



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

ORIGINAL

APPLICATION FOR SURFACE WATER USE PERMIT
 FOR EXISTING USE IN THE NA WAI EHA, MAUI, SURFACE
 WATER MANAGEMENT AREAS

FORM SWUPA-E (NA WAI EHA, MAUI)

For Official Use Only:
RECEIVED
COMMISSION ON WATER
RESOURCE MANAGEMENT
 2009 APR 30 AM 9:01
 SWUP No. 90
 Event ID: SWUP.2326.6

For detailed instructions on filling out this application, refer to the attached instructions.

APPLICANT INFORMATION: Note: In accordance with §174C-51(1)(B), HRS, 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'S NAME Mary Ciacci (landowner) Lester Nakama (lessee)		Applicant's Contact Lester Nakama (Aloha Poi Inc.)	2. SOURCE LANDOWNER'S NAME Wailuku Water Co. LLC		Source Landowner's Contact Avery Chumbley
Applicant's Mailing Address, or Principal Place of Business Aloha Poi Factory, Inc. 800 Lower Main Street Wailuku, HI 96793			Source Landowner's Mailing Address, or Principal Place of Business 255 East Waiko Road Wailuku, HI 96793		
Applicant's Phone	Applicant's Fax	Applicant's E-mail	Source Landowner's Phone	Source Landowner's Fax	Source Landowner's E-mail

EXISTING SOURCE INFORMATION

The following must be attached before this application is accepted as complete:
 • Portion of 7.5-Minute Series USGS topographic map (scale 1:24,000) labeled with stream and diversion locations and quad map name.
 • Property Tax Map Key (TMK), showing stream or diversion location, and location of water use referenced to established property boundaries.
 • Photograph(s) of the surface water diversion works and end use.

3. SURFACE WATER HYDROLOGIC UNIT AND CODE: Waihee/6022 Waiehu/6023 Iao/6024 Waikapu/6001

4a. TMK OF STREAM DIVERSION LOCATION: 3 - 2 - 014 : 001
Zone Sector Plat Parcel

4b. TMK OF DITCH DIVERSION LOCATION: 3 - 2 - 018 : 044
Zone Sector Plat Parcel

5. STREAM DIVERSION: How is water diverted from the stream to your property? Check all that apply.
 Pipe Pump Ditch/auwai Other Describe: See Attachment 1
 Is the diverted water returned to the stream or ditch? Yes. No. If yes, how much water is returned? See Attachment 1

6. FLOW MEASUREMENT INFORMATION:
 Does the stream diversion have a flowmeter with totalizer or other device to measure diverted amounts?
 Yes. Enter the installation date:
 Describe the device and enter measured amounts in Table 1.
 No. Explain how you are measuring flow to justify amounts shown in Table 1 in the space below
 See Attachment 1

EXISTING USER INFORMATION

7. APPURTENANT RIGHT: Do you claim an appurtenant right for your water use? Yes No
 If yes, has the appurtenant right been established by the courts or the Commission? Yes No

8. END USER INFORMATION: Are you an end user on an existing water system? Yes No
 If yes, who is the operator of the water system? Wailuku Water Company

9. REGISTRATION AND DECLARATION OF WATER USE: Do you have a Registration and Declaration of Water Use with the Commission?
 Yes. List the file reference name(s): Aloha Poi Factory
 No

10. STREAM DIVERSION WORKS PERMIT (SDWP):
 Have you ever been issued a SDWP by the Commission?
 Yes. List the permit number(s):
 No

NOTE: 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. Furthermore, 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 will be subject, but not limited, to any existing legal uses, changes in sustainable yields and instream flow standards, Hawaiian Home Lands uses, and any other conditions imposed by the Commission; and 3) the applicant is responsible for paying the required public notice fees associated with this application.

11. APPLICANT Signature Print: LESTER NAKAMA Date: 4/25/09	12. SOURCE LANDOWNER Signature Date
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FILE ID: SWUP.2326.6
 DOC ID: 3450 ✓

**SURFACE WATER USE PERMIT APPLICATION
EXISTING USE (NA WAI EHA, MAUI)**

**TABLE 1: 12-MONTH AVERAGE DAILY USE
Measured or Calculated Use of Water at the Source or End Use
As of the Effective Date of Designation, April 30, 2008**

MONTH / YEAR	AVERAGE DAILY USE FOR THE MONTH IN GALLONS PER DAY (GPD)	Check one item per box				OTHER Please describe
		METERED	ESTIMATED	ACTIVE BUT UNKNOWN	INACTIVE	
May 2007	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
June 2007	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
July 2007	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
August 2007	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
September 2007	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
October 2007	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
November 2007	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
December 2007	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
January 2008	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
February 2008	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
March 2008	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
April 2008	174,266	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SUM OF AVERAGE DAILY USE FOR THE MONTH	2,091,192	GPD				
AVERAGE DAILY USE (Average of the above)	174,266	GPD				

**SURFACE WATER USE PERMIT APPLICATION
EXISTING USE (NA WAI EHA, MAUI)**

TABLE 2: LAND USE CONSISTENCY/EFFICIENCY
(Attach additional copies of Table 2 if necessary)

LAND USE CONSISTENCY						EFFICIENCY OF USE			
1. PURPOSE / WATER USE CATEGORY	2. USE TMK ATTACH THE FOLLOWING: • Property tax map, showing use location in reference to established property boundaries • Photograph of the area of use	3. STATE LAND USE DISTRICT	4. CDUP REQ'D Enter either: Yes and Date approved, or Yes and not acquired, or No	5. COUNTY ZONING CODE	6. SMAP REQ'D Enter either: Yes and Date approved, or Yes and not acquired, or No	7. REQUESTED QUANTITY OF USE Gallons per Day (GPD)	8. SUB-METERED? (Yes or No)	9. UNITS OR NET ACREAGE	10. APPLICANT'S JUSTIFICATION FOR REQUESTED QUANTITY OF USE FOR ITEM 7. If applicable, attach sheets to show how this number was calculated. For irrigation uses, fill in Table 3.
Uses that require potable (drinking) water									
	____ - ____ - ____ : ____ Zone Sector Plat Parcel								
	____ - ____ - ____ : ____ Zone Sector Plat Parcel								
	____ - ____ - ____ : ____ Zone Sector Plat Parcel								
	____ - ____ - ____ : ____ Zone Sector Plat Parcel								
TOTAL POTABLE USE						0		GPD	
Uses that do not require potable water									
AGRCP	3 - 2 - 018 : 021 Zone Sector Plat Parcel	AG	NO	AG	NO	153,600	NO	1.1	see Attachment 1
AGRCP	3 - 2 - 018 : 044 Zone Sector Plat Parcel	AG	NO	AG	NO	20,666	NO	0.5832	see Attachment 1
	____ - ____ - ____ : ____ Zone Sector Plat Parcel								
	____ - ____ - ____ : ____ Zone Sector Plat Parcel								
TOTAL NON-POTABLE USE						174,266		GPD	
TOTAL USE REQUESTED (Sum of Total Potable Use and Total Non-Potable Use above) =						174,266		GPD	
If total use requested is not equal to the total monthly average in Table 1, please explain.									
In accordance with §174C-51(5), please explain if there are any limitations (legal, contractual, etc.) on the use(s) of water described above. To the best of my knowledge, there are no limitations on the use of water described above.									

**SURFACE WATER USE PERMIT APPLICATION
EXISTING USE (NA WAI EHA, MAUI)**

TABLE 3: IRRIGATION INFORMATION

List all crops as separate line items and include landscape and golf course irrigation, grown in the 12 months prior to April 30, 2008. Attach additional copies of Table 3 if necessary.

1. USE TAX MAP KEY (TMK) Attach map outlining area and photo.	2. CROP	3. TOTAL ACREAGE	4. NET IRRIGATED ACREAGE	5. BEGIN ROWTH PERIOD (Month)	6. END GROWTH PERIOD (Month)	7. IRRIGATION SYSTEM (Refer to instructions.)	8. IRRIGATION PRACTICE (Refer to instructions.)
3 - 2 - 018 : 021 <small>Zone Sector Plat Parcel</small>	TARO (WETLAND)	1.101	1.1	YEAR ROUND	YEAR ROUND	FLOOD (TARO)	IRRIGATE TO FIELD CAPACITY
3 - 2 - 018 : 044 <small>Zone Sector Plat Parcel</small>	TARO (WETLAND)	1.458	0.5832	YEAR ROUND	YEAR ROUND	FLOOD (TARO)	IRRIGATE TO FIELD CAPACITY
- - - : <small>Zone Sector Plat Parcel</small>							
- - - : <small>Zone Sector Plat Parcel</small>							
- - - : <small>Zone Sector Plat Parcel</small>							
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- - - : <small>Zone Sector Plat Parcel</small>							

**SURFACE WATER USE PERMIT APPLICATION
EXISTING USE (NA WAI EHA, MAUI)**

TABLE 4: ALTERNATIVES ANALYSIS

	Potable Alternatives Attach additional sheets if necessary.	Non-Potable Alternatives Attach additional sheets if necessary.
Municipal sources		See Attachment 1
Wastewater reuse		See Attachment 1
Ditch system		See Attachment 1
Desalinization		See Attachment 1
Ground water		See Attachment 1
Other (specify)		N/A

PUBLIC INTEREST

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

Explain below how the uses in your application are consistent with the public interest as described above. Attach additional sheets if necessary.

See Attachment 1

SURFACE WATER USE PERMIT APPLICATION EXISTING USE (NA WAI EHA, MAUI)

INSTRUCTIONS FOR FILLING OUT *FORM SWUPA-E*

This application form is to be used for actual existing uses as of the effective date of designation, April 30, 2008, for the Na Wai Eha Surface Water Management Areas. Based on the State Water Code, Section 174C, Part IV Regulation of Water Use, a completed application must be filed with the Commission on Water Resource Management (CWRM) no later than April 30, 2009, to qualify as an existing use. Failure to meet the filing deadline may cause your application to be considered a new use and require you to file an Application for Surface Water Use Permit for New Use.

If you are applying for a new surface water use, which are proposed uses after the date of designation, please use the Application for Surface Water Use Permit for New Use, **Form SWUPA-N**.

Information about surface water management areas and the current application forms are available at our website: <http://www.hawaii.gov/dlnr/cwrm/>; by contacting the Stream Protection and Management Branch at 587-0234; or sending an email to: dlnr.cwrm@hawaii.gov.

REQUIREMENTS FOR A COMPLETE APPLICATION Information must be legible. Therefore, please type or clearly print all information in ink.

- a. Fill in the most recent application form.
- b. Fill in every line on the application.
- c. Enclose a check for the non-refundable filing fee of \$25 payable to: Department of Land and Natural Resources.
- d. Pay for the cost of publishing any required public notices related to your application.
- e. Mark the source and end use locations on the appropriate USGS quad map and TMK map and attach to your application.
- f. Attach photos showing your existing diversion, measuring device (if applicable) and end use areas.
- g. Sign the application form. Both the applicant and the landowner of the source must sign the application form.
- h. Submit one original and **15 copies** of the application form; one original and 15 copies of the attachments (instructions, maps, photos and any additional attachments) and filing fee to: Commission on Water Resource Management, P.O. Box 621, Honolulu, HI 96809.

The applicant must establish that the existing use of water is a reasonable and beneficial use. According to §174C-3 of the State Water Code: *"Reasonable-beneficial use" means the use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and the public interest.*

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

LINE BY LINE INSTRUCTIONS FOR COMPLETING THE APPLICATION FORM

APPLICANT INFORMATION

1. **APPLICANT'S NAME:** Fill in the information for the applicant. This should be the entity that will be responsible for all conditions of the water use permit.
2. **SOURCE LANDOWNER'S NAME:** Fill in the information for the landowner of the property where the existing surface water diversion works is located. Note: in accordance with §174C-51(1)(B), *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.*

EXISTING SOURCE INFORMATION

3. **SURFACE WATER HYDROLOGIC UNIT AND CODE:** Check the appropriate box for the hydrologic unit name and hydrologic code where the source is located. The "source" is the stream, ditch, or conduit from which water is diverted to the user. For information on hydrologic unit names and unit codes please refer to the *Surface-Water Hydrologic Unit: A Management Tool for Instream Flow Standards* report available on the CWRM website at: <http://www.hawaii.gov/dlnr/cwrm/>, or contact CWRM staff at (808) 587-0234. You may also contact CWRM toll-free from Maui at: 984-2400, ext. 70234.
- 4a. **TMK OF STREAM DIVERSION LOCATION:** Fill in the current Tax Map Key (TMK) number of the parcel where the stream diversion is located if applicable. To find out your TMK number, call Maui County Real Property Tax Division at: (808) 270-7297, or check online at: www.mauipropertytax.com/
- 4b. **TMK OF DITCH DIVERSION LOCATION:** Fill in the current Tax Map Key (TMK) number of the parcel where the ditch diversion is located, if applicable.
5. **STREAM DIVERSION:** How is water diverted from the stream to your property? Check the appropriate box(es). Is the diverted water returned to the stream or ditch? Check "Yes" or "No." If yes, enter the amount of water returned.
6. **FLOW MEASUREMENT INFORMATION:** Check "Yes" or "No". If you have a working flowmeter with a totalizer, answer "Yes" to this question, and fill in the date that the flowmeter was installed and any other information you may have (manufacturer, serial number, etc.). A totalizer directly measures the total use for the source (similar to a car's odometer). Otherwise, answer "No" and explain how stream diversion is measured or estimated to justify amounts requested in Table I

EXISTING USER INFORMATION

7. **APPURTENANT RIGHT:** An appurtenant water right is a legally recognized right to a specific amount of surface freshwater – usually from a stream – on the specific property that has that right. This right traces back to the first time the land was converted to fee simple title; i.e., the Great Mahele and the issuance of either a Land Commission Award or Royal Patent. The quantity of water under the appurtenant right is the amount that was being used on the land shortly before or at the time of the Mahele.
Do you claim an appurtenant right for your water use? Check "Yes" or "No."
If yes, has your appurtenant right been established by the courts or the Commission? Check "Yes" or "No."
8. **END USER INFORMATION:** Are you an end user on an existing water system? Check "Yes" or "No". If yes, please list the name of the water system operator.
9. **REGISTRATION AND DECLARATION OF WATER USE:** Do you have a Registration and Declaration of Water Use from the Commission? Check "Yes" or "No". If yes, please list the name of the registrant(s).
10. **STREAM DIVERSION WORKS PERMIT (SDWP):** Have you ever been issued a SDWP by the Commission? If yes, please list the permit number(s). Otherwise, check "No."
11. **APPLICANT:** Please sign and print your name, and date your application.
12. **LANDOWNER:** Please sign and print your name, and date your application. The landowner shall be the joint applicant in the event the applicant is 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. §174C-51(1)(B)

SURFACE WATER USE PERMIT APPLICATION EXISTING USE (NA WAI EHA, MAUI)

TABLE 1: 12-MONTH AVERAGE DAILY USE - Measured or calculated use of water at the source or end use as of the effective date of designation, April 30, 2008.

Please fill out Table 1 to calculate your existing use as of the effective date of the designation, April 30, 2008, of the Na Wai Eha Surface Water Management Areas. The effective date of designation is the date of the publication of the public notice of the Commission designation action. The qualifying dates have been filled in for this application. Fill in as completely as possible.

The 12-month average is the average daily use^a of 12 months of consecutive use^b from the last month^c of the period.

- a. Average daily use. This is the average daily use for one month in gallons per day (GPD). To calculate this average, take the total use (in gallons) for the month, and divide this amount by the number of days in the month.
- b. 12 months of consecutive use. To calculate the average monthly withdrawal for 12 consecutive months of use, add the average daily use for all 12 months and divide that amount by 12.
- c. Last month. The last month of the period is the effective date of designation, April 30, 2008.

Check only one of the following boxes per row in Table 1:

- Metered – data is based on an operational meter with a totalizer.
- Estimated – data is based on some indirect measurement technique (e.g. measured flow rate multiplied by time of operation).
- Active but unknown – source is active, but there is no means to measure or estimate flow coming from source.
- Inactive – source was not pumped or diverted for the month.
- Other - describe how water use was measured or calculated in this box.

TABLE 2: LAND USE CONSISTENCY/EFFICIENCY

1. PURPOSE / WATER USE CATEGORY: Choose one of the following purpose or category codes listed below for each row in Table 2. There may be several purpose/categories on a single TMK, and each purpose or category must be listed in a separate row. Attach additional copies if necessary.

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
INDUSTRIAL	
INDEL	Geothermal, Thermolectric Cooling, Power Development
INDFP	Fire Protection
INDMI	Mining, Dust Control
INDOTH	Industrial – Other
IRRIGATION	
IRRG	Golf Course
IRRH	Habitat Maintenance
IRRHOT	Hotel
IRRLA	Landscape/Water Features
IRROTH	Other
IRRPCA	Parks
IRRSC	Schools
MILITARY	
MIL	Military
MUNICIPAL	
MUNCO	County
MUNPR	Privately owned and operated but defined as a public system by the Department of Health
MUNST	State

2. USE TMK: The Tax Map Key number of the parcel over which the water is applied. There should only be one parcel for each line. Also, attach a TMK map(s) for the lots showing the boundaries of irrigated acreage, etc., as well as a photograph of the area of use.
3. STATE LAND USE DISTRICT: To find out the current Land Use District, contact the Land Use Commission at 587-3822.
4. CDUP REQUIRED: If a Conservation District Use Permit (CDUP) is required, enter either: "Yes" and the date the CDUP was approved if you have a CDUP applicable to this project; or "Yes" and "not acquired" in this box. If a CDUP is not required, enter "N" for no in this box. To check if your parcel is in the Conservation District, contact the Land Use Commission at 587-3822. If your parcel is in a Conservation District, contact the Department of Land and Natural Resources Office of Conservation and Coastal Lands at 587-0328 to find out if a CDUP is required.
5. COUNTY ZONING CODE: To find out the Zoning Code for your property, call Maui County Planning Department at 270-6279, or 270-7253
6. SMAP REQUIRED: If a Special Management Area Permit (SMAP) is required for this project, enter either: "Y" and the date SMAP was approved; or "Y" and "not acquired" in this box. If a SMAP is not required, enter "N" for no in this box. To find out if your property is in a Special Management Area and requires an SMAP, call Maui County Planning Department at 270-8205.
7. QUANTITY OF USE: Enter the quantity of use in gallons per day (GPD). Justification for the quantities requested may depend on your answers to items 8 and 9, and you should describe the justification in item 10.
8. SUBMETERED? (Y/N): If the specific use is submetered, enter "Y" for yes here. If it is not submetered, enter "N" for no. Submetering is specific to each line item.
9. UNITS OR ACREAGE: This is the value and category as the basis for calculating the duty. "Duty" is the amount of water used or requested for a "unit" over a specific time period, e.g. gallons per acre per day, or gallons/acre/day. "Unit" can mean dwelling units, or number of people, or animals. Examples to fill in for this category are: 400 dwelling units, 500 people, 3.74 acres.
10. APPLICANT'S JUSTIFICATION FOR REQUESTED QUANTITY OF USE FOR ITEM 7: Explain how you are justifying the amount you are requesting. Attach additional sheets if necessary.

**SURFACE WATER USE PERMIT APPLICATION
EXISTING USE (NA WAI EHA, MAUI)**

TABLE 3: IRRIGATION INFORMATION

If you have grown crops in the year prior to the date of designation, please list all the crops (including landscape and golf course irrigation) that you have grown. Enter a single crop and single TMK per line. If you have multiple crops, list them all as separate line items. Attach additional copies of Table 3 if necessary.

1. **USE TAX MAP KEY (TMK):** Enter the parcel number where the crop is being grown. Attach a map outlining irrigated area(s) and photos.
2. **CROP:** Enter the crop type.
3. **TOTAL ACREAGE:** Enter the total acreage of the parcel listed.
4. **NET IRRIGATED ACREAGE:** Enter the acreage for the specific crop grown.
5. **BEGIN GROWTH PERIOD (MONTH):** This is the month of the start of the growth cycle. For perennial crops, list the 12th month prior to the date of designation.
6. **END GROWTH PERIOD (MONTH):** This is the month of the end of the growth cycle. For perennial crops, list the month of the date of designation.
7. **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.
8. **IRRIGATION PRACTICE:** Enter one of the following:
 - IRRIGATE TO FIELD CAPACITY
 - APPLY A FIXED DEPTH PER IRRIGATION
 - DEFICIT IRRIGATION
 - OTHER – Please describe.

TABLE 4: ALTERNATIVES ANALYSIS

Please address every alternative listed in Table 4 and whether or not they are available, for both potable and non-potable needs. Other alternatives on the last line may include stormwater reclamation, rainwater catchment, etc.

Surface water is defined in §174C-3 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.*

PUBLIC INTEREST

Explain how the uses in your application are consistent with the public interest as described in §174C-2(c): *(t)he state water code shall be liberally interpreted to obtain maximum beneficial use of the waters of the State for purposes such as domestic uses, aquaculture uses, irrigation and other agricultural uses, power development, and commercial and industrial uses. However, adequate provision shall be made for the protection of traditional and customary Hawaiian rights, the protection and procreation of fish and wildlife, the maintenance of proper ecological balance and scenic beauty, and the preservation and enhancement of waters of the State for municipal uses, public recreation, public water supply, agriculture, and navigation. Such objectives are declared to be in the public interest.*

ATTACHMENT 1

EXHIBITS: Appended hereto as **EXHIBIT 1** is a copy of the 7.5 minute-series USGS topographic map with the North Waiehu and Waihe`e Ditch diversions labeled. **EXHIBIT 2** is a map of our TMKs and kuleana water system. **EXHIBIT 3** contains copies of photographs of our `auwai diversion and area of use. **EXHIBIT 4** is described below.

ADDITIONAL INFORMATION FOR SWUPA-E BOXES:

2. Source Landowner:

Not applicable pursuant to HRS § 174C-51(1)(B), because applicant does not have a terminable interest in the land which is the source of the permitted water. According to the Water Commission's records, which have not been verified, Wailuku Water Company claims to be the source landowner.

5. Stream Diversion:

We are kuleana users in Waiehu that receive kuleana water from two sources (see Exhibits 2 and 3). TMK No. 3-2-018:021 receives water from a kuleana `auwai that receives water from North Waiehu Stream. Water is diverted from North Waiehu Stream (TMK No. 3-2-014:001) (see attached USGS topo map) into the North Waiehu Ditch and a 6 inch pipe in North Waiehu Ditch brings water across Waihe`e Ditch and under a plantation road. At some point under the plantation road, the pipe is reduced to 4 inches. The pipe splits and some water comes east toward our land and some goes toward the Ho`opi`i's land. The outflow from the Ho`opi`i's pipe eventually meets up with the portion of the water that comes toward our land and flows in an open ditch into the lo`i kalo on our land.

The other source is a kuleana `auwai that runs along Malaihi Road, and this `auwai provides water to TMK No. 3-2-018:044. The `auwai receives water from Waihe`e Ditch, after Waihe`e Ditch receives water from Waihe`e River and North Waiehu Stream. Water is diverted from Waihe`e River at the Waihe`e diversions (see attached USGS topo map) into the Waihe`e Ditch. Water is diverted from North Waiehu Stream (TMK No. 3-2-014:001) (see attached USGS topo map) into the North Waiehu Ditch, then into Waihe`e Ditch. Water from the Waihe`e Ditch flows into a pipe and weir, then into an open ditch. The water continues makai in the ditch and pipes down both sides of Malaihi road until it enters our land at TMK 3-2-018:044. Some of our outflow runs in an open ditch through the neighboring parcels and onto the Lee's parcels at TMK No. 3-2-018:040; some of our outflow returns to the `auwai running down Malaihi Road.

6. Flow Measurement Information: See explanation for Table 2 Box 10, below.

7. Appurtenant Rights:

Our property has appurtenant rights because it was in kalo cultivation at the time of the Māhele of 1848. In fact, almost all of the stream water we currently use is for ancient lo`i kalo that we

have restored. Attached hereto as **EXHIBIT 4** are true and correct copies of Māhele records for Land Commission Award No. 3448, Royal Patent No. 6124 and Land Commission Award No. 3435, Royal Patent No. 3222, including testimony indicating the land was in kalo. This land has been in our family for many generations, and based on our knowledge of the history of this kuleana and our family we have no evidence, indication, or any other reason to believe that our appurtenant rights have been extinguished. This application should be granted pursuant to HRS § 174C-63.

Table 2. Justification for Requested Quantity:

Our existing water use is not gauged, but we measured our use by using the bucket method. See 'Onipa'a Nā Hui Kalo, Guidelines for Grassroots Lo'i Kalo Rehabilitation 70. We measured the water in the pipe that comes east toward our land after the split, and recorded the amount of time it took to fill a five-gallon bucket five times; the average time was 4.5 seconds. Using the table on page 70 of Guidelines for Grassroots Lo'i Kalo Rehabilitation, we calculated that we use 96,000 gallons per day.

We measured the inflow at the Ho`opi`i's property, and recorded the amount of time it took to fill a five-gallon bucket five times; the average time was 3.75 seconds. Using the table on page 70 of Guidelines for Grassroots Lo'i Kalo Rehabilitation, we calculated that we use 115,200 gallons per day. We estimate that about half of this amount, 57,600 gallons per day, flows off the Ho`opi`i's land and meets up with the amount measured above before entering our land.

Based on these two measurements, we estimate that approximately 153,600 gallons per day enters our land at TMK No. 3-2-018:021. This approximates the amount we were using on the date of designation, but this amount is not adequate for a healthy kalo crop.

We measured the inflow on our land at TMK No. 3-2-018:044, and recorded the amount of time it took to fill a five-gallon bucket five times; the average time was 7 seconds. Using the table on page 70 of Guidelines for Grassroots Lo'i Kalo Rehabilitation, we calculated that we receive about 62,000 gallons per day from the Malaihi Road `auwai. We use about 1/3 of that on TMK No. 3-2-018:044 and the remainder flows off our land to the neighboring properties. Therefore, we receive approximately 20,666 gallons per day on TMK No. 3-2-018:044. This approximates the amount we were using on the date of designation, but this amount is not adequate for a healthy kalo crop.

Table 4: Alternatives Analysis

Because our land has an appurtenant right to stream water, which is in the nature of an easement that was conveyed with the land at the time of the Māhele, we do not need to demonstrate that we have no practicable alternative source of water. Our appurtenant right is for stream water, not to water from some other source, and our exercise of this appurtenant right enjoys maximum protection and first priority under the law.

Moreover, even if we did not have protected rights to stream water, there is no potentially available alternative source that is economically practicable. We lease our land to

Aloha Poi Factory to grow kalo in the traditional manner in the ancient lo`i on our land. Aloha Poi makes poi out of the kalo they grow to provide the local community with a nutritious and culturally significant food source. An alternative water source that would require us or Aloha Poi to pay for the volumes of constantly flowing water in our lo`i necessary to keep temperatures cool and support healthy kalo would make Aloha Poi's wetland kalo cultivation using traditional methods economically impossible. We would effectively be denied our appurtenant right and the opportunity to grow kalo on our land. As shown below, each potentially available alternative water source is impracticable and imposes a cost on exercising our protected right.

Municipal Sources. Our domestic water service is a typical residential service and does not have the capacity to deliver the volumes of water we require. Even if the Maui County Department of Water Supply were willing to provide municipal water for wetland kalo cultivation by installing a larger water meter, the cost of using municipal water for such purposes would be prohibitive. Additionally, water from the Maui County Department of Water Supply is chlorinated, which is detrimental and unsuitable for wetland kalo.

Wastewater reuse. Reusing wastewater is impracticable because we would still be required to pay for large volumes of flowing water. Additionally, the closest wastewater treatment plant is in Kahului. As a small user engaged in wetland kalo cultivation using traditional irrigation methods, we do not have the means to hookup to and use that water.

Ditch system. We are currently using water from an existing `auwai, although water is not available consistently and in sufficient amounts to support the existing uses on our system, including our own uses. Getting water from a different ditch system other than the existing system that already services our land is not practicable or efficient. First, the other ditch systems in Nā Wai `Ehā do not consistently have enough water to support additional users. Second, we lack the property, access, permissions and funding necessary to permit and construct an additional ditch diversion and irrigation system. As a small user engaged in wetland kalo cultivation, the cost of taking water from or constructing another ditch is not practicable.

Desalinization. Desalinization of brackish water is not a practicable alternative because we are not aware of any such plant having been built on Maui. According to the County's estimates, a plant is expected to be built in 2013 at the earliest.

Ground Water. Even if we were able to secure the permits necessary to drill a well and pump ground water for our uses, installing and operating such a well to provide flowing water for kalo cultivation would be unprecedented and extremely burdensome. As a small user engaged in wetland kalo cultivation using traditional methods, we do not have the means to install and maintain such infrastructure.

Table 4: Public Interest

Our Existing Use is Consistent with the Public Interest

Generally, “water use for diversified agriculture on land zoned for agriculture is consistent with the public interest.” In re Waiāhole Ditch Combined Contested Case, 94 Hawai‘i 97, 162, 9 P.3d 409, 474 (2000) (“Waiāhole I”). Further, HRS § 174C-2(c) provides that the protection of traditional and customary Hawaiian rights, agriculture, and the maintenance of proper ecological balance and scenic beauty are “in the public interest.” The water we use is for kalo cultivation. We grow kalo in traditional ways and use it to make poi for sale in local stores. Our lo`i kalo help maintain ecological balance and scenic beauty and allow the perpetuation of the Native Hawaiian culture. As such, our existing use of stream water is consistent with the public interest. Additionally, the exercise of appurtenant rights is a protected public trust purpose. Waiāhole I, 94 Haw. at 137 n.34, 9 P.3d at 449 n.34.

Our Existing Use is a “Reasonable-Beneficial Use”

“Reasonable-beneficial use” is defined as “the use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and public interest.” HRS § 174C-3. As indicated, our existing use of stream water is consistent with state and county land use plans and the public interest. It will also be “economic and efficient” because we will only use the amount we need. Therefore, the water we use is for a “reasonable-beneficial use.”

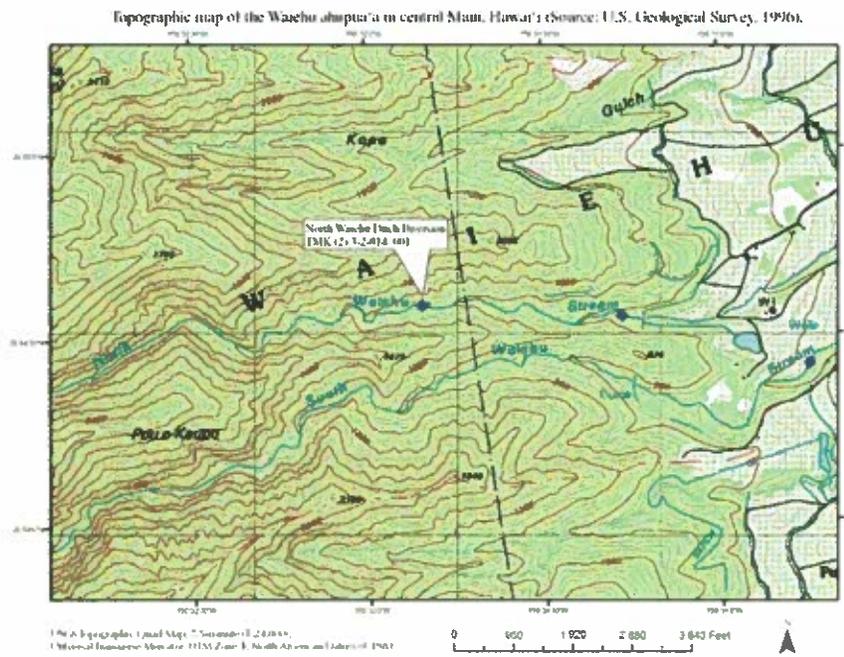
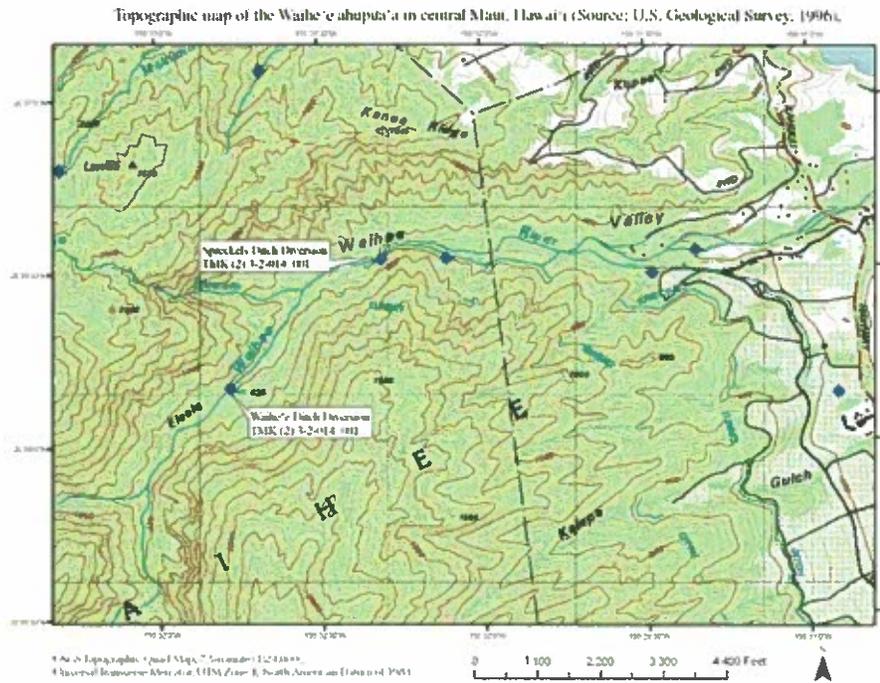


EXHIBIT 1: USGS MAPS

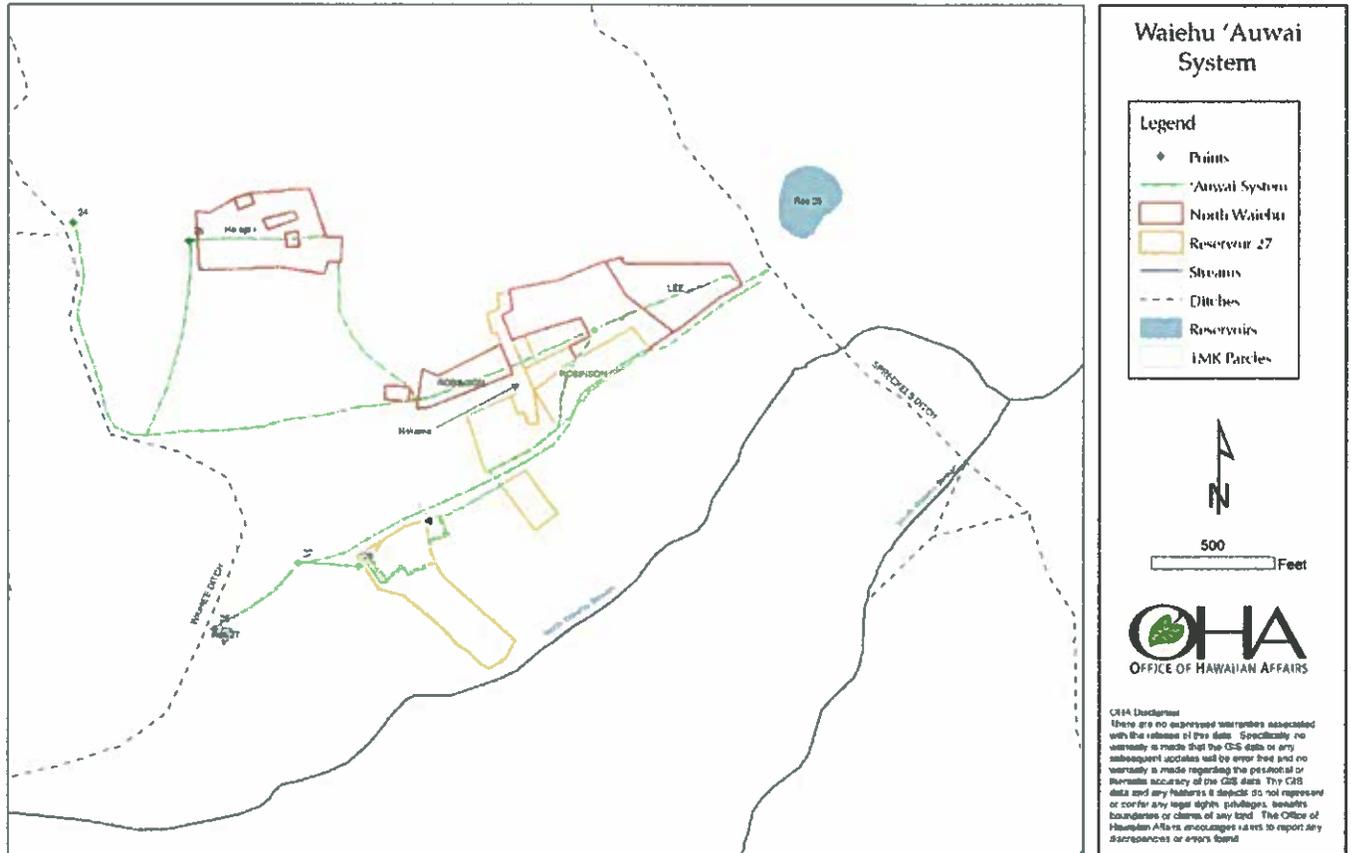


EXHIBIT 2: TMK Map depicting the water system in relation to land

EXHIBIT 3



The above photograph depicts the 6-inch pipe that crosses Waihe`e Ditch and goes underground before delivering kuleana water to our land. The North Waiehu Ditch is emptying into the Waihe`e Ditch to the right.



The above photograph depicts the `auwai as it runs down Malaihi Road on a rainy day.



The above photo depicts the Malaihi Road `auwai inflow to our lower parcel at TMK No. 3-2-018:044.

Mary Ciacci (landowner)
Lester Nakama (lessee)
TMK 3-2-018:021, 044
SWUPA-E
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The above photo depicts a portion of our fallow lo'i kalo that will be planted in a few weeks.

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It is a piece of hale land in the isle of Punahele, Moku.
 The land is bounded by the sea to the North, by the
 land of the King to the South, by the land of the King to the
 East, and by the land of the King to the West. The land is
 bounded by the sea to the North, by the land of the King to the
 South, by the land of the King to the East, and by the land of the
 King to the West.

It is bounded by the sea to the North, by the land of the King to the
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 East, and by the land of the King to the West.

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 South, by the land of the King to the East, and by the land of the
 King to the West. The land is bounded by the sea to the North,
 by the land of the King to the South, by the land of the King to the
 East, and by the land of the King to the West.

Copied at Hawaii State Archives

No. 3219 Apapau (cont.)

Naoopu sworn He has seen 3 sections in these ilis of Ahikuli

<u>Section 2</u>	Mauka	Kualii
	Waihee	Polipoli ahupuaa
	Makai	Koahula
	Malaaea	Lii
<u>Section 3</u>	Mauka	Kane
	Waihee	Waiwaiole
	Makai	Kualii
	Malaaea	Stream
<u>Section 4</u>	Mauka	Kamahaloa
	Waihee	Pali
	Makai	Kamahaloa
	Malaaea	Pali

No. 3328 Naoopu

July 17

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Apapau sworn He has seen 3 sections in the ilis of Ahikuli and Waiehu. 1 and from Kaaimakani before 1829, no objection. 4 Poalima's in section 2, 1 poalima in section 2.

Section 1 - Lauhala pasture at Pahapahawale

Mauka	Kahookano
Waihee	Stream
Makai	Makanui
Malaaea	Kahookano

Section 2 - Taro moo at Keakukui

Mauka and Waihee	Konohiki
Makai	Kanakaole
Malaaea	Ahikuli/stream

Section 3 - Taro moo at Pooheua

Mauka and Waihee	Pehauui
Makai	Kaholomaana
Malaaea	Stream

No. 3435 Keonahula

July 17

Apapau sworn He has seen 3 section in Polipoli ilis. Sections 1 and 2 from Puhuewale at the time of Kam. I, section 3 from Kaaimalani before 1829. 2 Poalimas in first section, no objection.

Section 1 - Taro moo and pasture at Kapalaoa

Mauka	Apapau's land
Waihee	Puahi
Makai	Auwaee/Poalima
Malaaea	Ahikuli

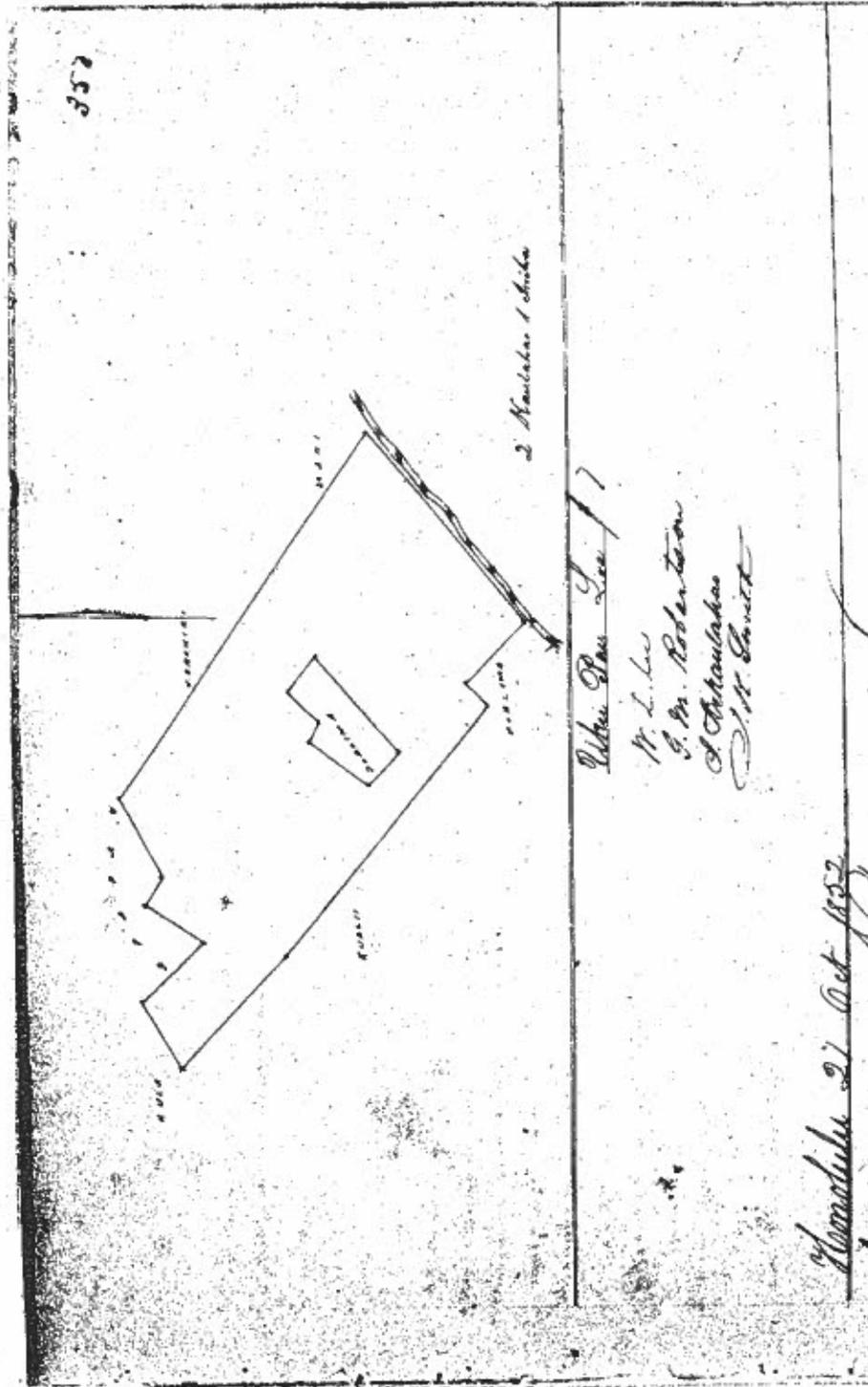
Section 2 - Taro moo and pasture at Kapalaoa

Mauka	Apapau's land
Waihee	Kapapuni
Makai and Malaaea	Auwaee/Poalima

Section 3 - 2 Taro pastches and pasture at Pooheua Ahikuli

Mauka	Waiwaiole
Waihee	Poalima
Makai and Malaaea	Hanae

Mary Ciacci (landowner)
Lester Nakama (lessee)
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No. 3462 Kaloni (cont.)

Section 1 - Taro land and pasture at Chia

Mauka	Kualii
Waihee	Apapau
Makai	Mahi
Maalaea	Stream

Section 2 - 3 Taro sections (patches) at Halawa
 Kane's boundaries on all sides.

No. 3273 Waiwaiole July 18, 1849

Ehu sworn He has seen 1 taro section, pasture and house in the ili of Halelau at Polipoli. Waiwaiole's land from Nawai at the time of Kam. II. 2 Poalimas there, no one has objected.

Mauka	Ehu
Waihee	Kamahua
Makai	Pohakupa
Maalaea	Kepaa

No. 3448 Kaalapahi July 18, 1849

Ehu sworn He has seen 1 section in the ili of Mookahi at Polipoli. Land from Mua at the time of Kam. II, 4 Poalimas there, no one has objected.

Mauka	Laka
Waihee	Kapulu
Makai	Kaai
Maalaea	Kaiuipoepoe

WAILUKU, JULY 19, 1849

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No. 3374 Paele

Kapohuli sworn He has seen 1 taro section and pasture in the ili of Kukuialaimaka in Waiehu. Paele's land from Kapahi at the time of Eleele and Kam. II. Paele died in 1848, three children are his heirs, Kalawala, Kaeuwai, and Zebe-bapera. No one has objected.

Mauka	Kapahi
Waihee	Stream
Makai	Keauwaeaina
Maalaea	Kapahi

No. 5622 Kaneiakala Waiehu, July 19, 1849

Ehu sworn He has seen 2 sections in these ilis of Ahikuli. Land from Kaai-lani at the time of Kam II, 1 poalima in the first section, 1 in the second section. No one has objected.

Section 1 - Taro land at Kaohu

Mauka	Kane's land
Waihee	Stream
Makai	Poina
Maalaea	Ahikuli pali

Section 2 - Taro land at Phakulua

Mauka, Waihee, amak	Kualii
Maalasa	Konohiki

Copied at Hawaii State Archives

The title of this land is from the days of the
 King of Hawaii. No title was ever disputed. There was no purchase
 for it. It is from the
 It is bounded north by the land of the late King, by the land of the late King,
 south by the land of the late King, west by the land of the late King,
 east by the land of the late King.

C. 3448. Ewalapahi

The land is one piece of high & low land in the
 Kingdom of Hawaii. It is from the days of the
 King of Hawaii. No title was ever disputed. There was no purchase
 for it. It is from the
 It is bounded north by the land of the late King, by the land of the late King,
 south by the land of the late King, west by the land of the late King,
 east by the land of the late King.

C. 3449. Pahi

The land consists of high & low land in the
 Kingdom of Hawaii. It is from the days of the
 King of Hawaii. No title was ever disputed. There was no purchase
 for it. It is from the
 It is bounded north by the land of the late King, by the land of the late King,
 south by the land of the late King, west by the land of the late King,
 east by the land of the late King.

It is bounded north by the land of the late King, by the land of the late King,
 south by the land of the late King, west by the land of the late King,
 east by the land of the late King.

C. 3451. Kaniakapala

The land consists of two pieces in the
 Kingdom of Hawaii. It is from the days of the
 King of Hawaii. No title was ever disputed. There was no purchase
 for it. It is from the
 It is bounded north by the land of the late King, by the land of the late King,
 south by the land of the late King, west by the land of the late King,
 east by the land of the late King.

Copied at Hawaii State Archives

Nevelehu Nov 20 1852

Nevelehu Koolopahi

Nevelehu Maui

Mahala 1. Eke Moteke. Chomatake ke ana ma te hiki. Maui. Saka. Num. 27. North 9. South.
 a hiki ana te hiki. Moteke. ke ana ma te hiki. Maui. Num. 27. North 9. South. 123. Kaulahe ana te
 Palama. Num. 27. North 9. South. 123. Kaulahe ana te Palama. Num. 27. North 9. South. 123. Kaulahe ana te
 Ah. 85. Num. 589. Kaulahe ana te hiki. Maui. Saka. a hiki ana hiki. Chomatake.

Mahala 2. Eke Moteke. Chomatake ke ana ma te hiki. Maui. Saka. Num. 27. North 9. South. 123.
 a hiki ana te hiki. Maui. Saka. Num. 27. North 9. South. 123. Kaulahe ana te Palama. Num. 27. North 9. South. 123.
 Ah. ana Kaulahe. Ah. 55. North 9. South. 123. Kaulahe ana te Palama. Num. 27. North 9. South. 123. Kaulahe ana te
 Num. 59. Num. 568. Kaulahe ana te hiki. Maui. Saka. a hiki ana hiki. Chomatake.

Mahala 3. Eke Moteke. Chomatake ke ana ma te hiki. Maui. Saka. Num. 27. North 9. South. 123.
 a hiki ana te hiki. Maui. Saka. Num. 27. North 9. South. 123. Kaulahe ana te Palama. Num. 27. North 9. South. 123.
 Num. 32. Ah. 135. Ah. Palama. Num. 56. Num. 84. Kaulahe ana te hiki. Maui. Saka. a hiki ana hiki. Chomatake.

Mahala 4. Eke Moteke. Chomatake ke ana ma te hiki. Maui. Saka. Num. 27. North 9. South. 123.
 North 76. Ah. a hiki ana te hiki. Maui. Saka. Num. 27. North 9. South. 123. Kaulahe ana te Palama. Num. 27. North 9. South. 123.
 Kaulahe ana te hiki. Maui. Saka. Num. 27. North 9. South. 123. Kaulahe ana te Palama. Num. 27. North 9. South. 123.
 Ah. Kaulahe. a hiki ana hiki. Chomatake. a maletahi ana maletahi ana. 2. 7. 6. 6. 6.

Waikana July 05 1852

John Nakama
 Maui ana ana

