STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES | KA 'OIHANA KUMUWAIWAI 'ĀINA
COMMISSION ON WATER RESOURCE MANAGEMENT | KE KAHUWAI PONO
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STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

January 30, 2024
Honolulu, Hawai'i

Approval of Stream Diversion Works Permit Application (SDWP.5083.6) and Special Conditions, East Maui Irrigation Company, LLC, Abandonment of Stream Diversion Nos. 152, 247, 246, 191, 264, 240, 242, 217, 155, 225, 330, 331, 324, 322, 321, East Maui Irrigation System (Category 1), Honopou, Hanehoi (Puolua), Pi'ina'au (Palauhulu), and Wailuanui Streams, Maui, TMK: Various; and

Declare that Project is Exempt from Environmental Assessment Requirements under Hawaii Revised Statutes, Chapter 343, and Hawaii Administrative Rules Chapter 11-200.1

APPLICANT
Mark Vaught
East Maui Irrigation Co., Ltd. (EMI)
P.O. Box 791628
Pā'ia, HI 96779

LANDOWNER
East Maui Irrigation Co., Ltd.
(2) 2-8-008:007; 2-9-006:001; 2-9-006:002; 2-9-006:004; 2-9-008:012; 2-9-009:019; 2-9-014:009

State of Hawai'i
Department of Land and Natural Resources
(2) 1-1-002:002; 2-9-009:033; 2-9-014:001

SUMMARY OF REQUEST

Approve the Stream Diversion Works Permit (SDWP.5083.6) Application that proposes the modification and abandonment of Stream Diversion Nos. 152, 247, 246, 191, 264, 240, 242, 217, 155, 225, 330, 331, 324, 322, 321 to fix leaks and provide habitat connectivity on the Honopou, Hanehoi (Puolua), Pi'ina'au (Palauhulu), and Wailuanui Streams, Maui. This is being done under its maintenance authority in 2018 and per the interim instream flow standards (IIFS) established in the Commission on Water Resource Management's (Commission) contested case hearing CCH-MA13-01 Decision and Order dated June 20, 2018. Only the portion of each structure which causes water to be diverted from the stream into the ditch is being abandoned. Certain structures, including the irrigation ditch, will continue to carry water diverted from other East Maui Streams to off-stream users and are not being abandoned. Category 1 diversions are defined by the applicant as work that is exempt from permitting as maintenance/repair of existing

diversion structures. This is based on past determinations made for similar work (applies to diversion structures that are integral to an irrigation ditch that will continue to function as part of the East Maui Irrigation system).

Find that the project, SDWP.5083.6, is exempt from Hawaii Revised Statutes, Chapter 343 per the Comprehensive Exemption List for the Commission, reviewed and concurred upon by the Environmental Council on January 5, 2021.

The Board of Land and Natural Resources has jurisdiction on land owned by the State through its Revocable Permits. The Commission has jurisdiction for actions taken in the stream channel only.

No.	Diversion Name	Owner	Stream	Forest Reserve	Agriculture/ Conservation	SMA
1	Lupi Long Intake at Wailoa Ditch (Div.152)	State	Honopou	Y	C	-
2	Honopou Intake New Hamakua Ditch Intake (Div.247)	EMI/State	Honopou	Y	C/C	-
3	Wailole Intake at New Hamakua Ditch (Div.246)	EMI	Honopou	-	A/C	-
4	Huelo Intake at Wailoa Ditch (Div.191)	State	Hanehoi	Y	C	-
5	Huelo Intake at New Hamakua Ditch (Div.264)	State	Hanehoi	Y	C	-
6	Huelo #1 Intake at Lowrie Ditch (Div.240)	EMI	Hanehoi	-	A/C	-
7	Huelo #2 Intake at Lowrie Ditch (Div.242)	EMI	Hanehoi	-	A/C	-
8	Poncho Intake at Haʻikū Ditch (Div.217)	EMI/State	Hanehoi	-	A	Y
9	Huelo #3 Intake at Lowrie Ditch (Div.155)	EMI	Hanehoi (Puolua)	-	A/C	-
10	School Intake at Haʻikū Ditch (Div.225)	EMI	Hanehoi (Puolua)	-	A	Y
11	Piʻinaʻau Intake at Koʻolau Ditch (Div.330)	State	Piʻinaʻau (Palauhulu)	Y	C	-
12	#6 Intake at Koʻolau Ditch (Div.331)	State	Wailuanui	Y	C	-
13	#6 Control House Intake at Koʻolau Ditch (Div.324)	State	Wailuanui	Y	C	-
14	#7 Intake at Koʻolau Ditch (Div.322)	State	Wailuanui	Y	C	-
15	#9 Intake at Koʻolau Ditch (Div.321)	State	Wailuanui	Y	C	-

LOCATION: Island of Maui in the Honopou (**Map 1**), Hanehoi (**Map 2**), Piʻinaʻau (Palauhulu) (**Map 3**), and Wailuanui (**Map 4**) surface water hydrologic units.

BACKGROUND

On March 23, 2007, in the contested case hearing regarding water licenses at Honomanū, Keʻanae, Nāhiku, and Huelo, Maui, the Board of Land and Natural Resources (BLNR) ordered EMI to "decrease current diversions on Waiokamilo Stream such that the water flow can be

measured below Dam #3 at a rate of 6 mgd based on a monthly moving average on an annual basis." Understanding that Waiokamilo Stream did not naturally flow at a rate of six (6) mgd, EMI decided to abandon all major and minor diversions on Waiokamilo Stream in an effort to comply with the BLNR Order. The Commission staff was notified subsequent to the action and was told that pipes were cut and removed and intakes were cemented. A site visit to identify and verify the diversions was conducted by Commission staff on December 9, 2008.

On September 16, 2016, Alexander & Baldwin, Inc. (A&B), filed a Stream Diversion Works Permit Application for Removal / Abandonment for 70 diversions along the A&B System in the surface water hydrologic units of Honopou, Hanehoi, Pi‘ina‘au, Waiokamilo, and Wailuanui. Commission staff asked A&B to refile separate applications, presenting the data (descriptions, maps, photos, sketches, etc.) by hydrologic unit (east to west), then by ditch system (mauka to makai) in order to more effectively convey the proposed work to government agency reviewers and the general public. Revised applications were received in February 2017.

In March 2017, staff met with the Department of Health’s Clean Water Branch (DOH) to discuss the abandonment application. However, in part due to their unfamiliarity with the A&B System, DOH-CWB staff contended that a more rigorous environmental review process may be necessary and that some diversion structures may need to be completely removed.

In June 2018, staff met with A&B to discuss the stream diversion works abandonment process. It was decided that A&B:

1. Take certain minor maintenance actions where possible to effectuate the restoration of streamflow quickly (Category 1 diversions, 15 total) then subsequently file a revised application to formally abandon these diversions;
2. File a revised application for Category 2 diversions (15 total) which are located away from the main ditch and require minor work to abandon in-place;
3. File a revised application for Category 3 diversions (11 total) which require more extensive work to abandon in-place; and
4. File a revised application for Category 4 diversions (29 total) of which 28 have been inactive since 2007 and one cannot be located and is believed to be no longer functional.

On June 20, 2018, the Commission issued its Findings of Fact, Conclusions of Law, and Decision and Order (D&O) in contested case hearing CCH-MA13-01. The Commission classified streams in four broad categories (D&O, p. iv) that represent different priorities and management strategies. Of the four, one category is Kalo (Taro) and Community Streams and is summarized as follows:

Kalo (Taro) and Community Streams - The goal is to return free flowing water, with no upstream diversions, to all streams which have historically supported significant kalo cultivation. From the D&O, p. 262:

138. The following streams will have all diversions ceased to allow for all water to flow to the taro growing areas or for community and non-municipal domestic use: Honopou, Huelo (Puolua), Hanehoi, Pi‘ina‘au, Palauhulu, Waiokamilo, Wailuanui, Ohia, Waianu, Kualani, and Makapipi.

139. All diversions for these streams shall be modified so that no out of watershed transfers will occur from these streams.

140. In requiring the release of all water from these streams for the use of appurtenant rights users, the IIFS will be set at zero (0) below the taro lo‘i complexes and the domestic use diversions. The users will determine the amount of water that will remain in the stream or that will be returned to the stream from the taro lo‘i.

Additionally, the Commission noted on page 269 of the D&O:

i. It is intended that diversion structures only need to be modified to the degree necessary to accomplish the amended IIFS and to allow for passage of stream biota, if needed.

j. This Order does not require that every diversion on every tributary be removed or modified, the Commission is only looking at modifications to main stem and major diversions to accomplish the amended IIFS set forth above (*in reference to the chart of IIFS values by stream on p. 268 of D&O*). The Commission also recognizes that it is not the purpose of this proceeding to determine how the diversions will be modified. That issue will be before the Commission in a subsequent process.

k. The intent of the Commission is to allow for the continued use and viability of the EMI (*East Maui Irrigation*) Ditch system and will not require the complete removal of diversions unless necessary to achieve the IIFS.

On August 22, 2018, the Commission received a revised abandonment application for 15 Category 2 diversions; a revised abandonment application (electronic only) for 11 Category 3 diversions on October 2, 2018; and a revised abandonment application (electronic only) for 29 Category 4 diversions on October 2, 2018. Staff made additional non-substantive comments.

On October 16, 2018, the Commission approved a request for determination for Category 1 streams which proposed that certain actions did not require a stream diversion works permit application to be submitted because maintenance of existing facilities are exempt from obtaining a permit per Hawaii Administrative Rules §13-169-50. Additionally, the proposed work was intended to provide for intermediate restoration of streamflow until more permanent work could be performed.

On February 8, 2019, the Commission received a complete permit application for Category 1 streams to abandon in-place.

On February 19, 2019, the Commission approved to abandon in-place 15 Category 2 diversions on the Honopou, Pi‘ina‘au (Palauhulu), and Wailuanui Streams, East Maui. Category 2 was defined by the applicant as located away from the main ditch and required minor work to abandon. Note: W-22b (Reg.152.6) was abandoned via SDWP.4915.6. It is believed that Diversion W-22a minor (No. 1 Lupi Long Intake at Wailoa Ditch) is also listed as Reg.152.6.

On August 29, 2019, the Commission approved the Stream Diversion Works Permit (SDWP.4950.6) Application to reconnect tributaries to the main stream, fill intake grates with rock and concrete, construct wingwalls, put in a stream overpass, remove a small diversion dam, then abandon in-place 11 diversions on the Honopou, Hanehoi (Puolua), and Pi‘ina‘au (Palauhulu) Streams, East Maui. Category 3 was defined by the applicant as actions that were more extensive than maintenance.

On November 20, 2019, the Commission approved the Stream Diversion Works Permit (SDWP.4951.6) Application for Category 4 streams to seal intake grates and remove pipes and abandon in-place 29 diversions and associated infrastructure on the Waiokamilo and Wailuanui Streams, East Maui, subject to the standard conditions and special conditions. Per the meeting minutes, the Commission amended Recommendation No. 2: “staff should use the following criteria in determining further actions that include: restoration of full un-diverted stream flow, fish passage, safety, no derelict accessory structures, erosion protection, minimizing stagnant waters to return to natural conditions as best as possible, and to limit future unauthorized diversions. The Commission reserves the right to require additional work upon submission and review of the final site inspection report.”

On August 18, 2020, by a 7-0 vote, one with reservations, the Commission:

1. Deferred action on the subject Stream Diversion permit application.
2. Recognized the work of Alexander & Baldwin, Inc. in restoring streamflow, appreciate the commitment of Mahi Pono to continue working toward making improvements, and reaffirmed the intent of the Commission’s Decision & Order to restore streamflow, conserve the function of the ditch system, and address habitat issues, continuity, fish passage, and mosquito control.
3. Required the applicant to identify the essential structures that are needed to maintain the viability of the ditch system and identify the structures that are not essential to the ditch system that may cause erosion and habitat damage.
4. Request staff to continue discussions with the applicant, Division of Forestry and Wildlife, and Division of Aquatic Resources, and public consultation so that the community can provide input.
5. Bring this process back to the Commission in six (6) months.

On November 10, 2021, Mahi Pono transmitted via email a Condition Assessment Report for the Number 9 Intake of Ko‘olau Ditch Tunnel, Ha‘ikū, Maui, prepared by Island Geotechnical Engineering (IGE) (See **Exhibit 2**). The Report finds that, “Based on the observed site conditions, IGE anticipates that removing the impermeable dike will not adversely affect the stability of the Ko’olau Ditch Tunnel passing below as it removes the surcharge load and there is not structural connection. However, IGE recommends the following:

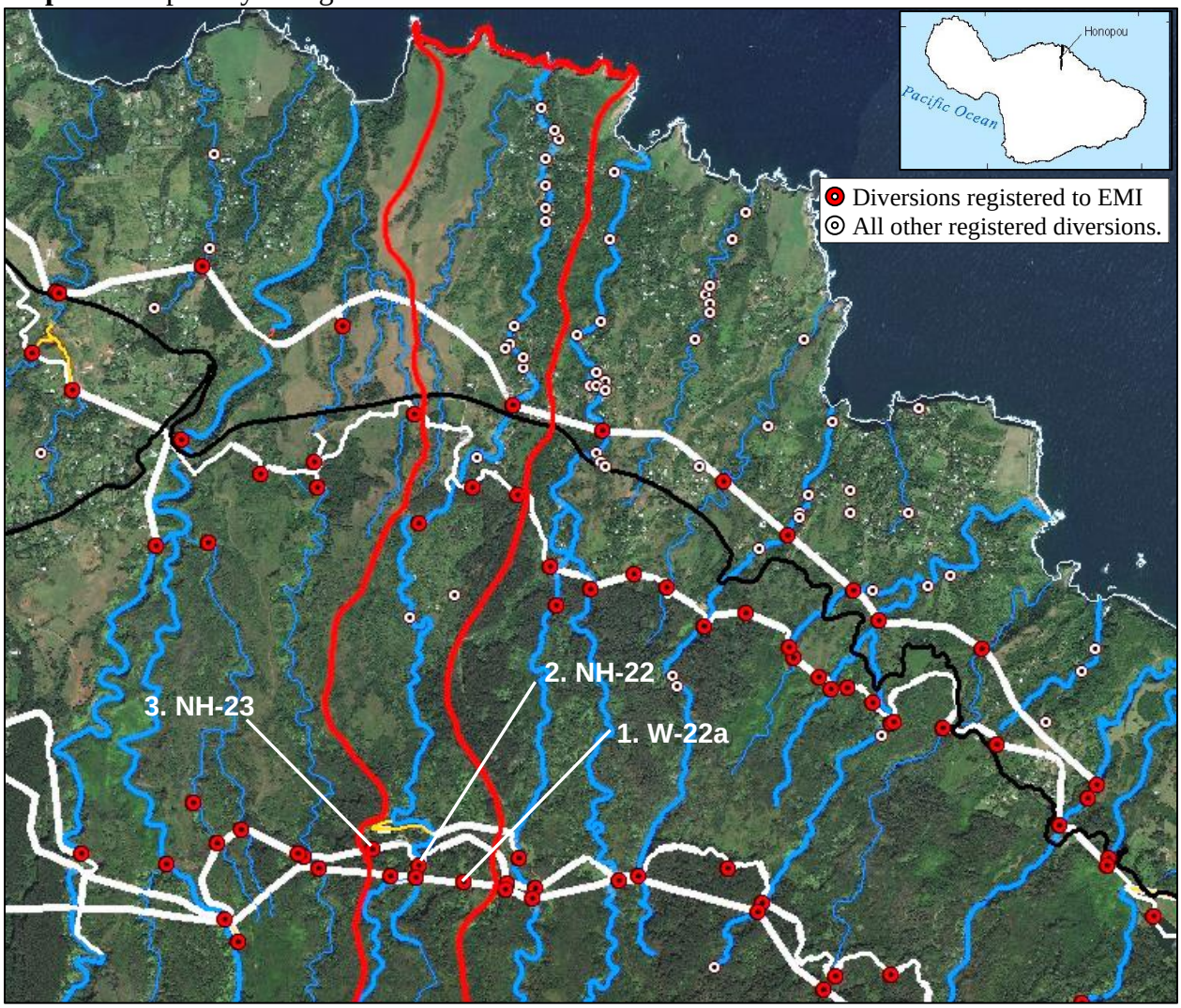
1. The impermeable dike four (4) feet from the rockwall supported embankment should be left intact and tempered 1:1 to the stream bed level to keep the rockwall supported embankment in good condition. It is IGE’s opinion that this section of the embankment needs to be left in intact condition because the loss of this embankment would lead to the eventual collapse of the western abutment and ultimately the bridge that supports the road.
2. IGE anticipates that the impermeable dike is built on hard rock; however, if it is found that the base of the dike is not hard rock, the area is to be capped using high strength concrete to prevent erosion/scoring.
3. Large boulders should be placed at the base of the rockwall supporting the embankment to prevent scoring of the embankment.”

On December 7, 2023, Commission staff presented the proposed revised modifications to the East Maui Quarterly Working Group, including representatives from Division of Forestry and Wildlife, Land Division, Sierra Club of Hawai‘i, and multiple community members.

Based on multiple meetings with and input from community members, agency representatives, and Mahi Pono, the Commission staff has revised the proposed modifications for most of the stream diversions covered by this permit.

HONOPOU STREAM DIVERSIONS

Map 1. Honopou Hydrologic Unit.



STREAM DESCRIPTION

Honopou. The hydrologic unit of Honopou covers 2.7 square miles from the lower slopes of Haleakala at 2,286 feet elevation to the sea (**Map 1**). Honopou is 4 miles in length. Most of the hydrologic unit is made up of the Ko‘olau Forest Reserve. Honopou is mostly a gaining stream. The Hawaii Stream Assessment rates Honopou average in comparison to other watersheds in Maui and statewide. The Division of Aquatic Resources (DAR) assigns Honopou a total watershed rating of 5 out of 10, a total biological rating of 5 out of 10, and a combined 5 out of 10. Native species observed in the stream include:

Fish: ‘O‘opu nākea (*Awaous guamensis*), ‘o‘opu ‘akupa (*Eleotris sandwicensis*), ‘o‘opu ‘alamo‘o (*Lentipes concolor*), and ‘o‘opu nōpili (*Sicyopterus stimpsoni*)

Crustaceans: ʻŌpae kalaʻole (*Atyoida bisulcata*) and ʻōpae ʻoehaʻa (*Macrobrachium grandimanus*)
Mollusks: None observed

Also observed were two native dragonflies, giant Hawaiian dragonfly (*Anax strenuous*) and globe skimmer (*Pantala flavescens*), and the native damselfly, pacific Megalagrion damselfly (*Megalagrion pacificum*). ʻOʻopu ʻalamoʻo was found only in the upper reaches. Larval recruitment of native fish has been observed near the stream mouth.

PROJECT DESCRIPTION

1. Lupi Long Intake at Wailoa Ditch (W-22a, Div.152.6). Concrete diversion structure.

EMI Actions: Filled grate openings with concrete, about a few cubic feet.

Diversion intake structure (RMT, 2007).


Diversion structure before sealing (EMI, 2020).


Diversion structure after sealing (EMI, 2020).

Proposed Modifications: No further modifications necessary.

2. Honopou Intake at New Hamakua Ditch (NH-22, Div.247.6). Water is diverted from Honopou Stream at Intake NH-22 into the New Hamakua Ditch (tunnel).

EMI Actions: Filled grate openings with concrete, about 1-2 cubic yards.

Diversion intake on left bank (CWRM, 2016)

Dam below the intake (CWRM, 2016)

Diversion structure after sealing (EMI, 2020).

Proposed Modifications: 1) Remove steel plates separating former intake and main stream channel; 2) Remove concrete lip on top of dam structure (see red arrows in photos above).

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3. Wailole Intake at New Hamakua Ditch (NH-23, Div.246.6). Water is diverted from East Honopou Stream at Intake NH-23 (Wailole Intake) into the New Hamakua Ditch (tunnel).

EMI Actions: Filled grate openings with concrete, about one cubic yard.

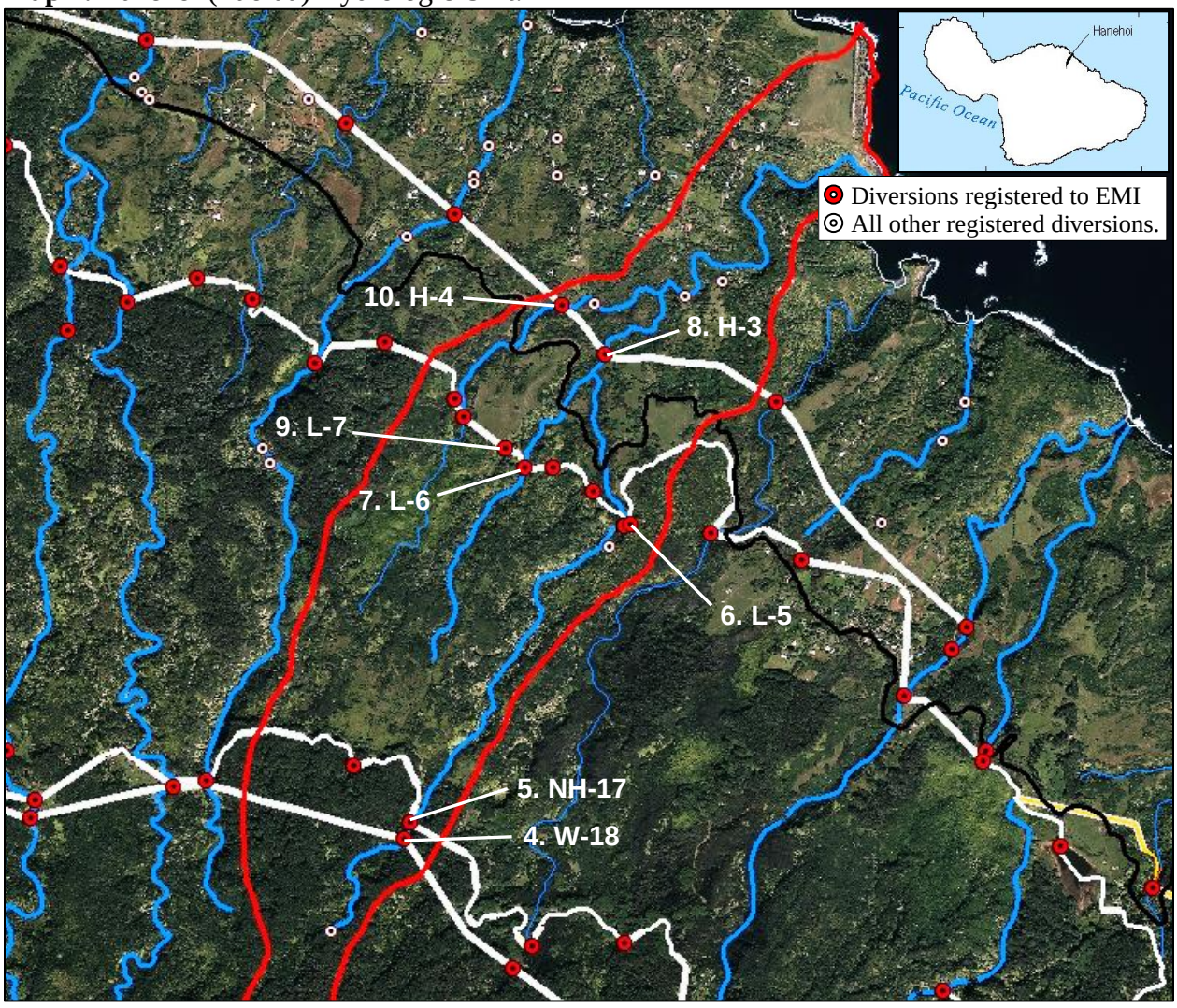

Diversion structure before sealing (EMI, 2020).


Diversion structure after sealing (EMI, 2020).

Proposed Modifications: Construct a 45-degree concrete ramp on the left bank, downstream of the bypass channel for the main channel to the left of the sealed intake (see red arrow in photo above).

HANEHOI (PUOLUA) STREAM DIVERSIONS

Map 2. Hanehoi (Puolua) Hydrologic Unit.



STREAM DESCRIPTION

Hanehoi (Puolua). The hydrologic unit of Hanehoi covers 1.41 square miles (**Map 2**). Hanehoi Stream is 3.2 miles in length, traversing in a northeasterly direction from its headwaters originating in the Ko’olau Forest Reserve at 1,200 feet to Hoalua Bay. A tributary, Puolua (Huelo), is 1.3 miles in length and flows intermittently in the upper section of the stream. Most of the catchment is made up of the Ko’olau Forest Reserve. The lower altitudes are occupied by grasses and shrubs with few cultivated lands. Only one native species of crustacean ‘Ōpae kala‘ole was observed in Hanehoi, while no native fish or mollusks were observed. All of the fish and macroinvertebrates observed in the middle reaches (downstream of Lowrie Ditch) were introduced species.

PROJECT DESCRIPTION

4. Huelo Intake at Wailoa Ditch (W-18, Div.191.6). Water is diverted from Hanehoi Stream at Intake W-18 (Huelo Intake) into the Wailoa Ditch (tunnel).

EMI Actions: Filled grate openings with concrete, about 1-2 cubic yards.


Upstream view structure (DAR, 2008)


Upstream view structure (DAR, 2008).


Diversion structure after sealing (EMI, 2020).


Diversion structure after sealing (EMI, 2020).

Proposed Modifications: 1) Remove wing walls on right bank; 2) Fill in gaps undercutting the downstream end of the intake structure (see red arrows in photos above).

5. Huelo Intake at New Hamakua Ditch (NH-17, Div.264.6). Water is diverted from Hanehoi Stream at Intake NH-17 (Huelo Intake) into the New Hamakua Ditch (tunnel).

EMI Actions: Filled grate openings with concrete, about 1-2 cubic yards.

Diversion structure before sealing (EMI, 2020).

Diversion structure after sealing (EMI, 2020).

Proposed Modifications: Remove dam lip from right bank at downstream end of the bypass channel, up to sealed diversion intake.

6. Huelo #1 Intake at Lowrie Ditch (L-5, 240.6). Water is diverted from Hanehoi Stream at Intake L-5 (Huelo #1 Intake) into the Lowrie Ditch.

EMI Actions: Filled grate openings with concrete, about three to five cubic yards.

Upstream view of bypass channel with bypass pipe at right bank (Sierra Club, 2020).

Close-up view of leak into Lowrie Ditch on upstream end of bypass channel (Sierra Club, 2020).

Diversion structure after sealing (Sierra Club, 2020).

Sierra Club Hawaii Chapter. See **Exhibit 1**. Diversion structure impedes natural stream flow and has a slight overhang. It should be removed and a flatter bypass created over the Lowrie ditch to allow more natural grade of stream bed.

Proposed Modifications: 1) Seal and/or cap downstream end of PVC bypass pipe; 2) Seal leaks into Lowrie Ditch on upstream end of bypass channel.

7. Huelo #2 Intake at Lowrie Ditch (L-6, Div.242.6). Water is diverted from Hanehoi Stream at Intake L-6 (Huelo #2 Intake) into the Lowrie Ditch.

EMI Actions: Filled grate openings with concrete, about 1-2 cubic yards.

Upstream view of diversion dam and intake on left bank (CWRM, 2016).

Upstream view of diversion dam and Lowrie Ditch overpass (CWRM, 2016).

Diversion structure after sealing (EMI, 2020).

Diversion structure after sealing (EMI, 2020).

Proposed Modifications: Remove concrete dam on right bank.

8. Poncho Intake at Ha‘ikū Ditch (H-3, Div.217.6). Water is diverted from East Hanehoi Stream at Intake H-3 (Poncho Intake) into the Haiku Ditch (tunnel).

EMI Actions: Filled grate openings with concrete, about 1-2 cubic yards. Sluice gate removed.


Diversion intake structure (CWRM, 2009).


Diversion dam (CWRM, 2009).


Diversion intake structure after sealing (EMI, 2020).

Sierra Club Hawaii Chapter. See **Exhibit 1**. Stream life left with very limited migration path. Remove unneeded dam/catch basin structures.

Proposed Modifications: 1) Remove wingwall portion of the dam (towards the left bank) down to the concrete base; 2) Remove downstream lip of the apron at the foot of the dam; and 3) Remove the sluice gate infrastructure (see red arrows in photos above).

9. Huelo #3 Intake at Lowrie Ditch (L-7, Div.155.6). Water is diverted from Hanehoi Stream at Intake L-7 (Huelo #3 Intake) into the Lowrie Ditch. CWRM records indicate that the diversion is located on Huelo Stream, tributary to Hanehoi Stream.

EMI Actions: Filled grate openings with concrete, about 1-2 cubic yards.


Diversion structure after sealing (EMI, 2020).


Diversion structure after sealing (EMI, 2020).


Diversion structure after sealing (Sierra Club, 2020).


Diversion structure after sealing (Sierra Club, 2020).

Proposed Modifications: 1) Remove top of dam at intake above bypass channel; 2) Seal downstream end of bypass channel for leakages (see red arrow in photo above).

10. School Intake at Ha‘ikū Ditch (H-4, Div.225.6). Water is diverted from West Hanehoi Stream at Intake H-4 (School Intake) into the Haiku Ditch (tunnel).

EMI Actions: Filled grate openings with concrete, about one cubic yard. Sluice gate removed.


Water flows into diversion intake on left bank (CWRM, 2009).

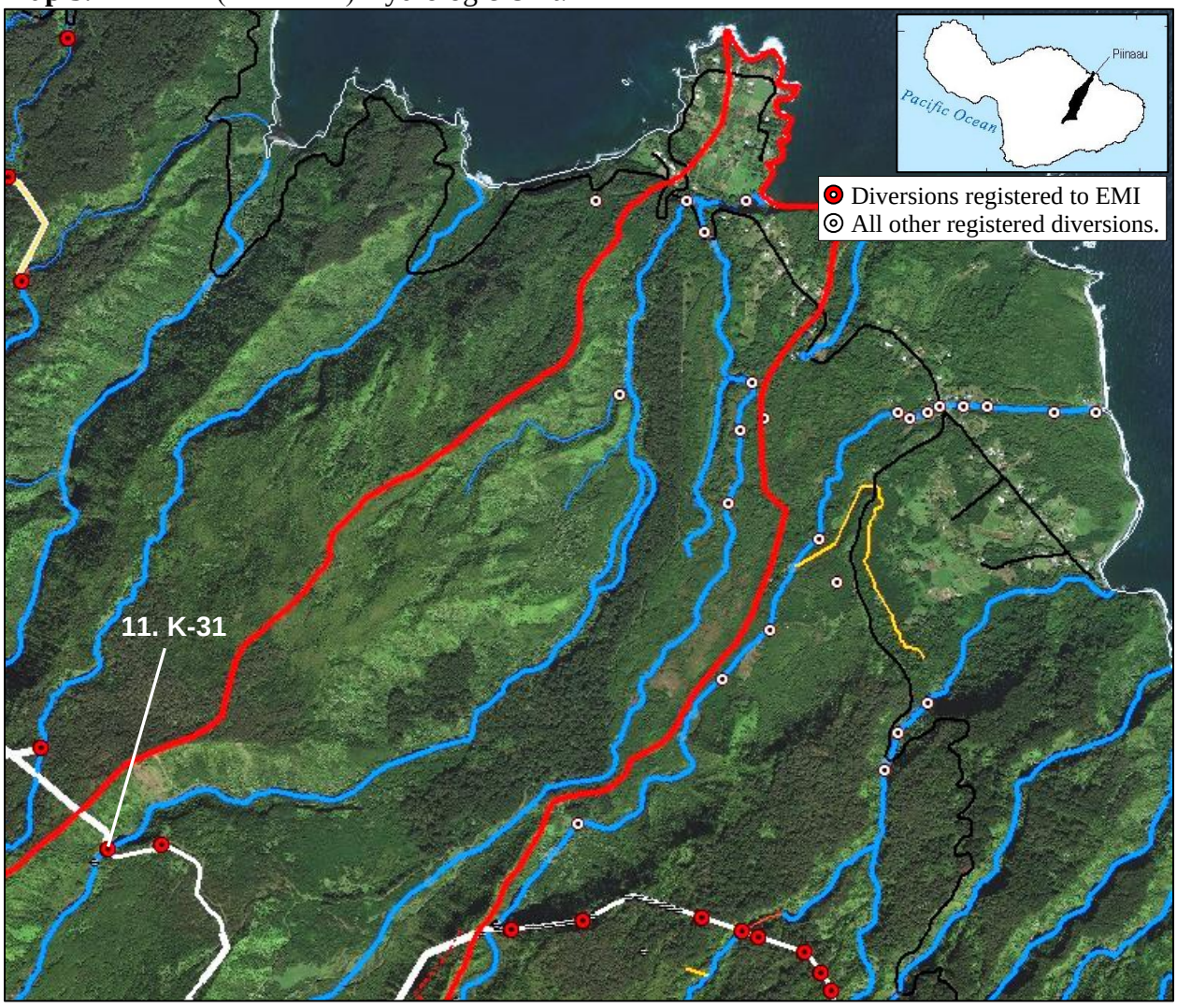

Diversion dam and collection pond, with bypass pipe, taken from left bank (CWRM, 2009).


Diversion structure after sealing (EMI, 2020).

Proposed Modifications: 1) Remove dam wall and sluice gate infrastructure; 2) Remove the sediment basin wall (see red arrows in photos above).

PI‘INA‘AU (PALAUHULU) STREAM DIVSERSIONS

Map 3. Pi‘ina‘au (Palauhulu) Hydrologic Unit.



STREAM DESCRIPTION

Pi‘ina‘au (Palauhulu). The hydrologic unit of Pi‘ina‘au covers 22 square miles (**Map 3**). Pi‘ina‘au is 13.1 miles in length, originating in the Waikamoi Preserve before entering the ocean. A tributary, Palauhulu, is 4.8 miles in length. It is fed perennially by the Ko’olau Forest Reserve and flows through Keahu Falls, Waiokuna Falls, and the Waiokuna Pond before joining with Pi‘ina‘au Stream. The Hawaii Stream Assessment classifies the aquatic resources as outstanding. Pi‘ina‘au was noted for the presence of ‘o‘opu ‘alamo‘o, ‘o‘opu nākea, ‘o‘opu nōpili, and hīhīwai (*N. granosa*), among others. Pi‘ina‘au and Palauhulu feed Waialohe Pond, which provides habitat for estuarine animals. The size of the watershed and the diversity of native stream animals present makes Pi‘ina‘au rate high in comparison to other watersheds in Maui and statewide. DAR assigns Pi‘ina‘au a total watershed rating of 8 out of 10, a total biological rating of 8 out of 10, and a combined overall rating of 9 out of 10. Native species observed in the stream include:

Fish:	‘O‘opu nākea, ‘o‘opu ‘akupa, ‘o‘opu ‘alamo‘o, and ‘o‘opu nōpili, and Hawaiian or barred flagtail (*Kuhlia sp*.)
Crustaceans:	‘Ōpae kala‘ole and ‘ōpae ‘oeha‘a
Mollusks:	Freshwater limpet (*Ferrissia sharpi*), Hīhīwai (*Neritina granosa*) and Hapawai (*Neritina vespertina*)

PROJECT DESCRIPTION

11. Pi‘ina‘au Intake at Ko‘olau Ditch (K-31, Div.330.6). Water is diverted from Pi‘ina‘au Stream at Intake K-31 into the Ko‘olau Ditch system.

EMI Actions: Filled grate openings with concrete, about one cubic yard.

Diversion intake structure on right bank (DAR, 2008).


Upstream view of intake structure and dam (DAR, 2008).

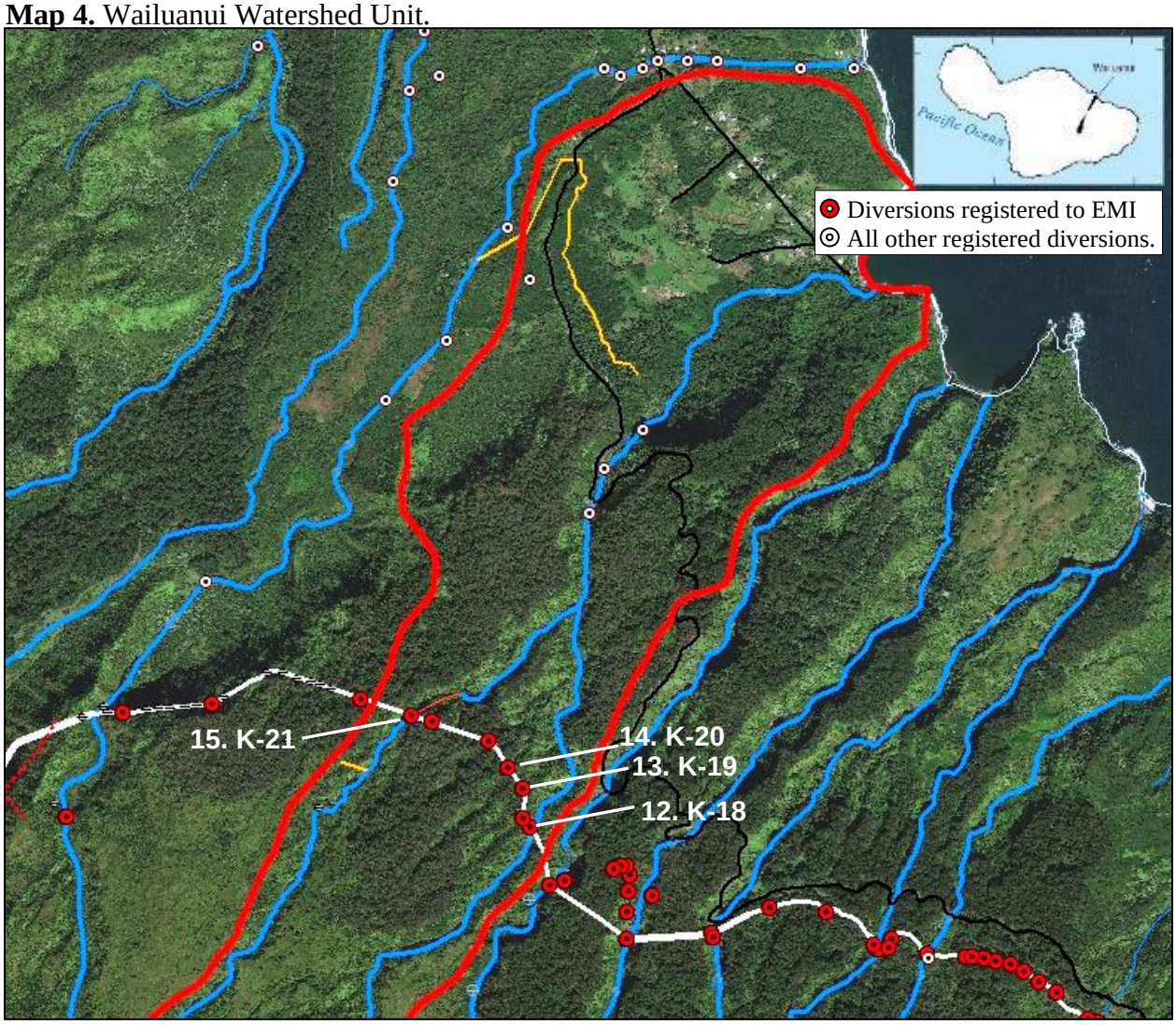

Diversion structure before sealing (EMI, 2020).


Diversion structure after sealing (EMI, 2020).

Proposed Modifications: Remove the low dam just downstream of the sealed intake (see red arrows in photos above).

WAILUANUI STREAM DIVERSIONS

Map 4. Wailuanui Watershed Unit.



STREAM DESCRIPTION

Wailuanui. The hydrologic unit of Wailuanui covers an area of 6.0 square miles from the upper slopes of Haleakala at 8,891 feet elevation to the sea. (**Map 4**). EMI operates diversions on Wailuanui Stream and its tributaries, West and East Wailuanui, at the Ko‘olau Ditch. Wailuanui Stream is gaining flow from the lower reaches of its tributaries down to the coast. The Hawaii Stream Assessment classifies the aquatic resources of Wailuanui Stream as outstanding. Wailuanui Stream has a combination of large watershed size, higher biodiversity protection, high native species diversity and low alien species population. The ditch diversions create disconnected deep pools, restricting the movement of adult animals and standing post larvae recruits at the stream mouth. Wailuanui Stream rates high in comparison to other watersheds in Maui and statewide. DAR assigns Wailuanui a total watershed rating of 7 out of 10, a total biological rating of 8 out of 10, and a combined overall rating of 8 out of 10. Native species observed in the stream include:

Fish:	‘O‘opu nākea (*Awaous guamensis*), ‘o‘opu akupa (*Eleotris sandwicensis*), *aholehole* (*Kuhlia sp.*), ‘o‘opu ‘alamo‘o (*Lentipes concolor*), and ‘o‘opu nōpili (*Sicyopterus stimpsoni*)
Crustaceans:	‘Ōpae kala‘ole (*Atyoida bisulcata*) and ‘Ōpae ‘oeha‘a (*Macrobrachium grandimanus*)
Mollusks:	Hīhīwai (*Neritina granosa*) and Hapawai (*Neritina vespertina*)

PROJECT DESCRIPTION

12. #6 Intake at Ko‘olau Ditch (K-18, Div.331.6). Water is diverted from East Wailuanui Stream at Intake K-18.

EMI Actions: Filled grate openings with concrete, about one cubic yard. Sluice gate removed.

Downstream view of stream ponding behind the sluice gate, where it then passes through holes in the wall and drops into the ditch below the intake (EMI, 1989).

Downstream view of stream passing through the open sluice gate (CWRM, 2008).

Diversion structure after sealing (EMI, 2020).

Diversion structure after sealing (EMI, 2020).

Proposed Modifications: 1) Remove dam wall and sluice gate infrastructure; and 2) Remove the sediment basin wall (see red arrows in photos above).

13. #6 Control House Intake at Ko‘olau Ditch (K-19, Div.324.6). Water is diverted from East Wailuanui Stream at Intake K-19 (#6 Control House Intake).

EMI Actions: Filled grate openings with concrete, about 1-2 cubic yards.


Diversion intake structure before sealing (EMI, 2020).


Diversion intake structure before sealing (EMI, 2020).


Diversion intake structure after sealing (EMI, 2020).


Diversion intake structure after sealing (EMI, 2020).

Proposed Modifications: No further modifications necessary.

14. #7 Intake at Ko‘olau Ditch (K-20, Div.322.6). Water is diverted from Wailuanui Stream at Intake K-20.

EMI Actions: Filled grate openings with concrete, about one cubic yard. Control gate removed.

View from just upstream of diversion, with intake on right and the ditch running below and perpendicular to stream tributary (EMI, 1989).

Upstream view with water flowing downstream after control gate removed (CWRM, 2008).

Diversion structure before sealing (EMI, 2020).

Diversion structure after sealing (EMI, 2020).

Proposed Modifications: Remove low dam wall on left bank of stream (see red arrow in photo above).

15. #9 Intake at Ko‘olau Ditch (K-21, Div.321.6). Water is diverted from West Wailuanui Stream at Intake K-21.

EMI Actions: Filled grate openings with concrete, about 1-2 yards. Sluice gate removed.


Diversion structure before sealing (Sierra Club, 2020).


Diversion structure before sealing (Sierra Club, 2020).


Diversion structure before sealing (EMI, 2020).


Diversion structure before sealing (EMI, 2020).

Sierra Club Hawaii Chapter. See **Exhibit 1**. Stream life left with very limited migration path due to two large dam structures. Remove unneeded dam structures to create more natural stream bed.

Proposed Modifications: Per the Island Geotechnical Engineering report, dated September 1, 2021, cut and remove the dam, leaving intact 4-feet from the rockwall-supported embankment on the left bank, and tempered 1:1 to the stream bed level to keep the rockwall supported embankment in good condition. If the base of the dam, once cut, is found not to be hard bedrock, the area may need to be capped with high-strength concrete to prevent erosion/scouring. Furthermore, large boulders may be placed at the base of the rockwall supporting the embankment to prevent scour of the embankment.

AGENCY REVIEW COMMENTS

County of Maui, Planning Department: No objections.

Department of Hawaiian Home Land (DHHL): DHHL is generally quite supportive of this effort. The restoration of full stream flows that these permanent abandonments will implement will result in water being available to DHHL lands in Ke‘anae and Wailuanui. These lands are capable of being used for lo‘i kalo cultivation, now that there will be sufficient water. DHHL does note, however, that any future beneficiaries using these lands will also have traditional and customary rights associated with these streams. Therefore, it is not sufficient to alter these intakes only to allow water flow, if the altered streams and diversion works abandoned-in-place will disrupt the mauka to makai life cycles of our native stream species. DHHL requests that CWRM consult with (and implement as requirements on the permits) any comments from your Division of Aquatic Resources which are designed to limit or eliminate the impacts from abandonment-in-place of these stream diversion works.

Department of Land and Natural Resources (DLNR), Aha Moku: No objections.

DLNR, Aquatic Resources:

1. We fully support restoring natural stream flow to all streams. We support filling grate openings with concrete/grout and/or stream rocks; or by bolting a steel plate over the grate opening; removal of sluice gates; removal of diversion dam (K-30b); and removal of pipes (K-31a, K-19a, K-20a, etc.).

   CWRM Staff Response: The diversions cited in comment #1 are not part of the subject diversions.

2. More information and description with dimensions are needed for the proposed concrete stream overpasses. There is no assessment on the amount of flow above the ditch under various storm conditions. During flooding conditions, it appears most of the water be allowed to flow into the ditch.

3. *CWRM Staff Response: Comment #2 is not applicable to the subject diversions.*

4. For example, K-30a proposes to remove the pipe. Will the concrete catchment basin be removed similar to K-30b or broken to allow water to flow naturally?

   CWRM Staff Response: Comment #3 is not applicable to the subject diversions.

5. The simple removal of sluice gates is a “great first step” in restoring flow, however, the walls and dams that have been constructed to direct water to intakes and diversions must also be removed or “modified.” These areas that constrict flow prevents animals from migrating upstream. The presence of some animals which we’ve identified helps to validate that few animals can migrate upstream. The multiple diversions prevent healthy populations to successfully migrate to upper elevations.

   CWRM Staff Response: Comment #2 is not applicable to the subject diversions.

6. Stream “tributaries” also have diversions and could contribute to the overall flow in a particular stream. As much as possible, these diversions should also be modified and/or removed.

   CWRM Staff Response: Comment #5 is not applicable to the subject diversions.

7. Will future maintenance for the EMI System require review of sealed diversions? How long will concrete/grout last and will these locations be surveyed for leaks? Who will be responsible for sealing any leaking into the ditches in the future? Will all of the structures be identified, mapped with GPS coordinates and monitored for compliance?

   CWRM Staff Response: Recognizing the difficulty of anticipating future system management scenarios, the Commission asserts that East Maui Irrigation Company will continue to have the responsibility of maintaining the sealing of abandoned diversions. While the subject diversions shall be abandoned, the main ditch systems continue to operate below or adjacent to the abandoned diversion structures. The locations of all diversions have already been documented and future monitoring will be conducted on an as-needed basis.

DLNR, Engineering: Did not comment.

DLNR, Forestry and Wildlife (DOFAW):

1. Walls, structures, or channels that alter the natural course of the stream, such that water becomes trapped and stagnant in areas where flow is restricted. Stagnant waters become breeding sites for mosquitoes, which are vectors for introduced diseases that are a major threat to native forest birds. All such modifications should be removed from the stream when they are no longer being used or deconstructed to the extent that they do not trap stagnant water.

   CWRM Staff Response: The Commission staff agrees with this comment, but also believes that with the abandonment of the diversion structures, any basins associated with the diversions, when left unattended, will be filled in over time with sediment resulting from natural erosion. The potential for stagnant pools of water are no greater than what might naturally occur in the stream during periods of low-flow or in natural land depressions during wet periods.

2. Pipes and related structures are known to obstruct passage of native fish. Such structures should not be employed to transmit water in restored streams.

   CWRM Staff Response: No pipes are being used to convey water for the subject diversions.

3. Walls, structures, or channels may alter the natural course of the stream, resulting in high levels of erosion, affecting water quality. Such modifications should be removed from the stream when they are no longer being used or altered to assure they do not cause erosion to the stream channel.

CWRM Staff Response: The Commission staff does not believe that the current diversion structures, abandoned in-place, will contribute to excessive stream channel erosion other than what may naturally occur.

DLNR, State Historic Preservation Division (SHPD): SHPD review pending.

CWRM Staff Response: Approval of the application is subject to SHPD concurrence. If SHPD requires conditions, delegation authority to Deputy Director will be added as a special condition.

DLNR, Land Division: Did not comment.

DLNR, State Parks: No objections.

Dept. of Health (DOH), Clean Water Branch: The DOH standard comments can be reviewed on their website at: https://health.hawaii.gov/cwb/files/2018/05/Memo-CWB-Standard-Comments.pdf.

CWRM Staff Response: The lead agency for the protection of water quality is the Department of Health, Clean Water Branch, which administers the Federal Clean Water Act (33 U.S.C. §1251 et seq.) and the State Water Pollution Act (HRS Ch. 342D; HAR Ch. 11-54 Water Quality Standards; and HAR Ch. 11-55 Water Pollution Control). HAR §11-54-1 through §11-54-8 defines Best Management Practices and water quality criteria applicable to inland and nearshore waters and are based on the Federal Clean Water Act. HAR Ch. 11-55 Appendix C defines discharges of storm water associated with construction activity. HRS 174C-66 states that the DOH oversees the State's water quality control program.

Office of Hawaiian Affairs: Did not comment.

US Army Corps of Engineers: Did not comment.

US Fish and Wildlife Service (FWS): No objections.

PUBLIC COMMENTS

Sierra Club (**Exhibit 1**).

TRADITIONAL AND CUSTOMARY PRACTICES

1) The identity and scope of cultural, historical, or natural resources in which traditional and customary native Hawaiian rights are exercised in the area.

   The Applicant cited the 275-page County of Maui Planning Department, Kalo Kanu O Ka ‘Āina: A Cultural Landscape Study of Ke‘anae and Wailuanui, Island of Maui, July 1995; and Kumu Pono Associates, Wai O Ke Ola: He Wahi Mo‘olelo No Maui Hikina, A

Collection of Native Traditions and Historical Accounts of the Lands of Hāmākua Poko, Hāmākua Loa and Ko‘olau, Maui Hikina (East Maui), Island of Maui, 2001.

CWRM Staff Response: The Office of Hawaiian Affairs' Kipuka Database, shows no historic sites, land awards, or crown lands involved. DLNR Aha Moku did not have any objections to the subject work. The implementation actions are within the footprint of existing diversion structures. Furthermore, the Commission, as part of contested case hearing CCH-MA13-01, reviewed documentation and heard testimony from many area residents regarding traditional and customary native Hawaiian practices on the subject East Maui streams. Implementation of these proposed stream diversion works abandonment actions seek to return streamflow in support of traditional and customary practices.

2) The extent to which those resources, including traditional and customary native Hawaiian rights, will be affected or impaired by the proposed action.

The Applicant stated, "The proposed action will have a positive impact on stream resources due to the total restoration of flows in affected streams. This in turn will have a positive effect on traditional and customary Native Hawaiian rights, including but not limited to kalo cultivation in areas downstream of the diversions."

CWRM Staff Response: The proposed actions seek to restore streamflow to the subject streams. Thus, tradition and customary native Hawaiian rights are not anticipated to be affected or impaired by this action.

3) What feasible action, if any, could be taken by the Commission in regards to this application to reasonably protect native Hawaiian rights.

The Applicant stated "The Commission's expedited approval of this application will advance the project's work schedule."

CWRM Staff Response: No further action as identified.

HRS CHAPTER 343 – ENVIRONMENTAL ASSESSMENT (EA) COMPLIANCE

Under Hawaii Revised Statutes (HRS) §343-5(a), an EA shall be required for actions, as summarized in part below, that propose:

(1) use of state land or county lands, or the use of state or county funds;
(2) use within any land classified as a conservation district;
(3) use within a shoreline area;
(4) use within any historic site as designated in the National Register or Hawaii Register;
(5) use within the Waikiki area of O‘ahu;
(6) any amendments to existing county general plans where the amendment would result in designations other than agriculture, conservation, or preservation;
(7) any reclassification of any land classified as a conservation district;
(8) construction of new or the expansion or modification of existing helicopter facilities within the State, that may affect: (A) any land classified as a conservation district; (B) a

shoreline area; or (C) any historic site as designated in the National Register or Hawaii Register;

(9) any (A) wastewater treatment unit, except an individual wastewater system or a wastewater treatment unit serving fewer than fifty single-family dwellings or the equivalent; (B) Waste-to-energy facility; (C) Landfill; (D) Oil refinery; or (E) Power-generating facility.

The proposed action triggers an EA because most of the subject diversions are located on State land or are in in the Conservation District. However, per Hawaii Administrative Rule (HAR) §11-200.1-15(a) some actions, because they will individually and cumulatively probably have minimal or no significant effects, can be declared exempt from the preparation of an EA.

The proposed actions are exempt from an EA in accordance per HAR §11-200.1-15(c)(1), operations, repairs, or maintenance of existing structures, facilities, equipment, or topographical features, involving minor expansion or minor change of use beyond that previously existing.

STAFF REVIEW

HAR §13-168-32(d) sets out the general criteria for ruling on SDWP applications.

(1) The quantity and quality of the stream water or the stream ecology shall not be adversely affected.

CWRM Staff Response: No water is diverted from this site. The Hawaii Department of Health is the lead agency regarding water quality (HRS §174C-66)

(2) Where instream flow standards or interim instream flow standards have been established pursuant to HAR Chapter 13-169, no permit should be granted for any diversion works which diminishes the quantity or quality of stream water below the minimum established to support identified instream uses, as expressed in the standards.

CWRM Staff Response: The IIFS for Honopou, Hanehoi (Puolua), Pi‘ina‘au (Palauhulu), and Wailuanui Streams were established (full restoration) in the Commission’s Decision and Order (p. 268) under CCH-MA13-01.

(3). The proposed diversion works shall not interfere substantially and materially with existing instream or non-instream uses or with diversion works previously permitted.

CWRM Staff Response: The Commission staff does not anticipate that the proposed actions will interfere with existing instream or non-instream uses.

RECOMMENDATION

That the Commission:

1. Approve the Stream Diversion Works Permit (SDWP.5083.6) Application for a period of two (2) years to abandon in-place the subject 15 diversions and perform further modifications at certain diversions, as identified below, on the Honopou, Hanehoi (Puolua), Piʻinaʻau (Palauhulu), and Wailuanui Streams, East Maui, subject to the standard conditions in **Exhibit 3** and special conditions below.

2. Direct East Maui Irrigation Company, Ltd. to make further modifications to their already completed abandonment actions at the following locations:

    a. Honopou Intake at New Hamakua Ditch (NH-22, Div.247.6): 1) Remove steel plates separating former intake and main stream channel; 2) Remove concrete lip on top of dam structure.

    b. Wailole Intake at New Hamakua Ditch (NH-23, Div.246.6): Construct a 45-degree concrete ramp on the left bank, downstream of the bypass channel for the main channel to the left of the sealed intake.

    c. Huelo Intake at Wailoa Ditch (W-18, Div.191.6): 1) Remove wing walls on right bank; 2) Fill in gaps undercutting the downstream end of the intake structure.

    d. Huelo Intake at New Hamakua Ditch (NH-17, Div.264.6): Remove dam lip from right bank at downstream end of the bypass channel, up to sealed diversion intake.

    e. Huelo #1 Intake at Lowrie Ditch (L-5, 240.6): 1) Seal and/or cap downstream end of PVC bypass pipe; 2) Seal leaks into Lowrie Ditch on upstream end of bypass channel.

    f. Huelo #2 Intake at Lowrie Ditch (L-6, Div.242.6): Remove concrete dam on right bank.

    g. Poncho Intake at Haʻikū Ditch (H-3, Div.217.6): 1) Remove wingwall portion of the dam (towards the left bank) down to the concrete base; 2) Remove downstream lip of the apron at the foot of the dam; and 3) Remove the sluice gate infrastructure.

    h. Huelo #3 Intake at Lowrie Ditch (L-7, Div.155.6): 1) Remove top of dam at intake above bypass channel; 2) Seal downstream end of bypass channel for leakages.

    i. School Intake at Haʻikū Ditch (H-4, Div.225.6): 1) Remove dam wall and sluice gate infrastructure; 2) Remove the sediment basin wall.

    j. Piʻinaʻau Intake at Koʻolau Ditch (K-31): Remove the low dam just downstream of the sealed intake.

    k. #6 Intake at Koʻolau Ditch (K-18, Div.331.6): 1) Remove dam wall and sluice gate infrastructure; 2) Remove the sediment basin wall.

l. #7 Intake at Ko‘olau Ditch (K-20, Div.322.6): Remove low dam wall on left bank of stream.

m. #9 Intake at Ko‘olau Ditch (K-21, Div.321.6): Per the Island Geotechnical Engineering report, dated September 1, 2021, cut and remove the dam, leaving intact 4-feet from the rockwall-supported embankment on the left bank, and tempered 1:1 to the stream bed level to keep the rockwall supported embankment in good condition. If the base of the dam, once cut, is found not to be hard bedrock, the area may need to be capped with high-strength concrete to prevent erosion/scouring. Furthermore, large boulders may be placed at the base of the rockwall supporting the embankment to prevent scour of the embankment.

3. Poncho Intake at Ha‘ikū Ditch (H-3, Div.217.6) and School Intake at Ha‘ikū Ditch (H-4, Div.225.6) are located in the Special Management Area (SMA) and subject to regulation by the County of Maui, Planning Department. Issuance of the SDWP shall be subject to a determination whether an SMA Permit is required. If not required, the Applicant shall provide evidence of consultation with the Maui Planning Department. If an SMA Permit is required, the Applicant shall provide a copy of the SMA Permit prior to issuance of the SDWP.

4. Abandonment of diversion is subject to SHPD concurrence. If SHPD requires conditions, delegate to Deputy Director to attach those as conditions of abandonment.

5. Declare that the project is exempt from EA requirements under HRS Chapter and HAR 11-200.1.

Ola i ka wai,

DEAN D. UYENO
Acting Deputy Director

Exhibits:
1. Sierra Club letter, dated August 9, 2019.
2. Condition Assessment and Removal of Number 9 Intake of Ko‘olau Ditch Tunnel, Ha‘ikū, Maui, prepared by Island Geotechnical Engineering, dated September 1, 2021.
3. Standard Stream Channel Alteration Permit and Stream Diversion Works Permit Conditions.
4. Legal Authorities.

APPROVED FOR SUBMITTAL:

DAWN N. S. CHANG
Chairperson

SIERRA CLUB
FOUNDED 1892

To: Kaleo Manuel, Deputy Director August 9, 2019
Commission on Water Resource Management

From: Sierra Club, Hawai'i Chapter
PO Box 2577Honolulu, Hawai'i 96803

Subject: Comments on East Maui Irrigation ("EMI")/ Alexander and Baldwin, Inc. ("A&B") "Category 3" (SDWP 4950.6) and "Category 4" (SDWP 4951.6) applications for stream diversion works permits to abandon listed East Maui diversions.

Aloha Deputy Director Manuel, Water Commissioners and staff

Sierra Club of Hawai'i, on behalf of our 27,000 supporters across the state, thanks you for the opportunity to comment on the EMI/Alexander and Baldwin, Inc. (A&B) applications for stream diversion works SDWP-4950.6 (proposed Category 3 abandonment permits) and SDWP-4951.6 (already completed Category 4 abandonment permits), submitted to the Commission on Water Resource Management (CWRM). We understand that the official comment period for Cat 3 permits has already passed, but hope that the Commission will keep our comments in mind when they hear the matter of the Cat. 3 permits in Maui later this month.

As noted below, we ask the Commission to not approve the Category 4 after the fact permits until CWRM staff and Ke'anae-Wailuanui community members are satisfied that there is a plan and implementation schedule to restore biological connectivity for native stream species for the Waiokamilo-Palauhulu-Wailuanui-Wailuaiki stream system. The Commission has a proactive duty to make decisions which uphold Native Hawaiian traditional and customary rights. The Ko'olau community has fished and gathered from these same streams for centuries, and their rights to continue these practices is protected under the Hawai'i State Constitution.

Sierra Club has long advocated for the restoration of East Maui streams for the benefit of rural East Maui and Native Hawaiian communities, native fisheries and stream life, watershed ecosystems and public recreation and nature study. We support the efforts of A&B/EMI to abandon 70 stream diversions and restore mauka-makai flow and biological connectivity to the numerous streams and tributaries that are the lifeblood of East Maui.

EXHIBIT 1

We are mystified as to why the process has dragged on for so long. We often hear that the delay was due to County SMA and Army Corps review. Records obtained by Sierra Club Hawai'i indicate that USACE determinations were completed on January 26, 2018, a few months after being requested on October 17, 2017 and Maui County SMA exemption was granted on November 27, 2017, one month after requested. It has now been over a year and half since these needed agency reviews were completed. It is now past time to proceed with the complete and permanent restoration of the specific East Maui streams promised by A&B/EMI in April 2016, and formalized in the June 2018 CWRM IIFS Decision and Order.

We commend all involved for working towards a solution. We understand that the diversions are being grouped into different categories for administrative purposes and that separate applications are being submitted for each category, and we offer comments at this time for streams involved in Category 3 (SDWP_4950) and Category 4 (SDWP_4951.)

Sierra Club Maui volunteers have led educational hikes in these stream areas for over 30 years and have observed conditions along the streams and in the areas of the diversions. While SDWP Application 4951 (after the fact permits for diversions abandoned on 28-29 intakes on Waiokamilo stream and its tributaries) and SDWP Application 4950 (sealing intake grates, building stream overpasses and other modifications to abandon diversions on 11 streams and tributaries in the Huelo and Ke'anae areas) contain various maps and photos, many of these are very unclear, making detailed agency or public review difficult.

For example, in SDWP_4951, over a dozen metal or PVC pipes were described as already having been capped or removed. This action supposedly took place 12 years ago and is being permitted now. The Application should specify which pipes were removed, along with how the discarded pipe sections were disposed of. It should also indicate which pipes were "capped" and whether the capped sections are found near trails, streams or other natural areas, and if they are tightly sealed or leak. None of this information is provided. It is difficult to know when pictures were taken and whether the former "minor diversions," which once carried water from springs or tributaries into the Ko'olau Ditch, now carry water to any restored stream. We simply are not told in the Application what happens to the water that once went into the minor diversions.

In her December 26, 2016 comments on the EISPN for proposed long term A&B/EMI leases for East Maui, Sierra Club member and longtime Wailuanui resident, Leina Wender, offered these personal observations regarding the Waiokamilo stream Diversion restoration referenced in the EMI/A&B Category 4 After the Fact permit application SDWP_4951:

> "The Early Consultation Summary of November 23, 2016 states that Waiokamilo Stream was "fully restored in 2007", and that several other streams are "planned for full and permanent restoration." The dictionary definitions of "restore" include "to return…something to a former condition…"; "to repair or renovate…so as to return it to its original condition"; and "to give something previously stolen, taken away, or lost back to the original owner or recipient." EMI has not restored Waiokamilo or any other stream."

Wender continues in her comments:

> "EMI apparently no longer utilizes water from Waiokamilo. But this is not the same as restoration. EMI formerly diverted water not only from the main flume at Kikokiko, but also from numerous tributaries of various sizes which, before the existence of the ditch, eventually

> found their way into Waiokamilo Stream. This water was collected via about two dozen diversions consisting primarily of concrete catchment basins with pipes. EMI has cut these pipes so that the water no longer goes into the ditch. Instead, it now drips or flows onto the ditch road, creating a muddy mess and additional habitat for invasive plants. Most of this water never makes its way off of the road, much less back into the stream. When they were built, the ditch and the ditch road cut into and altered the natural terrain. Nothing has been done to return this terrain to its original condition or to ensure that the water not diverted actually gets into the stream."
>
> "In addition, EMI has abandoned and no longer maintains the ditch road in the Waiokamilo area, resulting in its present hazardous condition. They also no longer monitor the area for miconia, which I have frequently encountered there in recent years. EMI has abandoned any responsibility for stewardship of the watershed areas they no longer utilize. Even in the areas they still use, banyan trees, clidemia and other invasive plants grow unfettered."

These conditions of the Waikokamilo steam were reported in 2016, nine years after the claimed "restoration" of Waiokamilo stream. Photos taken by CWRM staff in 2008 and found in CWRM report PR200804 (*Instream Flow Standard Assessment Report for Hydrological Unit 6055, Waiokamilo*) show numerous Waiokamilo "minor" diversions as closed, but with pipes, unneeded dams and other debris left in place.

CWRM should not approve this After-the-Fact permit until they have a report from a staff visit to the area, in the company of Na Moku 'Aupuni o Ko'olau representatives. If conditions are as described, CWRM should request that EMI submit within 60 days, the outline of a plan to remediate the situation and fully restore the natural ecosystem of the Waiokamilo stream and its tributaries. We would particularly recommend the removal of dam structures located far from the Ko'olau ditch, such as the one shown on intake K-25 at the Kikokiko waterfall intake. (See picture in Attachment A)

In reviewing the permit applications, it appears that some other significant information was not provided, especially in these areas:

1) How the abandoned diversions will be modified or removed to allow adequate biological connectivity to support Native Hawaiian traditional and customary gathering practices;

2) How diversion structures will be properly removed to minimize debris and mosquito breeding in and along streams; and

3) How "dry sections" of stream between diversion structures will be avoided to ensure complete restoration of mauka-makai stream flows.

Cultural Impacts Posed by Diversion Structures

The SDWP Application has a section (Items 44 & 45) to provide information on "Cultural Impacts" of the proposed action. The response provided by A&B/EMI in all the applications assumes that by simply allowing stream water to flow over, around or through the extensive, century old diversion dams and sluices, all traditional and customary cultural practices can be protected and ensured. Experience, generational knowledge and common sense has shown us that this simply is not true.

There is no discussion in the A&B/EMI Applications of the impacts presented by massive structures, pipes and catch basins to native stream life and its habitat. Native Hawaiian culture includes traditional gathering, and any "stream restoration" plan that returns stream water yet does not provide a viable habitat for the culturally and biologically important resources that live in the stream is an incomplete plan.

In their October 2016 letter to then EMI head, Garrett Hew, CWRM staff made it clear that the EMI Diversion Abandonment Applications needed to have sufficiently clear and detailed information for Agency and public review, and commented to A&B/EMI staff:

"After reviewing your submission, as discussed briefly last week, we are requesting that you provide more specific information for all of the diversions listed."

CWRM staff also noted that: "The information will also be available for public review and, as you are well aware, will be heavily scrutinized to ensure that all water is restored and biological connectivity is optimized."

Although this specific request was made by CWRM staff, the EMI/A&B applications make no reference to efforts made or planned to optimize biological connectivity for native stream life on the streams covered by the permit activities.

In November 2017, BLNR approved a continuation of the EMI holdover permit for the East maui Lease areas covered by these applications. The holdover permit was approved for another year on the condition that "A&B needs to clean up their debris starting with more accessible areas and along streams."

That condition was also included in the November 2018 BLNR hearing decision on the holdover permits for 2019. A&B's current permit request would allow it to abandon in place discarded pipes and concrete that no longer serve any useful purpose. As such, they constitute debris that litters state land. In order to be consistent with the BLNR's condition, CWRM must mandate that these features that no longer serve any useful purpose be removed from state land.

The State of Hawaii Division of Fish and Wildlife (DOFAW) in their June 28, 2019 letter commenting on the EMI/A&B applications, appear to have the same concerns that discarded diversion structures will be left in place along the "restored" streams. Both the June 28 DOFAW letter and an earlier DOFAW memo from December 18, 2018, expressed concerns that the "applicant intends to leave a place a number of stream alterations that may substantially alter the natural condition of streams, concrete fixtures, channels, walls, catchments, and tunnels that potentially alter stream flows and surfaces, exacerbate erosion, encourage establishment of invasive species, degrade plant and wildlife habitats and affect wildlife dispersal and movements."

DOFAW provided a detailed analyses of intakes found in the EMI Cat 1 Application. EMI Cat 2 Application (SDWP_4915_6) and EMI Cat 3 Application (SDWP_4950) illustrate the types of alterations that can impact streams and stream life and should be properly removed.

DOFAW suggested that the present permits should be seen as the first step of the restoration process and that "the primary tasks to restore stream flow can be implemented initially, ensuring the water is returned to the streams in a timely manner, with the additional recommended work to proceed on a reasonable schedule."

The Sierra Club would like to see CWRM go a step further. We ask that CWRM require EMI/A&B to partner with the state on a specific plan and implementation timetable to remove unneeded diversion

debris, structures and accessory equipment (such as pipes) on or along the restored streams, to protect the Public Trust resources of the East Maui Lease/License areas.

Sierra Club concurs with the DOFAW comments, and requests that all the diversion structures be removed and are not allowed to be left in place. These structures:

(a) interfere with native aquatic species;
(b) facilitate mosquito breeding;
(c) have the potential to take water from streams (even if the water is not removed from the ahupua’a);
(d) threaten the safety of recreational users of public land;
(e) will essentially become garbage, and
(f) are aesthetically inappropriate in a natural environment.

We attach a short slide presentation (Attachment “A”) of a few East Maui Lease area streams proposed for complete restoration, illustrating these conditions that need to be addressed during the stream restoration/diversion abandonment process.

We appreciate your consideration of our comments and suggestions.

Attachment A

from

Sierra Club Hawaii

August 11, 2019 Comments

RE: EMI ATF stream abandonment
Category 4 permits (SDWPA_4951)
Category 3 permits (SDWPA_4950)
and comments on other Restoration streams

Monday, August 12, 19

Sierra Club has concerns that unmodified diversion structures on "restored" stream interfere with movement and habitat of native aquatic species

Intake L-5
Hanehoi stream
Lowrie ditch

Status: to be fully and permanently restored.

Permit Action: CAT 1. seal grate with concrete

Recommendation: Diversion structure impedes natural stream flow and has a slight overhang. It should be removed and a flatter bypass created over the Lowrie ditch to allow more natural grade of stream bed

Monday, August 12, 19

Intake K-17 W. Wailuaiki stream Ko'olau ditch
Status: to be fully and permanently restored.
Permit Action: NONE. Gate removed.
Streamlife left with very limited migration path
W. Wailuaiki -open gate to restore flow, Restricts flow area
West Wailuaiki Stream has high native streamlife habitat value :
"The data in this report reveals the potential adverse effects of stream alterations to biological resources in the stream and estuary, which bears significant ecological and cultural value."
DAR 2009 survey of West Wailuaiki stream
Recommendations:
• Remove unneeded dam structure (photo below) to restore more natural flow pattems and avoid stagnant pools that breed mosquitos during low flow periods
Overall, Wailua Iki West Stream has good potential stream habitat in the lower, middle, and upper reaches....IRestoration of flow and improvement of animal passage would have the greatest effect on S. stimpsoni ('o'opu nopili) and A. bisulcata ('opae kala'ole), and would further enhance the overall productivity of Wailua Iki West Stream.
DAR 2009 survey of West Wailuaiki stream
Monday, August 12, 19

Intake K-21 W. Wailuanui stream Ko'olau ditch
on State land
Status: to be fully and permanently restored.
Permit Action: NONE. Gate removed.
Streamlife left with very limited migration path due to two large dam structures
Recommendation: Remove unneeded dam structures to create more natural stream bed
W. Wailuanui -narrow gate to restore flow, Restricts flow area
W. Wailuanui connectivity is important for native streamlife recovery
West Wailuanui stream rates better than average for streams on Maui and statewide. due to range of habitats present and the number of different native species observed in the lower parts of the stream. The stream lacks many of the commonly introduced species and thus has a relatively intact native biota.
DAR 2009 study
Monday, August 12, 19


Intake H-3 Hanehoi stream New Haiku ditch
Status: to be fully and permanently restored.
Permit Action: CAT.1. Gate removed/grate sealed
Streamlife left with very limited migration path
Recommendation: remove unneeded dam/ catch basin structures
Hanehoi/Haiku ditch -Narrow open gate is only pathway for restored flow and streamlife migration.Restricts flow area
Monday, August 12, 19

Intake H-3 Hanehoi stream New Haiku ditch
Status: to be fully and permanently restored.
Permit Action: CAT.1. Gate removed/grate sealed
Unneeded debris basin facilitates accumulation of stagnant water and mosquito breeding; Flow concentrated in one spot erodes soil banks and silts up water.
Recommendation: remove unneeded dam/ catch basin structures create more natural flows
Monday, August 12, 19

Debris left along public trails on public land threatens the safety of recreational users of public land;

Photo: jagged iron pipe along Wailuaiki Trail on State land

Close-up of leaking pipes

Broken EMI pipes carrying water from a W. Wailuaiki stream tributary to Ko'olau ditch make almost half the public trail muddy, slippery and hazardous. W. Wailuaiki is supposed to be restored, but debris like this remains remains
Monday, August 12, 19

Unneeded Irrigation system debris are aesthetically inappropriate in a natural environment, and will essentially become garbage.....

WAIOKAMILO

Waiokamilo Kikokiko Intake

Dec. 2008

Main Kikokiko 6-in intake pipe - severed and no longer operational

Intake K-25 Kikokiko waterfall leads by pipe to Ko'olau ditch

Status: stream to be fully and permanently restored.

Permit Action: Cat 4. Pipe severed but not removed at its source

Recommendation: remove unneeded pipe (photo left) and diversion dam (photo far left) at Kikokiko falls

Table 13-2. Continued. Minor diversions on the EMI System in the Waiokamilo hydrologic unit.

Diversion ID	EMI Ditch System	Description
K-25a	Koolau	East Kikokiko 2-inch pipe intake. Concrete catchment basin with pipe.

Photos. a) Concrete catchment basin captures seepage and transports water to Koolau Ditch below via a PVC pipe (EMI, 05/1989); b) Downstream view from diversion structure (RMT, 12/2007); c) Water dropping into concrete catchment basin below roadway (RMT, 12/2007).

a)

b)

c)

Intakes K-25-a & K-22-g Waiokamilo Stream Ko'olau ditch-- State Land

Status: stream to be fully and permanently restored.

Permit Action: CAT 4. Pipes "cut" but not removed at their source

Recommended Action: remove unsightly pipes on public land

K-22g	Koolau	Koolau Ditch #10 crosscut intake #6. Concrete catchment basin with pipe.

Photos. a) Concrete catchment basin captures seepage and transports water to Koolau Ditch below via a PVC pipe (EMI, 05/1989); b) Close-up view of disconnected PVC pipe outlet from catchment basin (RMT, 12/2007).

a)

b)

Monday, August 12, 19

Intakes K-22-c & K-22-d Waiokamilo Stream Ko’olau ditch-- State Land

Status: stream to be fully and permanently restored.

Permit Action: CAT 4. Pipes “cut” but not removed at their source. piped water may be causing erosions and degradion of trails on state land

Recommended Action: remove unsightly pipes on public land

Table 13-2. Continued. Minor diversions on the EMI System in the Waiokamilo hydrologic unit.

Diversion ID	EMI Ditch System	Description
K-22c	Koolau	Koolau Ditch #10 crosscut intake #2. Concrete catchment basin with pipe.

Photos. a) Concrete catchment basin captures seepage and transports water to Koolau Ditch below via a PVC pipe (EMI, 05/1989); b) Upstream view from below capture of seepage with PVC pipe disconnected (RMT, 12/2007).

a)

b)

K-22d	Koolau	Koolau Ditch #10 crosscut intake #3. Concrete catchment basin with pipe.

Photos. a) Concrete catchment basin captures seepage and transports water to Koolau Ditch below via a pipe (EMI, 05/1989); b) Close-up of disconnected pipe below basin (RMT, 12/2007).

a)

b)

- 111 -

Monday, August 12, 19

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01 September 2021

Mark K. Vaught
Director, Water Resources
Mahi Pono, LLC
P.O. Box 1104
Puunene, HI 96784

Subject: Geotechnical Engineering Condition Assessment and Removal of Number 9 intake of Ko'olau Ditch Tunnel, Haiku, Maui

Mark K. Vaught:

Island Geotechnical Engineering (IGE) understands that Mahi Pono, LLC is considering the removal of the non-permeable, rockwall dike on Number 9 intake of Ko'olau Ditch Tunnel, Haiku, Maui. Mahi Pono is concerned about the structural integrity of the Ko'olau Ditch Tunnel that passes through below the dike.

For this reason, a site visit was conducted to evaluate the site conditions on 30 June 2021. The following people attended the condition assessment site visit:

1. Mark K. Vaught, Mahi Pono LLC
2. Kainoa Casco, Mahi Pono, LLC
3. Abidin Kaya, Island Geotechnical Engineering

The following was observed:

1. The crown of the Ko'olau Ditch Tunnel is about five feet below the riverbed level of the Number 9 water intake.
2. There is an overpass bridge built in 1923 that is about 45 feet long and six feet wide (Photo 1).
3. There is about a four-foot-high impermeable rock dike (Photo 2).
4. There is about a 10-foot high rockwall supported embankment on the west side of the bridge (Photo 3).

It was noted that the impermeable dike is in particularly good condition. However, the very end of the supported rock wall is crumbling at the surface level (see Photo 4).

Based on the observed site conditions, IGE anticipates that removing the impermeable dike will not adversely affect the stability of the Ko'olau Ditch Tunnel passing below as it removes the surcharge load and there is not structural connection. However, IGE recommends the following:

1. The impermeable dike four (4) feet from the rockwall supported embankment should be left intact and tempered 1:1 to the stream bed level to keep the rockwall supported embankment in good condition. It is IGE's opinion that this section of the embankment needs to be left in intact condition because the loss of this embankment would lead to the eventual collapse of the western abutment and ultimately

EXHIBIT 2

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the bridge that supports the road.

2. IGE anticipates that the impermeable dike is built on hard rock; however, if it is found that the base of the dike is not hard rock, the area is to be capped using high strength concrete to prevent erosion/scoring.

3. Large boulders should be placed at the base of the rockwall supporting the embankment to prevent scoring of the embankment.

4. Tunnel should be inspected regularly to monitor any falling of soft soil/rocks from the crown due to vibrations from deconstruction activities.

5. All deconstruction activities to be conducted under the observation of a licensed Geotechnical Engineer.

6. Demolishing should be conducted in accordance with OSHA requirements and applicable State and county safety requirements.

Sincerely yours.

Abidin Kaya, Ph.D., P.E.

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Pho 1. View of rock memorial at the site.

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Photo 2. View of the impermeable dike on the river bed.

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Photo 3. Rockwall supported embankment on the west side of the bridge and dike.

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Photo 4. View of the crumbling rockwall supported embankment at its west side.

STREAM DIVERSION WORKS PERMIT STANDARD CONDITIONS
(Revised December 15, 2020)

1. The permit application and staff submittal approved by the Commission at its meeting on the above date shall be incorporated herein by reference.
2. The project may require other agency approvals regarding wetlands, water quality, grading, stockpiling, endangered species, and floodways. The permittee shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments, including, but not limited to, instream flow standards.
3. The permittee, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the permittee or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.
4. The permittee shall notify the Commission, by letter, of the actual dates of project initiation and completion. The permittee shall submit a set of as-built plans and photos in pdf format of the completed work to the Commission upon completion of this project. This permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The proposed work under this stream channel alteration permit shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.
5. Before proceeding with any work authorized by the Commission, the permittee shall submit one set of construction plans and specifications in PDF format to determine consistency with the conditions of the permit and the declarations set forth in the permit application.
6. The permittee shall implement site-specific, construction Best Management Practices in consultation with the DOH Clean Water Branch and other agencies as applicable, that are designed, implemented, operated, and maintained by the permittee and its contractor to properly isolate and confine activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting State waters per HRS Ch. 342D Water Pollution; HAR §11-54-1 through §11-54-8 Water Quality Standards; and HAR Ch. 11-55 Water Pollution Control, Appendix C.
7. The permittee shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The permittee shall plant or cover lands denuded of vegetation as quickly as possible to prevent erosion and use native plant species common to riparian environments to improve the habitat quality of the stream environment.
8. The permittee, owner and/or operator of the stream diversion works shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage on a monthly (calendar or work schedule) basis to the Commission per HAR §13-168-7 Report of Water Use.
9. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the permittee shall stop work in the area of the find and contact the Department’s Historic Preservation Division immediately. Work may commence only after written concurrence by the State Historic Preservation Division.

EXHIBIT 3

LEGAL AUTHORITIES

Water as a Public Trust. The four public trust purposes are:

1. Maintenance of waters in their natural state;
2. Domestic water use of the general public, particularly drinking water;
3. The exercise of Native Hawaiian and traditional and customary rights, including appurtenant rights. Waiahole, 94 Hawaii 97; 9 P.3d 409 (2000).
4. Reservations of water for use on Hawaiian home lands. Waiola O Molokai, Inc., 103 Hawaii 401; 83 P.3d 664 (2004).

HRS §174C-71 Protection of instream uses. The commission shall establish and administer a statewide instream use protection program. In carrying out this part, the commission shall cooperate with the United States government or any of its agencies, other state agencies, and the county governments and any of their agencies. In the performance of its duties the commission shall:

(2) Establish interim instream flow standards;
  (D) In considering a petition to adopt an interim instream flow standard, the commission shall 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;
(3) Protect stream channels from alteration whenever practicable to provide for fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses;
  (A) The commission shall require persons to obtain a permit from the commission prior to undertaking a stream channel alteration; provided that routine streambed and drainageway maintenance activities and maintenance of existing facilities are exempt from obtaining a permit;
  (C) The commission shall establish guidelines for processing and considering applications for stream channel alterations consistent with section 174C-93;

HRS §174C-92 Registration of existing stream diversion works. Any person owning or operating a stream diversion works within or outside of a water management area shall register such work with the commission. Registration shall be on the forms provided by the commission. Reporting requirements on the registration forms shall be reasonable.

HRS §174C-93 Permits for construction or alteration. No person shall construct or alter a stream diversion works, other than in the course of normal maintenance, without first obtaining a permit from the commission.

HAR §13-168-2 Definitions.

“Instream flow standard” means 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 aquatic life, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses.

“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 aquatic life 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.

"Stream diversion" means the act of diverting, pumping or otherwise removing water from a stream into a channel, ditch, pipeline, or other conduit.

"Stream diversion works" means any artificial structure, excavation, pipeline, or other conduit constructed singly or in combination, for the purpose of diverting or otherwise removing water from a stream into a channel, ditch, tunnel, pipeline, etc.

HAR §13-168-31 Registration of existing stream diversion works. Within one year from the effective date of these rules, the owner or operator of any stream diversion works in any area of the state shall register such facility with the commission. Registration shall be on the forms provided by the commission and shall include information such as location, dimensions, elevations, divertible capacity, construction plans, method of measuring flows, and all other facts or information reasonably required.

HAR §13-168-35 Abandoned stream diversion works. (a) The owner of any stream diversion works wishing to abandon or remove such works shall first obtain a stream diversion permit issued or caused to be issued by the commission. No abandonment work shall be undertaken by the applicant until such a permit is issued by the commission.

(b) Each application for a stream diversion permit to perform abandonment work shall be made on forms furnished by the commission, shall not require a fee, and shall include:

(1) The name and address of the applicant;
(2) The location and description of the proposed stream diversion work abandonment;
(3) An assessment of the impact the abandonment will have on the stream environment;
(4) Relevant maps, plans, and drawings; and
(5) Other information as may be necessary for the commission to determine the merits of the proposed stream channel alteration, including any hazards to public health, safety, or welfare, and the desirability of issuing a permit.