



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

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

FORM SWUPA-N
Application for New Use
Application to Modify SWUP No.

For Official Use Only:

For detailed instructions on filling out this application form completely, refer to the attached instructions sheet.
Incomplete applications will not be accepted for processing.
The following must be attached before this application is accepted as complete:
- Portion of 7.5-Minute Series USGS topographic map (scale 1:24,000) labeled with stream and diversion location and the quad map name.
- Property tax map showing the stream or diversion location and location of water use referenced to established property boundaries.
- Photograph(s) of the surface water source, diversion and end use, if applicable.

APPLICANT INFORMATION: NOTE: In accordance with HRS §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 be stated as a joint applicant for the water permit.

1. APPLICANT'S NAME: Michele Hoopii
Applicant's Contact: Michele Hoopii
2. SOURCE LANDOWNER'S NAME (Portion of Waihe'e Ditch): Wailuku Water Company LLC
Source Landowner's Contact: Avery Chumley
Applicant's Mailing Address, or Principal Place of Business: 58 Hoola Hou Street, Wailuku HI 96793
Source Landowner's Mailing Address, or Principal Place of Business: 255 East Waiko Road, Wailuku HI 96793
Applicant's Phone, Fax, E-mail: [Redacted] N/A
Source Landowner's Phone, Fax, E-mail: [Redacted]

SOURCE INFORMATION

3. SURFACE WATER HYDROLOGIC UNIT: Island: Maui Hydrologic Unit: Waihee Stream Hydrologic Unit Code: Waihee Stream
4. INSTREAM FLOW STANDARD (IFS) FOR HYDROLOGIC UNIT, IF APPLICABLE:
5. CAN YOUR PROPOSED USE(S) BE ACCOMMODATED WITHIN THE ABOVE AMOUNTS: [X] Yes [] No
Explain how your proposed use(s) can be accommodated within the existing IFS for the above hydrologic unit:
Allow for a Water Pipe Intake into Waihe'e Ditch via an existing water course
6a. TMK OF PROPOSED STREAM DIVERSION LOCATION: [] - [] - [] : []
6b. TMK OF PROPOSED DITCH DIVERSION LOCATION: [] - [] - [] : []
7a. PROPOSED STREAM DIVERSION: How will water be diverted from the stream to your property? Check all that apply.
[X] Pipe [] Pump [X] Ditch/auwai [] Other Describe:
7b. WILL THE DIVERTED WATER BE RETURNED TO THE STREAM OR DITCH?
[] Yes. How much water will be returned? [] gallons per day TMK of Returned Water Location: []
[X] No
8. PROPOSED FLOW MEASUREMENT INFORMATION:
Will the stream diversion have a flow meter with totalizer or other device to measure diverted amounts? Pending
[] Yes. List the manufacturer and describe the device.
[] No. Explain how stream diversion will be measured or estimated to justify amounts requested in the space below.

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

9. TOTAL QUANTITY OF WATER REQUESTED: 510,000 gallons per day. See Table 1, Item 14.
10. PROPOSED USE: Check all that apply. [X] Agriculture [] Domestic [] Industrial
See Table 1, Item 1. [X] Irrigation [] Military [] Municipal
11. LOCATION OF PROPOSED WATER USE: Show the location of the proposed use on the same USGS and TMK maps as the proposed source location. Otherwise, attach similar maps. See Table 1, Item 2. - See Exhibit 4E

PROPOSED USER INFORMATION

12. APPURTENANT RIGHT: Do you claim an appurtenant right for your proposed water use? and Kuleana [X] Yes [] No
If yes, has the appurtenant right been established by the courts or the Commission? [X] Yes [] No Land Commission
13. PROPOSED END USER INFORMATION: Will you be an end user on an existing water system?
[X] Yes. List the name of the system operator: Waihe'e Ditch System via Wailuku Water Company [] No
14. REGISTRATION AND DECLARATION OF WATER USE: Do you have a Registration and Declaration of Water Use from the Commission?
[X] Yes. List the file reference name(s): Case Number CCH-MA 15-01 - See 21c [] No
15. STREAM DIVERSION WORKS PERMIT (SDWP): Do you have a SDWP from the Commission?
[] Yes. List the permit number(s): [X] 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, additional 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.

16. APPLICANT: Signature: Michele Hoopii
17. SOURCE LANDOWNER / Water System Owner (Waihe'e Ditch): Signature: Avery Chumley

APPLICATION FOR SURFACE WATER USE PERMIT - PROPOSED NEW USE

PROPOSED NEW USE OR MODIFIED USE INFORMATION

18. TABLE 1: LAND USE CONSISTENCY / EFFICIENCY OF USE (Attach additional copies of Table 1 if necessary.)

LAND USE CONSISTENCY						EFFICIENCY OF USE				
A	B	C	D	E	F	G	H	I	J	K
PURPOSE / WATER USE CATEGORY	TMK FOR PROPOSED LOCATION OF USE ATTACH THE FOLLOWING: <ul style="list-style-type: none">Property tax map, showing proposed location of use referenced to established property boundaries.Photograph of the area of proposed use.	STATE LAND USE DISTRICT	CDUP REQ'D Check the appropriate box, and write in the date approved, if applicable.	COUNTY ZONING CODE	SMAP REQ'D Check the appropriate box, and write in the date approved, if applicable.	UNITS OR NET ACREAGE	GPD/UNIT or GPD/ACRE (Gallons per Day)	REQUESTED QUANTITY OF USE (GPD)	SUB- METERED? Check Yes or No	APPLICANT'S JUSTIFICATION FOR REQUESTED QUANTITY OF USE. If applicable, attach sheets to show how this number was calculated. For irrigation uses, fill in Table 2.

Uses that require potable (drinking) water											
	<div>Zone</div>	-	<div>Sec</div>	-	<div>Plat</div>	:	<div>Parcel</div>		<div><input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes <input type="checkbox"/> No</div>
	<div>Zone</div>	-	<div>Sec</div>	-	<div>Plat</div>	:	<div>Parcel</div>		<div><input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes <input type="checkbox"/> No</div>
	<div>Zone</div>	-	<div>Sec</div>	-	<div>Plat</div>	:	<div>Parcel</div>		<div><input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes <input type="checkbox"/> No</div>
	<div>Zone</div>	-	<div>Sec</div>	-	<div>Plat</div>	:	<div>Parcel</div>		<div><input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes, date approved: / / <input type="checkbox"/> Yes, not acquired <input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes <input type="checkbox"/> No</div>

TOTAL POTABLE USE (L)

GPD

Uses that **do not** require potable water

	<div>3</div>	-	<div>2</div>	-	<div>0</div>	<div>1</div>	<div>8</div>	:	<div>0</div>	<div>2</div>	<div>7</div>	AGRCP	<div><input type="checkbox"/> Yes, date approved: / / <input checked="" type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No</div>	AG	<div><input type="checkbox"/> Yes, date approved: / / <input checked="" type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No</div>	1.63	244,500	244,500	<div><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</div>	Net acres x 150,000 = gallons per day
	<div>3</div>	-	<div>2</div>	-	<div>0</div>	<div>1</div>	<div>8</div>	:	<div>0</div>	<div>3</div>	<div>1</div>	AGRCP	<div><input type="checkbox"/> Yes, date approved: / / <input checked="" type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No</div>	AG	<div><input type="checkbox"/> Yes, date approved: / / <input checked="" type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No</div>	.035	5,250	5,250	<div><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</div>	Net acres x 150,000 = gallons per day
	<div>3</div>	-	<div>2</div>	-	<div>0</div>	<div>1</div>	<div>8</div>	:	<div>0</div>	<div>3</div>	<div>2</div>	AGRCP	<div><input type="checkbox"/> Yes, date approved: / / <input checked="" type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No</div>	AG	<div><input type="checkbox"/> Yes, date approved: / / <input checked="" type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No</div>	.007	1,050	1,050	<div><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</div>	Net acres x 150,000 = gallons per day
	<div>3</div>	-	<div>2</div>	-	<div>0</div>	<div>1</div>	<div>8</div>	:	<div>0</div>	<div>3</div>	<div>3</div>	AGRCP	<div><input type="checkbox"/> Yes, date approved: / / <input checked="" type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No</div>	AG	<div><input type="checkbox"/> Yes, date approved: / / <input checked="" type="checkbox"/> Yes, not acquired <input checked="" type="checkbox"/> No</div>	.037	5,550	5,550	<div><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</div>	Net acres x 150,000 = gallons per day

TOTAL NON POTABLE USE (M)

256,350

GPD

TOTAL QUANTITY OF WATER REQUESTED (Sum of Total Potable Use and Total Non-Potable Use above) (N) =

256,350

GPD

O. LIMITATIONS: Please explain if there are any limitations (legal, contractual, etc.) on the use(s) of water described above. §174C-51(5) HRS

No limitations

APPLICATION FOR SURFACE WATER USE PERMIT - PROPOSED NEW USE

TABLE 2: IRRIGATION INFORMATION

List all crops that will be grown as separate line items and include landscape and golf course irrigation.
Attach additional copies of Table 2 if necessary.

PROPOSED NEW USE OR MODIFIED USE INFORMATION (continued)							
19. TABLE 2: IRRIGATION INFORMATION (List all crops that will be grown as separate line items, including landscape and golf course irrigation uses. Copy Table 2 and attach additional sheets to complete your list, as necessary.)							
A	B	C	D	E	F	G	H
TMK OF PROPOSED LOCATION OF USE (Attach TMK map outlining area and photos for each proposed 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.)
<div><div>3</div><div>Zone</div></div> - <div><div>2</div><div>Sec</div></div> - <div><div>0</div><div>1</div><div>8</div><div>Plat</div></div> : <div><div>0</div><div>2</div><div>7</div><div>Parcel</div></div>	Taro (wetland)	3.279	1.63	Year round	Year round	Flood (Kalo)	Irrigate to field capacity
<div><div>3</div><div>Zone</div></div> - <div><div>2</div><div>Sec</div></div> - <div><div>0</div><div>1</div><div>8</div><div>Plat</div></div> : <div><div>0</div><div>3</div><div>1</div><div>Parcel</div></div>	Taro (Wetland)	.071	.035	Year round	Year round	Flood (Kalo)	Irrigate to field capacity
<div><div>3</div><div>Zone</div></div> - <div><div>2</div><div>Sec</div></div> - <div><div>0</div><div>1</div><div>8</div><div>Plat</div></div> : <div><div>0</div><div>3</div><div>2</div><div>Parcel</div></div>	Taro (Wetland)	.014	.007	Year round	Year round	Flood (Kalo)	Irrigate to field capacity
<div><div>3</div><div>Zone</div></div> - <div><div>2</div><div>Sec</div></div> - <div><div>0</div><div>1</div><div>8</div><div>Plat</div></div> : <div><div>0</div><div>3</div><div>3</div><div>Parcel</div></div>	Taro (Wetland)	.074	.037	Year round	Year round	Flood (Kalo)	Irrigate to field capacity
<div><div>3</div><div>Zone</div></div> - <div><div>2</div><div>Sec</div></div> - <div><div>0</div><div>1</div><div>8</div><div>Plat</div></div> : <div><div>0</div><div>2</div><div>7</div><div>Parcel</div></div>	Diversified Ag	3.279	.082	Year round	Year round	Trickle/Drip	Deficit irrigation
<div><div></div><div>Zone</div></div> - <div><div></div><div>Sec</div></div> - <div><div></div><div></div><div></div><div>Plat</div></div> : <div><div></div><div></div><div></div><div>Parcel</div></div>							
<div><div></div><div>Zone</div></div> - <div><div></div><div>Sec</div></div> - <div><div></div><div></div><div></div><div>Plat</div></div> : <div><div></div><div></div><div></div><div>Parcel</div></div>							
<div><div></div><div>Zone</div></div> - <div><div></div><div>Sec</div></div> - <div><div></div><div></div><div></div><div>Plat</div></div> : <div><div></div><div></div><div></div><div>Parcel</div></div>							
<div><div></div><div>Zone</div></div> - <div><div></div><div>Sec</div></div> - <div><div></div><div></div><div></div><div>Plat</div></div> : <div><div></div><div></div><div></div><div>Parcel</div></div>							
<div><div></div><div>Zone</div></div> - <div><div></div><div>Sec</div></div> - <div><div></div><div></div><div></div><div>Plat</div></div> : <div><div></div><div></div><div></div><div>Parcel</div></div>							
<div><div></div><div>Zone</div></div> - <div><div></div><div>Sec</div></div> - <div><div></div><div></div><div></div><div>Plat</div></div> : <div><div></div><div></div><div></div><div>Parcel</div></div>							
<div><div></div><div>Zone</div></div> - <div><div></div><div>Sec</div></div> - <div><div></div><div></div><div></div><div>Plat</div></div> : <div><div></div><div></div><div></div><div>Parcel</div></div>							
Comments:							

APPLICATION FOR SURFACE WATER USE PERMIT - PROPOSED NEW USE

OTHER PERTINENT INFORMATION

20. 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	No municipal water source available to property	No municipal water source available to property
Wastewater reuse	No wastewater reuse since no municipal water or other water source to property	No wastewater reuse since no municipal water or other water source
Ditch system	Currently no ditch system available	Previous user of North Waiehu Stream via North Waiehu Stream Ditch. Infrastructure is in place but waterflow severed from North Waiehu Stream Ditch. Waihe'e Ditch can provide water to TMK: 3-2-018-027
Desalinization	Due to location, desalinization would not be feasible or financially attainable	Due to location, desalination would not be feasible or financially attainable
Ground water	Do to extensive research and financial needs, ground water would not be feasible	Do to extensive research and financial needs, ground water would not be feasible
Conservation measures	No water conservation measures available	No water conservation measures available
Other (specify)	Not applicable	Not applicable

APPLICATION FOR SURFACE WATER USE PERMIT - PROPOSED NEW USE

OTHER PERTINENT INFORMATION
<p>21. PUBLIC INTEREST: Hawaii Revised Statutes §174C-2(c) states that: <i>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.</i></p> <p>Explain how the proposed new use(s) in your application are consistent with items [a] and [b] above.</p> <p>A.</p> <p>I am a lineal descendant of the original Mahele awardee who once lived and cultivated taro on our Kuleana land also known as TMK 3-2-018-027. Historically taro grew abundantly in Waiehu and was the main sustenance for many families. Taro was not just a food source but also used for medicinal purposes and given the right preparation, a food for long travels. In addition, when given sufficient water, taro is able to produce offsprings to further provide taro for continuous cultivation. This is how our ancestors survived on an island in the middle of the ocean. Taro as an alternate food source is a public interest.</p> <p>B.</p> <p>Restoration of water would provide for the protection of traditional and customary Hawaiian rights by allowing for the return of taro cultivation for food and medicine. It could also be an additional source of food for the public should shipping be affected to the islands.</p>
<p>21a. 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.</p> <p>I am the sixth generational descendant of the Mahele awardee who received a Hawaiian Kingdom Government land patent for our Kuleana land, also known as TMK: 3-2-018-027 in which water continuously flowed, uninterrupted, until the sugar plantation modified the watercourses throughout Waiehu. Generational family history and knowledge of Waiehu were shared to me and my siblings of sacred sites gathering areas, fishing methods and traveling routes used by royalty. My family has lived cultivated, and are buried in Waiehu.</p> <p>One of the old watercourses from North Waiehu Stream flowed through Maniania Ditch and fed numerous Kuleana lands registered and awarded to Hawaiian families who cultivated taro, native plants, trees, flowers, and animals for subsistence. Taro continued to be grown on our kuleana land, also known as TMK: 3-2-018-027, until 2014 when North Waiehu Stream Ditch was damaged and and not repaired by Wailuku Water Company. We are currently struggling to maintain the sparse taro growing without flowing water.</p>
<p>21b. Identify the extent to which those resources, including traditional and customary Native Hawaiian rights, will be affected or impaired by the proposed action</p> <p>The restoration of water to our Kuleana land, also known as TMK: 3-2-018-027, will re-establish the cultivation of taro once abundant on the land. It will also re-establish the cultivation of banana trees, mango trees, jack fruit trees, lilikoi vines, avocado trees, ulu trees, gingers flowers, and many other native plants, trees, vines, and flowers. In addition it will provide for eventual drinking water and running water for farm and iving facilities.</p>
<p>21c. What feasible action, if any, could be taken by the Commission on Water Resource Management in regards to your application to reasonably protect Native Hawaiian rights?</p> <p>Enforce the Na Wai Eha’s Final Decision Findings of Fact Conclusion of Law and Decision & Order – Case Number CCH-MA 15-01:</p> <p>The ruling stipulates the return of water to “kuleanas previously provided water from the North Waiehu Ditch, continue to serve the Waiehu Kuleana users from the Waihe’e Ditch, and modify the inactivated North Waiehu diversion located just above the Waihe’e Ditch to facilitate passage of native stream species” In doing so, this will restore water back to the kuleana for kalo restoration.</p> <p>Existing infrastructure already exists. Allow for a new water intake pipe into Waihe'e Ditch at point of "White Pipe" currently located above Waihe'e Ditch (See Exhibit 4E)</p>

APPLICATION FOR SURFACE WATER USE PERMIT - PROPOSED NEW USE

OTHER PERTINENT INFORMATION

22. INTERFERENCE WITH THE RIGHTS OF THE DEPARTMENT OF HAWAIIAN HOME LANDS
Explain how the proposed new use(s) of water will not interfere with the rights of the Department of Hawaiian Home Lands, as provided in section 221 of the Hawaiian Homes Commission Act.

My application will not interfere with the rights of the Department of Hawaiian Home Lands.

The water flowed through our Kuleana land, also known as TMK: 3-2-018-027, from North Waiehu Stream since before the Great Mahele of 1848. The kuleana land has been passed to me, uninterrupted, from my great, great, great, great, great, great, great grandparent during the time of Kamehameha I which was long before the inception of the Hawaiian Homes Commission Act of 1920. The water does not flow to Waiehu Kou Phase I, II, III, or IV

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

Restoring water will be in compliance with Hawaii Revised Statues 7-1 and Hawaii Revised Statues 1-1:

§7-1 Building materials, water, etc.; landlords' titles subject to tenants' use. Where the landlords have obtained, or may hereafter obtain, allodial titles to their lands, the people on each of their lands shall not be deprived of the right to take firewood, house-timber, aho cord, thatch, or ki leaf, from the land on which they live, for their own private use, but they shall not have a right to take such articles to sell for profit. The people shall also have a right to drinking water, and running water, and the right of way. The springs of water, running water, and roads shall be free to all, on all lands granted in fee simple; provided that this shall not be applicable to wells and watercourses, which individuals have made for their own use. [CC 1859, §1477; RL 1925, §576; RL 1935, §1694; RL 1945, §12901; RL 1955, §14-1; HRS §7-1]

§1-1 Common law of the State; exceptions. The common law of England, as ascertained by English and American decisions, is declared to be the common law of the State of Hawaii in all cases, except as otherwise expressly provided by the Constitution or laws of the United States, or by the laws of the State, or fixed by Hawaiian judicial precedent, or established by Hawaiian usage; provided that no person shall be subject to criminal proceedings except as provided by the written laws of the United States or of the State. [L 1892, c 57, §5; am L 1903, c 32, §2; RL 1925, §1; RL 1935, §1; RL 1945, §1; RL 1955, §1-1; HRS §1-1]

24. 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.

25. CHAPTER 343
This project proposes:

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

☐ A wastewater treatment unit

☐ Use within a state conservation district

☐ Waste-to-energy facility

☐ Use within a shoreline setback area

☐ Landfill

☐ Use within a national or Hawaii registered historic site

☐ Oil refinery

☐ Use within the Waikiki Special District

☐ Power-generating facility

☐ The construction, expansion or modification of helicopter facility

☒ None of the above 11 items

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

☐ An Environmental Assessment was completed, and

☐ An Environmental Impact Statement was required and has been accepted (attach letter of acceptance).

Publication date in The Environmental Notice:

☐ A Finding of No Significant Impact has been determined (attach letter).

Publication date in The Environmental Notice:

INSTRUCTIONS FOR FILLING OUT APPLICATION FOR SURFACE WATER USE PERMIT FOR A PROPOSED NEW USE OR TO MODIFY A SURFACE WATER USE PERMIT

This application form is to be used for **proposed new surface water uses** or for a modification of a previously approved water use permit in designated surface water management areas. **If you are applying for an existing surface water use, which are uses prior to the effective date of designation, do not use this form.** Instead, use the *Application for Surface Water Use Permit for Existing Use* (Form SWUPA-E) for existing uses. New surface water uses are proposed uses after the effective date of designation of the surface water management area. Please check the appropriate box.

Most questions can be addressed by visiting our website at: <https://dlnr.hawaii.gov/cwrm/>, or contacting us at 587-0234, or by email at: dlnr.cwrm@hawaii.gov. The current application forms are also available at: <https://dlnr.hawaii.gov/cwrm/info/forms/>.

REQUIREMENTS FOR A COMPLETE APPLICATION

1. Fill in the most recent application form. A current form is available at our web site or by contacting us at 587-0234.
2. Print in ink or type in the information on the application.
3. The application form has a total of 25 items on six pages. Items 18, 19, and 20 are tables, with multiple line items. Fill in the required information for every item in the application form as it relates to your proposed new use or permit modification.
4. Enclose a check for the non-refundable filing fee of \$25 payable to: Department of Land and Natural Resources. Government agencies are not required to pay the filing fee.
5. Pay for the cost of publishing any required public notices related to your application. The current cost for publishing public notices is approximately \$400.00. Commission staff will provide instructions later in the permit process regarding payment of these costs.
6. Mark the proposed source and end use location(s) on the appropriate USGS quad map (scale 1:24,000) and property tax (TMK) map, and attach these maps to the application.
7. Attach photos showing the existing or proposed source diversion(s), measuring device(s) (if applicable), and end use areas.
8. Sign the application form in ink. Both the applicant and the landowner where the source is located must sign the application form.
9. Submit the **original application in hardcopy and one (1) digital copy** of the application form and all attachments (maps, photos and any other attachments) and filing fee to: Commission on Water Resource Management, P.O. Box 621, Honolulu, HI 96809.

Further, the applicant must address §174C-49(a) of the State Water Code, which states that:

To obtain a permit pursuant to this part, the applicant shall establish that the proposed use of water:

- (1) *Can be accommodated with the available water source;*
- (2) *Is a reasonable-beneficial use¹ as defined in section 174C-3;*
- (3) *Will not interfere with any existing legal use of water;*
- (4) *Is consistent with the public interest²;*
- (5) *Is consistent with state and county general plans and land use designations;*
- (6) *Is consistent with county land use plans and policies;*
- (7) *Will not interfere with the rights of the department of Hawaiian home lands as provided in section 221 of the Hawaiian Homes Commission Act.*

¹According to §174C-3, HRS, “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.

²Public interest is described in §174C-2(c), HRS, which states: *[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.*

NOTE: Filling in the application completely will address the requirements of §174C-49(a).

LINE BY LINE INSTRUCTIONS ON APPLICATION

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 information for the applicant. This should be the person who will be responsible for all conditions of the water use permit.
2. **SOURCE LANDOWNER INFORMATION:** Fill in the information for the landowner of the property where the existing surface water diversion source (e.g., stream, spring, etc.) is located.

SOURCE INFORMATION

3. **SURFACE WATER HYDROLOGIC UNIT AND CODE:** Enter the appropriate island name, hydrologic unit name, and hydrologic code where the proposed source is located. The “source” is the stream 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 on the CWRM website at: <https://files.hawaii.gov/dlnr/cwrm/publishedreports/PR200501.pdf>, or contact CWRM staff at (808) 587-0234. You may also contact CWRM toll-free from Maui at: (808) 984-2400, ext. 70234.
4. **INSTREAM FLOW STANDARD (IFS) FOR HYDROLOGIC UNIT:** Provide Instream Flow Standard (IFS) for hydrologic unit if available.
5. **CAN YOUR PROPOSED USE BE ACCOMMODATED WITHIN THE ABOVE AMOUNTS:** Check “Yes” or “No”. Explain how your proposed use(s) can be accommodated within the Instream Flow Standard (IFS) for the above hydrologic unit.
- 6a. **TMK OF PROPOSED STREAM DIVERSION LOCATION:** Fill in the Tax Map Key (TMK) number of the tax parcel where the stream diversion is or will be located. Each tax parcel is issued a TMK number by the county property tax office and is defined as follows: 1st digit = (Island code), 2nd digit = Zone, 3rd digit = Section, Digits 4 to 6 = Plat, Digits 7 to 9 = Parcel, e.g. (1) 1-1-001:001. To find out your TMK number, call Maui County Real Property Tax Division at: (808) 270-7297, or check online at: www.mauipropertytax.com/
- 6b. **TMK OF PROPOSED DITCH DIVERSION LOCATION:** Fill in the Tax Map Key (TMK) number of the parcel where the proposed ditch diversion will be located, if applicable.
- 7a. **PROPOSED STREAM DIVERSION:** How will water be diverted from the stream to your property? Check all the appropriate boxes.

INSTRUCTIONS FOR FILLING OUT APPLICATION FOR SURFACE WATER USE PERMIT
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- 7b. **WILL THE DIVERTED WATER BE RETURNED TO THE STREAM OR DITCH?** Check “Yes” or “No.” If yes, enter the amount of water to be returned and the TMK location of where water will be returned to the stream or ditch.
8. **PROPOSED FLOW MEASUREMENT INFORMATION:** Check “Yes” or “No”. If yes, please describe the measuring device. A flowmeter with a totalizer will directly measure the total use for the source (similar to a car’s odometer). If no, explain how stream diversion will be measured or estimated to justify amounts requested.

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

9. **TOTAL QUANTITY OF WATER REQUESTED:** Enter the amount of water requested as gallons per day (GPD). Fill out Table 1 and enter the amount in Box 14, “Total Use Requested.”
10. **PROPOSED USE:** Check all the boxes that apply for the proposed 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 category to use.
11. **LOCATION OF PROPOSED WATER USE:** Show the location of the proposed use on the same USGS and TMK maps as the proposed source location. Otherwise, attach similar maps and show the location of the proposed use.

PROPOSED USER INFORMATION

12. **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 proposed water use? Check “Yes” or “No.”
If yes, has your appurtenant right been established by the courts or the Commission? Check “Yes” or “No.”
13. **PROPOSED END USER INFORMATION:** Will you be an end user on an existing water system? Check “Yes” or “No.” If yes, please list the name of the water system operator.
14. **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, list the name of the registrant(s).
15. **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.”
16. **APPLICANT:** Sign and print your name, and date your application.
17. **SOURCE LANDOWNER:** Sign and print your name, and date your application. The landowner of the source shall be a 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)

PROPOSED NEW USE OR MODIFIED USE INFORMATION

18. **TABLE 1: LAND USE CONSISTENCY / EFFICIENCY OF USE:**
Provide information on all of the proposed uses you are applying for or seeking to modify. 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 proposed water use(s), as required by §174C-51(5), HRS.
- A. **PURPOSE / WATER USE CATEGORY:** For each proposed use, choose one of the categories listed below and enter the appropriate code in the space provided (e.g. AGRAQ, IRRIG, 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 IRRPC 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

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- B. USE TMK:** The Tax Map Key number of the parcel over which the water will be applied. There should only be one parcel for each line. Also, attach: 1) a TMK map (or maps) showing each of the lots listed and the boundaries of the end use area(s); and 2) a photograph of the area of use.
- C. STATE LAND USE DISTRICT:** Write in the name of the current land use district. To find out the current Land Use District, contact the Land Use Commission at (808) 587-3822.
- D. CDUP REQUIRED:** If a Conservation District Use Permit (CDUP) is required, check “Yes” and enter the date CDUP was approved if you have a CDUP applicable to this project; or check “Yes, not acquired”. If a CDUP is not required, check “No.” To find out if your parcel is in the Conservation District, contact the Land Use Commission at (808) 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 (808) 587-0377 to find out if a CDUP is required.
- E. COUNTY ZONING CODE:** To find out the Zoning Code for Maui, contact the Maui County Planning Department at (808) 270-7253.
- F. SMAP REQUIRED:** If a Special Management Area Permit (SMAP) is required, check “Yes” and enter the date SMAP was approved if you have a SMAP applicable to this project; or check “Yes, not acquired”. If a SMAP is not required, check “No.” To find out if your parcel is in a Special Management Area and requires an SMAP, contact Maui County Planning Department at (808) 270-8205.
- G. UNITS OR NET ACREAGE:** This is the value and category as the basis for calculating the duty. “Duty” means the amount of water requested for a “unit” over a specific time period, e.g. gallons per acre per day, or gallons/acre/day. “Unit” can mean dwelling unit, or number of people, or animals. Some examples of this category include: 400 dwelling units, 500 people, and 3.74 acres.
- H. GPD/UNIT or GPD/ACRE** (GPD=gallons per day): Enter the gallons per day or gallons per acre for each water use category listed in Column A.
- I. REQUESTED QUANTITY OF USE:** Enter the proposed quantity of use in gallons per day (GPD) at build out after all phases of your project have been completed. The build out amount may differ from the four-year cumulative projected demand if your build out date extends beyond the cumulative projected four-year demand. Justification (Column K) for the quantity(ies) requested may depend on the information provided in Columns G and H of this table.
- J. SUBMETERED:** Is there a second measuring device or meter for another user? Check “Yes” or “No” if the specific use will be submetered or not. Submetering is specific to each line item.
- K. APPLICANT’S JUSTIFICATION FOR QUANTITY OF REQUESTED USE:** 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 19 (Table 2) of the application.
- L. TOTAL POTABLE USE:** Add the quantities listed in Column I for proposed potable water use(s). Enter the total quantity in gallons per day (GPD) in Line L.
- M. TOTAL NON-POTABLE USE:** 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 Line M.
- N. TOTAL QUANTITY OF WATER REQUESTED:** Add the totals in Lines L and M, and enter the sum in Line N. The quantity in Line N should be the same as the amount entered in Line 9 on page 1 of this application.
- O. LIMITATIONS:** Please explain if there are any limitations (legal, contractual, etc.) on the use(s) of water described above. §174C-51(5), HRS.

19. TABLE 2: IRRIGATION INFORMATION:

On Table 2, provide the information requested for all the crops you are proposing to grow, including landscape and golf course turf and plants. Enter only one crop and one parcel number (TMK) per line. For multiple crops, list each one as a separate line item. All proposed or modified irrigation uses you are applying for must be listed. Attach additional copies of Table 2, if necessary.

- A. TMK OF PROPOSED USE LOCATION:** Enter the parcel number where the crop will be grown. Also attach a property tax map with an outline around the area(s) of proposed use(s) and a photograph of each area of the 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.
- 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 below.

20. TABLE 3: ALTERNATIVES ANALYSIS AND ADDITIONAL REQUIREMENTS:

Please address every alternative and explain why each alternative is or is not available for your proposed potable and non-potable needs. Other alternatives (last row of Table 3) may include stormwater reclamation, rainwater catchment, or other alternatives not already listed above.

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.*

For **Conservation Measures**, please describe any conservation measures that will be used to ensure that your water use is or will be efficient. 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.

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OTHER PERTINENT INFORMATION

- 21. PUBLIC INTEREST:** Explain in the space provided or on a separate sheet, how the proposed new use(s) will maximize beneficial use(s) and how they will be deemed to be in the public interest as defined by the State Water Code below.

Hawaii Revised Statutes §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.*

- 22. INTERFERENCE WITH THE RIGHTS OF THE DEPARTMENT OF HAWAIIAN HOME LANDS**

Explain in the space provided or on a separate sheet, how the proposed new use(s) 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 (DHHL) main line at (808) 620-9500, or the DHHL Planning Office at (808) 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.*

- 23. INTERFERENCE WITH ANY EXISTING LEGAL USES**

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

- 24. PUBLIC WATER SYSTEM INFORMATION**

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

- 25. 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 the State Office of Planning and Sustainable Development's Environmental Review Program and the HEPA Citizen's Guide at <https://planning.hawaii.gov/erp/>.

Attachments

- Exhibit 1:** USGS topographic map showing ‘White Pipe’ above Waihe’e Ditch and TMK: 3-2-018-027 (Kapalaua)
- Exhibit 2:** Maui County Real Property map showing location of TMK: 3-2-018-027 (Kapalaua)
- Exhibit 3:** Private family map (**CONFIDENTIAL- NOT FOR PUBLIC RELEASE**)
- Exhibit 4:** Water course from North Waiehu Stream to TMK: 3-2-018-027 (Kapalaua) with pictures: 4A through 4R. **Proposed New Water Intake at ‘White Pipe’: 4E**
- Exhibit 5:** Kuleana verification letter from Office of Hawaiian Affairs (**CONFIDENTIAL- NOT FOR PUBLIC RELEASE**)
- Exhibit 6:** Native/Foreign testimonies and land documents: 6A through 6AA

SUPPLEMENTAL INFORMATION for SWUPA:

K. Applicant’s Justification for Quantity of Requested Use:

Proposed New Use or Modified Use Information

The proposed new use calculation is based on testimony filed by Aloha Poi Factory, Lester Nakama, for application SWUP No: 23266 (below in red). The measurement of water was done by a bucket test from TMK: 3-2-018-027 which was owned by Magdalen Ho’opi’i at the time of the test but has since been conveyed to me, Michele Ho’opi’i. Lester Nakama states that 300,000 gallons is the needed amount of water to sufficiently grow healthy taro. Lack of insufficient water causes stunted corms, rotting due to fluctuation of water temperature and excess weeds, among other issues.

$$\begin{aligned}\text{Total acres} \div 2 &= \text{grow area} \\ \text{Grow area} \times 150,000 &= \text{gallons per day}\end{aligned}$$

I am not currently able to calculate the measurement of water to TMK 3-2-018-027 (Kapalaua). The waterflow from the North Waiehu Stream Ditch ran an open course to a basin, entered into a white pipe above Waihe’e Ditch then ran a pipeline course to a wye joint with the final exit into TMK 3-2-018-027 (Kapalaua). North Waiehu Stream Ditch was vandalized and was not repaired by Wailuku Water Company, who oversaw the maintenance and repairs of North Waiehu Stream Ditch. In addition, several storms caused further collapse of North Waiehu Stream Ditch. The waterflow to TMK 3-2-018-027 (Kapalaua) ceased completely in 2014 causing the elimination of taro growing on the property.

North Waiehu Stream has been the main water source to TMK 3-2-018-027 (Kapalaua) since before the time of the Mahele of 1848. The sugar plantation, Wailuku Agribusiness, and Wailuku

Water Company have altered the water courses over time thus severing the original water source to TMK 3-2-018-027 (Kapalaua).

Hawaii State law 7-1 provides for the protection of native Hawaiian traditional and customary rights. As such, Waihe'e Ditch would provide the alternative source of water to TMK 3-2-018-027 (Kapalaua).

SWUP No: 23266

Testimony submitted on SWUP No: 23266

Mary Ciacchi (landowner)

Lester Nakama (leesee)

TMK 3-2-018:021, 044

SWUPA-E

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 is land. The outflow from the Ho'opi's pipe eventually meets up with the portion of the water that comes toward our land and flows in an open ditch into the loi 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.

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 Na Hui Kato, 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 Hopi'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.

Testimony submitted on SWUP No: 23266

Mary Ciacchi (landowner)

Lester Nakama (leesee)

TMK 3-2-018:021, 044

SWUPA-N

Page 2

Table 1. Justification for Requested Quantity:

This application is to request sufficient water for our existing lo'i kalo on **TMK** Nos. 3-2-018:001 and 3-2-018:044. No new land will be put into cultivation.

We estimated the existing amount of water flowing into our lo'i kalo on TMK No. 3-2-018:021 is 153,600 gallons per day for 1.1 acres of kalo, based on the bucket measuring method (see concurrently filed SWUPA-E). This estimated amount is not enough to produce a healthy crop of wetland kalo. Although we try to make due with what we have, the lack of water causes problems like small corms, taro rot, and uncontrollable weeds. We request at least 300,000 gallons per acre per day for our wetland kalo, which, based on Lester Nakama's more than 45 years of experience as a kalo farmer, is necessary for a healthy crop. Accordingly, we need a total of 330,000 gallons per day (1.1 acres multiplied by 300,000 gallons per day). Because our existing use is 153,600 gallons per day, we subtracted that from the 330,000 gallons to get our estimate of 176,400 gallons per day for TMK No. 3-2-018:021.