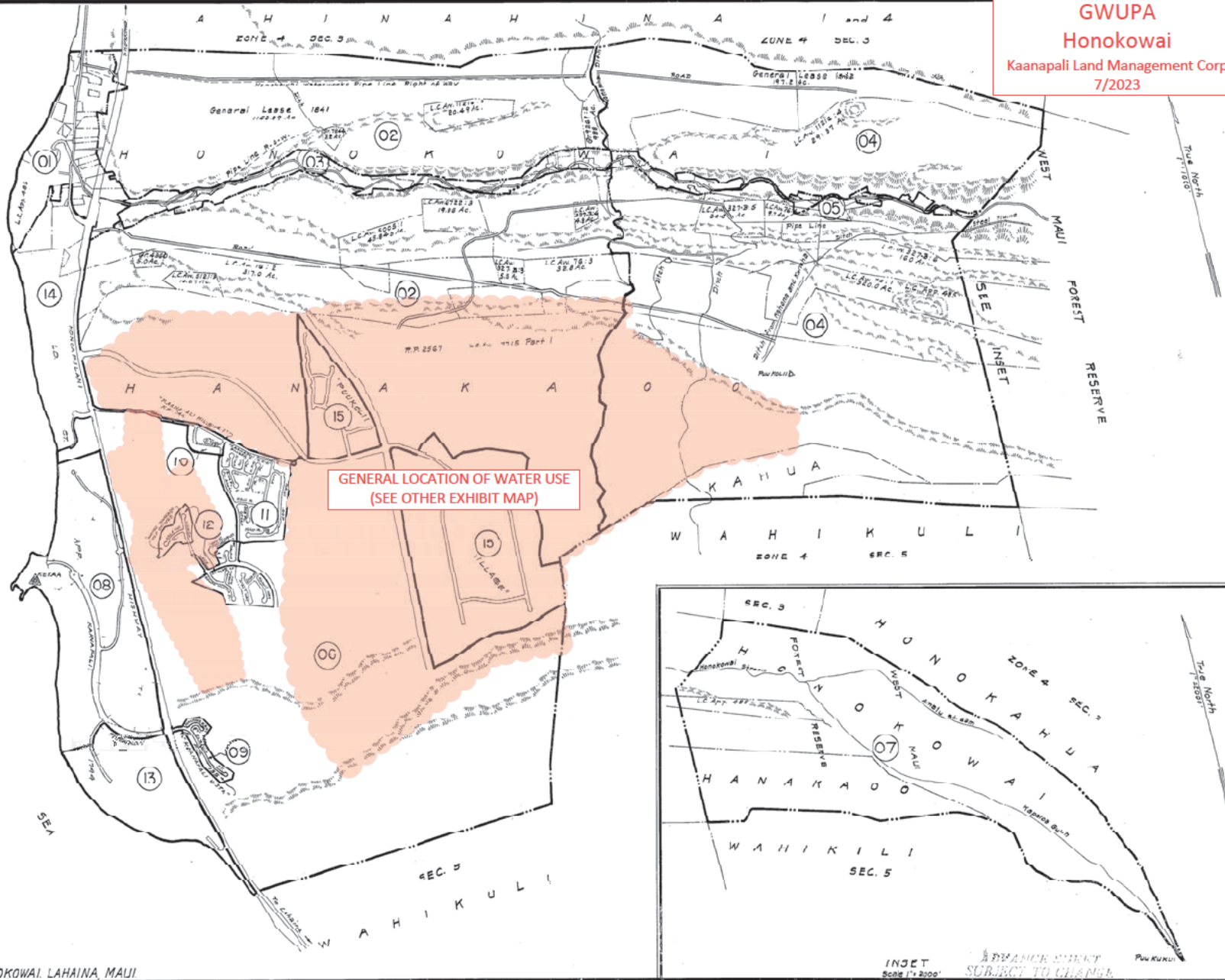
Application for Ground Water Use Permit for Existing Use

Well Nos.: 6-5537-001, 6-5537-002, 6-5540-001

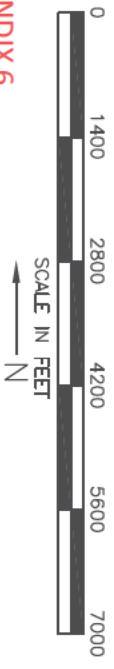
TMKs: (2) 4-4-007-001, (2) 4-4-015-061

Aquifer System Area: Honokowai

EXHIBIT FOR
GWUPA
Honokowai
Kaanapali Land Management Corp
7/2023



HANAKAO AND HONOKOWAI, LAHAINA, MAUI



APPENDIX 6

EXHIBIT FOR
Honokowai
GWUPA (section 8)
WATER USE TMK / LOCATION MAP
Kaunapali Land Management Corp
7/2023 (v4.1)



APPENDIX 7

Other Pertinent Information

Item 15: Ka Pa'akai Analysis

Application for Ground Water Use Permit for Existing Use

Well Nos.: 6-5537-001, 6-5537-002, 6-5540-001

TMKs: (2) 4-4-007-001, (2) 4-4-015-061

Aquifer System Area: Honokowai

MEMORANDUM

To: M. Kaleo Manuel, Deputy Director
Commission on Water Resource Management

Fr: Trisha Kehaulani Watson, J.D., Ph.D.
Honua Consulting, LLC

Re: *Ka Pa'akai* Analysis Memo
Kā'ānapali Land Management Co. GWUPA-E
Well Nos.: 6-5537-001, 6-5537-002, 6-5540-001
TMKs: (2) 4-4-007-001, (2) 4-4-015-061

Date: July 1, 2023

Executive Summary

Kā'ānapali Land Management Co. (KLM) has applied to the State of Hawaii Department of Land and Natural Resources Commission on Water Resource Management (CMRW) for a Ground Water Use Permit (GWUPA-E). The application is for the existing use of Well Nos. 6-5537-001, 6-5537-002, 6-5540-001 (located at TMKs: (2) 4-4-007-001, (2) 4-4-015-061). This *Ka Pa'akai* analysis was completed by Honua Consulting, LLC for consideration by CWRM.

A full *Ka Pa'akai* analysis was completed. There were no cultural resources (archaeological resources) identified in the areas near the project area, although it should be noted that an archaeological survey was not part of Honua Consulting's scope of work. Numerous sites have been documented in Honokōwai, but there is no evidence any are within the immediate project area. There were also no traditional or customary practices identified within the immediate boundaries project area, although there are cultural practices in the surrounding area. The potential that the proposed action would affect or impair these resources is negligible, but standard archaeological best practices are recommended to ensure the nearby cultural resources are not impacted. Environmental monitoring of the nearshore marine system is also recommended to ensure that the action does not impact the coastal environment's nutrient budget. Additionally, best management practices should be implemented to ensure that no unanticipated effects to cultural resources occur and that there is a mechanism in place for practitioners to report any such potential occurrences to the project. It is also recommended that additional resources be allocated to the cultural preserve to increase the cultural practices taking place there.

Proposed Action

Kāʻānapali Land Management Co. (KLM) has applied to the State of Hawaii Department of Land and Natural Resources Commission on Water Resource Management (CMRW) for a Ground Water Use Permit (GWUPA-E). The application is for the existing use of Well Nos. 6-5537-001, 6-5537-002, 6-5540-001 (located at TMKs: (2) 4-4-007-001, (2) 4-4-015-061). Research and ethnographic data were aggregated the necessary information to complete this *Ka Paʻakai* analysis.

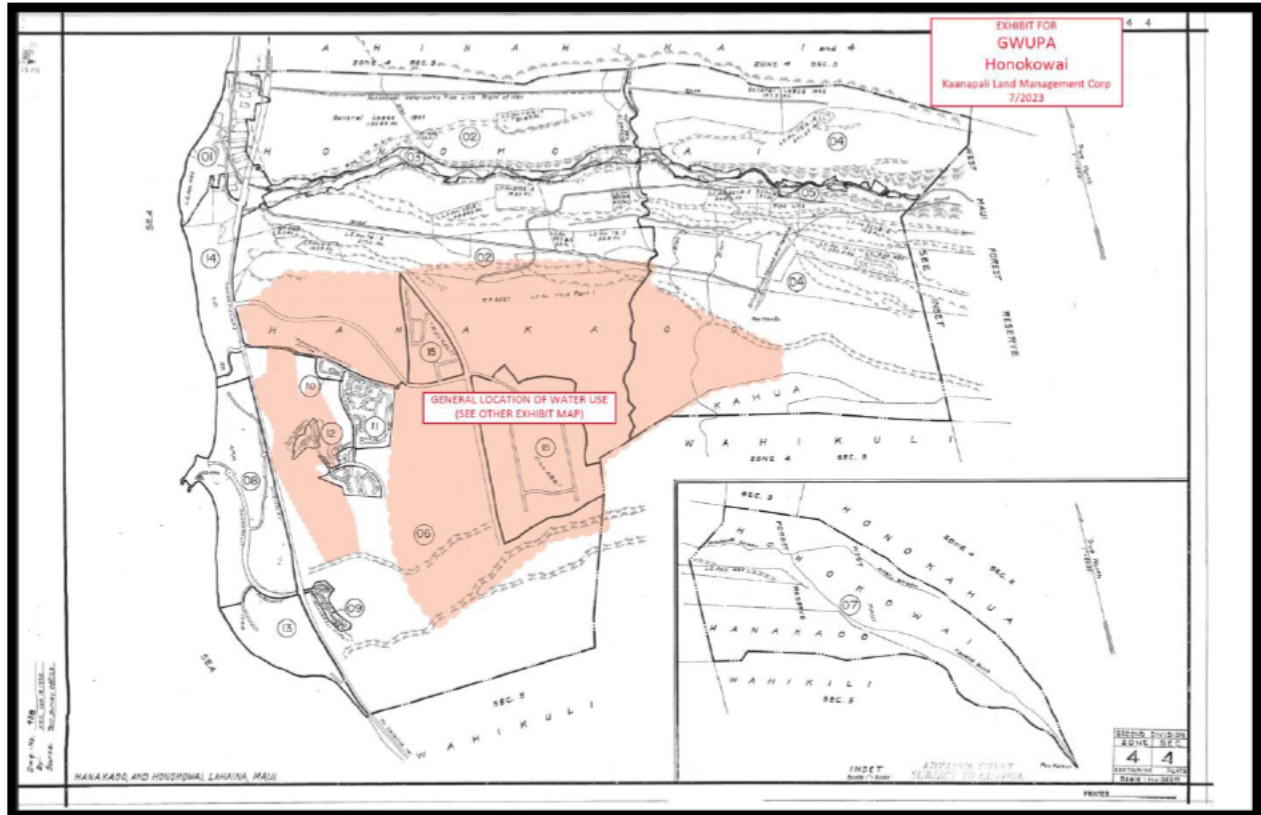


Figure 1. Project Site Location

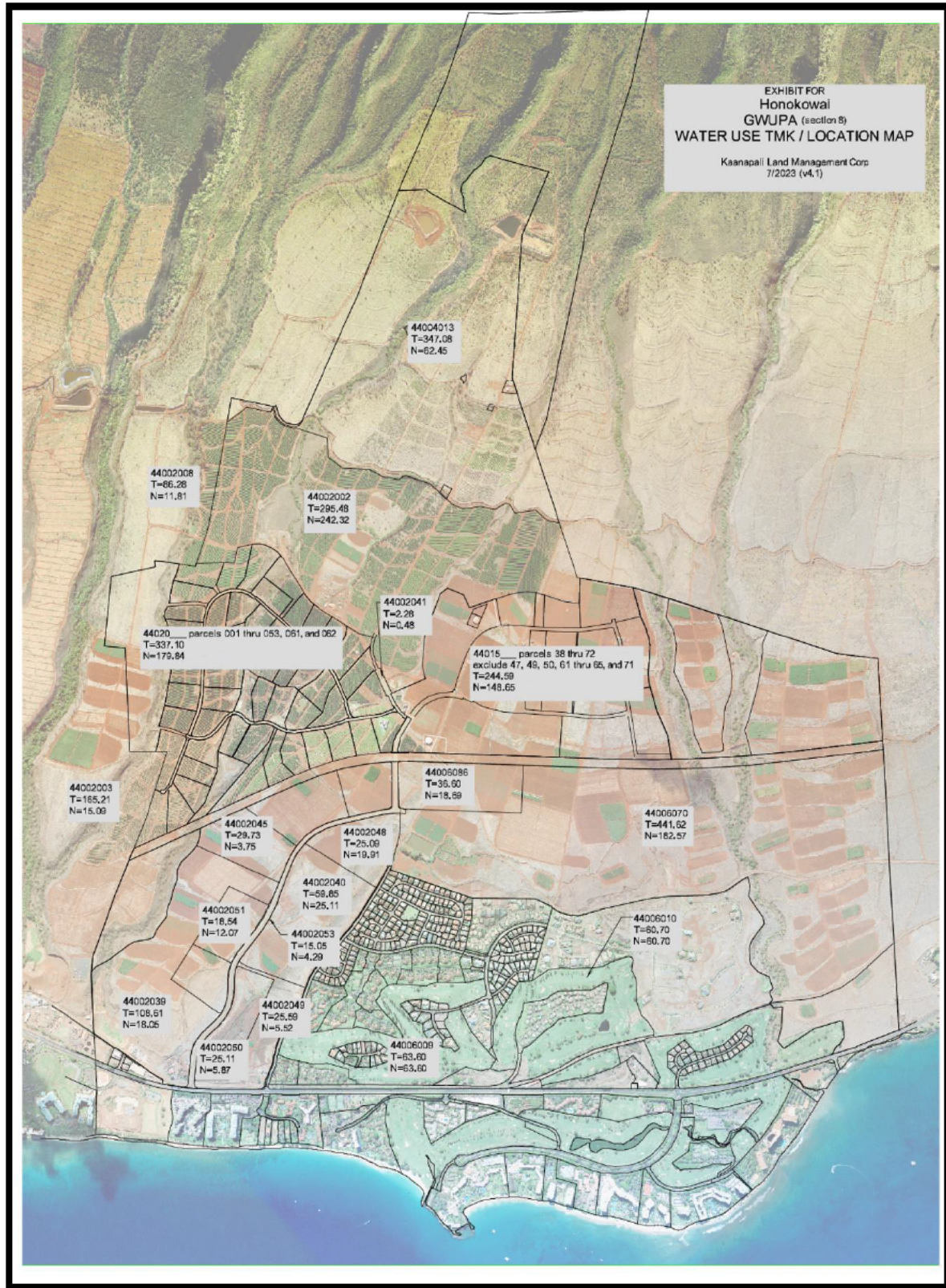


Figure 2. Project Site Location

Background and Compliance Standards

The State and its agencies have an obligation to preserve and protect Native Hawaiians' customarily and traditionally exercised rights to the extent feasible.¹ State law further recognizes that the cultural landscapes provide living and valuable cultural resources where Native Hawaiians have and continue to exercise traditional and customary practices, including hunting, fishing, gathering, and religious practices. In *Ka Pa'akai*, the Hawai'i Supreme Court provided government agencies an analytical framework to ensure the protection and preservation of traditional and customary Native Hawaiian rights while reasonably accommodating competing private development interests. This is accomplished through:

- 1) The identification of valued cultural, historical, or natural resources in the project area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the project area;
- 2) The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action; and
- 3) The feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist.

The appropriate information concerning the ahupua'a was collected, focusing on areas near or adjacent to the project area.

Background Research

Honua Consulting, as part of its standard methodology, identifies wai (fresh water) sources within a project area and in the surrounding geographic extent and treats these resources as "cultural resources" under *Ka Pa'akai*. Honua also identifies and consults on potential impacts a project will have on cultural practices that utilize or are otherwise associated with wai.

Fresh water (wai) is of tremendous significance to Native Hawaiians. It is closely associated with a variety of Hawaiian gods. According to traditional accounts, Kāne and Kanaloa were the "water finders:" "Ka-ne and Kanaloa were the water-finders, opening springs and pools over all the islands, each pool known now as Ka-Wai-a-ke-Akua (The water provided by a god)" (Westervelt 1915: 38). Kāne is widely known to be closely associated with all forms of water, as outlined in the mele "He Mele No Kane."

¹ Article XII, Section 7 of the Hawai'i State Constitution, *Ka Pa'akai O Ka 'Āina v. Land Use Commission*, 94 Haw. 31 [2000](*Ka Pa'akai*), Act 50 HSL 2000.

There was no element more important or precious than water. There was no god more powerful than Kāne. Pua Kanahale recounts the oli “O Kāne, ‘o wai ia ali‘i o Hawai‘i?” and notes of the oli: “The chant begins with Kāne and focuses on this deity as the connective force of all the po‘e akua, or god family. All the entities mentioned in each paukū, or verse, are a manifestation of Kāne” (2011: 24). The association between water and Kāne is logical considering certain interpretations of Hawaiian mythology identify Kāne as the most powerful of all the Hawaiian gods.

Further investigation into the relationship between Kāne and Pele would be appropriate and helpful. Some interpretations identify Kāne as Pele’s father (Westervelt 1915). A full analysis of the different perspectives on Pele and Kāne would be helpful to refining an approach in developing community education programs for geothermal energy and culture. A brief analysis is provided below.

He Mele No Kane asks:

E ui aku ana au ia oe,
Aia i hea ka Wai a Kane?
Aia i lalo, i ka honua, i ka Wai hu,
I ka wai kau a Kane me Kanaloa-
He waipuna, he wai e inu,
He wai e mana, he wai e ola,
E ola no, ea!

One question I ask of you:
Where flows the water of Kane?
Deep in the ground, in the gushing spring,
In the ducts of Kane and Kanaloa,
A well spring of water, to quaff,
A water of magic power- The water of life!
Life! O give us this life!

This mele and other mo’olelo are clear: Kāne is water. It is deeply valued among the Hawaiian people. The only exceptions may be mist, known to be associated with Lilinoa, and snow, associated with Poliahu. There is an extensive body of traditional knowledge about the expeditions of Kāne and Kanaloa during which Kāne drove his ‘ō‘ō (digging stick) into the earth in search of water.

There is heightened sensitivity regarding water on Maui, where the project is located. Contemporaneous protections around water as a “public trust resource” extend back to the Kingdom, where the concept of owning water contradicted Hawaiian cultural values and traditions. Under the monarchy, control of water was reserved for use by the people who lived on and worked the land. The use of surface water was strictly controlled through the kapu system to ensure that all land tenants enjoyed an abundant availability of water. Farming, particularly kalo or taro, occurred regularly, especially in places with notably fertile lands like those found in the watersheds of Maui. As early as 1839, the public use of water was codified by Kamehameha III. His “Respecting Water for Irrigation” law stated: “In all places which are watered by irrigation, those farms which have not formally received a division of water, shall, when this new regulation respecting lands is circulated, be supplied in

accordance with this law, the design of which is to correct in full all those abuses which men have introduced. All those farms which were formally denied a division of water, shall receive their equal proportion. Those bounties which God has provided for the several places should be equally distributed, in order that there may be an equal distribution of happiness among all those who labor in those places” (Cited in *Reppun v. Board of Water Supply*, 656 P.2d 57 1982). This public right eventually found its way into existing law, where the Hawaii Water Code continues to recognize and protect traditional farming and mahi ‘ai (farmers).

It is critical for this *Ka Pa‘akai* analysis to consider impacts to cultural practices, even when the practices may take place outside the project area if project activities within the project area have the potential to impact traditional practices and customs. In this particular case, it is appropriate to carefully consider the impact water usage may have on farmers and other practitioners within the watershed(s) from which the water for this project will be drawn. Even though this project area is near the shoreline, if the water usage potentially results in an allocation of water that diverts those resources from cultural and/or traditional uses, that potential impact should be considered. Based on the information provided by the client, there is no evidence that water usage of this well will impact traditional or customary practices.

The project area is located within the ahupua‘a of Honokōwai, in the moku of Lahaina. Inoa ‘Āina or place names are critical in understanding how Hawaiians valued and understood their surrounding environment. A selection of place names from the project area are provided below.

Table 1. Selected inoa ‘āina from the project area.

Inoa	Description
Hanaka‘ō‘ō	Ahupua‘a within the Lāhaina moku. Meaning the ‘ō‘ō bay (hana).
Lahaina (sometimes written as Laha‘ina in historic records, also written traditionally as Lāhainā	Name of the moku, meaning the scorching sun, likely in reference to its hot, drought conditions.
Keka‘a	Sacred site and traditional cultural property. Said to have been the capital of Maui under Kakaalaneo’s rule of West Maui. Historic accounts use this name for the general area, not only the point or hill. Name means the rumble.

Keawaawa or Ke Awaawa	A name from traditional mo'olelo, specifically mo'olelo of Maui, the deity. See He Mo'olelo No Maui (Section 3.1.1).
Hāhākea	Land division and gulch, meaning unknown, possibly to white stalk (as in a type of kō, or sugarcane).
Makaiwa	Beach, meaning mother of pearl eyes (also for Lono, whose ki'i, images, would be adorned with mother of pearl eyes)
Wahikuli	Land section, gulch and ditch in Lāhainā, meaning noisy place.
Keawaiki	Lighthouse and place name in Lāhainā, meaning small passage.
Kapunakea	Land section in Lāhainā, means the clear spring or the white coral.
Kaio'o or Kai 'O'o	Place in Lāhainā, possible meaning strong sea.
Honokōwai	Land section in modern Lāhainā, but traditionally in Kā'anapali ahupua'a. Also a stream, point, and beach park. One of bays of Pi'ilani, meaning bay drawing water.
Mala	Land division and port in Lāhainā, literally meaning garden.
Kā'anapali (also Pōhaku-Kā'ana-Pali or Kā'anapali-pōhaku)	District and village, meaning Kā'ana cliff or rolling precipices.
Pu'u Kolii (or Pu'ukoli'i)	Hill in Hanaka'ō'ō, literally meaning koli'i shrub hill
Kaleinaaka'uhane	Sacred site where the spirits leapt into the next world, currently located west of the Sheraton Maui.
Alanuikikeekee a Maui (or Alanui Kīke'eke'e)	Road with many turns, name for the winding road in Keka'a
Ahuamoemoe	Mound backing Pu'u Keka'a on the grounds of the Sheraton, literally mound of Moemoe.

The region the project is located in has a rich history. The Kingdom Government passed modern boundaries outlined in the 1859 Civil Code “For taxation, educational, and judicial purposes...”(Civil Code of 1859, Section 498). In this, it specifically stated of Maui:

The islands of Maui, Molokai, Lanai, and Kaahoolawe (sic), shall be divided into six district, as follows: 1, From Kahakuloa to Ukumehame, including Kahoolawe, to be called the Lahaina district; 2, From Waihee to Honuaula inclusive, to be called the Wailuku district; 3, Kahikinui, Kaupo, Kipahulu, Hana and Koolau, to be called the Hana district; 4, Hamakualoa, Hamakuapoko, Haliimaile, Makawao and Kula, to be called the Makawao district; 5, Molokai; 6, Lanai.

This was the beginning of the district known as the modern Lahaina (or Lāhainā, as is an alternate spelling) today.

Practitioners have been working to restore lo'i in Honokōwai Valley. Maui Cultural Lands, a nonprofit organization, remains active to this day.



Figure 3. Ed Lindsey working on 'āina in Honokōwai (Maui No Ka Oi Magazine, 2006)

Ethnographic Data

Individuals with lineal and cultural ties were invited to be interviewed.

A summary of each interview was sent first to the individual interviewed for review. Consent to participate in the assessment is obtained from each individual. Consent is obtained verbally or in writing and kept on file with Honua Consulting.

The interviewee provided a rich body of information about the project area and larger geographic extent. All information provided by the interviewees was followed up on with extensive research and incorporated throughout the body of the assessment, with particular emphasis on integrating the information provided in the interviews into this memo.

Interview with Elmer Ka'ai

Interviewer: Trisha Kehaulani Watson

Date: 6/01/2023

Location: In person

Biography

Mr. Ka'ai is a government and community affairs director. He was born and raised in Honolulu, where he currently lives today.

General Discussion

Mr. Ka'ai is associated with the project area through genealogy and cultural descent. He noted that the area, due to its geographic qualities, was targeted previously to be developed. The current development, from a Native Hawaiian perspective, is an eye-sore since there aren't many Native Hawaiians who live there.

Cultural Resources

Mr. Ka'ai said that there were cultural resources in the area before the current development. He said that there were previously lo'i in the area as well as residences, but he doesn't believe they were as extensive as they were in other places.

Traditions and Customs

Mr. Ka'ai notes that he knows some families farm in the area. He is not sure how many. He believes those farming areas are cultural resources, especially because many of the farmers are long descendants of the area.

Impacts

Mr. Ka'ai did not know what impacts the project could cause on cultural resources, but he believes there could be some. Any construction activity has the potential to impact archaeological resources or burials that may be in the area. Mr. Ka'ai knows that due to West Maui's extensive use by Hawaiians, there are iwi across West Maui, particularly in areas that were heavily inhabited, like coastal areas and agricultural areas.

Mitigation Measures and Recommendations

Mr. Ka'ai could not provide any mitigation measures against potential impacts. Mr. Kaai did recommend that cultural advisors be present during the project. This should include lineal

descendants. Mr. Ka'ai has strong concerns about more development coming to the area. He expressed strong concern about the use of surface water for homes that do not appear to be for local families, but he had less concern over ground water use from wells. He also believes that should the project proceed, the Commission should put strong limits on the use of water for landscaping. He notes that other places (like Las Vegas) do not allow for landscaping and limit new housing to hardscaping or xeriscaping. He thinks it's inappropriate to have lush yards with foreign plants when there are ongoing water shortages and Hawaiians struggling to maintain lo'i that they need to feed their families with.

Interview with Hinaleimoana Wong-Kalu

Interviewer: Trisha Kehaulani Watson

Interviewee: Hinaleimoana Wong-Kalu

Date: 6/01/2023

Location: In person

Biography

Hinaleimoana Kwai Kong Wong-Kalu, known affectionately as “Kumu Hina”, is a Native Hawaiian māhū – a traditional third gender person who occupies “a place in the middle” between male and female, as well as a modern transgender woman. She is known for her work as a kumu hula, a filmmaker, and as a community leader in the field of Kanaka Maoli language and cultural preservation. She teaches Native Hawaiian philosophy and traditions while promoting cross-cultural alliances throughout the Pacific Islands. Described as a “powerful performer with a clear, strong voice”, she has been hailed as a cultural icon, and is a prominent leader in our community today.

Kumu Hina was born in the Nu‘uanu district of O‘ahu, but she is a lineal descendant of West Maui. Her maternal side of the family lived in Honokohau. She is a lineal descendant to the Honokahua burial preserve, with ‘ohana buried there. Her family had a home in Napili – Honokōwai where she spent a lot of her time growing up.

She attended Kamehameha Schools and the University of Hawai‘i at Mānoa, where she began her activism journey. She is a founder of the Kulia Na Mamo transgender health project, a former Hawaiian language kumu at Leeward Community College, and candidate for the Office of Hawaiian Affairs, notably being one of the first transgender candidates for statewide political office in the United States. She also served as the Chair of the O‘ahu Island Burial Council and was cultural director of Hālau Lokahi Public Charter School. She is a recipient of the National Education Association Ellison Onizuka Human and Civil Rights Award, Native Hawaiian Community Educator of the year, and a White House Champion of Change. Recently, USA Today named Wong-Kalu one of ten Women of the Century from Hawai‘i. In 2020, Kumu Hina directed, produced and narrated *Kapaemahu*, an animated short film based on the Hawaiian story of four legendary māhū who brought the healing arts from Tahiti to Hawai‘i.

Overview

Ms. Wong-Kalu has lineal ties to West Maui. She recounts how the water diversions in the area directly led to her family’s inability to farm their lo‘i. The result was an inability to use their land to sustain themselves and this forced them to from their subsistence lifestyle, which they had been practicing for generations.

General Discussion

As a cultural and lineal descendent of West Maui and a highly regarded cultural practitioner, Ms. Wong-Kalu brings a critical perspective of how such diversion practices have long adversely affected Hawaiian families in West Maui and how its adversely effected traditional practices and ways of life.

Cultural Resources

Ms. Wong-Kalu emphasized how all of West Maui is interconnected. From an ecological standpoint, it's one region with a series of overlapping resources. The water is a cultural resource, and a very important one. The food that comes from these lo'i feeds families. This food is a cultural resource too. As are the places, which have been used for generations, as sites of cultural practices.

Traditions and Customs

Ms. Wong-Kalu notes that West Maui was an important, thriving community of kānaka. Each bay and valley had a thriving community where the 'ohana lived and flourished. While farming was among the most important practice, every practice associated with Hawaiian living occurred in West Maui.

Impacts

These kānaka were largely forced out by development and the plantations. Then plantations became housing. She doesn't think the water should be diverted at all, because of the impacts it has on Hawaiians.

Mitigation Measures and Recommendations

Ms. Wong-Kalu did not provide any mitigation measures for the action, she just strongly believes water should be left for the families that live on the land.

Analysis

As previously noted in this memo, in *Ka Pa'akai*, the Hawai'i Supreme Court provided government agencies an analytical framework to ensure the protection and preservation of traditional and customary Native Hawaiian rights while reasonably accommodating competing private development interests. This is accomplished through the following three-part test:

- 1) The identification of valued cultural, historical, or natural resources in the project area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the project area;
- 2) The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action; and

- 3) The feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist.

The identification of valued cultural, historical, or natural resources in the project area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the project area.

Through the research and ethnographic data, numerous cultural resources were identified in the surrounding geographic extent. If there is new construction required for this permit, there should be careful consideration of the cultural resources in the area. An archaeological survey should be completed to ensure no sites are impacted by any new construction.

The potential that the proposed action would lead to any new effect or impairment of these resources is negligible because it is an existing use, but there is no doubt that historically water diversions have been devastating to traditional practices and Hawaiian communities. The status of the restoration efforts in the valley are unknown, but presumed to be continuing. The Commission should ensure these farmers and practitioners have sufficient water for their needs.

Environmental monitoring of the nearshore marine system is also recommended to ensure that the action does not impact the coastal environment's nutrient budget. Additionally, best management practices should be implemented to ensure that no unanticipated effects to cultural resources occur and that there is a mechanism in place for practitioners to report any such potential occurrences to the project. It is also recommended that additional resources be allocated to the cultural preserve to increase the cultural practices taking place there. With additional resources, including perhaps additional water, the preserve has the potential to become a vibrant hub of cultural practice.

The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action.

Of the identified cultural resources and traditional and customary practices that occur in the surrounding project area, the potential that the proposed action would newly affect or impair these resources is negligible.

The feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist.

As this application is for an existing use, the potential for any new effect or impairment of cultural resources (including practices) is negligible, no action is required to protect Native Hawaiian rights. Nonetheless, best management practices should be implemented to ensure

that no unanticipated affects to cultural resources occur and that there is a mechanism in place for practitioners to report any such potential occurrences to the project. Additionally, should new development result from this action, there should be limits to landscaping that minimize water use and traditional access for practitioners should be guaranteed and protected.