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September 15, 2025

Via E-mail - *Suzanne.M.Kariya-Ramos@hawaii.gov*
and *dlnr.cwrm@hawaii.gov*

The Commission on Water Resource Management
Kalanimoku Building
1151 Punchbowl Street, Room 227
Honolulu, Hawaii 96813

Re: Commission on Water Resource Management September 16, 2025 Meeting - Testimony on Agenda Item C-1

Aloha Chair Chang and Members of the Commission:

My name is Grant Allison, and I represent TY Management Corporation ("TY"). Mahalo for the opportunity to submit testimony on Agenda Item C-1 regarding the current drought conditions in West Maui, instream flow standards of the Honokōhau stream, and water use issues in West Maui. TY also appreciates the Commission temporarily authorizing the continued use of groundwater for irrigation in Kapalua. **This testimony confirms that the use of groundwater for irrigating The Plantation and Bay Golf Courses was an existing use before the 2022 designation of the Lahaina Aquifer Sector Area as a water management area.** The courses were owned by Maui Land and Pineapple Company ("MLP") until 2009 and 2010, respectively, when MLP sold the courses to TY. We look forward to working with the Commission and all stakeholders to protect this vital public trust resource and to develop a long-term solution for the water needs of the Kapalua community. To that end, TY submits this testimony to provide additional information and context about the Kapalua water issues to the Commission for its consideration as a part of the briefing being made under this agenda item.

MLP controls all sources of water available to Kapalua. TY is only one of many Kapalua water users. For its part, TY receives irrigation water from the Honokōhau ditch system pursuant to water delivery agreements with MLP. MLP historically used groundwater from wells[1] it owns and controls to supplement ditch water for irrigation purposes. Recently, and

[1] MLP's State Well Nos. 6-5938-002 (Well 1) and 6-5938-003 (Well 2) are operational. MLP's State Well No. 6-5938-004 (Well 3B) is drilled but not operable. Each well can generate approximately 1.1 MGD. Records indicate that MLP was issued a pump installation permit for Well 3B in or around 2000 but failed to install one. It does not appear that MLP applied for a pump approval for Well 3B after TY requested groundwater in the early part of 2025. Wells 1, 2, and 3B would likely provide sufficient amounts of irrigation water to the Kapalua community and TY during low flow periods, including enough to maintain the Plantation Course in condition for a PGA tournament.

during a nearly six-month period where the water users in Kapalua, including TY, were limited to zero (or nearly zero) irrigation water between March and August 2025, MLP refused to supplement water from the Honokōhau ditch system with water from the wells because MLP claimed it had never been done before. MLP's justification is false, as demonstrated by the following:

1. On or around April 15, 2025, MLP informed the Commission that "golf course irrigation is not an existing use of MLP's potable wells." See Exhibit "A" at 1 and 4.

2. However, on or about August 21, 2025, Commission Chair Chang e-mailed MLP's CEO, Race Randle, confirming that HWS had reported that groundwater was an existing use for irrigating The Plantation and Bay Golf Courses prior to designation. See Exhibit "B".

3. Despite MLP's statements to the Commission on April 15, 2025 that well water was not an existing use for irrigation of the courses, Race Randle then told TY on June 20, 2025 – or two-months prior to Commission Chair Chang's email attached as Exhibit "B" – that MLP would "provide TY with 'emergency' water from its wells in limited quantities." MLP's offer clearly contradicts its prior positions before the Commission. See Exhibit "C".

4. On or about August 25, 2025, Mr. Randle wrote to TY's President, Tadashi Yanai, without objection or reservation, informing him that the Commission authorized the temporary use of groundwater as a substitute for surface water during low flow periods for irrigating TY's golf courses. See Exhibit "D".

5. In or around 2019, MLP represented and promised TY and Kapalua homeowner association representatives that if the Honokōhau ditch system failed to produce enough water, the backup plan would be to use groundwater. MLP confirmed that the well and reservoir system was designed and constructed for interoperability of groundwater and surface water supplies and that they "tested" the system and knew that the pumps would supply groundwater to the reservoirs.

6. The water delivery agreements between MLP and TY, dated 2009 and 2010, clearly contemplate that groundwater could be used as a backup or supplement when ditch water is unavailable. MLP could not have made this representation if the system was not designed and already used or "tested" to be interoperable in a manner which groundwater could be delivered to the reservoirs.

7. In or around 2019, when the Commission was developing the Interim Instream Flow Standards for Honokōhau stream, TY considered drilling its own wells, which it was expressly permitted to do under the water delivery agreements. However, TY ultimately decided not to, because MLP represented and promised that there was sufficient water for all irrigation purposes and that MLP would use groundwater from its pumps to supplement ditch water, if needed.

8. The Staff Submittal regarding the waste complaint filed against MLP stated that R1 recycled water and groundwater are "two potential alternative water sources that may be used to meet the needs of non-instream uses." See Exhibit "E" at 15.

9. MLP's existing use of groundwater for irrigating TY's golf courses is consistent with the Maui Island Water Use and Development Plan (2023) (the "WUDP"). The plan states that "Non-public trust uses, including golf courses and resort irrigation should plan for groundwater and alternative supply to substitute stream flow during drought conditions."[2] Although not binding on the Commission, the WUDP, as part of the Hawaii Water Plan, serves as a guide for the Commission's decision-making on water allocation and reservation requests.

The foregoing facts clearly demonstrate that water from the wells has historically been used to supplement water from the Honokōhau ditch system and for irrigation purposes *in times of need*.

Thus, it is important to correct MLP's statements to the contrary and to the extent those statements have been used to justify denying the water users in Kapalua this existing use. Recently, vague water conservation tier restrictions have been imposed by Hawaii Water Service ("HWS"), which acquired MLP's water distribution assets in or around 2021, before the designation of the water management area. HWS relies on MLP for the provision of water that it distributes to Kapalua's users, including TY. HWS issued these "tier notices" in coordination with MLP, which, before August 21, 2025, had unilaterally refused to use groundwater as a supplement for ditch water.

As a result, TY's golf courses in Kapalua – the Plantation and Bay Courses — that proudly serve and employ many in the Maui community, are dying and have become unplayable. Critically, the Plantation Course hosts The Sentry, a renowned PGA golf tournament held annually in January, which generates tens of millions of dollars in economic activity, provides worldwide exposure for Maui, and raises hundreds of thousands of dollars for local non-profits. Golfers from around the world come to Hawaii throughout the year to play at Kapalua and enjoy Maui.

[2] The Maui Island WUDP is adopted and incorporated as part of the County of Maui's WUDP. See Exhibit "F". https://waterresources.mauicounty.gov/DocumentCenter/View/608/Ord-5335 at pdf. 922.

Just yesterday, TY announced that the Bay Course would be closed indefinitely so that all of the water made available by MLP can be used to try to keep the Plantation Course alive and to have any chance of hosting the Sentry tournament in 2026. The Maui community will soon learn whether the PGA will cancel The Sentry due to the condition of the Plantation Course. Cancelling The Sentry would deal another devastating blow to an economy that has yet to recover from the Lahaina Wildfires. Sadly, this situation was largely avoidable if groundwater was made available early on and the ditch system was repaired and maintained properly.

Thank you again for the opportunity to submit testimony on this agenda item.

Very truly yours,

LUNG ROSE VOSS & WAGNILD

By _____
Grant Fasi Allison
Attorney at Law, A Law Corporation
Its General Partner

GFA:sam
Enclosures (Exhibits A-F)

cades · schutte
A LIMITED LIABILITY LAW PARTNERSHIP

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April 15, 2025

VIA E-MAIL
dawn.chang@hawaii.gov

Dawn N. S. Chang, Chair
Commission on Water Resource Management
Kalanimoku Building
1151 Punchbowl Street, Room 227
Honolulu, Hawai'i 96813

Re: TY Management Corporation

Dear Chair Chang and Commissioners:

On behalf of Maui Land & Pineapple Company, Inc. ("**MLP**"), I respond to the enclosed letter from TY Management Corporation ("**TY**") dated April 4, 2025.

TY owns the Bay Golf Course, Plantation Golf Course and Golf Academy (together, the "**Golf Courses**"). As the letter from TY acknowledges, there is limited water from Honokohau Stream available for the irrigation of the Golf Courses. Elevating the irrigation of golf courses above other uses, TY seeks an order from the Commission on Water Resource Management ("**CWRM**") directing MLP to deliver potable groundwater from MLP's wells to the Golf Courses. Since the wells were not being used for golf course irrigation at the time of the water management area designation for West Maui and are not part of MLP's groundwater existing use application for the Golf Courses, TY effectively asks CWRM to make an exception to the process for allocating water within a water management area to prioritize the use of potable water for private golf courses.

It is unclear whether CWRM has jurisdiction to entertain this extraordinary request. It is entirely clear that the request should be denied.

The delivery of water from Honokohau Stream to the Golf Courses during low flow conditions is governed by two private agreements executed in 2009 and 2010, respectively (together, the "**Water Delivery Agreements**"). Under the Water Delivery Agreements, MLP is obligated to deliver approximately 1.0 mgd of water from Honokohau Stream to the Golf Courses via the Honokohau Ditch System so long as water is available for diversion above the interim instream flow standard ("**IIFS**")

EXHIBIT "A"

for Honokohau Stream. Water Delivery Agreements § 1 (delivery of water) and § 7 ("TY and MLP agree and understand that the ability of MLP and [TY] to perform their respective obligations under this Agreement are made expressly subject to . . . other natural disasters or events which render [the Honokohau Ditch System[temporarily or permanently inoperable, actions of the federal, state and county governments or agencies thereof, including without limitation enactment or enforcement of laws of governmental regulations . . . .").

When water from Honokohau Stream is limited:

- MLP "shall allocate its water resources as follows": first, to all Potable Uses, including the County of Maui Department of Water Supply ("**DWS**"); second, to current life-safety related non-potable uses including Kapalua fire systems, taking care to ensure that water stored for such purposes is not drawn for other purposes; and last, to existing non-potable uses, specifically MLP's plantation agriculture, the non-potable resort water system operated by Hawaii Water Service ("**HWS**"), the Sustainable Agricultural Development in areas mauka of Napili and irrigation for the Golf Courses. *See* Water Delivery Agreements § 2 (use priorities). Reductions to the existing non-potable uses are "in a nondiscriminatory manner based upon each [existing] [n]on-[p]otable [u]se's respective non-potable water usage over the preceding twelve months." *Id.*

- "MLP **may elect** to provide a substitute source of irrigation water in the form of water from MLP's existing or new wells delivered by MLP, [HWS], or another entity." *Id.* § 8 (alternative source) (emphasis added).

TY agreed to pay the rate of $0.320 / 1,000 gallons for the delivery of water from Honokohau Stream to the Golf Courses and any adjusted rate "to be commensurate with any material increase in MLP's costs in operating and maintaining the [Honokohau Ditch System], but not including the cost of any capital improvements, replacements or repairs." *Id.* § 3 (water delivery charges). The Water Delivery Agreements are enclosed for reference.

A dispute between TY and MLP arose when MLP increased the rate to support its stewardship of water resources. Specifically, MLP notified TY that pursuant to the Water Delivery Agreements, TY's rate would increase from $0.320 / 1,000 gallons to $1.68 / 1,000 gallons, which reflects the "material increase in MLP's costs in operating and maintaining the [Honokohau Ditch System]." *Id.*

MLP also notified TY that due to persistent drought conditions, MLP anticipated that after first meeting the IIFS and satisfying the potable requirements of the DWS, there would be less water available than in past years. MLP reminded TY that under the Water Delivery Agreements, MLP is not obligated to supplement pumped potable groundwater for irrigation of the Golf Courses and that TY could develop its own ground water well on the easements granted by MLP to TY more than a decade ago.

On March 21, 2025, HWS (as the Honokohau Ditch system operator) notified TY and the other non-potable users that due to the lack of consistent rainfall and resulting low flows, there would be a mandatory 5-day Tier 4 water conservation period. A Tier 4 water conservation period allows for potable and fire protection use only and requires a 100% reduction of non-potable water usage. MLP's notices and other letters with TY are enclosed for reference.

In an effort get more than it bargained for in the Agreements, TY has tried to turn this private contractual dispute into a regulatory one. Such action should not be condoned.

TY first complained to the Public Utilities Commission ("**PUC**") on the ground that the adjusted rate of $1.68 / 1,000 gallons, which is less than the DWS non-potable rate of $1.80 / 1,000 gallons, is unreasonable, and asked the PUC to take jurisdiction over MLP's potable and non-potable water deliveries. The PUC rejected TY's request because the PUC was unable to ascertain the specific nature of the request. TY re-filed its request as a formal complaint. PUC Dkt. 2025-0188. The PUC returned the formal complaint for failure to substantially comply with the requirements of formal complaints under the PUC's rules. The PUC's letter to TY rejecting TY's request and Order No. 41655 Returning Formal Complaint are enclosed for reference.

Following the same pattern, TY now complains to CWRM. While acknowledging its agreement that MLP "may elect" to deliver potable groundwater when water from Honokohau Stream is unavailable, TY Letter dated April 4, 2025 at 2 (citing the Water Delivery Agreement for Kapalua Golf Course at 4), TY asks CWRM to require MLP to supplement stream water with potable groundwater to irrigate golf courses. In support of the request, TY claims that CWRM has the authority to issue an order because CWRM "may take jurisdiction of and resolve any disputes . . . where there is insufficient water to meet competing needs[.]" HAR § 13-167-3(4). There are several problems with TY's position.

First, section 13-167-3(4) does not allow CWRM to intervene in a private contractual dispute. The competing uses are the potable needs of DWS, fire-protection

and existing non-potable uses, including irrigation for the Golf Courses. TY agreed to resolve any dispute regarding competing uses by prioritizing all potable uses and fire-protection. *See* Water Delivery Agreements § 2 (water use priorities). CWRM cannot rewrite the contract to prioritize golf course uses.

Second, golf course irrigation is not an existing use of MLP's potable wells. Instead, the use is a new use within a designated water management area and would require a new use groundwater use permit. *See* HRS § 174C-48. CWRM does not have authority to compel MLP to commence TY's new use without an issued permit for the use.[1]

Third, since TY is not an existing user of potable water from the well, TY's use is not a competing need. Without the existence of competing needs, CWRM lacks a dispute to resolve. *See* HAR § 13-167-3(4).

Finally, it would be incongruous to elevate irrigating golf courses above other uses. Rather, TY's contractual obligation to allow MLP to prioritize potable uses is consistent with the Hawai'i State Constitution's protection of public trust uses. Article XI §§ 1, 7 of the Hawai'i State Constitution; *In re Waiola O Moloka'i Inc.*, 103 Hawai'i 401, 429, 83 P.3d 664, 692 (2004) (domestic use, particularly drinking water, and the maintenance of waters in their natural state are public trust uses).

For these reasons, CWRM should reject TY's request. Implementation of mandatory water conservation periods was and remains necessary. MLP will continue to protect Honokohau's water resources and DWS's potable domestic uses.

Should you require further information, I can be reached at (808) 521-9220.

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[1] TY implies that CWRM ordered MLP to supplement Honokohau Stream water with potable groundwater. TY Letter dated April 4, 2025 at 2 (citing Staff Submittal dated May 18, 2021 at 6, which states, "[HWS] has plenty of capacity in its drilled wells to utilize groundwater as a backup supply for its non-potable needs when insufficient water is available in the ditch."). Nothing in the Staff Submittal ordered MLP to deliver potable groundwater from its wells to irrigate the Golf Courses. Indeed, such action was not before CWRM. *See* Staff Submittal dated May 18, 2021. CWRM staff simply identified potential alternative sources as required in establishing IIFSs. HRS § 174C-71(1)(E).

Very truly yours,

Calvert G. Chipchase
Darene K. Matsuoka
for
CADES SCHUTTE
A Limited Liability Law Partnership

Enclosures (8)
Water Delivery Agreements
MLP Letter to TY dated August 21, 2024
MLP Letter to TY dated October 21, 2024
HWS Notice to TY dated March 21, 2025
MLP Letter to TY dated April 3, 2025
PUC Letter to TY dated January 29, 2025
PUC Order No. 41655 Returning Formal Complaint
cc: TY Management Corporation, Robert E. Strand (rstrand@carlsmith.com)
client

From: Chang, Dawn <dawn.chang@hawaii.gov>
Date: Thursday, August 21, 2025 at 9:30 PM
To: Race Randle <race@mauiland.com>, Cal Chipchase <cchipchase@cades.com>
Cc: Kealalio, Kanani <kanani.kealalio@hawaii.gov>
Subject: FW: Draft Language

August 21, 2025

Hawaii Water Services has confirmed that, prior to designation, groundwater was used as a substitute source for irrigation purposes, including on the Bay and Plantation Golf Courses. This letter confirms that temporary use of groundwater as a substitute for surface water during low flow periods is allowed for irrigation uses, including at the Bay and Plantation Golf Courses, pending Commission action on Hawai‘i Water Service’s water use permit application.

Mahalo

Dawn

Dawn N.S. Chang
Chair, Commission on Water Resource Managment
State of Hawai'i
1151 Punchbowl St. Room 130
Honolulu, HI 96813
Ph: (808) 587-0401
Dawn.chang@hawaii.gov

EXHIBIT "B"

[redacted]

差出人: Race Randle <race@mauiland.com>
送信日時: Friday, June 20, 2025 7:13:18 AM
宛先: YUI Kenji[FRJP:CEO Office(SA)](由井 賢二) <kenji.yui@fastretailing.com>
件名: [EXTERNAL] HRE 408 COMMUNICATION - MLP/TY

HRE 408 COMMUNICATION

Aloha Kenji,
Per discussion yesterday, we reviewed our current situation, and MLP may be able to temporarily provide emergency water from an alternate source to TY to maintain the functionality of its operations. We are only open to performing the effort required to do this if it will end the various conflicts between us. We feel the draft terms outlined below are fair and reasonable ways for us to work together.

Background

- West Maui is experiencing a time of significant drought.
- The Honokohau Stream is experiencing some of its lowest flow rates on record. The Honokohau ditch system, which has provided irrigation water to West Maui for over 100 years, was damaged significantly by storm events and landslides, and is now experiencing minimal water levels. Available flows in the Honokohau Ditch are being prioritized for the County of Maui water treatment facility.
- MLP provides source water from its two Kapalua wells to Hawaii Water Service and the County of Maui. This water is provided for potable uses by Hawaii Water Service in the Kapalua resort, and by the County of Maui to Honokohau residents. MLP's water system operator, Hawaii Water Service, also is permitted to utilize these wells to ensure the water levels in the Kapalua reservoirs are maintained for fire protection purposes. There technically exists additional capacity in the Kapalua wells in the near term, however not enough capacity in to meet the full Kapalua irrigation needs of Hawaii Water Service and TY.
- TY has recently begun efforts to design and permit additional water sources for their business, but these new sources are likely not available quickly enough to meet their current needs.
- To prevent significant commercial impacts (job loss) in the West Maui Community, MLP will temporarily provide TY with "emergency" water from its wells in limited quantities.

Emergency water for TY:

- MLP provides supplemental emergency water of [XXk] gallons/day for period of the lesser of [xx] months or until such time that other irrigation sources become available. Water is for use of minimal required watering to maintain functionality of the Plantation Course and other areas critical for ongoing commercial operations and the annual Sentry PGA tournament.
- Water will be provided to the TY at cost without any profit to MLP.
- Amounts of emergency water must be a minimum needed to maintain functionality, as there is not sufficient emergency water for normal use.
- This emergency water must only be used during the lowest evaporation periods (i.e. during nighttime hours only)

Return water deliveries to status quo:

- TY will dismiss its Amended Formal Complaint filed with the PUC and will oppose PUC regulation of MLP's water deliveries.
- TY agrees not to file anything further with other agencies (including CWRM or the County of Maui) regarding MLP's water management and deliveries.

EXHIBIT "C"

- The Water Agreements will terminate if subject to PUC regulation and/or in the event MLP is considered a public utility by the PUC.

Transparent water rates for irrigation users:

- TY agrees to updated non-potable water rates previously sent at end of 2024.
- The parties will amend Section 3 of the Water Agreements (Plantation and Bay Courses) – with adjusted rate to be effective June 1st, 2025, to align the rate setting methodology with the County of Maui's current agreement. This allows for transparent forecasted rate setting with an annual true-up at the end of each year.

Work together to improve water source/availability in Kapalua area:

- MLP will support TY in their efforts to identify and implement additional water source(s) or system improvements which would benefit golf course irrigation (i.e. rainfall catchment, expanded reservoir storage, County of Maui R-1 water, R-1 scalping plant, desalination, etc.) to the extent they do not negatively impact MLP's water sources.
- TY will support MLP in their efforts to identify and implement additional water source(s) or system improvements which would benefit the Kapalua and/or wider region irrigation (i.e. stream sensors, irrigation automation, expanded reservoir storage, County of Maui R-1 water, desalination, etc.) to the extent they do not negatively impact TY's proposed water sources.

Support for each other's business in West Maui:

- Each party will support the other's surface or groundwater applications to CWRM (SWUPAs and GWUPAs, existing and new).
- TY will not oppose or contest any land use applications submitted by MLP.

Remove KRA distractions:

- TY will withdraw its objection to MLP's annexations of additional land to KRA and will oppose objections or challenges by PELOA or others.

Mahalo,
Race

Race A Randle | *CEO*
MAUI LAND & PINEAPPLE COMPANY, INC. (NYSE: MLP)
808.349.9364 Mobile
500 Office Road | Lahaina, HI 96761
mauiland.com

MAUI LAND
& PINEAPPLE COMPANY INC.

August 25, 2025

VIA EMAIL

Tadashi Yanai
President
TY Management Corporation
hiroko.muto@fastretailing.com

Re: Surface Water System

Dear Mr. Yanai:

The Commission on Water Resource Management's ("**CWRM**") has authorized the temporary use of groundwater as a substitute for surface water during low flow periods for irrigation uses, including at the Bay and Plantation Golf Courses, pending CWRM's action on Hawai'i Water Service's water use permit application. Maui Land & Pineapple Company, Inc. ("**MLP**") will follow CWRM's guidance. The letter from CWRM is enclosed.

I would like to use the authorization from CWRM as an opportunity to reset the relationship between TY and MLP. It is our hope to find a path forward for all stakeholders in our community and our shared future. To that end, I hope that TY will consider dismissal of the lawsuit filed on August 18, 2025, and to secure a dismissal by the other parties as well.

I look forward to talking with you.

Sincerely,

Race Randle
Chief Executive Officer

Enclosure (1)
cc: Kenji Yui (kenji.yui@fastretailing.com)

EXHIBIT "D"

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

For the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

November 20, 2019
Lahaina, Maui

Request to Address the Waste Complaint Filed by Ka Malu O Kahalawai and West Maui Preservation Association Against Maui Land and Pineapple Company Alleging Water Diverted from Honokōhau Stream Overflows the Honokōhau Ditch, Pursuant to Hawai'i Revised Statutes §174C-13, and to Amend the Interim Instream Flow Standards for the Surface Water Hydrologic Units of Honolua (6013) and Honokōhau (6014), West Maui

LOCATION MAP See Figure 1

SUMMARY OF REQUEST

Staff is requesting that the Commission on Water Resource Management (Commission) consider resolving a portion of the waste complaint filed by Ka Malu o Kahalawai and West Maui Preservation Association by replacing the intake control structure on Diversion 770 on Honokōhau Stream in order to remotely control the rate of diverted streamflow and to meet proposed interim instream flow standards (interim IFS), the domestic water supply needs of Maui County Department of Water Supply (DWS), and the non-potable water needs of the Department of Hawaiian Home Lands (DHHL).

Recommendations are provided for modifying the structures associated with:

DIVERSION 769 on Honolua Stream by modifying or abandoning the stream diversion works
DIVERSION 768 on Kaluanui Stream by abandoning and removing the stream diversion works
DIVERSION 770 on Honokōhau Stream by modifying the stream diversion works

And for amending the interim IFS for:

HONOLUA HYDROLOGIC UNIT (6013): Honolua Stream
HONOKŌHAU HYDROLOGIC UNIT (6014): Kaluanui Stream
HONOKŌHAU HYDROLOGIC UNIT (6014): Honokōhau Stream

EXHIBIT "E"

Item C-2

BACKGROUND

The State Water Code (Code), Chapter 174C, Hawaii Revised Statutes (HRS), provides that the Commission shall have jurisdiction statewide to hear any dispute regarding water resource protection, water permits, or constitutionally or otherwise legally protected water interests. HRS §13-167-23. If any person files a complaint with the Commission that any other person is wasting or polluting water, or is making a diversion, withdrawal, impoundment, consumptive use of waters or any other activity occurring without a permit where one is required, the Commission shall cause an investigation to be made, take appropriate action, and notify the complainant thereof. HRS §13-167-82. Further, the Commission may take jurisdiction of and resolve any disputes regarding water resource protection, water permits, or constitutionally protected water interests. HRS §13-167-3(4).

The Code provides that the Commission may adopt interim IFS on a stream-by-stream basis or a general IFS applicable to all streams within a specified area. In the 2000 appellate ruling on the first Waiāhole Ditch Contested Case Decision and Order ("*Waiāhole* I"), the Hawai'i Supreme Court emphasized that "instream flow standards serve as the primary mechanism by which the Commission is to discharge its duty to protect and promote the entire range of public trust purposes dependent upon instream flows." 94 Haw. 97, 148, 9 P.3d 409, 460. This submittal seeks to address interim IFS on three streams in West Maui and the modifications to the stream diversion works to meet these interim IFS.

The current interim IFS for the streams being considered were established by way of Hawai'i Administrative Rules (HAR) §13-169-48, which, in pertinent part, reads as follows:

> Interim instream flow standard for West Maui. The Interim Instream Flow Standard for all streams on West Maui, as adopted by the Commission on Water Resource Management on October 19, 1988, shall be that amount of water flowing in each stream on the effective date of this standard, and as that flow may naturally vary throughout the year and from year to year without further amounts of water being diverted off stream through new or expanded diversions, and under the stream conditions existing on the effective date of the standard.

The current interim IFS effective date was December 10, 1988. Thus, the status quo interim IFS, in effect, grandfathered all then-existing diversions that were registered with the Commission by May 31, 1989. Following the initial registration of stream diversion works, any new or substantially modified stream diversion works required a permit for construction as well as an amendment to the interim IFS.

The Code defines an instream flow standard as a "quantity or flow of water or depth of water which is required to be present at a specific location in a stream system at certain specified times of the year to protect fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses." *See* HRS § 174C-3 ("Definitions").

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

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

In considering a petition to amend an interim instream flow standard, the Code directs the Commission to "weigh the importance of the present or potential instream values with the importance of the present or potential uses of water for noninstream purposes, including the economic impact of restricting such uses." HRS § 174C-71(2)(D).

"Noninstream use" means the use of stream water that is diverted or removed from its stream channel and includes the use of stream water outside of the channel for domestic, agricultural, and industrial purposes.

Since the establishment of the Stream Protection and Management Branch in July 2002, the Commission has been developing a framework for setting measurable instream flow standards statewide. This framework involves an assessment of natural flow conditions for the current climate period (1984-2013), an analysis of the instream uses protected by the State Water Code, the existing and planned off stream uses of surface water, and the availability of water from multiple sources. This information is compiled in the Instream Flow Assessment Report (IFSAR) for each hydrologic unit.

The assessment of instream uses for West Maui has been separated into multiple phases, the first of which addressed the interim IFS for the Ukumehame (6004), Olowalu (6005), Launiupoko (6006) and Kaua'ula (6007) hydrologic units in March 2018. The second phase addressed interim IFS for Kahoma and Kanahā streams in the Kahoma (6008) hydrologic unit. This submittal will address the interim IFS values for the Honolua (6013) and Honokōhau (6014) hydrologic units.

FORMAL WASTE COMPLAINT

On April 23, 2019, Ka Malu o Kahalawai and West Maui Preservation Association filed a formal Complaint / Dispute Resolution regarding water diverted from Honokōhau Stream and wasted in areas extending south to the Wahikuli hydrologic unit. In the complaint, water from Honokōhau Ditch was being released into gulches, roads, and ditches. Members of Ka Malu o Kahalawai

and West Maui Preservation Association include *lo'i kalo* farmers on lands adjacent to Honokōhau Stream and members who conduct traditional and customary practices including fishing, surfing, canoe paddling, and diving in nearshore areas of the Honokōhau hydrologic unit and other areas of West Maui.

In August and September 2018, Hurricanes Lane and Olivia hit West Maui, causing localized flooding and damage to Diversion 769 on Honolua Stream and Diversion 770 on Honokōhau Stream. The flooding resulted in an incised stream channel which lowered the elevation of the stream relative to the banks and damaged property throughout the valley.

In October 2018, Commission staff conducted a site visit with community representatives, the mayor of Maui County, and representatives from Maui Land and Pineapple (MLP) to assess the damage. The intake structure on Diversion 769 no longer existed, while the intake structure and sluice gate on Diversion 770 were badly damaged, rendering them inoperable. The location where MLP historically released water (Taro Gate) back into Honokōhau Valley from Honokōhau Ditch was blocked by sediment and debris, preventing the return of diverted water.

In September 2018, MLP lost their ditch operator, compounding problems associated with damage to the infrastructure.

In November and December 2018, a lack of flow in Honokōhau Stream was impeding efforts to restore *lo'i kalo* cultivation. At the same time, members of Ka Malu o Kahalawai and West Maui Preservation Association observed the release of water from Honokōhau Ditch in other locations.

Petitioners are seeking to prevent wastage by restoring flow to Honokōhau Stream and requiring upgrades to the stream diversion works (Diversion 770) to better regulate the amount of water removed from Honokōhau Stream. Establishing an interim IFS will protect instream uses of water, as identified by Ka Malu o Kahalawai and West Maui Preservation Association. Upgrades to Diversion 770 will enable MLP to continue to meet the domestic needs of Maui DWS and the non-potable needs of DHHL while ensuring adequate water remains in the stream to meet the interim IFS.

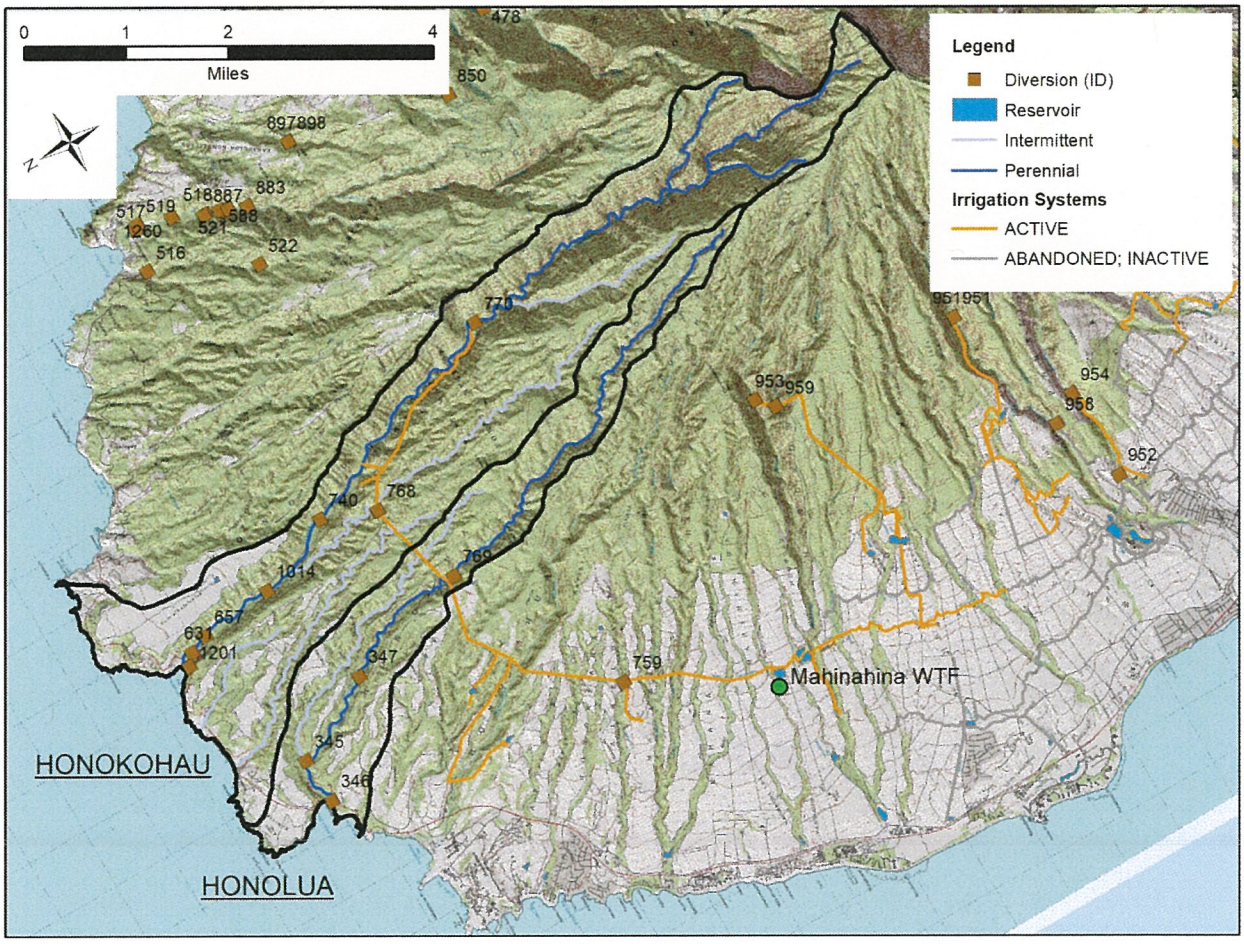
HISTORIC CONTEXT

The *ahupua'a* of Honokōhau, in the moku of Ka'anapali, supported one of the largest concentrations of Hawaiian agriculture in the Kingdom, with over 1000 surveyed *lo'i* in excess of 50 acres. While terracing in the *ahupua'a* of Honolua also suggests *lo'i kalo* was cultivated in the valley, archeological evidence and local knowledge points to Honolua being a focal region of religion and not agriculture.

Honolua Ranch began in 1853 with 2,675 acres of land awarded through a royal grant to Dwight Baldwin. By 1902, the ranch grew to 24,500 acres, and in 1914 became Baldwin Packers, eventually becoming the largest private producer of pineapple and pineapple juice in the nation. In 1904, Pioneer Mill partnered with Honolua Ranch to construct the Honokōhau Ditch (known

as the Honolua Ditch up to Māhinahina), taking advantage of West Maui's largest water source, Honokōhau Stream. Due to problems with the ditch (mainly landslides), the intake was moved from an elevation of 700 feet to its present location at 825 feet in 1913, with a new ditch running parallel to the older ditch, but mainly in tunnel. In 1912, the first 20 acres of pineapple were planted. Maui Pineapple Company (MPC) formed in 1932. The company produced pineapple grown on 5,000 acres as well as other diversified agriculture grown on Kapalua Farms.

Figure 1. The Honolua and Honokōhau hydrologic units, perennial and intermittent streams, registered diversions and irrigation systems, and water treatment facilities (WTF), West Maui.



In 1962, MPC merged with Baldwin Packers to form Maui Land and Pineapple (MLP). In 1975, MLP incorporated Kapalua Land Company (KLC) as a subsidiary dedicated to resort development with MPC dedicated to agricultural operations. Since that time, approximately 3,000 acres of land in Kapalua have been developed into golf courses, luxury homes, condos, and resorts.

In 2005, the real estate division of KLC began to expand its luxury resort development and sold its two existing golf courses.

At the end of 2009, MLP ceased pineapple operations, leaving a real estate division for land planning, development and sales, a leasing division for residential, resort, agricultural, commercial and industrial land and property leases, a resort amenities division for Kapalua Club members, and a utilities division, which operates the Kapalua Water Company (KWC) and Kapalua Waste Treatment Company.

In early 2010, Kapalua Farms organic pineapple operation was taken over by Ulupono Sustainable Agriculture Development. KWC continues to operate potable and non-potable water distribution systems, with potable water originating from three wells and non-potable water originating in Honokōhau Stream via Honokohau Ditch. The 8,304-acre Pu'u Kukui Nature Preserve is also owned and operated by MLP, one of the largest private nature preserve in the State of Hawai'i.

Today, there are 5.15 acres identified as *kuleana* lands, and *lo'i kalo* is currently grown on less than 3.5 acres. However, mirroring larger trends across Hawai'i, the Honokōhau community is experiencing a resurgence in food independence and Hawaiian cultural practices in which *lo'i kalo* cultivation is expanding.

TIMELINE

In 1987, with the passage of the State Water Code (HRS 174C), all wells and stream diversions had to be registered with the Commission on Water Resource Management (Commission) by May 31, 1989. Registered diversions accepted by the Commission in the hydrologic units considered here are listed in Table 1. The primary diversions on Honokōhau and Honolua streams were registered by MLP and maintained by MPC (FileRef: MAUI LAND&PINE). Following the cessation of pineapple cultivation in Kapalua, the operation and maintenance of the intake and ditch system were contracted out to a private company for MLP.

In 2003, the U.S. Geological Survey (USGS), in cooperation with the Office of Hawaiian Affairs, produced a Scientific Investigations Report (SIR 03-4060) which provides flow-duration estimates and detailed characterization of the distribution and availability of base flows in lower Honokōhau Stream. The analysis also showed groundwater gains between the USGS long-term continuous gaging station 1662000 at the 870 foot elevation time and Diversion 770 at the 825 foot elevation, as well as gains and losses of surface water downstream to the ocean.

In 2006, MLP filed separate petitions to amend the instream flow standard (PAIFS) for the Honolua and Honokōhau streams. These PAIFS followed biological assessments by SWCA Environmental Consultants, Inc.

In 2012, John Carty filed a PAIFS in order to pump water from the stream to a small reservoir to meet the agricultural irrigation needs of kalo, banana, sweet potato and other diversified crops on kuleana land.

In 2014, the USGS, in a Joint Funding Agreement with the Commission, published a Scientific Investigations Report (2014-5087), which characterized streamflow availability under natural low-flow conditions for streams in the Lahaina district, including Honolua Stream.

Following the publication of USGS SIR 2014-5087, Commission staff began analyzing historic and current data in support of the production of the Instream Flow Assessment Report (IFSAR) for each hydrologic unit in West Maui.

In September 2019, CWRM staff held a public fact-gathering meeting in Lahaina where 54 people attended. Oral testimony was submitted by about 25 people and written testimony was received from 6 other people. Overall, there was much support for the Commission's process for developing interim IFS and the need to protect the stream, traditional and customary practices, and domestic uses of stream water. Some comments were concerned about issues related to compliance, enforcement, and monitoring. Recommendations in this submittal seek to address these issues.

Table 2 summarizes staff research efforts towards production of the IFSAR for each hydrologic unit. Research included site visits and interviews with irrigation managers, community groups, land owners, and stakeholders as well as additional monitoring of stream and ditch flows, and surveying of instream resources. Information gathered contributed to a more complete understanding of the current water management and instream uses.

Table 1. Registration ID, diversion ID, diversion name, stream name, and additional information for diversions in the Honolua and Honokōhau hydrologic units, Maui.

Hydrologic Unit	Registrant	Diversion ID	Diversion name	Stream name	Additional information
Honokōhau	MAUI LAND & PINE	770	Aotaki Weir	Honokōhau	Intake #1 on Honokōhau Ditch at 825 ft
Honokōhau	MCDONALD J	740	McDonald's Dam	Honokōhau	Not active
Honokōhau	SHIM M	1014		Honokōhau	Not active
Honokōhau	LAHAINA PLTSCP	657		Honokōhau	Pump from stream
Honokōhau	KIM JW	631		Honokōhau	Pump from stream
Honokōhau	WATANABE WT	1201		Honokōhau	Pump from stream
Honokōhau	MAUI LAND & PINE	768	Kaluanui Intake	Kaluanui	Intake #2 on Honokōhau Ditch
Honolua	MAUI LAND & PINE	769	Honolua Intake	Honolua	Intake #3 on Honokōhau Ditch
Honolua	EZZO JSJR	347	n/a	Honolua	Diversion on TMK 241001002 of 100,000 gallons for 0.75 acres of taro, livestock, aquaculture, domestic
Honolua	EZZO JSJR	346	n/a	Honolua	Diversion on TMK 241001008 of 100,000 gallons for 2.0 acres of taro
Honolua	EZZO JSJR	345	n/a	Honolua	Diversion on TMK 241001002 of 100,000 gallons for 0.75 acres of taro, livestock, aquaculture, domestic

From 1995 to present day, Commission staff has received numerous requests in the form of a complaint or petition to protect stream resources in the subject area. Formal complaints and petitions are compiled in Table 3. Numerous informal requests in the form of phone calls, letters, and email have also been received by Commission staff. The primary concern is lack of streamflow and its effect on traditional and customary gathering practices, the cultivation of *lo'i kalo*, and recreational uses of the stream. Without reliable municipal water supply, many households in the valley rely on the stream for domestic uses as well.

Table 2. Summary of field investigations, by hydrologic unit and date, of Commission staff in support of developing interim instream flow standards for West Maui. [DDHL = Department of Hawaiian Home Lands; MDWS = Maui Department of Water Supply; MLP = Maui Land & Pineapple]

Date	Description
Honokōhau	
December 2014	CWRM site visit with Honokōhau Valley community members to investigate complaint at Chun's Dam
July 2017	CWRM and MLP site visit to diversion
December 2017	CWRM site visit with Honokōhau Valley community members to document existing lo'i complexes
October 2017	CWRM installation of gage at Honoapi'ilani Highway (6-157)
November 2017	CWRM flow measurements at gage 6-157
December 2017	CWRM flow measurements at gage 6-157
January 2018	CWRM flow measurements at gage 6-157
May 2018	CWRM site visit with Honokōhau Valley community members to discuss lo'i restoration following flood
October 2018	CWRM site visit with Honokōhau Valley community members to document flood damage
October 2018	CWRM and MLP site visit to diversion
November 2018	CWRM fieldwork at McDonald's Dam (6-149)
December 2018	CWRM flow measurements at gage 6-149
January 2019	CWRM flow measurements at gage 6-149
February 2019	CWRM flow measurements at gage 6-149
May 2019	CWRM site visit to Honokōhau Ditch at Wahikuli
June 2019	CWRM/DAR biota survey with MLP; flow measurement at gage 6-149
July 2019	CWRM site visit to Honokōhau ditch
November 2019	CWRM installation of gage at Adit 6 (6-201)
Honolua	
May 2012	CWRM and USGS conduct initial flow measurements
April 2017	CWRM and MLP site visit to diversion
September 2017	CWRM installation of gage at highway (6-158); flow measurement; initial USACOE survey
November 2017	CWRM flow measurement at highway
December 2017	CWRM flow measurement at gage 6-158
January 2018	CWRM flow measurement at gage 6-158
April 2018	CWRM flow measurement at gage 6-158
December 2018	CWRM flow measurement at gage 6-158
March 2019	CWRM flow measurement at gage 6-158
June 2019	CWRM/DAR biota survey with MLP
August 2019	CWRM site visit to gage 6-158

In the course of these research efforts, staff identified several existing, historic, or unregistered diversions within the Honokōhau hydrologic unit. Unregistered diversions are listed in Table 4.

While permits are needed for stream diversion works, traditional and customary practices, including the growing of *lo'i kalo* do not require an amendment to the interim IFS, as these uses are considered "instream" uses.

Based upon the best available information, as provided in this submittal, staff have developed recommendations that seeks to protect instream uses and public trust uses while providing for some noninstream uses; understanding that domestic needs of the public and reservations by the Department of Hawaiian Home Lands (DHHL) are public trust uses of water. The recommendations provided herein have also been developed in consideration of interim IFS values that were adopted by the Commission for previous areas of West and East Maui.

Table 3. Summary of complaints associated with the Honolua, or Honokōhau hydrologic units to Commission staff. [MLP = Maui Land & Pineapple Co.; DHHL = Department of Hawaiian Home Lands]

Date	Description of Complaint
Honokōhau	
August 1995	Lack of flow in stream
August 2004	Illegal grading of stream; rocks removed from stream to build an embankment to prevent erosion
August 2006	Petition to Amend the Interim IFS by MLP (PAIFS.1792.6)
August 2012	Lack of flow in stream
September 2014	Neighbor moved rocks in stream; unpermitted stream channel alteration
September 2018	Maui Co's pipeline catwalk broke across stream; lack of vegetation management affecting the stream
April 2019	Waste complaint: MLP failure to operate it's intake and water wasted at Wahikuli Flume
Honolua	
August 2006	Petition to Amend the Interim IFS by MLP (PAIFS.1792.6)
June 2012	Petition to Amend the Interim IFS by John Carty (PAIFS.3603.6)

Table 4. Existing, historic, or unregistered diversions in the Honokōhau hydrologic unit.

elevation (ft)	associated lo'i (count)	TMK	Description	notes
320	15	410040090000	Auwai on left bank	currently active
220	12	410030260000	Auwai on right bank	
110	22	410030140000	Auwai on left bank (Lindsey)	currently active; natural poowai in side channel
95	3	410020680000	Auwai on right bank	
90	90	410020680000	Auwai on right bank	some dryland kalo active
80	10	410020680000	Auwai on right bank	
70	0	410020510000	Auwai on left bank (McAulton)	concrete in channel
60	60	410020430000	Chun's Dam	currently active; concrete needs in channel repair

ISSUES/ANALYSIS

This section of the submittal begins with general considerations of issues that broadly apply to the development of an IFS. A discussion then follows of the unique hydrogeologic environment, the instream uses, and the noninstream uses of water. The general considerations are followed by an assessment summary for each stream and a simplified schematic diagram. The summary and diagram identify key points from the IFSAR while summarizing the hydrologic characteristics and is by no means intended to substitute for the information compiled in the report.

The next step to developing an interim IFS is to balance often-competing instream and noninstream uses of water, which may include public trust uses, against the amount of water available to accommodate the needs of these uses. Again, the quantity and quality of information varies from stream to stream. This step is further complicated by the tremendous variability of instream and non-instream uses across and within surface water hydrologic units. For example, one stream may support extensive *kalo* cultivation while another may primarily support domestic uses. The potential of the stream and hydrologic unit to support additional water use in the future has also been considered. The four public trust uses of water include: (1) Water in its natural state; (2) Water used for traditional and customary practices; (3) Water for domestic uses; and (4) Water reserved and used by the Department of Hawaiian Home Lands. The process is to be based upon best available information when balancing the present or potential, instream and non-instream uses.

In developing the interim IFS recommendations, staff has attempted to remain consistent in balancing all of the instream and noninstream uses of each stream based upon the best available information presented in the IFSAR, along with the oral and written comments received through the public review process. This process is challenging due to the unique nature of each stream, the various instream and noninstream uses of water, and the logistical challenges of instituting an interim IFS. Whether attempting to compare stream characteristics across multiple hydrologic units or within one unit, no single principal or equation determines the rate of flow restoration. However, the principals established by the State Constitution, the Hawai'i State Water Code (HRS 174C), administrative rules, and case law interpreting all of the above, are applied appropriately.

Hydrogeologic Context

The first step in developing an interim IFS is assessing the hydrogeology of the hydrologic unit. Freshwater resources originate as precipitation, falling in the form of rain, but also through fog drip intercepted by vegetation. Some of the precipitation evaporates from the canopy or the soil, some is transpired by plants, some flows as overland flow in runoff contributing to surface flow, and some infiltrates the soil and contributes to groundwater recharge. Much groundwater is stored in the basal aquifer found in the dike-free lava flows of the shield building phase of the volcano. This basal aquifer lens sits on the brackish transition zone, which then overlies saltwater.

"High-level" groundwater occurs where water is impounded by dikes or perched on buried low-permeability horizons. Dikes form vertical barriers of low-permeability rock behind which groundwater is stored in the intervening permeable lava. Dike compartments can increase the storage of an aquifer by impounding groundwater to hundreds or thousands of feet above sea level. Although conceptualized as "compartments", regions of high permeability are not closed on all sides and dikes are generally leaky. Inflow into dikes starts as recharge from infiltration of high-rainfall areas. Groundwater flows from higher compartments to lower compartments and eventually out of the dike-impounded groundwater area to adjacent groundwater bodies (e.g., basal lens) or in areas where the stream channel has incised into the water-bearing compartment producing spring flow. Where the stream channel has incised into dike-impounded groundwater, streams have substantial base flow (USGS SIR 2015-5164; p.100). The area of dike-impounded groundwater in West Maui was first delineated by Stearns and Macdonald (1942; USGS Hydrogeography Bulletin 7) but has since been modified by Gingerich (2008) and Gingerich and Engott (2012) as depicted in Figure 2.

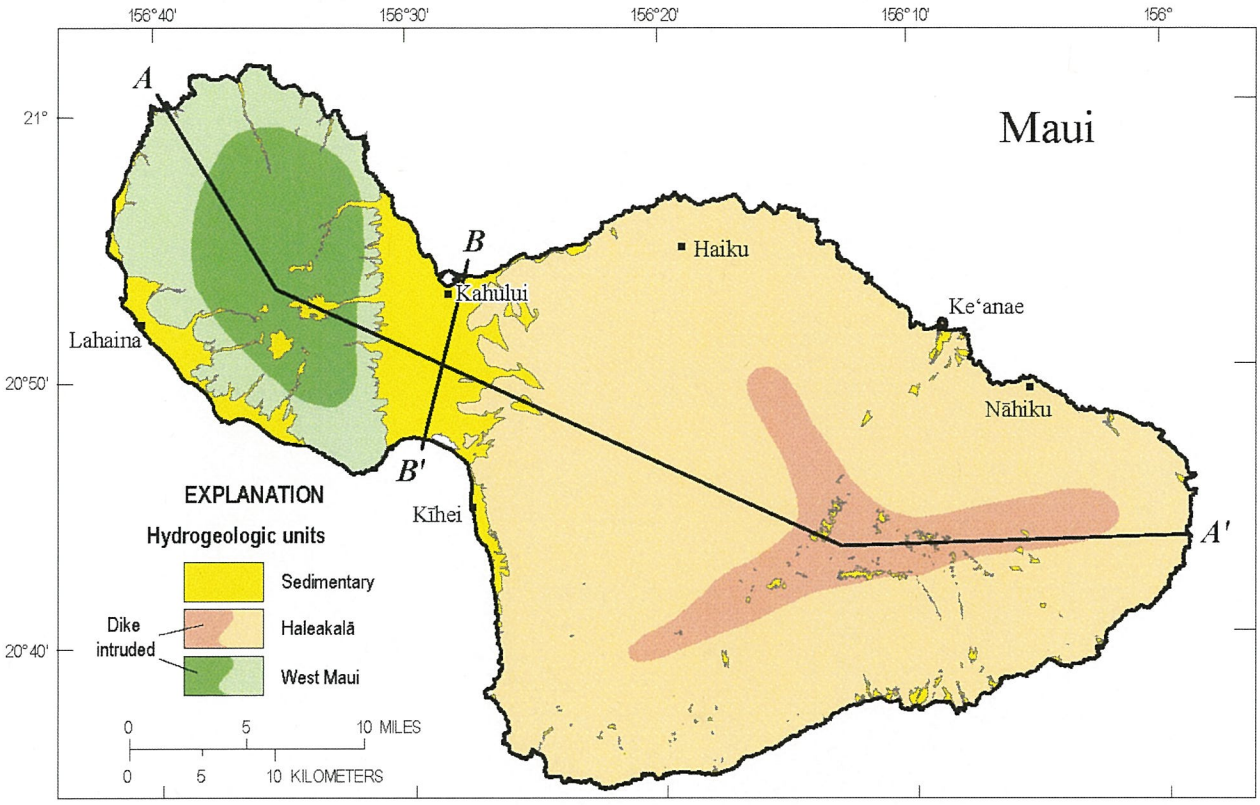
Hydrologic Considerations

Streams are largely characterized by different hydrologic and geologic components that affect flow regimes, particularly the groundwater-surface water interactions and rainfall-driven runoff. The amount of water flowing in a given stream is also affected by regional climate variations (e.g., rainfall, fog drip, solar radiation). The quantity and quality of data available to characterize these geologic and hydrologic components also varies considerably from stream to stream. For streams with long-term continuous data, the process for developing an interim IFS may be greatly different from that for streams with limited hydrologic data. For example, the groundwater contributions to surface flow (i.e., base flow) can be determined using continuously recorded data and statistical analyses, while record-augmentation is used with partial-record gaging stations to estimate low-flow characteristics where no continuous data exist.

Groundwater-surface water interactions influence the extent of gaining and losing stream reaches. A gaining reach is where the streambed intersects the underlying water table and groundwater contributes to streamflow as seepage or springs. A losing reach is where the streambed is above the water table and water infiltrates into the streambed and recharges the aquifer, sometimes leaving the stream dry even in undiverted conditions.

A common misconception is that flow restoration from diversions is immediately followed by continuous flow downstream from the point of release all the way to the coast (analogous to turning on a faucet); however, this is not always the case. For a stream that is losing, restored flow infiltrates underground once it reaches the losing section, and flow is often absent downstream of the losing reach. In some cases, flow will become continuous only after enough water has infiltrated the streambed and raised the water table, allowing base flow to be maintained by equilibrium with sub-surface flow. In other cases, the restored stream will remain dry at low-flows where the water table drops below the elevation of the stream bed. A stream can also become dry from prolonged periods of little or no rainfall as the water table drops below the streambed. In this case, adequate rainfall is necessary to restore the interaction between surface and groundwater, and to return base flow in the stream.

Figure 2. The zone of high elevation dike intrusion that contributes groundwater to surface flow on Maui. (Source: USGS SIR 2015-5164)



Honokōhau and Honolua streams have both gaining and losing reaches below the diversions, with Honokōhau mostly gaining and Honolua mostly losing below the diversion to the ocean. The presence of high elevation dike-impounded groundwater directly influences the availability of water during low-flow conditions in Honokōhau. In Honokōhau, spring flows from high-elevation dike structures were improved by the construction of development tunnels, which augmented surface flows (Figure 3). Thus, there is a disparity in surface water availability during low-flow conditions in Honokōhau, which has many dike-structures, and Honolua, which does not.

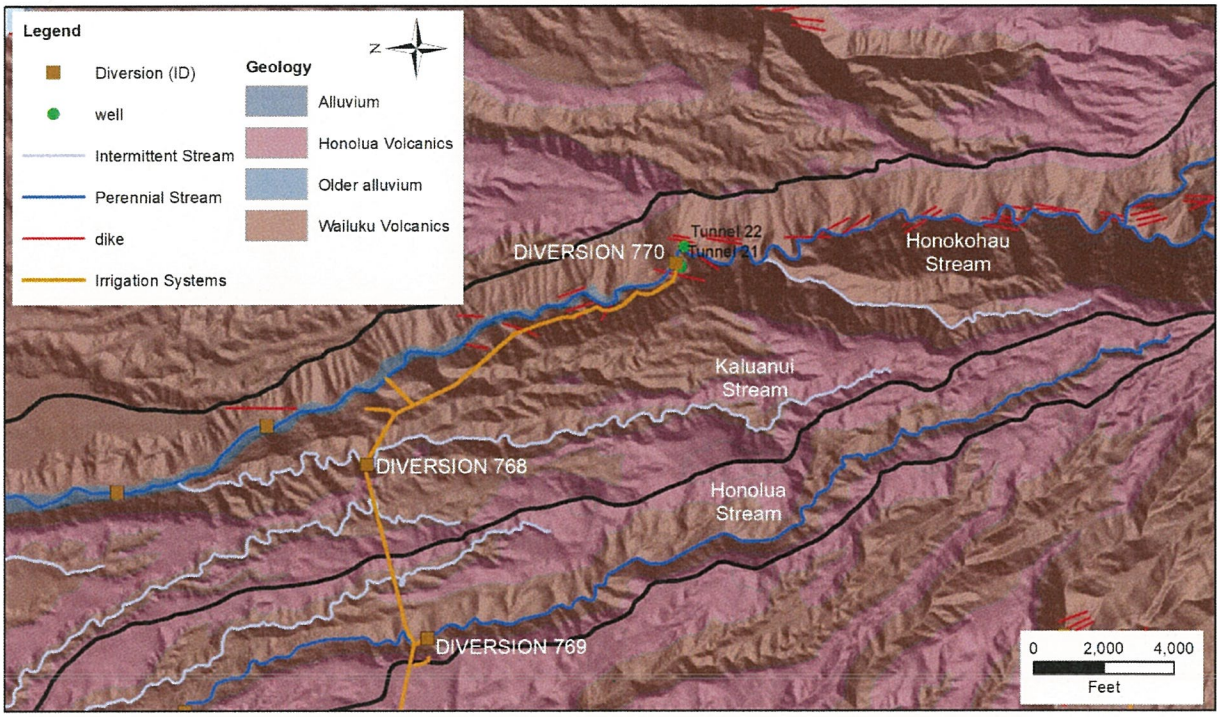
At 875 feet in elevation, a long-term (1914-present) continuous record gaging station exists on Honokōhau Stream. Median total flow (TFQ_{50}) and low total flow (TFQ_{90}) at this station are 15.5 mgd, and 8.4 mgd, respectively. Continuous data can be used to generate base flow duration statistics. Estimates of median base flow (BFQ_{50}) at USGS 1662000 on Honokōhau Stream for the (1984-2013) period is 11.2 mgd. On Maui, the estimated streamflow that supports approximately 90% habitat restoration is assumed to be the 64% of median base flow (USGS SIR 2005-5213), or 7.4 mgd at USGS 1662000. Kaluanui Stream is an intermittent tributary stream which contributed up to approximately 1 mgd to the Honokōhau Ditch during the wet season, but Diversion 768 on Kaluanui has remained inactive since 2005. Natural low-flow duration estimates at the 825 foot elevation (above Diversion 770) on Honokōhau Stream and at the 800 foot elevation (above Diversion 769) on Honolua Stream are listed in Table 5.

Table 5. Estimated natural median (Q_{50}) and low-flow (Q_{60} to Q_{90}) values available at the Honokōhau Ditch in the Honokōhau and Honolua hydrologic units. [cfs = cubic feet per second; mgd = million gallons per day]

Stream	Estimated natural-flow Q_{50}	Estimated natural-flow Q_{60}	Estimated natural-flow Q_{70}	Estimated natural-flow Q_{80}	Estimated natural-flow Q_{90}
Honokōhau[1]	30 (19.4)	26 (16.8)	23 (14.9)	20 (12.9)	17 (11.0)
Honolua[2]	3.8 (2.46)	2.3 (1.49)	1.2 (0.78)	0.40 (0.26)	0.0 (0.0)

[1]combined flow of USGS 1662000 and estimated Tunnel 21 and Tunnel 22 discharge as provided by USGS WRIR 03-4060
[2]from USGS SIR 2014-5087

Figure 3. Geology and extent of dike complexes in the Honokōhau and Honolua hydrologic units near development tunnels and stream diversions.



Trends in Rainfall and Streamflow

Long-term (1920-2012) and recent (1983-2012) trends indicate significant declines in rainfall across areas of West Maui, particularly during the dry season (Figure 4). There is some disagreement between dynamical and statistical downscaling models used to predict rainfall for the RCP 4.5 and RCP 8.5 climate scenarios[1], with dynamical models suggesting rainfall in the Honokōhau and Honolua aquifer systems marginally increasing (i.e., less than 3%) and statistical models suggesting rainfall declining 7.3% to 9.5%. Long-term declines in rainfall are generally coupled with a long-term decline in surface water availability and groundwater recharge, with consequences for base flow (Figure 5).

[1] Representative Concentration Pathway (RCP) are a set of greenhouse gas concentration trajectories adopted by the IPCC for its fifth Assessment Report in 2014

Figure 4. Annual, wet season (Nov-Apr) and dry season (May-Oct) rainfall trends for the 1920-2012 (A) and 1983-2012 (B) periods, Maui. Hashed line areas represent significant trend over the period. (with permission from Frazier and Giambelluca, 2017)

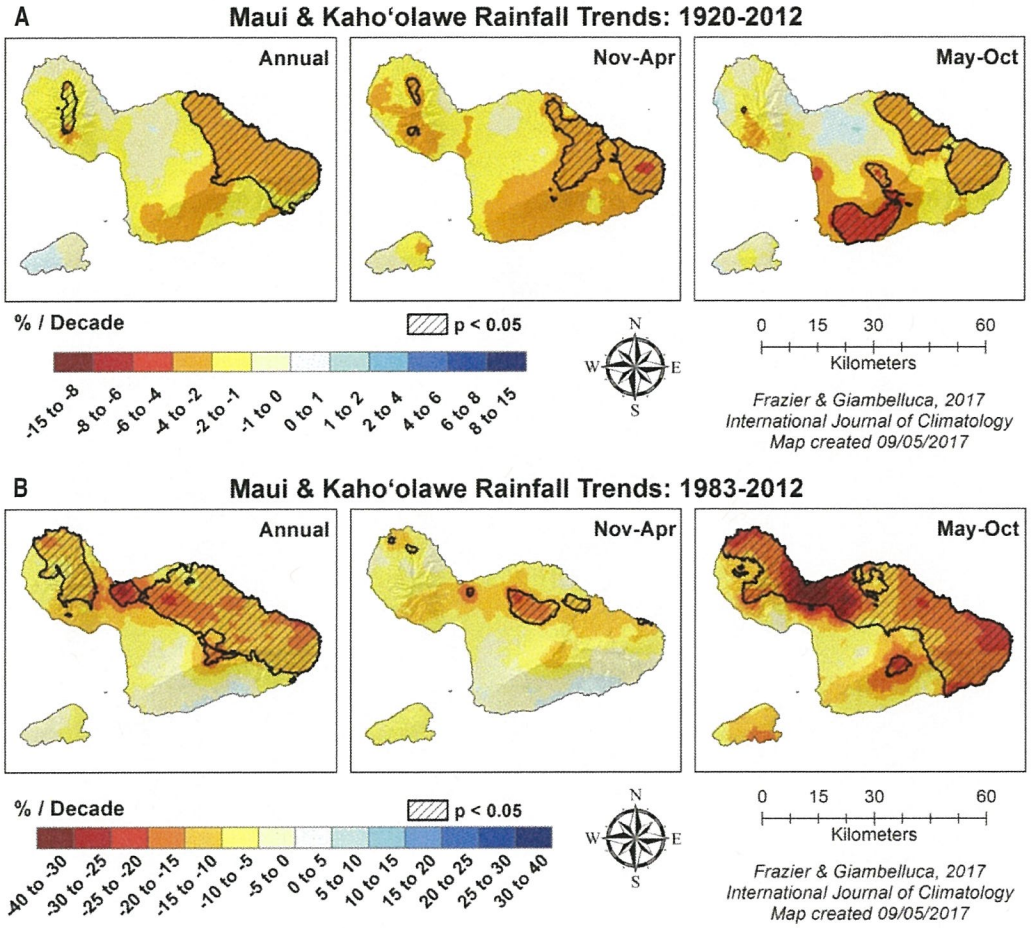
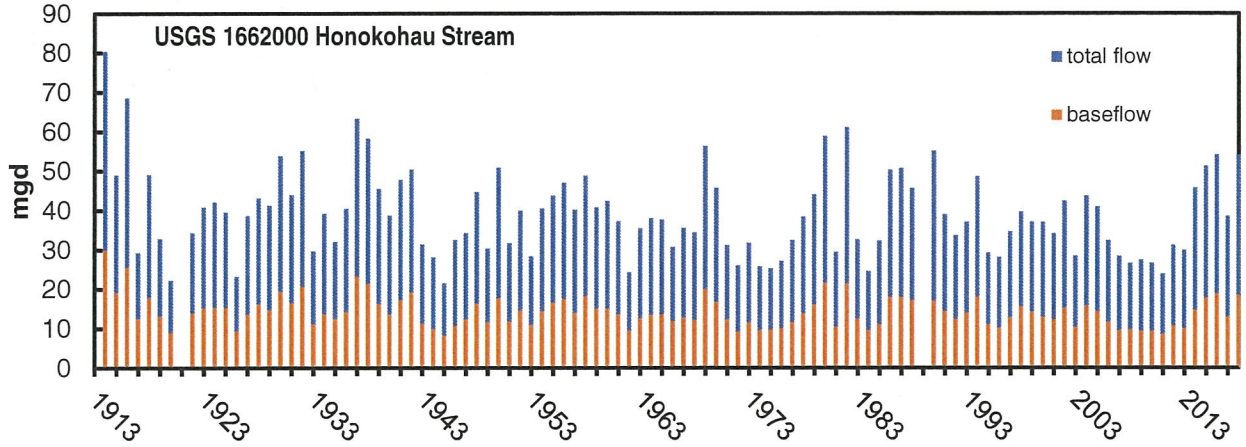


Figure 5. Mean annual total flow (million gallons per day, mgd) and mean annual baseflow (mgd) at USGS station 16620000 on Honokōhau Stream, West Maui.



AVAILABILITY OF ALTERNATIVE SOURCES

There are two potential alternative water sources that may be used to meet the needs of non-instream uses: 1) R1 recycled wastewater is available from the Lahaina Wastewater Treatment Facility (i.e., R1 alternative); 2) groundwater from the Honokōhau, Honolua, or Honokōwai aquifer systems (i.e., groundwater alternative).

R1 Alternative

Recycled wastewater treated to the R1 level can be used for golf course irrigation, landscape irrigation, and food crops. The Lahaina Wastewater Treatment Facility (LWWTF) currently produces about 4.0 mgd of R1 level water and is being upgraded to treat as much as 9.0 mgd. However, due to a lack of storage and distribution system, not all of this water is used and is currently pumped into injection wells. Because many of the sewage pipelines that feed the county wastewater transmission system located on private lands are in disrepair, saltwater intrusion into the system increases the chloride content of the wastewater up to 500 mg L^{-1}. This level of chloride is unacceptable for most orchard or row crops, and therefore this does not present a viable alternative for agricultural uses unless it is mixed with additional surface or groundwater of lower chloride content.

Maui County Department of Environmental Services (DES) has a pipeline from its LWWTF to the Honokōwai Reservoir at an elevation of 300 feet (currently owned by MLP). A former pipeline to Lower Field 14 Reservoir (TMK 4-4-004:012 State of Hawai'i) needs some repair and Maui County is working on a replacement pipeline to increase the capacity. Utilizing these two reservoirs and rehabilitating the Field 140 Reservoir (4-4-002:016 MLP) would make it possible to blend ditch water diverted via Honokōhau Ditch with R1 water and make it available to support agriculture or other non-potable water needs. The steps necessary to develop such a blending system in Field 140 Reservoir to achieve a desirable water source for all food crop uses needs to be supported by Maui County, DHHL, MLP, and other potential end users to be successful. In such a system, Maui County DES would be the responsible party for managing the supply and end users would be responsible for developing an irrigation management plan that optimizes this water source.

Groundwater Alternative

The Lahaina District of West Maui receives in excess of 250 inches of rainfall per year, providing recharge which saturates high level dike aquifers that then drain to basal aquifers at lower elevations. The principal dike trend ranges from 5° to 30°N in Honokōwai to almost northerly in Honokōhau. The dike zone plunges beneath the flank lavas several miles inland and groundwater from high level dike compartments seeps into the flank lavas, with leakage perpendicular to the trend adding to stream flow and further adding to local recharge of the basal lens.

The sustainable yields, current (2018) 12-month moving average, and 10-year average for the Honokōhau, Honolua, and Honokōwai aquifer systems are provided in Table 6. KWC operates

three wells with a combined capacity of 3.51 mgd and a 2018 total average pumpage of 0.936 mgd.

Table 6. Current sustainable yields for aquifer systems in the Lahaina Aquifer Sector north of Lahaina, current (2018) 12-month moving average (MAV) pumpage, and 10-year average pumpage. [million gallons per day, mgd]

System	Sustainable Yield (mgd)	2018 12-month MAV (mgd)	10-year average (mgd)
Honokōwai	6.0	3.380	3.249
Honolua	8.0	1.993	2.410
Honokōhau	9.0	0.000	0.000

SPECIFIC INSTREAM USE CONSIDERATIONS

The maintenance of instream flows is important for the protection of traditional and customary Hawaiian rights as they relate to the maintenance of stream (e.g., hīhīwai, ʻōpae, ʻoʻopu) and riparian (vegetation) resources for gathering, recreation within streams, and the cultivation of *kalo* or other traditional crops. The traditional Hawaiian *ahupuaʻa* concept is based on the premise of mauka-to-makai flow and a deep appreciation of water. Historical surveys by Duncan and Shishido (1900) show as much as 51.75 acres of *loʻi kalo* in Honokōhau Valley, although some of this was in the middle reaches above the current extent of community development.

Continuous streamflow benefits the maintenance of stream and nearshore habitat. Diversion structures can impede the downstream movement of larvae (entrainment) and the upstream movement of adults (recruitment). In previous surveys pre-restoration (2003) and post-restoration (2005) of flow at Aotaki Dam (Diversion 770) on Honokōhau Stream, restoration of as little as 1.5 cfs (1.0 mgd), in combination with natural pulse flood events, provided sufficient habitat and connectivity for new recruits of oʻopu alamoʻo (*Lentipes concolor*), oʻopu nakea (*Awaous stamineus*), and ōpae kalaʻole (*Atyoida bisulcata*) to return to the stream above Diversion 770. Recent (2019) surveys of Honokōhau and Honolua identified new recruits and reproductive-size adults of oʻopu alamoʻo, oʻopu nakea, oʻopu nopili (*Sicyopterus stimpsoni*), and ōpae kalaʻole.

The floods following two hurricanes (Lane and Olivia) in August and September 2018 carved a new channel around Diversion 770, allowing for a wetted pathway mauka to makai. Diversion 769 on Honolua Stream was discontinued in 2006, with the grate and transmission tunnel clogged with sediment, and then destroyed in September 2018 by the floods.

NON-INSTREAM USE CONSIDERATIONS

Kapalua Water Company Service Area

The active plantation diversions on Honokōhau and Honolua were originally built to irrigate pineapple and sugarcane for MLP and Pioneer Mill, respectively. In their registration, MLP

stated that KLC used 3.3 mgd for the irrigation of 600 acres of golf course (5,500 gallons per acre per day; gad), which, at that time, included three golf courses. Although one golf course was closed, MLP opened a golf academy using some of the available acreage. In the same registration, KWC used 1.0 mgd for the irrigation of 220 acres of resort landscaping (4545 gad). Metered use by KWC reported for 2017 and 2018 indicates approximately 1.0 mgd is used for resort and luxury home irrigation, approximately 0.8 mgd is used for golf course and related irrigation, and 0.2 mgd is used for diversified agriculture or other needs (Table 7). Non-potable water needs of the Kapalua area are currently only met by water diverted from Honokōhau Stream (Figure 6).

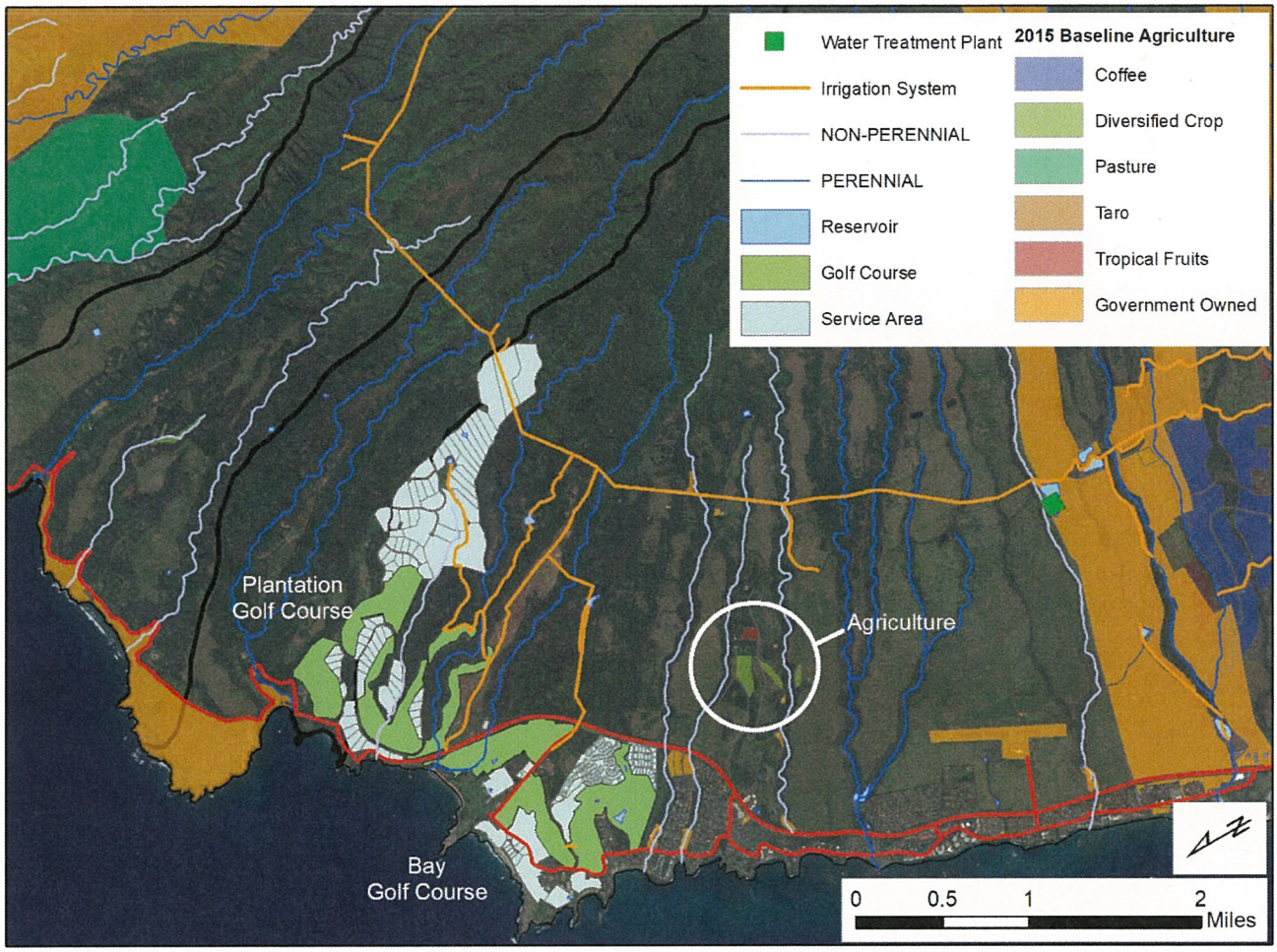
Table 7. Current actual and future estimated water use for various entities in the Kapalua-Napili region including golf course (GC) irrigation, resort landscape irrigation, luxury home landscape irrigation, Maui County Department of Water Supply (DWS), and Department of Hawaiian Home Lands (DHHL). [mgd = million gallons per day; gallons per acre per day, gad]

Water Use	2017 actual use (mgd)	2018 actual use (mgd)	2019 estimated use (mgd)	future estimated need (mgd)
Irrigation for Kapalua Resorts, common areas, luxury home landscaping	0.909	0.782	0.988	0.892
Irrigation for Plantation GC, Bay GC, Golf Academy	0.912	0.515	0.817	0.748
Other: Diversified Agriculture, Napili Gardens, Mailepai Cemetery, other homes	0.248	0.110	0.056	0.138
Future Planned Uses: Pulelehua, Wailele Ridge, Mahana Estates, Kapalua Mauka				3.64
Maui DWS Domestic/Municipal	1.74	1.78	2.00	2.28
DHHL Diversified Agriculture	--	--	--	2.10
Total	3.81	3.19	3.72	9.80

Domestic Water Supply

While not all municipal water supply is considered domestic water use, the Maui County Department of Water Supply (Maui DWS) serves a population of 18,122 within the Lahaina-Napili water system. This system relies on a combination of two surface water treatment facilities (WTF) at Lahaina and Māhinahina and 12 production wells. The total water production of Maui DWS is approximately 5.4 mgd, of which 5.08 mgd is considered domestic use (equating to 208 gallons per person per day) (Maui Water Use and Development Plan, 2017). Non-potable water is transmitted to the Maui DWS WTF at Māhinahina. Maui DWS currently has an agreement for the transmission of up to 2.5 mgd of water from MLP, but that contract expires in 2020. From 2015 to 2019, Māhinahina WTF treated a mean (±standard deviation) of 1.70 (±0.28) mgd of water received from Honokōhau Stream via Honokōhau Ditch, with a maximum daily production of 2.5 mgd.

Figure 6. Current land use and service area of non-potable water from the Honokōhau Ditch in the Kapalua area of Maui.



Water Needs of The Department of Hawaiian Home Lands

The reservation and use of water by the Department of Hawaiian Home Lands (DHHL) is a public trust use. The Honokōwai unit of DHHL's West Maui Regional Plan incorporates 780 acres, of which approximately 270 acres are south of Honokōwai Gulch and 510 acres are north of Honokōwai Gulch. The 2017 State Water Projects Plan for DHHL identified 2.1 mgd of non-potable use for Honokōwai in the West Maui Regional Plan. The DHHL West Maui Regional Plan is currently being revised, but it is expected that at least this much will be needed for non-potable needs. This availability of water could be doubled to 4.2 mgd of R1 water if the county blended at 50:50 R1 water with surface water from Honokōhau Ditch.

ASSESSMENT SUMMARY: HONOLUA HYDROLOGIC UNIT

Hydrology

The Honolua hydrologic unit lacks high elevation dike-impounded groundwater. As a result, the stream naturally runs dry during periods of extremely low rainfall. Based on partial-record

gaging station measurements, estimated median (Q_{50}) and low (Q_{90}) flow statistics for Honolua Stream above the intake for Honokōhau Ditch are 2.46 mgd and 0.00 mgd, respectively. Using two seepage runs, USGS estimated seepage loss below diversion 769 on Honolua Stream to be between 0.17 mgd per mile and 0.54 mgd per mile. Based on these measurements and a CWRM continuous-record gaging station at Honoapi'ilani Highway, mauka to makai flow does not occur naturally approximately 20% of the time.

Maintenance of Fish and Wildlife Habitat
In 2005, diversion 769 on Honolua Stream was inactivated, and all flow returned to the stream past Honokōhau Ditch. However, even with full restoration of surface water, Honolua Stream does not flow to the ocean 100% of the time. As a result, the stream does not support native aquatic biota in the lower reaches. Immediately below the diversion and upstream of diversion 769, the stream flows nearly 100% of the time and supports many native biota with pool refugia providing habitat during days with zero flow. The stream also supports native damselfly species (*Magdalagrion sp*) including the endemic *M. pacificum*. Stream surveys conducted in 2019, verified the utilization of upstream and downstream habitat by native aquatic species.

Outdoor Recreational Activities
The Hawaii Stream Assessment classified the recreational resources of Honolua as "limited" with the lowest rank possible. There are some hiking and scenic views available in the lowest reaches and at the coast. Honolua Bay offers snorkeling, diving, and surfing.

Maintenance of Ecosystems
The Hawaii Stream Assessment determined that the riparian resources of Honolua did not deserve to be a candidate for protection. Much of the riparian environment is dominated by non-native trees and shrubs, and pigs commonly damage the soil in lower elevations. There are efforts to restore native species and control invasive species in the portion of Honolua within the Pu'u Kukui Watershed Preserve.

Aesthetic
There is aesthetic value in the lowest reaches of Honolua Stream, where residents and the public interact with the stream.

Maintenance of Water Quality
Honolua Stream is classified by the Department of Health as Class 1b inland waters in the upper elevations and Class 2 inland waters in the lower elevations. It does not appear on the 2014 List of Impaired Waters in Hawaii, Clean Water Act §303(d), although there was insufficient data to support any conclusions. The Honolua hydrologic unit is part of the West Maui Ridge2Reef initiative in which multiple agency and stakeholder organizations are utilizing an all-encompassing approach to address land-based sources of pollution affecting nearby coral reef ecosystems. The initiative is working on reducing legacy sediment from historic agricultural practices that is carried in runoff into streams and out to the ocean.

Conveyance of Irrigation and Domestic Water Supplies
Honolua Stream is not used for the conveyance of irrigation or domestic water supplies.

Protection of Traditional and Customary Hawaiian Rights

There is partial coverage of archeological surveys, with scattered density, and moderate sensitivity in Honolua. There are examples of pre-contact culture with important and culturally noteworthy sites and historic features (e.g., auwai, terracing) associated with the stream both above and below diversion 769. Below the diversion there are registered uses which claim *kalo* cultivation. The cultural resources in Honolua were ranked as outstanding by the Hawaii Stream Assessment; however, Honolua was considered a religious center and not the primary *kalo* producing region compared to Honokōhau.

ASSESSMENT SUMMARY: HONOKŌHAU HYDROLOGIC UNIT

Hydrology
Stream flow in the Honokōhau hydrologic unit is supported by high elevation dike-impounded groundwater. The USGS has maintains a continuous-record gaging station (station 16620000) at an elevation of 875 feet with median (Q_{50}) and low (Q_{90}) flow statistics of 15.5 mgd and 8.4 mgd, respectively. Median base flow at this station is estimated to be 11.6 mgd. Two development tunnels and a spring augment surface flow between USGS 16620000 and Aotaki Dam (Intake #1 on Honokohau Ditch), providing an additional Q_{50} and Q_{90} flow of 3.4 mgd and 2.3 mgd, respectively. Using seepage runs, USGS estimated a gain in surface flow from an elevation of 600 ft to an elevation of 340 ft at McDonald's Dam of at least 1.4 mgd. Since December 2018, CWRM has maintained a continuous-record gaging station at McDonald's Dam to monitor current flow conditions at this elevation, with Q_{50} and Q_{90} flow duration statistics of 18.3 mgd and 12.6 mgd, respectively. Mauka to makai flow occurs 100% of the time.

Maintenance of Fish and Wildlife Habitat
In 2005, MLP initiated a release of 1.5 cfs (1.0 mgd) of stream water through Aotaki Dam (at Aotaki Gate) to supply a wetted pathway that supports habitat for migratory native biota. This release combined with a release of water at Taro Gate from Honokōhau Ditch supplied water for downstream uses. As a result, new recruits were observed above the diversion. In 2018, flash floods from hurricanes Olivia and Lane carved a new channel around Aotaki Dam and a portion of Honokōhau Stream continues to bypass the original diverted channel. Thus, there is now much more connectivity to support native aquatic biota, that there has been since the construction of Aotaki Dam. The Hawaii Stream Assessment ranked the aquatic resources of Honokōhau as "outstanding" with three of the most important native species observed (*o'opu 'alamo'o, o'opu nakea, o'opu nopili*). In 2019, additional stream surveys verified the utilization of upstream and downstream habitat by these species.

Outdoor Recreational Activities
The Hawai'i Stream Assessment classified the recreational resources of Honokōhau as "substantial". There are hiking and swimming recreational opportunities in the lower elevations, with many families living in the valley.

Maintenance of Ecosystems
The riparian resources of Honokōhau are dominated by detrimental plants (i.e., invasive, introduced) and only 30% of the riparian vegetation was native in the lower reaches. Invasive pigs damage the watershed in the lower reaches. There are efforts to restore native species and control invasive species in the portion of Honokōhau within the Pu'u Kukui Watershed Preserve.

Aesthetic
Honokōhau Waterfall is located at a high elevation above any diversions and is one of the top helicopter tour destinations on Maui. The stream provides aesthetic value for residents living in the valley.

Maintenance of Water Quality
Honokōhau Stream is classified by the Department of Health as Class 1b inland waters in the upper elevations and Class 2 inland waters in the lower elevations. It does not appear on the 2014 List of Impaired Waters in Hawaii, Clean Water Act §303(d), although there was insufficient data to support any conclusions.

Conveyance of Irrigation and Domestic Water Supplies
Honokōhau Stream is not used for the conveyance of irrigation water. However, many homes rely on the stream for domestic uses.

Protection of Traditional and Customary Hawaiian Rights
Honokōhau Valley has one of the largest concentrations of historic *lo'i* in Hawai'i and cultural resources were ranked as "outstanding" by the Hawaii Stream Assessment. While there is low survey coverage of archeological sites in Honokōhau, there is high predictability and moderate density of pre-contact or early contact sites which contain important and culturally noteworthy information. There are 5.15 acres of identified *kuleana* parcels in the valley (estimated demand of 1.11 mgd). Currently, there are approximately 3.5 acres of active *lo'i* (estimated demand of 0.75 mgd) but as much as 10 acres could be in cultivation with sufficient stream flow (estimated demand of 2.13 mgd).

Figure 7. A) Diversion 769 on Honolua Stream from right bank before 2018 storm damage; B) Diversion 769 from right bank after 2018 storm damage; C) Intake at diversion 769 before 2018 storm damage; D) Intake at diversion 769 after storm damage; E) upstream view of Honolua Stream before 2018 storm damage; F) upstream view of Honolua Stream after 2018 storm damage; G) O'opu in Honolua Stream above diversion 769; H) Honokohau Ditch crossing at Honolua Stream.

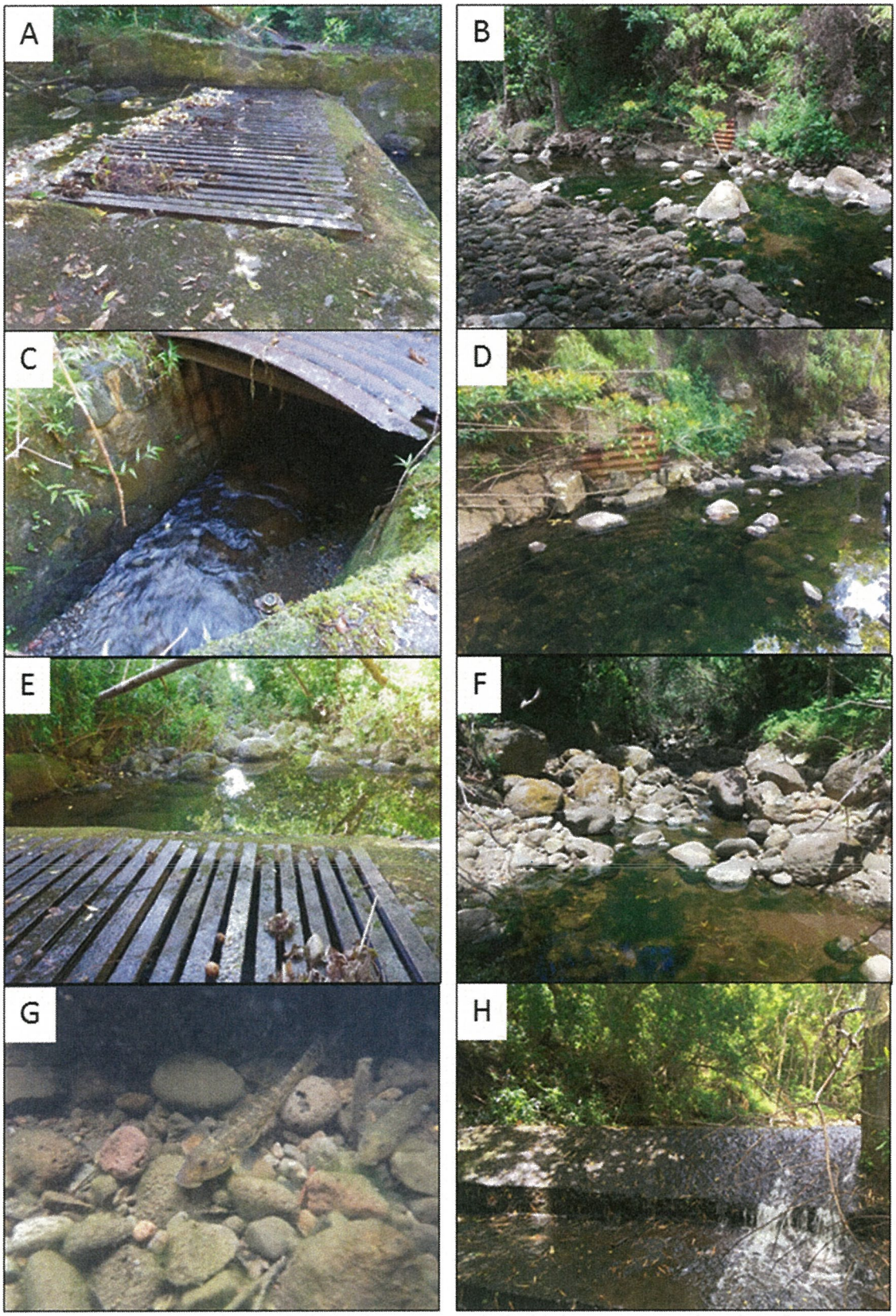


Figure 8. A) Diversion 770 on Honokōhau Stream from left bank; B) Intake at diversion 770 on left bank; C) upstream view of Honokōhau Stream following tropical storm Olivia; D) new channel along the right bank bypassing diversion 770; E) diversion 770 from right bank before Olivia; F) lo'i kalo in Honokōhau Valley; G) McDonald's Dam on Honokōhau Stream; H) unregistered auwai on left bank in Honokōhau Valley.

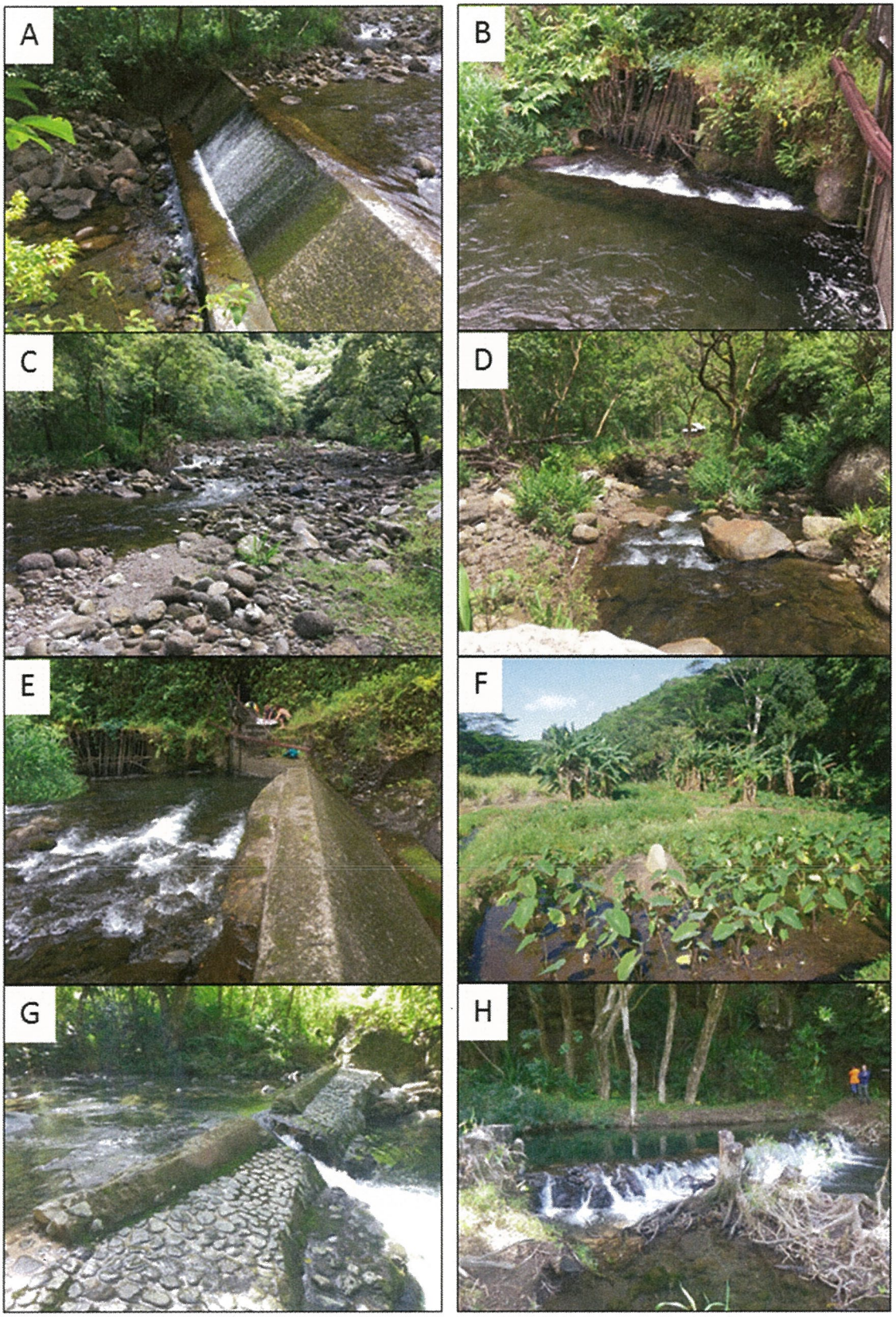
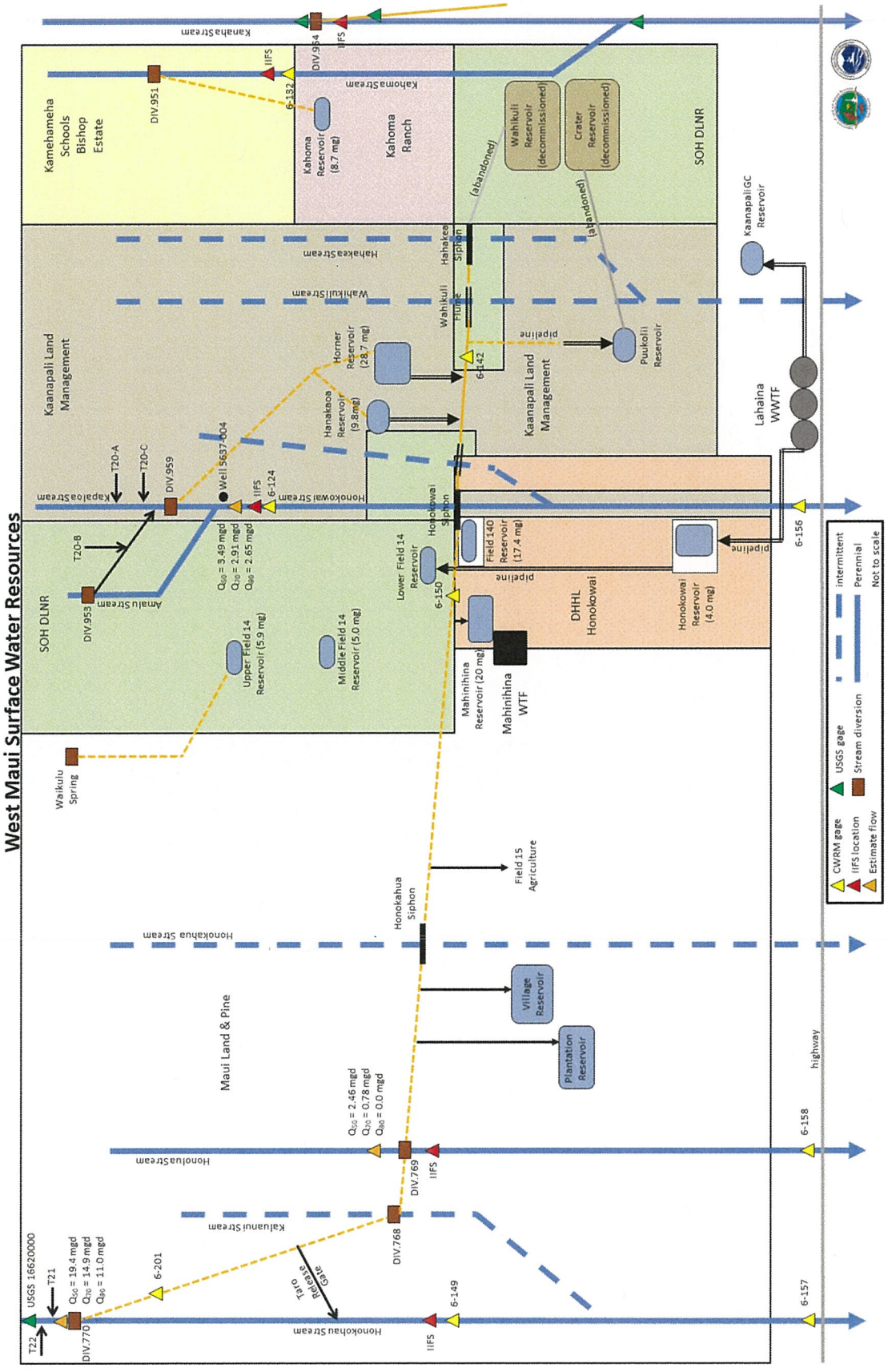


Figure 8: Simplified schematic of streams, ditches, pipelines, reservoirs, and tunnels in West Maui from Kahoma to Honokōhau.



FINDINGS OF FACT: HONOLUA HYDROLOGIC UNIT

1. The Honolua watershed is unique among the West Maui watersheds in that it is shorter in length, shallower in depth, and dominated by Honolua Volcanics and not Wailuku Volcanics, resulting in a lack of incised dike structures that would contribute to surface flow.

2. The estimated low-flow duration values for Honolua Stream at Diversion 769 are a median (Q_{50}) flow of 2.46 mgd and a Q_{90} flow of 0.00 mgd.

3. Honolua Stream is expected to flow mauka to makai naturally only 80% of the time.

4. Honolua Stream supports a high density of native aquatic species upstream and immediately downstream of the Diversion 769

5. Since 2006, Diversion 769 on Honolua Stream has been inactive and was destroyed by hurricanes Olivia and Lane.

FINDINGS OF FACT: HONOKŌHAU HYDROLOGIC UNIT

1. The estimated flow duration values for Honokōhau Stream at USGS 16620000 are a median (Q_{50}) flow of 16.0 mgd, a Q_{90} flow of 8.7 mgd, a BFQ_{50} of 11.2 mgd, and 64% of BFQ_{50} equal to 7.4 mgd.

2. Honokōhau Stream gains surface flow from two development tunnels and a spring between USGS 16620000 at an elevation of 900 feet and the Diversion 770 at an elevation of 825 feet; the magnitude of gain has a Q_{50} of 3.4 mgd and a Q_{90} of 2.3 mgd.

3. The total water available at Aotaki Weir at an elevation of 825 feet is estimated to have a Q_{50} flow of 19.4 mgd and a Q_{90} flow of 11.0 mgd.

4. Honokohau Stream gains approximately 1.4 mgd between Aotaki Weir at an elevation of 825 feet and McDonald's Dam at an elevation of 340 feet.

5. Diversion 770 at Aotaki Weir (Honokohau Ditch Intake #1) was designed to remove 100% of the flow in Honokōhau Stream at the 825ft elevation up to the Q_{10} magnitude flow (~55 mgd).

6. Honokōhau Stream is expected to flow mauka to makai naturally 100% of the time.

7. The Hawaii Stream Assessment rated Honokōhau Stream as having substantial recreational value, outstanding cultural resources, and outstanding habitat for freshwater biota.

8. There are at least 50 acres of potential *lo'i kalo* in Honokōhau Valley with approximately 3.5 acres in use as well as many other domestic needs that are met with surface water withdrawn from Honokōhau Stream.

9. The base flow of the stream is adequate to maintain a healthy aquatic ecosystem, aesthetic values, water quality, recreational uses, and traditional and customary practices.

10. Public trust uses of non-instream water include the Department of Hawaiian Home Lands (2.1 mgd) to meet the non-potable needs of future homestead lots and the Maui DWS (2.5 mgd) to meet the domestic water demands in the Napili-Lahaina service area.

11. Hurricanes Olivia and Lane generated flash flooding conditions which damaged the intake at Diversion 770, making the intake inoperable.

12. Diversion 770 currently removes water in excess of existing non-instream uses during moderate to high flow conditions.

13. Diversion 768 on Kaluanui Stream has been inactive for many years and historically contributed very little to the flow in Honokōhau Ditch.

14. Water in excess of 4.0 mgd that is removed from Honokōhau Stream, but not used, is wasted.

RECOMMENDATIONS

HONOLUA HYDROLOGIC UNIT

Honolua Stream

PROPOSED ACTION: INTERIM IFS

- Staff recommends full restoration be established for Honolua Stream below the Honokōhau Ditch diversion to maintain the habitat immediately downstream of the diversion.

IMPLEMENTATION

- There is no longer a functional diversion at Honokōhau Ditch from Honolua Stream, so the interim IFS will take effect immediately.
- Within 120 days of Commission action, MLP will submit a stream diversion works permit to formally abandon the diversion.

MONITORING

- Staff shall continue to monitor streamflow by maintaining a stream gaging station on Honolua Stream or coordinating with USGS as needed.

HONOKŌHAU HYDROLOGIC UNIT

Kaluanui Stream

PROPOSED ACTION: INTERIM IFS

- Staff recommends full restoration be established for Kaluanui Stream below the Honokōhau Ditch diversion.

IMPLEMENTATION

- Within 120 days of Commission action, MLP will submit a stream diversion works permit to formally abandon the diversion.

Honokōhau Stream

PROPOSED ACTION: INTERIM IFS

- To protect instream uses and non-instream public trust uses, staff recommends that an interim IFS be established in two phases for Honokōhau Stream:

Phase One

The interim IFS on Honokōhau Stream at McDonald's Dam (at the 340 foot elevation), shall be a flow of 8.6 mgd. The interim IFS represents the restoration of 64% of median base flow (BFQ_{50}) as estimated at USGS 16620000 (7.4 mgd), plus the additional 2.3 mgd of groundwater gains between USGS 16620000 and Aotaki Weir and 1.4 mgd of groundwater gains between Aotaki Weir and McDonald's Dam minus 2.5 mgd for the Maui DWS. The interim IFS is expected to be in excess of the water needs to support the existing 3.5 acres of *lo'i* as well as future acreage while protecting aquatic biota, recreation, and domestic uses at all elevations, and ensuring sufficient water to meet traditional and customary practices 100% of the time in Honokōhau Valley. MLP is required to meet the interim IFS 100% of the time. There should also be adequate ditch flow to meet Maui DWS needs of 2.5 mgd at the Māhinahina WTF 100% of the time. It is understood that during extreme drought ($< Q_{90}$; < 11.0 mgd at Aotaki Weir), 100% of the off-stream needs of non-public trust uses may not be met.

Phase Two

The interim IFS on Honokōhau Stream at McDonald's Dam (at the 340 foot elevation), shall be a variable interim IFS. The interim IFS will be the restoration of 50% of total flow at USGS 16620000 plus 2.4 mgd in groundwater gained between USGS 16620000 and McDonald's Dam. The 2.4 mgd is 50% of the estimated 4.8 mgd in total groundwater gain between USGS 16620000 and McDonald's Dam. The interim IFS is expected to support all instream values and Honokōhau Valley domestic uses while providing for non-instream public trust uses (Domestic and DHHL). MLP is required to meet the interim IFS 100% of the time. There should also be adequate ditch flow to meet Maui DWS needs of 2.5 mgd at the Māhinahina WTF 100% of the time. With 2.1 mgd of non-potable agricultural water for DHHL, Maui DEM can blend 2.1 mgd of R1 water from the Lahaina WWTF at 50:50 to make available 4.2 mgd of non-potable water to meet the agricultural needs of DHHL and other agricultural uses in the Lahaina Region. It is understood that during extreme drought ($< Q_{90}$; < 11.0 mgd at Aotaki Weir), 100% of the off-stream needs of non-public trust uses may not be met.

PROPOSED ACTION: SYSTEM MODIFICATIONS

- Due to the deteriorated state of the Honokōhau Ditch intake at Aotaki Weir on Honokōhau Stream (Diversion 770) and associated infrastructure, the Commission is requiring that MLP:

1. Replace the existing damaged intake with one that can be remotely operated; and

2. Provide real-time metering of each distribution point from the Honokōhau ditch and provide the real-time data to CWRM.

IMPLEMENTATION

- Phase One Interim IFS will be implemented within 30 days of Commission action.
- Within 180 days of Commission action, MLP will submit engineering plans and a stream diversion works permit (SDWP) to upgrade Diversion 770 on Honokōhau Stream to provide for remote operation of the diverted flow.
- Within 120 days of SDWP approval, MLP will commence construction of approved upgrades to Diversion 770.
- Phase Two will be implemented within three years of Commission action or following completion of upgrades to Diversion 770, whatever is earlier; with the exception that when DHHL needs non-potable water, MLP will provide up to 2.1 mgd. The 2.1 mgd of water for DHHL will remain in the stream during Phase Two until such time as DHHL has a need for non-potable water.
- The variable interim IFS will have to be met by remotely adjusting the intake as needed to meet the interim IFS and public trust uses.
- Within 180 days of Commission action, MLP will submit a plan, in consultation with Maui DWS, that includes a timeline to replace Honokahua siphon.
- Within 180 days of Commission action, MLP will submit a plan to upgrade the monitoring of uses from Honokōhau Ditch.
- Staff shall seek to enforce the provisions of the State Water Code should any unauthorized, non-registered or non-permitted diversions be discovered in the course of its fieldwork.
- Staff recommends that all owners of unregistered diversion works contact staff to file the necessary applications to seek compliance with all permitting requirements set forth by the Code.

MONITORING

- While staff relied on USGS seepage run measurements to evaluate stream gains and losses within each stream channel, measurements were done during the 1995-1997 (Honokōhau) or 2011-2013 (Honolua) periods. Additional measurements at periodic intervals following restoration as recommended by the USGS will improve the evaluation of the hydrologic consequences of stream restoration.
- Continued funding to support real-time gaging of Honokōhau Stream and ditch system to monitor the availability of water for multiple public trust purposes.

ENFORCEMENT

- Pursuant to HRS § 174C-15, the Commission recommends that a violation of the interim IFS be defined as when the mean daily flow measured or monitored in Honokōhau Stream at McDonald's Dam (at an elevation of 340 feet) does not meet the interim IFS for three or more consecutive days or four days out of seven in any consecutive period. Real-time interim IFS monitoring and mean daily flow calculations will be provided by the Commission through a publicly available cloud-based database. Real-time flow in Honokōhau Ditch at Adit 6 will also be provided by the Commission through this database.

EVALUATION

- Within five years from the date of Commission action, staff shall report to the Commission on the progress of implementing the interim IFS and the impacts of the interim IFS upon instream and non-instream uses.
- Based on existing hydrological data, current uses, proposed interim IFS values, and future public trust uses, estimates of water availability to meet non-instream, non-public trust uses are summarized for various flow values in Table 8.
- Staff shall assess the implementation of these strategies on an as-needed basis, as may be necessary upon consultation with the affected parties.

Table 8. Predicted mean daily flow (mdf) and low-flow duration exceedance values (in million gallons per day, mgd) for flow above Diversion 770 at Aotaki Weir and available water for non-instream uses from Honokōhau Stream in Phase One and Phase Two of the proposed interim IFS values. Note: some discrepancy due to rounding

Phase One	**Water Use**	**mdf**	**Q_{50}**	**Q_{70}**	**Q_{90}**
flow at USGS 1662000	instream	22.6	16.0	12.1	8.7
groundwater gains	instream	3.4	3.4	2.8	2.3
available above DIV 770	instream	26.0	19.4	14.9	11.0
groundwater gains	instream	1.4	1.4	1.4	1.4
interim IFS at McDonald's Dam	instream	**8.6**	**8.6**	**8.6**	**8.6**
amount available off stream	non-instream	18.8	12.2	7.7	3.8
Uses met					
Maui DWS domestic water supply		2.5	2.5	2.5	2.5
DHHL agriculture water demand		0.0	0.0	0.0	0.0
MLP non-instream uses		2.1	2.1	2.1	2.1
total off-stream demand:		4.6	4.6	4.6	4.6
total off-stream demand met:		4.6	4.6	4.6	3.8
unmet demand:		0.0	0.0	0.0	0.8
Phase Two		**mdf**	**Q_{50}**	**Q_{70}**	**Q_{90}**
flow at USGS 1662000	instream	22.6	16.0	12.1	8.7
groundwater gains	instream	3.4	3.4	2.8	2.3
available above DIV 770	instream	26.0	19.4	14.9	11.0
groundwater gains	instream	1.4	1.4	1.4	1.4
interim IFS at McDonald's Dam	instream	**13.7**	**10.4**	**8.5**	**6.8**
amount available off stream	non-instream	16.0	12.0	9.1	6.5
Uses met					
Maui DWS domestic water supply		2.5	2.5	2.5	2.5
DHHL agriculture water demand		2.1	2.1	2.1	2.1
MLP non-instream uses		5.6	5.6	5.6	5.6
total off-stream demand:		10.2	10.2	10.2	10.2
total off-stream demand met:		10.2	10.2	7.9	5.7
unmet demand:		0.0	0.0	2.4	4.6

[1]assumes DDHL demand only during Phase Two

FORMAL COMPLAINT

- The interim IFS proposed will protect instream public trust uses including water in its natural state, domestic uses, and water for traditional and customary practices in the Honokōhau and Honolua hydrologic units while providing for non-instream public trust uses of water. These interim IFS also provide for off-stream uses of water that are reasonable and beneficial uses in the public interest, including making water available for agriculture and providing a source of water to be blended with the available R1 recycled water, therefore helping to protect nearshore coral reef ecosystems.
- The actions proposed in this submittal will improve instream flows, upgrade the infrastructure to improve the management of the irrigation system and provide protections for public trust uses of water.
- Commission actions to address other portions of the complaint related to waste will be addressed by a future Commission action following additional research.

Respectfully submitted,

M. KALEO MANUEL
Deputy Director

Note: Exhibits 1 to 3 are available from the Commission website at https://dlnr.hawaii.gov/cwrm/surfacewater/ifs/westmaui3/

Exhibit 1	Instream Flow Standard Assessment Report for Honolua Hydrologic Unit 6013, PR-2019-02
Exhibit 2	Instream Flow Standard Assessment Report for Honokōhau Hydrologic Unit 6014, PR-2019-03
Exhibit 3	Compilation of Public Review Comments, PR-2019-04
Exhibit 4	CDR.5095.6 Complaint/Dispute Resolution Filing Form, Ka Malu o Kahalawai & West Maui Preservation Association, 4/23/2019
Exhibit 5	CDR.5095.6 Complaint/Dispute Resolution Filing Form, Maui Land and Pineapple Company, Inc, 10/15/2019

APPROVED FOR SUBMITTAL:

SUZANNE CASE
Chairperson

State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

COMPLAINT / DISPUTE RESOLUTION FILING FORM

Instructions: Please print in ink or type and send completed form with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. For further information and updates to this application form, visit http://dlnr.hawaii.gov/cwrm/..

For Official Use Only:
RECEIVED
2019 APR 23 PM 12:14
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII
Complaint File No: C

1. Name: Ka Malu o Kahalawai & West Maui Preservation Association Date: 4/23/2019

Address: c/o Law Office of Lance D. Collins
P.O. Box 179336, Honolulu, HI 96817

Daytime Phone No.: (808) 243-9292 Fax No.

2. Location of the violation or water problem: Water diverted from Honokōhau stream overflows the Honokōhau ditch in areas extending south to Wahikuli and makai to Hanakao'o.

Tax Map Key: (2) 4-5-021:005, 4-4-002:012; 4-4-002:013; 4-4-002:014; 4-4-005:035; 4-6-018:011, 4-4-004:013; and others.

Landowner's Name: Dep't of Land and Natural Resources, Maui Land & Pine, Kaanapali Land Mgmt Corp. (lessee)

Landowner's Address: DLNR: 1151 Punchbowl St., Honolulu, HI 96813
MLP: 200 Village Rd, Lahaina, HI 96761

Landowner's Phone No.: DLNR: (808) 587-0400
MLP: (808) 665-5480

3. The party I have a complaint about or dispute with is: (if more than one party, please attach additional sheets)

Name: Maui Land & Pine Company, Inc. (MLP); Kapalua Water Company (KWC); and Kaanapali Land Mgmt Corp. (KLMC)

Address: KLMC: (Gary Nickele), 275 Lahainaluna Road, Lahaina Hawai'i 96761
KWC: (Tim Esaki, CFO) 200 Village Rd, Lahaina, HI 96761/ tesaki@kapalua.com
MLP: (Warren Haruki, Tim Esaki, P. Subrata) 200 Village Rd, Lahaina, HI 96761

Phone No.: KLMC: (808) 661-9652
KWC: (808) 681-9311
MLP (808) 665-5480

If the party is not the landowner listed in Section 2 above, please describe the party's relationship to the TMK parcel described in Section 2.

The intake from Honokōhau stream into Honokōhau ditch is located on MLP lands. Kapalua Water Company (KWC) is a wholly owned subsidiary of MLP. Upon information and belief, Aqua Engineers, Inc. operates the KWC and took over supervisory responsibility for Honokōhau and Honolua ditch management. MLP is diverting water from Honokōhau stream and into the Honolua and Honokōhau ditcesh, which runs across MLP lands and lands held by other entities, including KLMC.
KLMC holds a revocable permit from DLNR to use lands underlying the Honokōhau ditch at several locations of the water wasting practices, running south towards Lahaina. KLMC has sought to obtain a long term lease for these lands.

CDR-FILE Form (02/28/2007)

FILE ID: CDR.5095.6

EXHIBIT 4

4. Describe the complaint or reason for the dispute:
(Attach a sketch or photograph if that will help explain the problem.)

See Addendum to Complaint/Dispute Resolution Form, Response to Question No. 4.

5. Describe how your water usage or water rights are specifically affected by the other party, if at all:

Ka Malu o Kahalawai members include kalo farmers who farm on lands adjacent to Honokōhau stream and who require the water that is otherwise diverted into the Honokōhau ditch. For many years, these members have sought restoration of Honokōhau stream water to support traditional lo'i kalo growing.

Members also include those who conduct traditional and customary practices of fishing, surfing, canoe paddling, and diving in nearshore areas where the wasted water meets the ocean. The wasted water is warmer and its periodic intrusion may interfere with reef and other nearshore ecosystems and water quality, both of which are necessary for cultural resources for members' traditional and customary practices and recreation.

West Maui Preservation Association also has members who conduct traditional and customary practices that depend on Honokōhau stream water and healthy nearshore coastal resources along West Maui's coasts.

6. Date the problem was first noticed: Several decades ago, with several large wasting events observed in late 2018.

7. If this complaint or dispute is related to a water source, was the water source previously declared with the Commission on Water Resource Management?

☒ Yes ☐ No ☐ Don't Know

If yes, what was the name and tax map key of the source?

Honokōhau ditch TMKs: (2) 4-4-002:012; (2) 4-4-002:013; (2) 4-4-002:014; (2) 4-4-005:035; (2) 4-5-021:005; (2) 4-6-018:011, and others.
MLP Honokōhau ditch intake: (2) 4-1-001:017
Honokōhau Taro Gate: (2) 4-1-001:009

8. Have you had any communication with the party/parties described in Section 3 above?

☒ Yes ☐ No

If yes, list the communications and dates: (Attach copies if written communications were made)

See Addendum to Complaint/Dispute Resolution Form, Response to Question No. 8.

9. Have you sought resolution of this matter with any other entity?
(e.g., government agency, judicial body, or private entity)

Yes, each of the communications listed under Response to Question No. 8 constituted attempts to have the water wasting stopped.

If so, with whom and what was the outcome?
(Please provide copies of any documentation of this process)

No responses have been forthcoming. Please see responses to Response Question No. 8.

10. Describe what you believe a successful and fair remedy might be:

Petitioners seek to prevent wastage by restoring to Honokōhau stream surface water in amounts equal to that wasted. Petitioners seek to require upgrades to MLP/KWC's diversion intake works from Honokōhau stream to Honokōhau/ Honolua ditch to better regulate the amounts removed from Honokōhau stream to avoid waste in areas including lands used by KLMC through which the Honokōhau ditch runs. Upgrades and better maintenance and regulation of the Taro Gate would also allow more water to be restored to Honokōhau stream, instead of contributing to wasting events in offstream areas, including agricultural fields further south towards Wahikuli. KLMC should be prevented from allowing ditch water to run into fields and roads adjoining the ditch. KLMC's wastage facilitates MLP/KWC's ability to ignore the need to upgrade its intake/ diversion works and better regulation and maintenance of the taro gate.

MLP/KWC's intake should be upgraded such that it can be closed during periods of high water flow. This may mean better monitoring so that the Aotaki gate can be closed during high flow (or during times that less water is needed in the Honokōhau ditch) and thereby result in that surface water remaining in the Honokōhau stream. Another solution might lie in investing in sealing the current diversion and installing a gate with remote control capacity (to avoid difficulties and inconvenience with accessing the intake). Petitioners note that Kamehameha Schools has installed a remote control valve to control gate above Kahoma stream that can be controlled via a computer.

I request that the Commission on Water Resource Management assist in resolving the matter described herein.

Signature

23 Apr 19

Date

Addendum to COMPLAINT / DISPUTE RESOLUTION FILING FORM

Response to Question No. 4: Describe the complaint or reason for the dispute.

Petitioners' reasons for the dispute.
Petitioners' members rely on Honokōhau stream water for lo'i kalo, other agriculture, and domestic purposes. Members have a long history of complaints against MLP's failure to properly regulate its diversion of Honokōhau stream waters into the Honolua/ Honokōhau ditch and, conversely, to return water to the stream via the Taro Gate, which is downstream from the Honokōhau ditch intake. Members have concerns about ecological impacts on cultural resources consequent to periodic flows of ditch water running through Hahakea/ Wahikuli gulches to the coast.

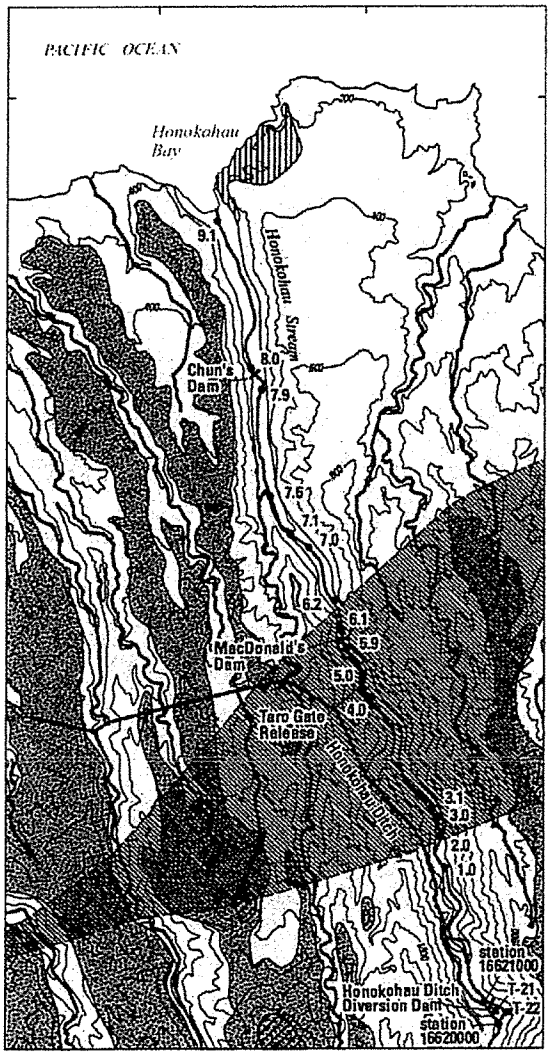


Fig. 1. Streamflow measurement sites and location of intake and Taro Gate. From Richard A. Fontaine, U.S. Geological Survey, "Availability and Distribution of Base Flow of Honokohau Stream, Island of Maui, Hawaii," Water-Resources Investigations Rpt. No. 03-4060, at 9 (Honolulu, 2003).

1

Wasting events

Diverted water is warmed while traveling through the Honokōhau ditch. For at least several decades, Petitioners observed periodic flows of warmed ditch water entering Hanakaoʻo and nearby coastal waters from Honokōwai stream, Hahakea gulch, and sometimes Honolua stream. The warmed water flows are observed several times a year and have been going on for decades.

In September 2018, Hurricane Olivia caused significant flooding and damage in Honokōhau valley. Thereafter, on October 5, 2018, Petitioners hiked to the intake and observed a new "stream" running around the diversion instead of remaining within Honokōhau stream. The Taro Gate was closed by excessive debris and therefore the extra water resulting from the storm went to the Honokōhau ditch, where it was spilled into fields and wasted.

On November 24, 2018, Wood emailed Roy Silva of Aqua Engineers, Inc., which is believed to be a managing entity for Honokōhau ditch, to make these ditch managers aware that Honokōhau stream was diminished while a new stream running around the Honokōhau diversion works had appeared.

On December 4, 2018, Petitioners observed water from Honokōhau ditch freely exiting the Honokōhau ditch through a gate and spilling into the fields and entering the Wahikuli Gulch at the northern end of the Wahikuli Flume. From there, the water spilled into agricultural fields and over cane haul roads into Wahikuli gulch. Also around this time, Petitioners observed water constantly flowing from Hahakea gulch (into which merges Wahikuli stream) into the ocean by Hanakaoʻo (Canoes beach). West Maui skies were clear and sunny when these wasted water flows were observed. *See* Fig. 2-6.

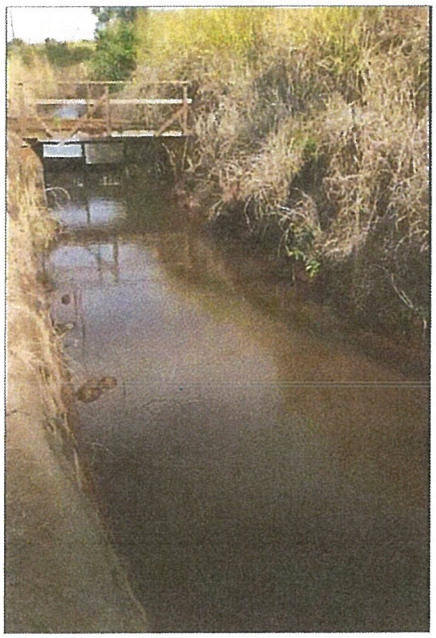


Fig. 2. Honokōhau ditch portion adjacent to Wahikuli flume. Screenshot of video taken by Wili Wood on Dec. 4, 2018.

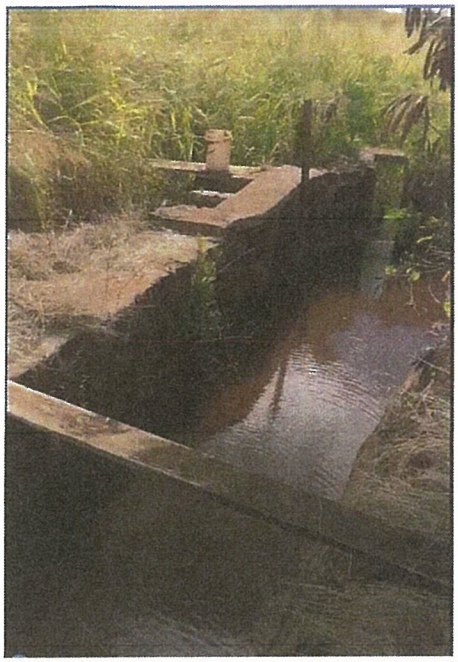


Fig. 3 (left) Water leaving Honokōhau ditch via Wahikuli flume. Screenshot of video taken by Wili Wood on Dec. 4, 2018.

Fig. 4 (right) Water from Wahikuli flume crossing cane haul road. Screenshot of video taken by Wili Wood on Dec. 4, 2018.

Fig. 5 (left) Water from fields makai of cane haul road flowing into Wahikuli gulch. Screenshot of video taken by Wili Wood on Dec. 4, 2018.

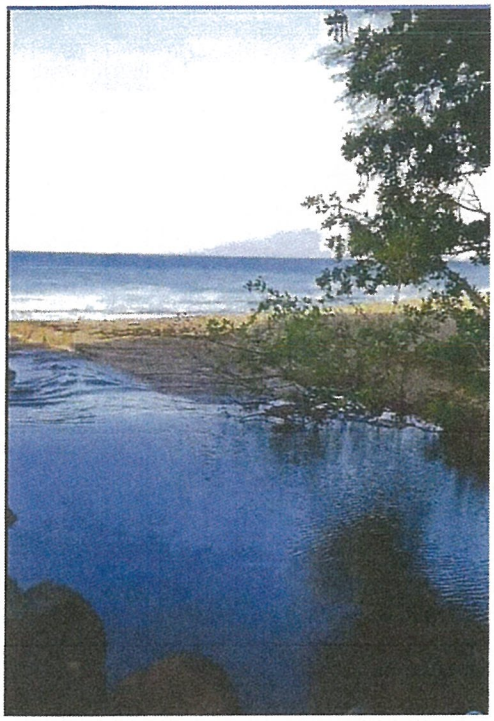


Fig. 6. Honokōhau stream water flowing from Hahakea/ Wahikuli gulch through Hanakao'o beach. Screenshot of video taken by Kai Keahi (approx. Dec. 9, 2018).

On or about December 9, 2018, Petitioner-member Kai Keahi observed that Honokōhau ditch water was flowing out to the ocean at Hanakao'o, At that time, Honokōhau stream was low - about ten inches to a foot lower than usual, and the Taro gate (installed for Honokōhau stream taro growers) was closed.

Also on December 9, 2018, Keahi called Roy Silva, who he believed to be working for MLP, to instruct him to restore water to Honokōhau stream instead of dumping into Wahikuli/ Hahakea gulches. Keahi was informed that water was being "turned off" at Mahinahina and Honokōwai, where several reservoirs exist, and pushed south towards Lahaina. Honokōhau ditch water was being dumped into fields near Wahikuli and Hahakea gulch and flowing to the ocean.

Response to Question No. 8: Have you had any communication with the party/parties described in Section 3 above?

Around ten years ago, Petitioner-member Kai Keahi called Jeffery Pearson of MLP. Keahi, Pearson, and Kimo Kapalehua discussed the issue of Honokōhau stream water being wasted from the Honokōhau ditch. MLP did not provide answers or plans for remediation.

In September 2018, Hurricane Olivia caused significant flooding and damage in Honokōhau valley. Prior to this time, the Honokōhau ditch system was reportedly managed by Steven Nikaido of Hoa ʻĀina Farm Services, LLC. However, Nikaido passed away roughly one week prior to Hurricane Olivia events and Hoa ʻĀina Farm Services has apparently transferred management of the ditch to Aqua Engineers.

On October 5, 2018, Petitioners noticed water wasting from Honokōhau stream. Petitioner-member Wili Wood contacted Paul Subrata from Kapalua Water Co. (which obtains water via Honokōhau tunnel) and Pōmaikaʻi Crozier, manager of the Puʻu Kukui Watershed partnership. Both referred Petitioners to Roy Silva of Aqua Engineers, Inc., who denied a contractual responsibility to "take care of the ditch," but also apparently coordinates use of the Honokōhau ditch waters. Silva stated he would open the taro gate to alleviate the low flow in Honokōhau stream by January 15, 2019. *See* Exh. 01 (Emails between Wili Wood, Petitioner-member, and Paulus Subrata, MLP (Oct. 2018)).

On November 24, 2018, Wood emailed Silva to make him aware that Honokōhau stream was diminished while a new stream running around the Honokōhau diversion works had formed. *See* Exh. 02 (Emails between Wili Wood, Petitioner-member, and Roy Silva, Aqua Engineers (Nov. 24, 2018 to Dec. 18, 2018).

On December 9, 2018, Petitioner Keahi called Roy Silva to complain about water dumping from Honokōhau ditch into Hahakea gulch.

On January 15, 2019, Wood received a phone call from Silva, who stated that the taro gate would not be opened until the end of February after the entire ditch system was cleaned from the intake in Honokōhau stream to the powerhouse siphon in Honokahua. That was the last Petitioners heard from Silva and no restoration of stream water has occurred.

Petitioners had also met and talked to Ayron Strauch of CWRM to discuss KLMC's proposal to lease lands underlying Honokōhau ditch and informed him of the location of water spillage in Kāʻanapali areas. After meeting with Strauch, Wood researched the proposed lease for Honokōhau water and identified the area where water was being wasted from Honokōhau ditch on a map. *See* Exh. 02 (map with water wasting location highlighted in red). Wood forwarded the highlighted map and other KLMC documents to Kapule Eubank, who has a home in Honokōhau valley. Strauch was installing a stream flow meter next to Eubank's home.

On or about February 10, 2019, Eubank shared Wood's map and papers with Strauch. Strauch confirmed with Eubank that water was being wasted from the ditch and shared Petitioners' concerns about long-term leasing to KLMC without first modifying the Honokōhau ditch system.

Strauch, however, noted that while he could make recommendations, he had restricted enforcement powers concerning proper water usage.

To the knowledge of petitioners, no further actions have been taken to remediate water wasting from the Honokōhau ditch or to upgrade diversion works at Honokōhau stream.

From: Paul Subrata <psubrata@mlpmaui.com>
Date: October 16, 2018 at 9:11:14 AM HST
To: Roy Silva <rsilva@aquaengineers.com>, "woodwili100@gmail.com" <woodwili100@gmail.com>
Cc: Pōmaika'i Kaniaupio-Crozier <pkaniaupio-crozier@kapalua.com>
Subject: Fwd: Honokohau

Hi Wili, thank you for talking to me this morning. Cc'd on this email is Roy Silva whose team been working on the ditch as of late. His number is (808) 681-9311.

Hi Roy, I spoke to Wili Wood earlier and he was Stephen Nikaido eyes and ears up in Honokohau and have worked closely in the past. Wili and the community does farming in the area and would like to get updates on the situation at the intake. I'm providing you his contact information so we can keep in constant communication with him. His number is 808-870-0552 or 808-669-3038.

Thanks,

Paul
808-757-2666
Sent from my iPhone

Begin forwarded message:

From: Wili Wood <woodwili100@gmail.com>
Date: October 15, 2018 at 8:42:02 PM HST
To: psubrata@mlpmaui.com
Cc: Elle Cochran <ellekcochran@gmail.com>, Kekai Keahi <kekaikeahi@gmail.com>, Pomaikai Kaniaupio-Crozier <maunahalawai2@gmail.com>
Subject: Re: Honokohau

Aloha Paul,
Please see the message below I had forwarded to Pōmaika'i Crozier. He has put me in contact with you. Please let me know when you are able to meet. I look forward to your reply.

Mahalo Nui,
Wili Wood

On Thu, Oct 11, 2018 at 10:33 AM Pōmaika'i Kaniaupio-Crozier <pkaniaupio-crozier@kapalua.com> wrote:
Aloha mai e Council member Elle, Wili & Kekai
Mahalo for your email and raising your concerns, my role of taking care of Pu'u Kukui Watershed Preserve is to protect the native biodiversity up ma uka and keep that

EXHIBIT 01

natural native sponge intact which benefits water recharge and retention and ecosystem function as whole healthy. However, I have nothing to do with water transmission or ditch related issues. I am putting you in contact via this email with Paul Subrata who is in charge of water for ML&P. Aloha

From: ellekcochran@gmail.com <ellekcochran@gmail.com>
Sent: Tuesday, October 9, 2018 10:02 PM
To: Wili Wood <woodwili100@gmail.com>
Cc: Pōmaika'i Kaniaupio-Crozier <pkaniaupio-crozier@kapalua.com>; kekaikeahi@gmail.com
Subject: Re: Honokohau

Per Jeff Pearson Chair for CWRM
MLP would need to get permit to do such work. Cwrm would allow it then.

Sent from my iPhone

On Oct 9, 2018, at 5:10 PM, Wili Wood <woodwili100@gmail.com> wrote:

Aloha Pomaika'i

As you are probably aware, the Honokohau water diversion has been compromised. A few others and I personally walked the stream on Friday October 5th to investigate debris in the upper valley and made it to the diversion. We found that the storm water from Olivia has cut a new stream right around the Honokohau diversion. Please see attached video. It is to the best of my knowledge that this can not be fixed by hand tools. Being that we are downstream users of this water source, we request to be notified of the plans in moving forward. Can you please put us in contact with the appropriate parties?

Mahalo nui for your time,
Wili Wood

Sent from my iPhone

Begin forwarded message:

EXHIBIT 01

From: Wili Wood <woodwili100@gmail.com>
Date: October 8, 2018 at 9:32:34 PM HST
To: Wili Wood <woodwili100@gmail.com>

<IMG_2330.MOV>

Sent from my iPhone

EXHIBIT 01

From: Roy Silva <rsilva@aquaengineers.com>
Date: December 18, 2018 at 6:53:05 AM HST
To: Wili Wood <woodwili100@gmail.com>
Cc: Pōmaika'i Kaniaupio-Crozier <pkaniaupio-crozier@kapalua.com>, "ayron.m.strauch@hawaii.gov" <ayron.m.strauch@hawaii.gov>, Dean U <dean.d.uyeno@hawaii.gov>, Kekai Keahi <kekaikeahi@gmail.com>, Paul Subrata <psubrata@mlpmaui.com>
Subject: Re: Honokohau Stream Flow Issues Nov 2018

Morning,

What about tomorrow morning at 10:00 at our KWC office ?

Sent from my iPhone

On Dec 17, 2018, at 7:50 PM, Wili Wood <woodwili100@gmail.com> wrote:

Aloha Roy,
When is best for you? I can make myself available as needed. I look forward to meeting with you. Mahalo

Wili Wood

On Dec 17, 2018, at 1:50 PM, Roy Silva <rsilva@aquaengineers.com> wrote:

Aloha Wili,

When can we meet to discuss Honokohau ditch ?

Thanks

"The less we talk the more we hear"

Roy J Silva
Island Operations Manager
Aqua Engineers, Inc.
200 Village Rd, Lahaina HI 96761

Mobile: 808 - 681-9311
Email: rsilva@aquaengineers.com
<image001.png>

EXHIBIT 02

From: Pōmaika'i Kaniaupio-Crozier [mailto:pkaniaupio-crozier@kapalua.com]
Sent: Monday, December 17, 2018 11:14 AM
To: Wili Wood <woodwili100@gmail.com>
Cc: ayron.m.strauch@hawaii.gov; Dean U <dean.d.uyeno@hawaii.gov>; Kekai Keahi <kekaikeahi@gmail.com>; Roy Silva <rsilva@aquaengineers.com>; Paul Subrata <psubrata@mlpmaui.com>
Subject: Re: Honokohau Stream Flow Issues Nov 2018

Aloha e Wili
Mahalo for your hard work, observations and for reaching out. As mentioned in previous emails Paul Subrata of ML&P is the person in charge and has put Roy Silva of Aqua Engineering at the helm. Therefore, I am including them in this correspondence.
There have been on going efforts to mitigate the unprecedented damage in the aftermath from Tropical Storm Olivia and work is ongoing as you were present with CWRM in the reconnaissance.

After we spoke on Thursday, I flew into Honokohau with a crew to clear debris up ma uka and attempted to access taro gate but was unsuccessful due to time available and landslides along ditch trail. Please reach out to Paul and Roy to discuss or let me know if you need my assistance to set up a meeting.

The health of entire watersheds are a priority and mahalo for your support and all that you do to keep Honokohau ahupua'a intact. Aloha

---

From: Wili Wood <woodwili100@gmail.com>
Sent: Saturday, December 15, 2018 8:36 PM
To: Pōmaika'i Kaniaupio-Crozier
Cc: ayron.m.strauch@hawaii.gov; Dean U; Kekai Keahi
Subject: Fwd: Honokohau Stream Flow Issues Nov 2018

Aloha Pomaika'i
I want to thank you for answering my phone call this past Thursday to speak about the low flow of water we have been seeing in Honokohau stream since around mid November. We believe this is due to the taro gate being closed with debris. We would like to open a dialogue with the operator of this ditch system but are having a hard time finding the responsible party. The lack of adequate flow brings concerns regarding the health of the aquatic life and the maintaining of traditional and customary practices of downstream users. Mahalo for your time and I look forward to your reply.

---------- Forwarded message ---------
From: **Wili Wood** <woodwili100@gmail.com>

EXHIBIT 02

Date: Wed, Nov 28, 2018 at 9:24 PM
Subject: Fwd: Honokohau Stream Flow Issues Nov 2018
To: <psubrata@mlpmaui.com>
Cc: Kekai Keahi <kekaikeahi@gmail.com>, <pkaniaupio-crozier@kapalua.com>, <ayron.m.strauch@hawaii.gov>, Elle Cochran <ellekcochran@gmail.com>, <rsilva@aquaengineers.com>, Lance D. Collins, Ph.D <lawyer@maui.net>, <dean.d.uyeno@hawaii.gov>, <rebecca.r.alakai@hawaii.gov>, <tamara@tamarapaltin.com>, Skippy Hau <skippy.hau@hawaii.gov>, <kainoawilson@yahoo.com>

Aloha Paul,

I reached out to Roy Silva as you recommended. Please see email below. I also reached out to CWRM and we were told that currently MLP does not have an operator for the Honokohau diversion. The stream has been very low for two weeks and this is very concerning considering that a big majority of the stream flow is being dumped into the dry gulch of Mahinahina. I am requesting a meeting to discuss solutions to this issue moving forward. I look forward to your reply.

---------- Forwarded message ---------
From: **Wili Wood** <woodwili100@gmail.com>
Date: Sat, Nov 24, 2018 at 9:19 PM
Subject: Honokohau Stream Flow Issues Nov 2018
To: <rsilva@aquaengineers.com>

Aloha Roy,
As of last week, the water flow in the Honokohau stream has been diminished due to the new stream running around the Honokohau diversion.
Naturally this stream changes with each high water and there is now less flow being directed around the diversion and feeding the downstream users.

To correct this issue, we are asking that you implement Taro gate once again. If too much water is leaving the Honokohau water shed it can be regulated at Taro gate to make sure Honokohau stream users are not left with inadequate flow. This is also a good solution because when too much water leaves the valley, it simply overflows into the concrete channelized stream of Honokowai, preventing much-needed aquifer recharge.

Mahalo for taking the time to listen to our concerns and I look forward to your reply.

Sent from my iPhone

EXHIBIT 02

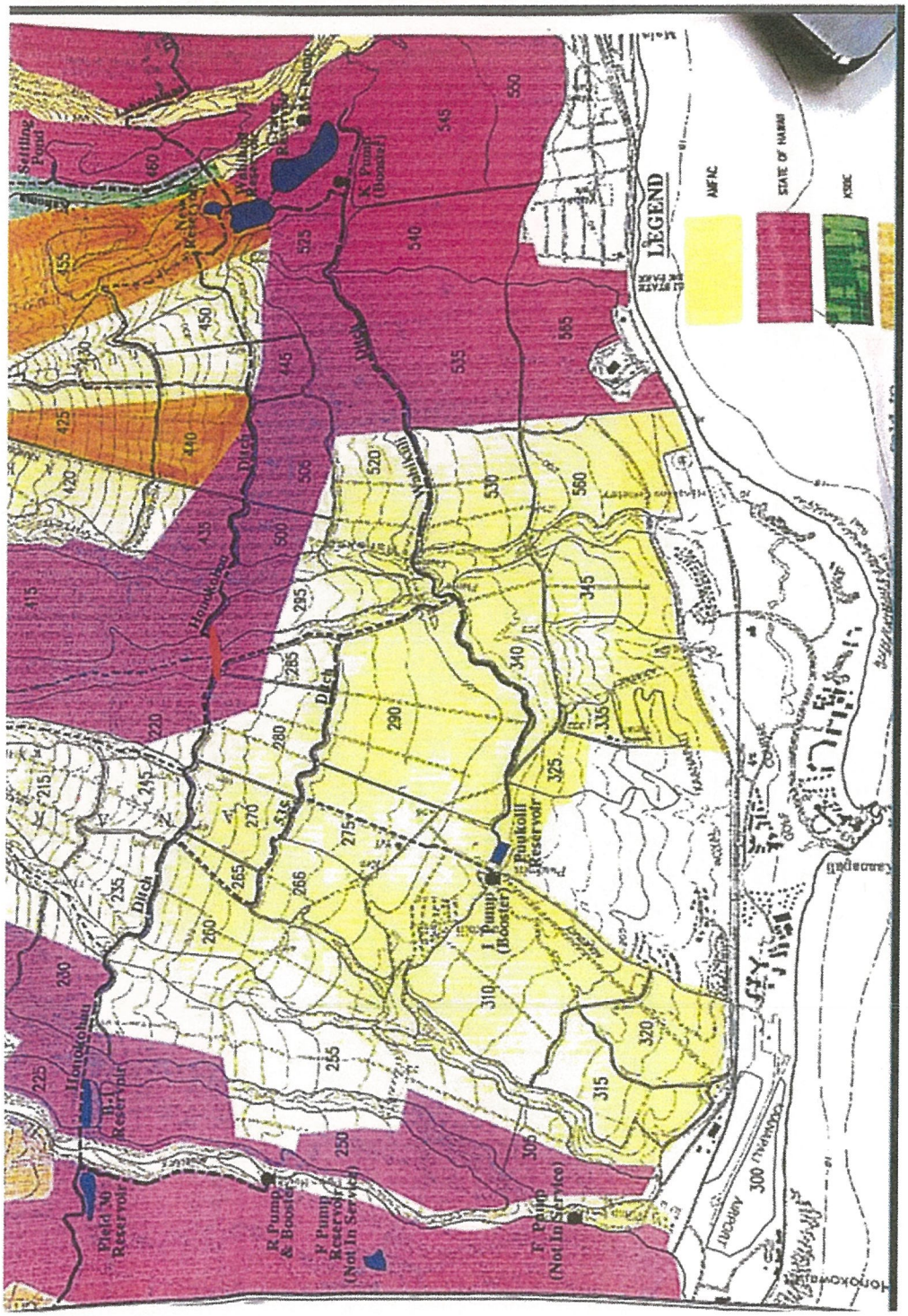

LEGEND
AMFNC
STATE OF HAWAII
KSDC
Settling Pond
K Pump (Booster)
Reservoir
Ditch
Honokohau
Pinkoali Reservoir
J Pump (Booster)
Field 30 Reservoir
R Pump & Booster
F Pump Reservoir (Not In Service)
F Pump (Not In Service)
Honokowai

EXHIBIT 03

State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

COMPLAINT / DISPUTE RESOLUTION RESPONSE FORM

Instructions: Please print in ink or type and send completed form with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. For further information and updates to this application form, visit http://dlnr.hawaii.gov/cwrm/.

For Official Use Only:

Complaint File No: C

Please answer any applicable questions to the best of your knowledge. This is a standard form and some questions may not pertain to your specific situation.

1. Name: Tim T. Esaki Date: 10/17/19

   Address: 200 Village Road
   Lahaina, HI 96761

   Daytime Phone No.: (808) 665-5480 Fax No. (808) 665-0641

2. Were you aware of the problem prior to this complaint? ☐ Yes ☑ No

3 Tax Map Key:
If you are not the owner, please provide the landowner's information below.

Landowner's Name: Maui Land & Pineapple Company, Inc.

Landowner's Address: 200 Village Road, Lahaina, HI 96761

Landowner's Phone No.: (808) 665-5480

4. If this complaint or dispute is related to a water source on your property, was the water source previously declared with the Commission on Water Resource Management?

☑ Yes ☐ No ☐ Don't know

If yes, what is the name and tax map key of the source?

Honokohau Stream

TMK: 4-1-001-017

5. Attach a sketch or photograph that will give additional details of the situation described by the complainant.

6. Have you had any communication with the complainant(s)?

☐ Yes ☑ No

If yes, list the communications and dates: (Attach copies if written communications were made)

7. Do you know if resolution of this matter has been sought with any other entity? (e.g., government agency, judicial body, or private entity)

☐ Yes ☑ No ☐ Don't Know

If so, with whom and what was the outcome? Please provide copies of any documentation of this process.

8. Describe what you believe a successful and fair remedy might be:

MLP is in the process of repairing damage to intakes and the ditch from Hurricane Olivia in September 2018 and securing a maintenance contractor for the ditch.

I attest that the information given is accurate and complete, to the best of my knowledge.

Signature

10/17/19
Date

ORDINANCE NO. 5335

BILL NO. 14 (2022)

A BILL FOR AN ORDINANCE ADOPTING AN UPDATE TO THE WATER USE AND DEVELOPMENT PLAN FOR THE ISLAND OF MAUI

BE IT ORDAINED BY THE PEOPLE OF THE COUNTY OF MAUI:

SECTION 1. In accordance with Chapter 14.02, Maui County Code, the document entitled "Maui Island Water Use and Development Plan Draft", attached as Exhibit "A", is adopted as an update to the County of Maui's Water Use and Development Plan.

SECTION 2. This Ordinance takes effect on approval.

APPROVED AS TO FORM AND LEGALITY:

Stephanie Chen

STEPHANIE M. CHEN
Deputy Corporation Counsel
Department of the Corporation Counsel
County of Maui

2021-0010
2022-01-10 Ord Updating WUDP.docx

apt:misc:057abill01:kmat

EXHIBIT "F"

Honolua and Honokōhau Streams, Honokōhau Ditch

CWRM has not established IIFS for Honolua and Honokōhau streams. Following storm damage and a waste complaint filed on April 23, 2019 by Ka Malu O Kahalawai and West Maui Preservation Association against Maui Land and Pineapple company, CWRM staff determined 4.0 mgd of water removed from Honokōhau Stream was not used but wasted. Storm damage left the intake on Honolua stream inoperable, resulting in full natural mauka to makai flow. The Commission requested that modifications be made to the diversions prior to establishing IIFS.[8] In consistency with established IIFS for West and East Maui streams, *potential* IIFS could restore 64% of median baseflow, and ensure sufficient flow for off-stream, public trust needs most of the time. It is assumed that MDWS and DHHL needs will be satisfied during median flow conditions. R-1 reclaimed water should supplement non-potable demand for new development, including MDWS and DHHL. Non-public trust uses, including golf course and resort irrigation should plan for groundwater and alternative supply to substitute stream flow during drought conditions.

Honokowai Stream and Ditch

Surface water diverted from Honokowai Stream, and tributaries Kapaloa and Amalu Streams feed Honokowai Ditch. Median ditch flow in 1994 was 4.74 mgd. The ditch serves Kā`anapali Development Corporation coffee irrigation and landscaping of agricultural subdivisions. CWRM assessed irrigation demand for coffee to 4.04 mgd. It is assumed that future IIFS will restore a portion of streamflow, possibly 64% of median base flow. The supply strategy is groundwater from Honokowai aquifer and expansion of recycled R-1 water supply to supplement 4.04 mgd agricultural irrigation, and an estimated 0.7 mgd landscape irrigation demand.

The following tables are revised to reflect adopted IIFS, Instream Flow Standard Assessment Reports (IFSAR) and CWRM staff investigations.

Table 19-1 Recharge for Lahaina Aquifer Sector (mgd)

Recharge - Average Climate Conditions	Recharge - Drought Climate Conditions	% Decrease – Drought Climate Conditions
162	*126*	24%

Source: USGS, *Spatially Distributed Groundwater Recharge Estimated Using A Water-Budget Model For The Island of Maui, Hawai`i, 1978–2007.*

Figure 19-1 Average Mean Recharge under Average Climate and Drought Conditions by Aquifer System, % Recharge Reduction, and Sustainable Yield

[8] CWRM Staff Submittal 11/20/19

From: sanna K
To: Kariya-Ramos, Suzanne M
Subject: [EXTERNAL] Written Testimony, Honokōhau & Water Use in West Maui
Date: Monday, September 15, 2025 8:56:08 PM

From my 13 year old son, Moon Kaleialoha Kaʻuhane

Aloha mai kākou,
O Moon Kaleialoha Kaʻuhane koʻu inoa. I am thirteen years old and I am from Honokōhau Valley. Here in the valley it has been extremely dry for months and months and the river has been very low. Trees are constantly falling because they are so dry and the grass has been brown and crispy to the point where itʻs hard. My ʻohana lives deeper in the valley where there is not enough water in the river for us to have loʻi. This shows that we get only a fraction of water from our streams to farm kalo. We of all people should be at the top of the list when it comes to water.
On the drive out to the valley when youʻre passing Punalau and you look up mauka you can see that the hillside is all dry and withered up with no leaves. The golf courses should be using the recycled R1 water rather than taking from our streams. The kanaka from Lahaina and Honokōhau deserve to use the water for their cultural practices. The average swimming pool in Lahaina evaporates 500 gallons of water a day. My dad said that is enough to run a whole house. Kalo is more important than swimming pools because it can feed us. And now the golf course owners are suing Maui Land and Pine because they donʻt have enough water for their golf courses. We should be using that water to farm kalo. It is our right as Hawaiians to be able to farm kalo and no one should be able to take that away from us.

Mahalo