

UKUMEHAME WATER ASSOCIATION, INC.

August 2, 2023

M. Kaleo Manuel
Deputy Director
Commission on Water Resource Management
1151 Punchbowl Street, Suite 227
Honolulu, HI 96813

Subject: Ukumehame Water Use Applications

Dear Deputy Director Manuel:

This letter is submitted with the following water use permit applications for:

SWUPA-E	Ukumehame Stream Intake	960
SWUPA-N	Ukumehame Stream Intake	960
GWUPA-E	Sugarway 2 & Ukumehame 3	6-4835-003 & 004
GWUPA-N	Sugarway 2 & Ukumehame 3	6-4835-003 & 004
GWUPA-N	Ukumehame Well 4	6-4834-002
GWUPA-N	Ukumehame Well 5	6-4834-003

UKUMEHAME BACKGROUND

Until recently the Ukumehame Water Association (UWA) was controlled by the developer of the subdivision as all directors were employed by or associated with the developer of the Ukumehame Agricultural Subdivision. The directors connected with the developer resigned from the Board earlier this year, leaving the Board without members. I and some other owners were appointed as directors to fill the seats until the UWA members could have a meeting. Since becoming directors, we've been working diligently to address many issues on which the developer dropped the ball or did things that may not have been in the best interest of our members. One issue we're addressing is the water use application that the developer's Board submitted.

C/O KOKUA REALTY
161 WAILEA IKE PLACE, STE. B-101
WAILEA, HI 96753

After reviewing the notice letters from CWRM and the GWUPA submitted by the developer controlled board, we determined that the GWUPA previously submitted should be revised. Based on discussions with consultants, we've determined that our best course would be to withdraw the previously submitted application and submit the enclosed replacement GWUPA application and to submit additional GWUPA and SWUPA applications.

While the GWUPA and SWUPA applications should be self-explanatory, some background on surface water use by the UWA may be helpful to CWRM. In 2016, a fire destroyed part of the surface water distribution system in the subdivision. This limited the surface water distribution area to only a portion of the subdivision. The new board learned that the developer did not undertake steps to repair the damaged portion of the system, although we do not know the reasons for the developer's lack of action. In 2018, an IIFS was established for the stream which is the source of the surface water distribution system.

The new board is considering repairing the lines, working with CWRM and USGS to install measuring devices in the stream, and exploring design options to allow surface water to be diverted when there are sufficient flows above the IIFS. Our intent is to make a beneficial use of flows above the IIFS to allow our members the opportunity to pursue a broader range of agricultural opportunities.

Please let me know if you have any questions.



Peter Martin
President
Ukumehame Water Association



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

FORM GWUPA

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

For Official Use Only:

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

Name/Company Ukumehame Water Assn. Inc.

Contact Person Harold Edwards

Mailing Address ITC Water Management Inc.
P.O. Box 458
Haliewa, HI 96712

Phone (808) 637-5078

Fax

E-mail

2. SOURCE LANDOWNER INFORMATION

Name/Company Ukumehame Water Association, Inc.

Contact Person Keoni Fursse

Mailing Address Kokua Realty
161 Wailea Ike Place, Ste. B-101
Wailea, HI 96753

Phone (808) 877-9000

Fax

E-mail

SOURCE INFORMATION

3. ISLAND Maui

4. AQUIFER SYSTEM AREA Ukumehame

4A. SUSTAINABLE YIELD FOR ITEM 4
2 MGD

5. SOURCE INFORMATION
Attach additional sheets, if necessary.

Well Number (if known)	Well Name	Existing or Proposed?	TMK	Flowmeter installed?
			zone - sector - plat : parcel	<input type="checkbox"/> Yes, date installed ____ / ____ / ____ <input type="checkbox"/> No
6-4835-003	Sugar Way 2	Existing	4 - 8 - 002 : 119 zone sector plat parcel	<input checked="" type="checkbox"/> Yes, date installed ____ / ____ / ____ <input type="checkbox"/> No
6-4835-004	Ukumehame 3	Existing	4 - 8 - 002 : 119 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 81,473

7. USE: ☒ Agriculture ☒ Domestic ☐ Industrial
Check all that apply. ☒ Irrigation ☐ Military ☐ 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

Signature

Print Name

Harold Edwards (Aug 3, 2023 15:43 HST)

Date

10. SOURCE LANDOWNER/JOINT APPLICANT (if applicable)

Signature

Print Name

Keoni Fursse (Aug 3, 2023 16:18 HST)

Date

FORM GWUPA (October 14, 2022)
Page 1 of 9

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: <ul style="list-style-type: none"> 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									
DOM	4 - 8 - 002 : EXHIBIT 2 zone sector plat parcel	AG	<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No	AG	<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No	9 lots	3360/lot	30,239	Existing Use. See Exhibit 2
	- - : zone sector plat parcel		<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No		<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
	- - : zone sector plat parcel		<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No		<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
	- - : zone sector plat parcel		<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No		<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
TOTAL POTABLE USE								K 30239	GPD
USES THAT DO NOT REQUIRE POTABLE WATER									
AGR	4 - 8 - 002 : 075 zone sector plat parcel	AG	<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No	AG	<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No	7.8	3,306	25,790	farmed for turf sod
AGR	4 - 8 - 002 : 091 zone sector plat parcel	AG	<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No	AG	<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No	8.0	3,180	25,444	farmed for turf sod
	- - : zone sector plat parcel		<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No		<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
	- - : zone sector plat parcel		<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No		<input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No				
TOTAL NON-POTABLE USE								L 51234	GPD
TOTAL QUANTITY OF WATER REQUESTED (sum of total potable use and total non-potable use) =								M 81473	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).

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	B	C	D	E	F	G	H	I
TMK FOR LOCATION OF USE ATTACH THE FOLLOWING: <ul style="list-style-type: none">Property tax map with an outline around the area of each irrigation use listed in this table.Photograph of the area of each use.	CROP	TOTAL ACREAGE	NET IRRIGATED ACREAGE	BEGIN GROWTH PERIOD (month)	END GROWTH PERIOD (month)	IRRIGATION SYSTEM (refer to instructions)	IRRIGATION PRACTICE (refer to instructions)	COMMENTS (Continue comments below, if more space is needed.)
<div>4-8-002-075</div> <div>zone-sector-plat-parcel</div>	Turf Sod	7.8	7.8	JANUARY	DECEMBER	MULTIPLE SPRINKLER	APPLY A FIXED DEPTH PER IRRIGATION	
<div>4-8-002-091</div> <div>zone-sector-plat-parcel</div>	Turf Sod	8.0	8.0	JANUARY	DECEMBER	MULTIPLE SPRINKLER	APPLY A FIXED DEPTH PER IRRIGATION	
<div>-</div> <div>zone-sector-plat-parcel</div>								
<div>-</div> <div>zone-sector-plat-parcel</div>								
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<div>-</div> <div>zone-sector-plat-parcel</div>								

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

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	There are no municipal systems in the vicinity of Ukumehame. Hence, this is not an option.	
Wastewater reuse	There is no municipal wastewater system in the vicinity. Each of the existing as well as future homes have Individual Wastewater Systems (consistent with Department of Health requirements). Incorporating a wastewater reuse at this limited scale is cost prohibitive.	
Ditch system	Not appropriate for potable water distribution or storage	
Desalinization	Desalinization is cost prohibitive based on the scale of the Ukumehame Water Association water system, that serves only 45-agricultural lots and their associated farms.	
Surface water	There is a perennial stream through the Ukumehame Agricultural Subdivision with diversions that feed kalo loi in two areas. The water returned to the stream is insufficient to meet the potable demand of UWA.	
Other		

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.

Ukumehame Water Association’s water use is for Domestic, Irrigation and Agriculture purposes. These uses are consistent with the state and county land use plans. See Maui Island General Plan 2030 at 8-54 (the plan does not indicate any significant change in use, other than continued use in agriculture and preservation of wetland areas); Additionally, the uses are consistent with the Declaration of Policy, which provides: “The state water code shall be liberally interpreted to obtain maximum beneficial use of the waters of the

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 Exhibit 15 Ka Pa’akai Analysis

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 Exhibit 15 Ka Pa’akai Analysis .

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

See Exhibit 15 Ka Pa’akai Analysis

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.

DHHL does not have a reservation in the Ukumehame aquifer. There are no DHHL lands within UWA's service area that would draw from the Ukumehame aquifer. Hence, UWA's existing use

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 Exhibit 17: Interference With Any Existing Legal Uses

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.

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

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
06/21 - 5/22	See Exhibits 1 and 2	<input checked="" 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.

EXHIBIT 1

**UKUMEHAME WATER ASSOCIATION INC
AVERAGE DAILY GROUND WATER USE**

EXHIBIT 3**AVERAGE DAILY PUMPAGE**

Ukumehame-Sugar Way 2			
6-4835-003			
WMA Month	Gallons Pumped	Million Gallons	GPD
Aug-21	1,575,000	1.575	50,806
Sep-21	1,433,000	1.433	47,767
Oct-21	1,593,300	1.593	51,397
Nov-21	1,407,200	1.407	46,907
Dec-21	774,200	0.774	24,974
Jan-22	864,400	0.864	27,884
Feb-22	1,251,969	1.252	44,713
Mar-22	1,212,435	1.212	39,111
Apr-22	861,110	0.861	28,704
May-22	851,174	0.851	27,457
Jun-22	1,244,357	1.244	41,479
Jul-22	653,832	0.654	21,091
TOTAL	13,721,977	13.722	452,289
AVG DAILY			37,594

Ukumehame 3			
6-4835-004			
WMA Month	Gallons Pumped	MGD	GPD
Aug-21	1,576,197	1.576	50,845
Sep-21	1,433,500	1.434	47,783
Oct-21	1,593,415	1.593	51,400
Nov-21	1,408,032	1.408	46,934
Dec-21	774,349	0.774	24,979
Jan-22	864,577	0.865	27,890
Feb-22	1,490,191	1.490	53,221
Mar-22	1,428,803	1.429	46,090
Apr-22	1,069,203	1.069	35,640
May-22	1,024,206	1.024	33,039
Jun-22	1,499,708	1.500	49,990
Jul-22	788,570	0.789	25,438
TOTAL	14,950,751	14.951	493,250
AVG DAILY			40,961

Total Combined Ground Water			
Wells 2 & 3			
WMA Month	Gallons Pumped	MGD	GPD
Aug-21	3,151,197	3.151	101,652
Sep-21	2,866,500	2.867	95,550
Oct-21	3,186,715	3.187	102,797
Nov-21	2,815,232	2.815	93,841
Dec-21	1,548,549	1.549	49,953
Jan-22	1,728,977	1.729	55,773
Feb-22	2,742,160	2.742	97,934
Mar-22	2,641,238	2.641	85,201
Apr-22	1,930,313	1.930	64,344
May-22	1,875,380	1.875	60,496
Jun-22	2,744,065	2.744	91,469
Jul-22	1,442,402	1.442	46,529
TOTAL	28,672,728	28.673	945,540
AVG DAILY			78,555

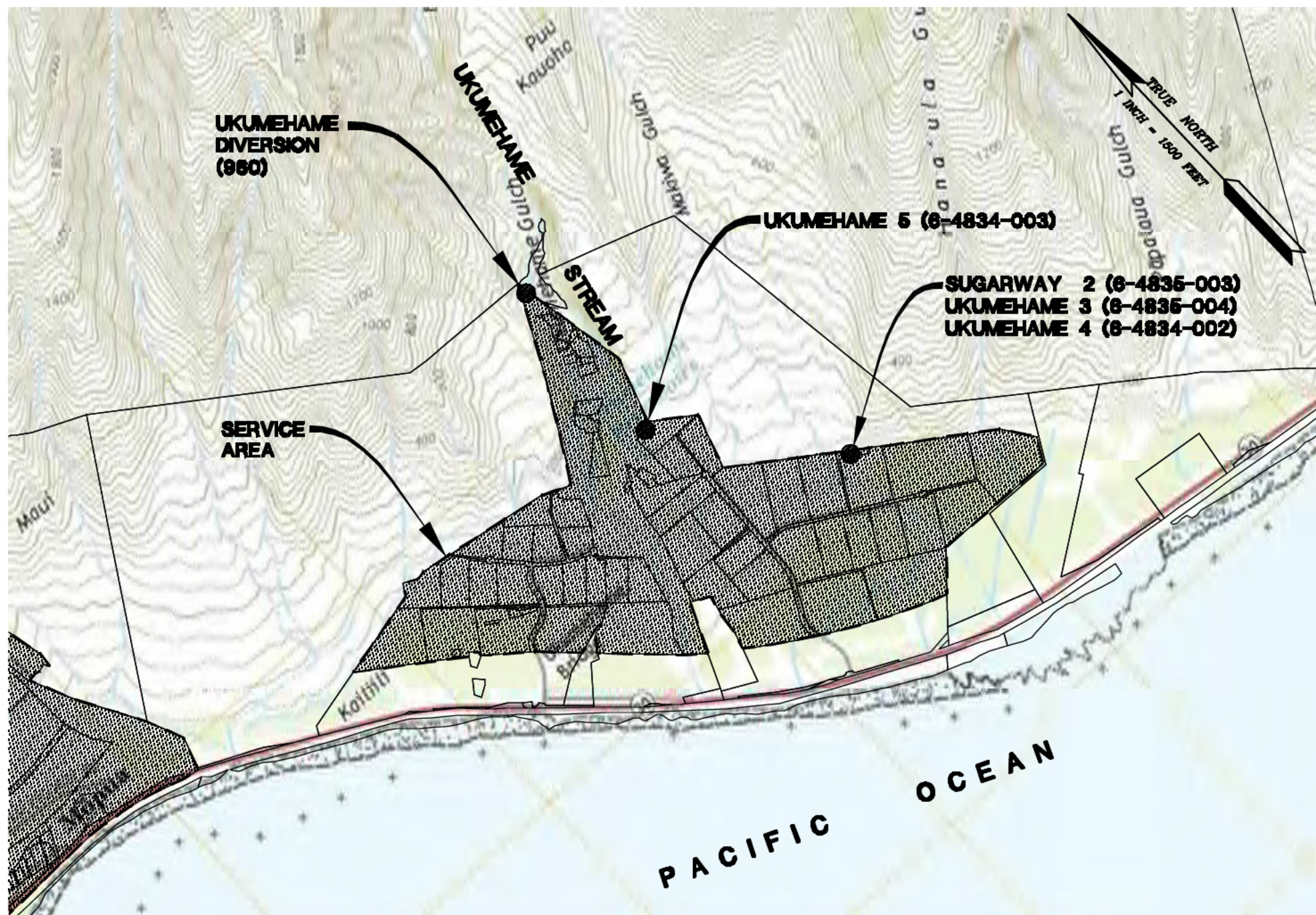
EXHIBIT 2

UKUMEHAME WATER ASSOCIATION INC.
POTABLE AND NON POTABLE CONSUMPTION

EXHIBIT 2_Potable GWUPA												
Table 1	Potable	Existing metered Consumption - Potable										
Month/Year	Lot Number	3	6	7	12	19	20	25	33	36	45	Grave
	Total	4-8-002:075	4-8-002:078	4-8-002:079	4-8-002:084	4-8-002:091	4-8-002:092	4-8-002:097	4-8-002:105	4-8-002:108	4-8-002:117	
Aug-21	3,151,197	1,228,597	181,700	77,500	229,100	541,800	0	83,600	609,800	105,600	0	93,500
Sep-21	2,896,115	1,133,715	181,700	72,800	427,500	404,700	0	29,600	240,300	115,600	0	290,200
Oct-21	3,234,815	872,215	267,500	41,900	451,200	854,700	0	48,100	291,600	68,300	0	339,300
Nov-21	2,815,232	860,132	182,200	45,500	164,400	1,127,700	0	46,600	268,300	99,700	0	20,700
Dec-21	1,584,749	591,949	87,800	24,100	116,500	568,800	0	36,200	84,600	60,200	0	14,600
Jan-22	1,770,077	604,077	122,600	25,500	124,400	581,500	0	41,100	190,800	65,000	0	15,100
Feb-22	2,524,265	722,965	143,800	24,600	127,900	1,140,600	0	43,800	206,000	98,500	0	16,100
Mar-22	2,398,391	949,991	159,900	27,500	143,700	732,900	0	64,800	203,900	98,400	0	17,300
Apr-22	2,234,822	665,822	147,400	51,600	124,800	689,800	0	34,900	396,000	105,300	0	19,200
May-22	3,537,999	933,299	267,300	62,400	161,700	1,334,100	0	204,300	367,700	182,000	0	25,200
Jun-22	1,237,780	263,280	69,000	57,400	55,200	554,000	0	86,600	101,000	42,400	0	8,900
Jul-22	2,352,103	587,303	179,100	120,300	121,700	756,600	0	94,900	368,700	103,100	0	20,400
Total	29,737,545	9,413,345	1,990,000	631,100	2,248,100	9,287,200	-	814,500	3,328,700	1,144,100	-	880,500
Average Daily Use	81,473	25,790	5,452	1,729	6,159	25,444	-	2,232	9,120	3,135	-	2,412

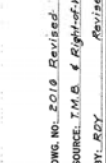
EXHIBIT 2_Non Potable SWUPA -E												
Table 1	Non Potable	Existing metered Consumption - Non Potable [1]										
Month/Year	TOTAL	3	6	7	12	19	20	25	33	36	45	Grave
Aug-21	1,370,020					1,282,150	87,870					
Sep-21	1,764,690					1,675,060	89,630					
Oct-21	753,620					680,690	72,930					
Nov-21	883,100					806,210	76,890					
Dec-21	304,750					243,320	61,430					
Jan-22	231,440					164,000	67,440					
Feb-22	482,210					404,470	77,740					
Mar-22	286,670					200,180	86,490					
Apr-22	542,540					476,110	66,430					
May-22	549,380					454,190	95,190					
Jun-22	225,800					195,780	30,020					
Jul-22	450,460	0	0	0	0	380,050	70,410	0	0	0	0	0
Total	7,844,680	-	-	-	-	6,962,210	882,470	-	-	-	-	-
Average Daily Use	21,492					19,075	2,418					

[1] Lots 3 & 19 are farmed for turf sod and Lot 20 is a tree nursery



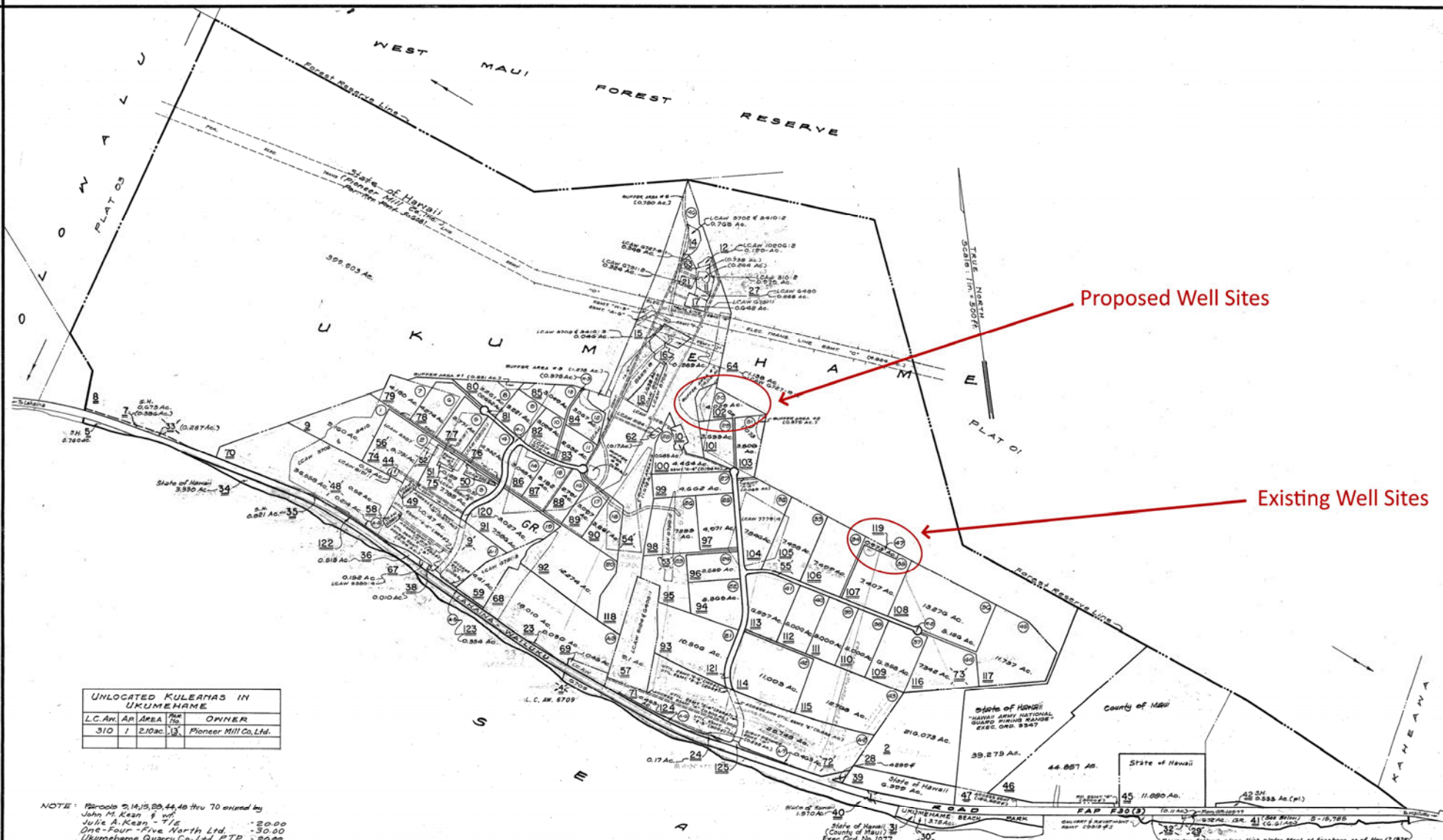
0 1500 3000 4500 6000
SCALE: 1 INCH = 1500 FEET

ATTACHMENT SWUPA-E 9, SWUPA-N 11, GWUPA 8
USGS - OLOWALU QUAD/TMK MAP
UKUMEHAME STREAM



SUBJECT TO CHANGE

155,24 13
155,4 32
155,3 35
157,31 52
UN 13 1973
JAN 6 1974
JAN 19 1974



UNLOCATED KULEAMAS IN UKUMEHAME		
L.C. AN.	AP. AREA	OWNER
310	1 210ac.	Pioneer Mill Co. Ltd.

NOTE: Parcels 2, 14, 15, 20, 44, 48 thru 70 owned by John M. Kean & wife Julie A. Kean - 1/2 One-Four - Five North Ltd. Ukumehame Quarry Co. Ltd. P.T.P. James J. C. Maynes & Trust Hugh Jeffery Farrington Deborah C. Farrington (Pioneer Mill Co., Ltd.) 1/2 unless otherwise noted.

Dropped Parcels: 11, 12, 15, 17, 21, 22, 23, 24, 27, 30, 32, 35, 36, 37, 38, 39

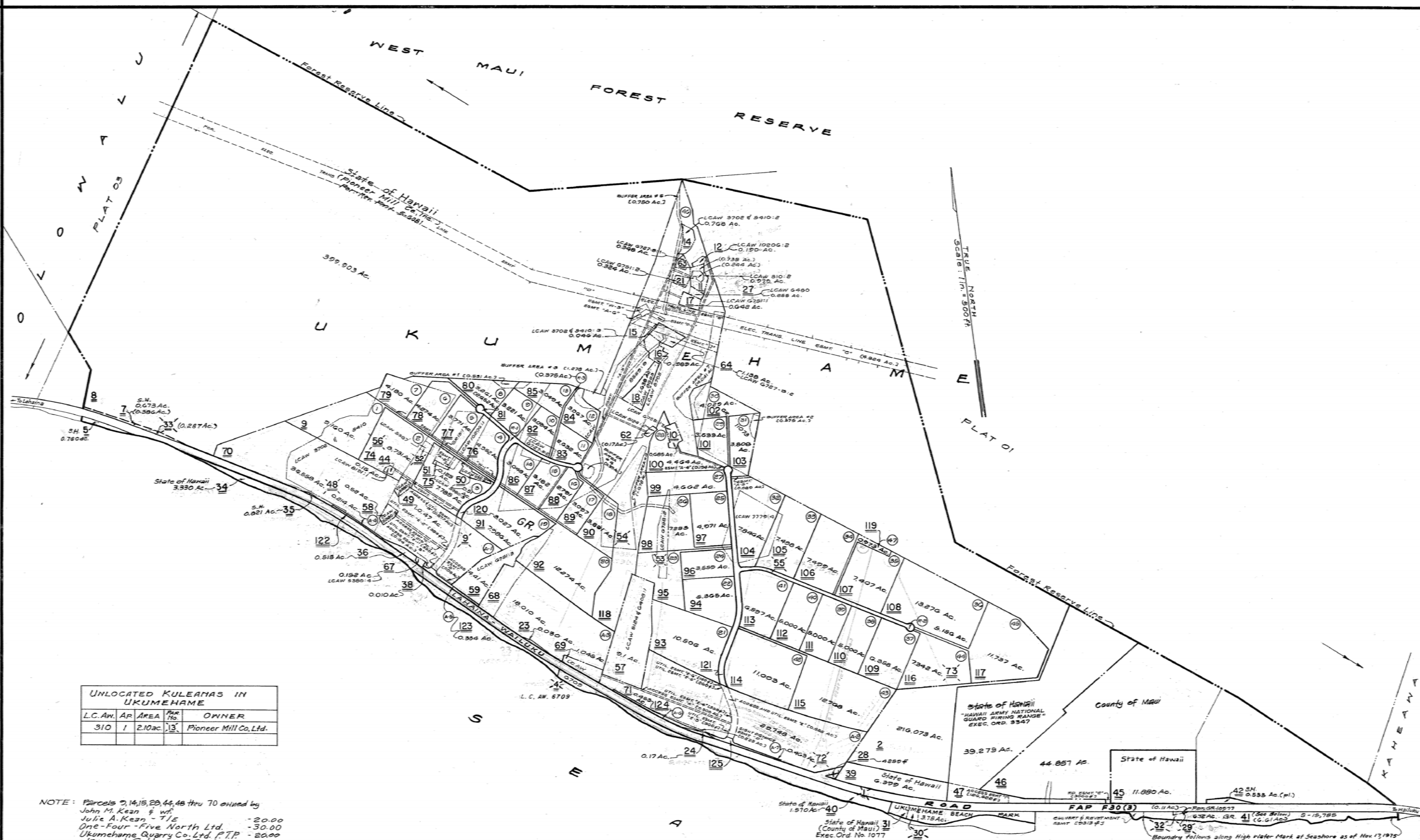
SUBJECT TO CHANGE

DEPARTMENT OF THE TAX COMMISSIONER TAXATION MAPS BUREAU TERRITORY OF HAWAII TAX MAP		
SECOND DIVISION		PLAT
ZONE	SEC.	
4	8	02
CONTAINING		PARCELS
SCALE: 1 IN. = 500 FT.		

DWG. NO. 2019 Revised
SOURCE: T.M.B. & Right-of-Way Map, FAP No. E30102
BY: RBY Revised August 1995

PIONEER MILL PLTN CO. LTD., UKUMEHAME, LAHAINA, MAUI

EN 13 1973
JUN 6 1974
JUN 18 1984



UNLOCATED KULEANAS IN UKUMEHAME				
L.C. Aw.	AP	AREA	PAR. No.	OWNER
310	1	2.10 ac.	13	Pioneer Mill Co. Ltd.

NOTE: Parcels 2, 14, 15, 23, 44, 48 thru 70 owned by
 John M. Kean & wife - 20.00
 Julie A. Kean - T/E - 30.00
 One-Four-Five North Ltd. - 20.00
 Ukumehame Quarry Co. Ltd. P.T.P. - 20.00
 James J. C. Haynes, I Trust - 20.00
 Hugh Jeffrey Farrington - 5.00
 Deborah C. Farrington - 5.00 - T/E
 (Pioneer Mill Co., Ltd.) ie unless otherwise noted.

41 State of Hawaii
 (Dept. of Land & Natural Resources
 Div. of State Parks)
 "ADDITION TO UKUMEHAME BEACH PARK"
 Exec. Ord. 2948

DEPARTMENT OF THE TAX COMMISSIONER TAXATION MAPS BUREAU TERRITORY OF HAWAII TAX MAP		
SECOND		DIVISION
ZONE	SEC.	PLAT
4	8	02
CONTAINING		PARCELS
SCALE: 1 IN. = 500 FT.		

Dropped Parcels: 1, 11, 12, 16, 17, 21,
 22, 25, 26, 27, 30, 32, 27, 52,
 53, 54, 50

SUBJECT TO CHANGE

PIONEER MILL PLTN CO. LTD., UKUMEHAME, LAHAINA, MAUI

DWG. NO. 2010 Revised
 SOURCE: T.M.B. & Right-of-Way Map, FAP No. F50(3)
 BY: R.O.Y. Revised August 1952



Well #1



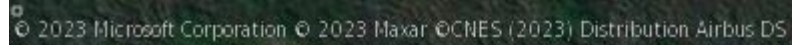
Well #2



480020780000-P



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480020970000-P



480021050000-P





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.

Archaeological Sites

During an archaeological review of the project site, 17 historic sites were identified including a cattle wall and two cane irrigation ditches; the remaining 14 sites include Ukumehame heiau, Hiki‘i heiau, the Lindsey family cemetery, precontact agricultural terraces, and several examples of habitation sites, 2 with burial features and 1 with petroglyphs.

Lo‘i Kalo

E. S. Craighill Handy in *The Hawaiian Planter* stated that in the Lahaina region there are taro terraces from “Honokohau to Ukumehame”. Specific to Ukumehame, he stated,

Ukumehame. Above the Pioneer Plantation reservoirs, terraces cover the flatland just below the entrance to Ukumehame Canyon. Only a few of these are now under cultivation. The upper terraces have been long abandoned, and those just above the reservoirs are only half used—that half unsuccessfully, because of insufficient water for flooding. The terraces used to extend well down over the land below the valley, but, with the exception of one tiny taro plantation standing like an island in the midst of the cane, all vestiges of the ancient cultivation have been plowed under. This is excellent wet taro soil. (page 103)

In *Native Planters of Old Hawaii*, Handy, Handy and Pukui stated, with respect to Lahaina,

Southeastward along the coast from the ali‘i settlement were a number of areas where dispersed populations grew taro, sweet potato, breadfruit and coconut on slopes below and in the sides of valleys which had streams with constant flow. All this area, like that around and above Lahaina, is now sugar-cane land. (page 492)

The CWRM Instream Flow Standard Assessment Report for Hydrologic Unit 6004, Ukumehame, states, “In the mid to low reaches along the stream there are cultivated taro loi.” (page 2)

That report further notes, “The maintenance of instream flows is important to the protection of traditional and customary Hawaiian rights, as they relate to the maintenance of stream resources (e.g., hihiwai, opae, oopu) for gathering, recreation, and the cultivation of taro.” (page 66) It further states,

Taro cultivation can also be considered a noninstream use since it removes water from a stream (even if water from taro loi is later returned to the stream). It could be argued that for scientific analysis, taro cultivation is an instream use since taro loi provide habitat for stream biota, but because the water is physically taken out of the stream, it is also a noninstream use. Another way to look at the approach of identifying taro cultivation as both instream and noninstream uses is that when the Commission addresses taro cultivation as an instream use, it is generally in the context of traditional and customary Hawaiian rights; whereas when the Commission addresses taro cultivation as a noninstream use, it is approaching the issue from the aspects of agriculture and water use. (page 66)

The preferred method of wetland taro cultivation, where terrain and access to water permitted, was the construction of loi (flooded terraces) and loi complexes. These terraces traditionally received stream water via carefully engineered open channels called auwai. The auwai carried water, sometimes great distances, from the stream to the loi via gravity flow. In a system of multiple loi, water may either be fed to individual loi through separate little ditches if possible, or in the case of steeper slopes, water would overflow and drain from one loi to the next. Outflow from the loi may eventually be returned to the stream. (pages 71 & 72)

“Ukumehame had extensive terraces below its canyon, some of which were still planted with taro in 1934 these terrace systems used to extend well down below the canyon.” (page 74, quoted from Native Planters, Handy, Handy and Pukui, page 492)

In the Ukumehame hydrologic unit, taro is currently grown in two areas: one fed by the Kaakau Auwai consisting of three complexes with 16 loi in total; and one area fed by the main Ukumehame Ditch of two complexes with two loi each (four loi total). (page 74)

“Currently, there are two ditches/auwais that remove water from the Ukumehame Stream with some water from each returned to the streams: the Rodriguez auwai and the primary Ukumehame plantation ditch. The Kaakau auwai diverts approximately 0.16 mgd at an elevation of 300 ft to feed an extensive loi complex”. (page 79)

The Maui Cultural Lands website notes that,

“Maui Cultural Lands, Inc. (MCL) is a grassroots land trust organization. Our mission is to stabilize, protect and restore Hawaiian cultural resources—and the success of our efforts depends upon volunteers like you!”

Edwin “Ed” Robert Naleilehua Lindsey Jr. and his wife Puanani established Maui Cultural Lands as a nonprofit organization in February 2002. A Native Hawaiian and lifelong school teacher, Uncle Ed had the goal of bringing in the people of Maui—both residents and visitors—to help with the restoration of Honokowai Valley. [They also have a program in Ukumehame.]

Since Ed’s passing in 2009, Puanani and Ed’s eldest son, Edwin “Eko” Lindsey III, carry on the work of Ed’s legacy.

Maui Cultural Lands has a program to restore the lo’i kalo at Ukumehame. As noted on their website, “Progress & Objectives: The ancient lo’i have been partially restored; however much work remains to be done. Lo’i kalo require constant, diligent attention in weeding, planting and harvesting. With more hands, the lo’i can be returned to their original state and thriving production.” (<https://mauiculturallands.org>)

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

Archaeological Sites

When the Ukumehame Agricultural Subdivision was being proposed, the archaeological report for the project noted, “Fourteen sites are to be preserved in the project area. Five of these fourteen sites to be

preserved are addressed in the Burial Treatment Plan (accepted by SHPD/DLNR). Ten of the fourteen sites to be preserved [were] addressed in [the] preservation plan. One of the fourteen sites to be preserved is addressed in both plans due to a non-burial component, within the project area, that is to be preserved and the site is therefore addressed in this document as well as the Burial Treatment Plan.”

As part of the Preservation Plan, the sites are preserved in place and buffer zones are established around each. Likewise, for the four identified probable human burial sites, all were preserved in place and “permanent buffer zone wherein no further construction or land alterations of any kind can occur” were established. The associated Burial Treatment Plan was accepted by SHPD/DLNR and unanimously approved by Maui / Lānaʻi Islands Burial Council.

Given that historical and burial sites are preserved, buffers have been established and the Preservation Plan calls for ongoing preservation in place, there are adequate protection measures in place to protect these resources. In addition, roads have been built in the Ukumehame Agricultural Subdivision that have improved access for families or practitioners to get to the sites.

Loʻi Kalo

Per a USGS website, a USGS Stream gauge is located 0.5 mi upstream from the Ukumehame Gulch diversion intake, 0.68 mi northeast of the Ukumehame Reservoirs, 1.4 mi southeast of Olowalu Stream diversion intake, and 2 mi northwest of Ukumehame Beach State Park. The elevation of the gauge is 400 feet above mean sea level.

“The Ukumehame Gulch diversion intake is located at an altitude of 240 ft, about 0.5 mi downstream from the measurement site. The diversion captures some of the flow in the stream and the remainder flows over the diversion dam downstream. A smaller diversion intake (for taro use) is located about 0.3 mi downstream from the measurement site.”

(<https://streamstatsags.cr.usgs.gov/gagePages/html/16647000.htm>)

Per the CWRM Instream Flow Standard Assessment Report for Hydrologic Unit 6004, Ukumehame,

Instream Flow Standards

Under the State Water Code (Code), Chapter 174C, Hawaii Revised Statutes (HRS), the Commission on Water Resource Management (Commission) has the responsibility of establishing IFS on a stream-by-stream basis whenever necessary to protect the public interest in the waters of the State. Early in its history, the Commission recognized the complexity of establishing IFS for the State’s estimated 376 perennial streams and instead set interim IFS at “status quo” levels. These interim IFS were defined as the amount of water flowing in each stream (with consideration for the natural variability in stream flow and conditions) at the time the administrative rules governing them were adopted in 1988 and 1989. (page 2)

The Code provides for a process to amend an interim IFS in order to protect the public interest pending the establishment of a permanent IFS. The Code, at §174C-71(2), describes this process including the role of the Commission to “weigh the importance of the present or potential instream values with the importance of the present or potential uses of water for noninstream purposes, including the economic impact of restricting such uses.” (page 3)

Under the State Water Code, the conveyance of irrigation and domestic water supplies to downstream points of diversion is included as one of nine listed instream uses. The thought of a stream as a conveyance mechanism for noninstream purposes almost seems contrary to the concept of instream flow standards. However, the inclusion of this instream use is intended to ensure the availability of water to all those who may have a legally protected right to the water flowing in a stream. Of particular importance in this section is the diversion of surface water for domestic purposes. In its August 2000 decision on the Waiahole Ditch Combined Contested Case Hearing, the Hawaii Supreme Court identified domestic water use of the general public, particularly drinking water, as one of, ultimately, four trust purposes. (page 65)

The maintenance of instream flows is important to the protection of traditional and customary Hawaiian rights, as they relate to the maintenance of stream resources (e.g., hihiwai, opae, oopu) for gathering, recreation, and the cultivation of taro. Article XII, Section 7 of the State Constitution addresses traditional and customary rights: "The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights." Case notes listed in this section indicate, "Native Hawaiian rights protected by this section may extend beyond the ahupua'a in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner. 73 H.578, 837 P.2d 1247." (page 66)

Taro cultivation is addressed in this section of the report as well as the next section, 13.0 Noninstream Uses. This is because instream flow standards take into account both social and scientific information. For sociological and cultural purposes, taro cultivation can be considered an instream use as part of the "protection of traditional and customary Hawaiian rights," that is specifically listed as an instream use in the Water Code. Taro cultivation can also be considered a noninstream use since it removes water from a stream (even if water from taro loi is later returned to the stream). (page 66)

Under the State Water Code, noninstream uses are defined as "water that is diverted or removed from its stream channel...and includes the use of stream water outside of the channel for domestic, agricultural, and industrial purposes." Article XI, Section 3 of the State Constitution states: "The State shall conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally sustainable lands." Water is crucial to agriculture and agricultural sustainability. Article XI, Section 3 also states, "Lands identified by the State as important agricultural lands needed to fulfill the purposes above shall not be reclassified by the State or rezoned by its political subdivisions without meeting the standards and criteria established by the legislature and approved by a two-thirds vote of the body responsible for the reclassification or rezoning action. [Add Const Con 1978 and election Nov 7, 1978]." (page 79)

Another component in the assessment of traditional and customary Hawaiian rights is the presence of Department of Hawaiian Home Lands (DHHL) parcels within the surface water hydrologic unit. The mission of DHHL is to effectively manage the Hawaiian Home Lands trust and to develop and deliver land to native Hawaiians (PBR Hawaii, 2004). In June 2004, DHHL published the Muai [sic] Island Plan which served to examine infrastructure needs, provide development cost estimates, and identify priority areas for homestead development. Of the more than 31,000

acres of DHHL land on the island of Maui, no parcels occur within or nearby the Ukumehame hydrologic unit. (page 75)

The definitions in the report include,

Instream Flow Standard. A quantity of flow of water or depth of water which is required to be present at a specific location in a stream system at certain specified times of the year to protect fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses.

Instream use. Beneficial uses of stream water for significant purposes which are located in the stream and which are achieved by leaving the water in the stream. Instream uses include, but are not limited to:

- (1) Maintenance of fish and wildlife habitats;
- (2) Outdoor recreational activities;
- (3) Maintenance of ecosystems such as estuaries, wetlands, and stream vegetation;
- (4) Aesthetic values such as waterfalls and scenic waterways;
- (5) Navigation;
- (6) Instream hydropower generation;
- (7) Maintenance of water quality;
- (8) The conveyance of irrigation and domestic water supplies to downstream points of diversion; and
- (9) The protection of traditional and customary Hawaiian rights. (page 6)

The report identified lo'i kalo in Ukumehame:

In the Ukumehame hydrologic unit, taro is currently grown in two areas: one fed by the Kaakau Auwai consisting of three complexes with 16 loi in total; and one area fed by the main Ukumehame Ditch of two complexes with two loi each (four loi total). (page 74)

"Currently, there are two ditches/auwais that remove water from the Ukumehame Stream with some water from each returned to the streams: the Rodriguez auwai and the primary Ukumehame plantation ditch. The Kaakau auwai diverts approximately 0.16 mgd at an elevation of 300 ft to feed an extensive loi complex". (page 79)

The CWRM website notes the following for the Instream Flow Standard: Hydrologic Unit of Ukumehame (6004):

Instream Flow Standard

CFS	MGD	Location / Notes
4.5	2.9	Ukumehame Stream, below the main Ukumehame Stream diversion near an altitude of 220 feet. At least 0.20 cfs (0.13 mgd) must be supplied for taro lo'i from diversion 960.6. (https://dlnr.hawaii.gov/cwrmsurfacewater/ifs/maui/6004-ukumehame/)

DLNR's website with CWRM News Releases, May 21, 2018, reported that "Instream values for four West Maui streams are now protected following a decision yesterday by the Hawai'i Commission on Water Resource Management (CWRM)." With respect to Ukumehame, that reporting stated,

The streams are Ukumehame, Olowalu, Launiupoko and Kaua‘ula. In addition to recognizing traditional and customary rights such as mauka-to-makai flows, the gathering of native species and taro cultivation, the Commission decision will serve to protect fish habitat, ecosystem services, aesthetic and recreational values, and water quality.

The decision is the first staff-initiated interim instream flow standard since 1988 and was the result of two years of stream measurements, data analysis, mapping and public engagement by the CWRM staff. “Farmers cultivating small taro patches downstream literally had to beg for water that was being diverted upstream for other agricultural and landscaping irrigation,” explained Commission Chair Suzanne Case. “With sugar cane plantations and mills no longer a consideration this is certainly the time to re-balance, to ensure all rightful users of West Maui’s water supply share this precious resource.”

The interim instream flow standards recommended by CWRM staff and adopted by the Commission are:

Ukumehame Stream - at least 2.9 million gallons per day below the plantation diversion, ensuring at least 600,000 gallons per day for taro farmers, At least 45,000 per day is available for agriculture and 4,000 gallons per day for landscaping at least 50% of the time with surface water. (<https://dlnr.hawaii.gov/blog/2018/03/21/nr18-040/>)

Existing Groundwater Wells

Ukumehame Water Association presently has two operating wells (6-3835-003, Sugar Way 2; 6-4835-004, Ukumehame 3). (6-2835-002, Sugar Way 1 is not presently functional, but may be used in the future.) The average monthly total pumpage from each well over the last 12-months (June 2021 through May 2022) has been 0.038 MGD and 0.048 MGD – total is 0.086 MGD).

Initial Need

As noted in the Draft Findings of Fact Report for Ground and Surface Water Management Area Designation (April 21, 2022), the elevations for the two existing operating wells under the operation and control of the Ukumehame Water Association for the Ukumehame Agricultural Subdivision are:

State Well No.	Well Name	Ground Elevation
6-4835-003	Sugar Way 2	63-feet (and draws from the basal aquifer below)
6-4835-004	Ukumehame 3	61-feet (and draws from the basal aquifer below)

Potential Future Groundwater Wells

Given the very modest current and foreseeable potable and irrigation use, as an initial step, the plan is to add a 3rd 40 gpm well on parcel :102, lot 30 in the Ukumehame Agricultural Subdivision.

When needed, based on increasing water use and/or salinity response in the three potable wells, add a large capacity well and 2nd storage tank (the 2nd storage tank should be located adjacent to the existing tank). There are two possible sites for the large capacity (about 500 gpm well, or 720,000 gpd (0.72 MGD).

1. TMK 4-8-02:118 (part of the ‘River Corridor Parcel’)
2. TMK 4-8-02:102 (Lot 30) (probable site)

Each of the proposed well sites are under 200-feet in elevation, and they would be drawing from the basal aquifer below.

Stream Diversions for Lo'i Kalo Are at a Higher Elevation Than the Existing and Planned Wells

The stream diversions are at elevations ranging from approximately 220-foot to approximately 300-foot elevation; the existing groundwater wells are in the vicinity of 60-feet to 65-feet and the proposed large capacity well will be just under 200-feet. The wells tap into the basal groundwater aquifer just above sea level.

Because the groundwater withdrawals are at elevations significantly lower than the diversions that serve the lo'i, the groundwater withdrawals do not impact the availability of water going into the lo'i or the quality of water in the stream.

In addition, the recent (2018) Instream Flow Standards for Ukumehame Stream serve "to protect the public interest in the waters of the State", consistent with the responsibilities noted in the State Water Code (Code), Chapter 174C, Hawaii Revised Statutes (HRS).

As noted in The Surface and Ground Water Management Area Designation Findings of Fact Report, "Interim IFS on nine streams [including Ukumehame] were established to protect the various instream uses of water, including habitat for native aquatic biota, recreational value, and traditional and customary practices of Native Hawaiians."

That Report also stated, "The Hawai'i Supreme Court also held that the Commission 'has an affirmative duty under the public trust to protect and promote instream trust uses.'" The maintenance of instream flows is important to the protection of traditional and customary Hawaiian rights. So, there are additional safeguards that serve to protect the traditional and customary practices and Native Hawaiian rights.

All of these actions serve to protect the traditional and customary practices and Native Hawaiian rights.

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

The Surface and Ground Water Management Area Designation Findings of Fact Report states,

Exercise of Traditional and Customary Native Hawaiian Rights and Practices

Traditional and customary Native Hawaiian rights (T&C rights) are protected at every level of the law, including the constitution, statutes, and common law. The Hawai'i Supreme Court "has stressed that the rights of native Hawaiians are a matter of great public concern in Hawaii." Article XII, section 7 confers upon the Commission "the power to protect [Native Hawaiian] rights and to prevent any interference with the exercise of these rights." Article XII, § 7 correlatively "places an affirmative duty on the State and its agencies to preserve and protect traditional and customary native Hawaiian rights."

The Hawai'i Supreme Court held that the "exercise of Native Hawaiian and traditional and customary rights" is a protected public trust purpose under the constitutional public trust, which the Commission has an affirmative duty to protect to the extent feasible. The Court reviewed the early law of the Hawaiian Kingdom and recognized the "specific objective of preserving the rights

of native tenants during the transition to a western system of private property.” The Court made clear its intention to uphold this “original intent” of the public trust.

The Code provides that protected T&C rights include, but are not limited to, “the cultivation or propagation of taro on one’s own kuleana and the gathering of hihīwai, opae, o’opu, limu, thatch, ti leaf, aho cord, and medicinal plants for subsistence, cultural, and religious purposes.” HRS § 174C-101(c). Additionally, HRS § 7-1 establishes the rights of tenants to gather certain enumerated items and also the “right of drinking water, and running water, and the right of way.” HRS § 1-1 more broadly codifies the doctrine of custom as it applies in Hawai‘i, protecting traditional and customary practices that were established by 1892. ...

As a summary: The maintenance of instream flows is important for the protection of T&C rights, as they relate to the maintenance of stream (e.g., hihīwai, ‘ōpae, ‘o’opu) and riparian (vegetation) resources for gathering, recreation within streams, the cultivation of kalo, and other subsistence, cultural, and religious purposes.

There is tremendous variability of instream and non-instream uses across and within the surface water hydrologic units in the Lahaina ASA. For example, one stream may support extensive taro cultivation while another may primarily support domestic and recreational uses. ...

Community members voiced grave concern over the lack of available stream water and streamflow to cultivate lo‘i kalo and to exercise traditional and customary Native Hawaiian practices that rely on water in its natural state, mauka to makai flow, and healthy native stream fauna. The concerns raised are that established IIFS are not being met, water continues to be diverted and prioritized for off stream uses while protected instream uses and Kuleana families do not have sufficient amounts of water for T&C rights and practices.

Continuation of protections in the Preservation Plan for the historic and burial sites, including maintenance of buffers will serve to further protect these resources into the future.

Likewise, the continuation and maintenance of instream flows is important to the protection of traditional and customary Native Hawaiian rights. So, there are additional safeguards that serve to protect the traditional and customary practices Native Hawaiian rights.

Attachment GWUPA 17. Interference With Any Existing Legal Uses

In the June 8, 2022 Surface and Ground Water Management Area Designation Findings of Fact Report (Table 13, page 47), the Sustainable Yield of the Ukumehame Aquifer System is 2 million gallons per day (MGD).

Hawai'i Army National Guard Ukumehame Firing Range

The Hawai'i Army National Guard Ukumehame Firing Range is another groundwater well reportedly operating within the Ukumehame Aquifer System Area. The Final Environmental Assessment for the Ukumehame Firing Range states,

3.1.2 Well and Irrigation Development [page 3-4]

Seasonal rainfall variations at Ukumehame require that irrigation be provided for landscaped areas. A well with a maximum capacity of 100,000 gallons per day (gpd) will be developed on the southeast portion of the facility adjacent to the target berm at the 600-Meter Firing Range. The well water will be used to irrigate landscaped plants throughout the facility with a drip irrigation system and a temporary bladder storage units.

The objective of the irrigation system plan is to maintain ground cover and landscaping through the dry season. Wetland species planted within the 600-Meter Range will be supplied water on a year-round basis, as needed. The average amount of water pumped for irrigation will be approximately 12,500 gallons per day, or 375,000 gallons per month. Water supplied in this system will not be for human consumption. Potable water is brought to the facility during training exercises.

State-Owned Land in Ukumehame Aquifer System Area

The State of Hawai'i owns two large vacant parcels in the lower portion of Ukumehame that are on either side of the Ukumehame Agricultural Subdivision. They are,

TMK: (2) 4-8-002:002 216.073-acres

TMK: (2) 4-8-002:008 399.903-acres

"The primary purpose of the SWPP [State Water Projects Plan] is to provide a framework for planning and implementation of water development programs to meet projected water demands for State projects. The objective of the SWPP is to review current and future state water projects to ensure orderly authorization and development of the State's water resources."

The State Water Projects Plan (Update 2020) indicates that the potable demand to the year 2034 is "0 MGD" for potable water (page 8-25) from the Ukumehame Aquifer "0 MGD" for non-potable water (page 8-26). So, these parcels are not intended for development at least prior to 2034.

The State also owns land in the upper portion of the Ukumehame Aquifer. This land is part of the West Maui Forest Reserve and is in the Conservation Land Use District. It is not expected that any significant amount of water is needed or planned for this area.

Maui Island Plan (General Plan 2030)

The Maui Island Plan states, “The West Maui community plan region is somewhat isolated from the rest of the island due to topography and limited highway access. The region has the fourth largest population with over 22,000 people in 2010, and the largest visitor population. The region has four distinct sub-regions: Ukumehame, Olowalu, Lahaina, and the band of urban settlements along the shoreline from Kā`anapali to Kapalua. A brief discussion of each sub-region is provided below:

Ukumehame. Ukumehame is the southernmost settlement in the West Maui community plan region. It is a low-density agricultural subdivision that still contains vacant undeveloped lots. Today, the community consists of small agricultural lots with residential and small scale agricultural uses. The community is surrounded by fallow sugarcane fields and significant cultural resources. (page 8-54)

The plan does not indicate any significant change in use, other than continued use in agriculture and preservation of wetland areas.

West Maui Community Plan (2022)

The West Maui Community Plan notes, “The southern region includes the area extending from south of Puamana to the Pali, including the areas of Launiupoko, Olowalu, and Ukumehame. The area is primarily agriculture with an agricultural subdivision in Launiupoko and rural residential in Olowalu. Businesses are mostly limited to the rural village in Olowalu. State Conservation lands lie in the upper reaches of the watershed, along a portion of Olowalu Stream, over the western half of the Pali, and along the shoreline. Parks and open space are expanded throughout this area.” (page 112)

“Subarea 4 has a population of 982 and covers 19,217 acres. This subarea has three distinct communities: Launiupoko, Olowalu, and Ukumehame. ... Ukumehame is the southernmost settlement in the region. Ukumehame is known for its gusty winds that blow from the uplands out to the sea. The waters of Ukumehame Gulch flow from Mauna Kahālāwai down through deep valleys. Here, ancient Hawaiians once maintained fertile green acres of lo’i kalo. The community consists of small agricultural lots with residential and small-scale agricultural uses surrounded by fallow sugarcane fields.” (page 92)

A policy of the plan is to “Preserve and protect the region’s cultural resources and traditional lifestyles, including agricultural pursuits, such as subsistence agriculture on lands owned by the State Department of Hawaiian Home Lands in Honokōwai and lo’i cultivation of Native Hawaiians in Honokōhau Valley, Kahoma Valley, Kaua’ula Valley, Olowalu, and Ukumehame.” (page 43)

There are a few private lots in the vicinity of the Ukumehame Agricultural Park. Due to County planning designations, the Ukumehame Agricultural Subdivision water use is not expected to interfere with these. Likewise, the County’s Ukumehame Beach Park and other public use is on the makai side of Honoapiilani Highway that will not be impacted by the proposed groundwater use.

Because of the lack of any immediate planned development in the area, there is no interference with existing or planned uses or properties that have existing legal use of water.

EXHIBIT 4

UKUMEHAME WATER ASSOCIATION WATER CONSERVATION POLICY

The following water conservation measures should be utilized:

Irrigation for agricultural and maintenance of defensible spaces for fire suppression are priority uses.

- (1) Planting for any new homes and any replacement planting should favor drought resistant grasses, plants, shrubs and trees. Native plants are encouraged.
- (2) Use drip irrigation whenever possible.
- (3) Set irrigation timers to minimize sprinkler use and adjust timers for rain.
- (4) Maintain irrigation systems, check for and repair leaks, and replace broken heads.
- (5) Monitor water use with a leak detection device.
- (6) Add mulch around shrubs, trees and plants to help reduce evaporation.
- (7) Do not use irrigation water for swimming pools.
- (8) Wash your car at an automated car wash that recycles water, or use a bucket instead of a hose.
- (9) Use a broom or blower instead of a hose to clean sidewalks, patios and driveways.

To report a water waste concern, please contact the property manager.