#### COMMISSION ON WATER RESOURCE MANAGEMENT

#### STATE OF HAWAII

PETITION TO AMEND INTERIM	) Case No <u>CCH-MA13-01</u>
INSTREAM FLOW STANDARDS FOR	
HONOPOU, HUELO (PUOLUA),	) HEARINGS OFFICER'S
HANEHOI, WAIKAMOI, ALO,	RECOMMENDATION RE INTERIM
WAHINEPEE, PUOHOKAMOA,	RESTORATION OF STREAM FLOW;
HAIPUAENA, PUNALAU/KOLEA,	CERTIFICATE OF SERVICE
HONOMANU, NUAAILUA, PIINAAU,	
PALAUHULU, OHIA (WAIANU),	
WAIOKAMILO, KUALANI, WAILUANUI,	
WEST WAILUAIKI, EAST WAILUAIKI,	)
KOPILIULA, PUAKAA, WAIOHUE,	)
PAAKEA, WAIAAKA, KAPAULA,	
HANAWI, AND MAKAPIPI STREAMS	
	)
	)

# HEARINGS OFFICER'S RECOMMENDATION RE INTERIM RESTORATION OF STREAM FLOW

A conference was held with attorneys for the parties in the East Maui Contested Case on Wednesday, March 23, 2016 to discuss the scope of the proposed reopened hearing because of Hawaiian Commercial & Sugar Co.'s (HC&S's) cessation of sugar operations.

As part of this discussion, all parties agreed that restoring the 18 million gallons per day (mgd) recommended by your Hearings Officer's Proposed Decision should be effective immediately. The recommended restoration would be as follows:

## Palauhulu Stream:

Amended IIFS: The lesser of 3.10 mgd  $(4.80 \text{ cfs}^1)$  or the estimated BFQ<sub>50</sub><sup>2</sup> flow at the site

as derived from actual flows.

Location: Near 80 feet elevation, upstream with its confluence with Piinaau Stream.

## Waiokamilo Stream:

Amended IIFS: 3.17 mgd (4.90 cfs)

Location: Near Dam 3, just above the diversion to the Lakini taro patches.

<sup>&</sup>lt;sup>1</sup> CFS is cubic feet per second.

<sup>&</sup>lt;sup>2</sup> BFQ<sub>50</sub> equals median base flow.

Wailuanui Stream:

Amended IIFS: The lesser of 4.03 mgd (6.23 cfs) or the estimated BFQ<sub>50</sub> flow at the site

as derived from actual flows.

Near 620 feet elevation, downstream of the Koolau Ditch and below the Location:

confluence of East and West Wailuanui Streams.

The lesser of 2.77 mgd (4.29 cfs) or the estimated 64 percent of  $BFQ_{50}$ Amended IIFS:

flow  $(H_{90}^{3})$  at the site as derived from actual flows.

Below Waikani Falls. Location:

**Honopou Stream**:

The lesser of 2.31 mgd (3.58 cfs) or the estimated BFQ<sub>50</sub> flow at the site Amended IIFS:

as derived from actual flows.

Location: Just below the Haiku ditch.

Amended IIFS: The estimated 64 percent of BFQ<sub>50</sub> flow  $(H_{90})$  at the site as derived from

actual flows, currently estimated as 1.49 mgd (2.30 cfs).

Downstream of taro and domestic diversions below the Haiku ditch. Location:

Hanehoi/Puolua Streams:

Amended IIFS: The lesser of 0.74 mgd (1.15 cfs) or the estimated BFQ<sub>50</sub> flow at the site

as derived from actual flows.

Location: On Hanehoi Stream above the Lowrie Ditch.

Amended IIFS: The estimated 64 percent of BFQ<sub>50</sub> flow (H<sub>90</sub>) at the site as derived from

actual flows, currently estimated as 2.21 mgd (3.42 cfs).

Location: Just above the terminal waterfall at the mouth of Hanehoi Stream.

Amended IIFS: 0.69 mgd (1.07 cfs) or the estimated BFQ<sub>50</sub> flow at the site as derived

from actual flows.

Location: On Puolua Stream below the Haiku Ditch.

Amended IIFS: 1.87 mgd (2.90 cfs) or as explained below.

Location: On Hanehoi Stream below the Haiku Ditch.

> The purpose of the two IIFS below the Haiku Ditch, one on Hanehoi Stream and the other on Puolua Stream, is to provide 0.35 mgd to meet the taro irrigation requirements. The sum of both IIFS, 2.56 mgd (0.69 mgd plus 1.87 mgd), is 0.35 mgd greater than the IIFS of 2.21 mgd for habitat restoration located downstream. Thus, if the estimated IIFS cannot be achieved, the IIFS on Puoloa Stream would be established as the BFO<sub>50</sub> flow at the site as derived from actual flows, and the IIFS on Hanehoi Stream would be established such that flows from both streams contribute

> to the 0.35 mgd to meet the taro irrigation requirements, and the remaining

 $<sup>^{3}</sup>$  H<sub>90</sub> is the flow required to provide 90 percent of the natural habitat.

combined flows equal 64 percent of BFQ $_{50}$  flow (H $_{90}$ ) at the lowest site as derived from actual flows.

**East Wailuaiki Stream**:

Amended IIFS: The estimated 64 percent of BFQ $_{50}$  flow (H $_{90}$ ) at the site as derived from

actual flows, currently estimated as 2.39 mgd (3.70 cfs).

Location: Below all EMI diversions and just above Hana Highway, near an altitude

of 1,235 feet.

West Wailuaiki Stream:

Amended IIFS: The estimated 64 percent of BFQ $_{50}$  flow (H $_{90}$ ) at the site as derived from

actual flows, currently estimated as 2.46 mgd (3.80 cfs).

Location: Below all EMI diversions and just above Hana Highway, near an altitude

of 1,235 feet.

Waikamoi Stream:

Amended IIFS: The estimated 64 percent of BFQ $_{50}$  flow (H $_{90}$ ) at the site as derived from

actual flows, currently estimated as 1.81 mgd (2.80 cfs).

Location: below all EMI diversions and just above Hana Highway, near an altitude

of 550 feet.

Waiohue Stream:

Amended IIFS: The estimated 64 percent of BFQ $_{50}$  flow (H $_{90}$ ) at the site as derived from

actual flows, currently estimated as 2.07 mgd (3.20 cfs).

Location: Below all EMI diversions and just above Hana Highway, near an altitude

of 1,195 feet.

Hanawi Stream:

Amended IIFS: 0.06 mgd (0.10 cfs) (to create a wetted pathway)

Location: Below all EMI diversions and just above Hana Highway, near an altitude

of 1,300 feet.

Kopiliula/Puakaa Streams:

Amended IIFS: The estimated 64 percent of BFQ<sub>50</sub> flow  $(H_{90})$  at the site as derived from

actual flows, currently estimated as 2.07 mgd (3.20 cfs).

Location: On Kopiliula Stream, below the Ko'olau Ditch.

Amended IIFS: Flow necessary to create a wetted pathway for an annual IIFS, estimated at

0.45 mgd (0.70 cfs) in the dry season.

Location: On Puakaa Stream, below the Ko`olau Ditch.

Makapipi Stream<sup>4</sup>:

Amended IIFS: 0.60 mgd (0.93 cfs) (achieved during test release).

Location: Below the Ko'olau Ditch.

<sup>&</sup>lt;sup>4</sup> Makapipi Stream's amended IIFS is subject to a continuous flow being established.

These proposed restorations would result in a net increase of 18 mgd of stream flow in east Maui as follows:

	Amended IIFS	Amount Restored
Palauhulu Stream Waiokamilo Stream	3.10 mgd (4.80 cfs) 3.17 mgd (4.90 cfs)	0 0 <sup>5</sup>
Wailuanui Stream	4.03 mgd (6.23 cfs)	
	2.77 mgd (4.29 cfs)	2.06 mgd (3.19 cfs)
Honopou Stream	2.31 mgd (3.58 cfs)	
	1.49 mgd (2.30 cfs)	2.17 mgd (3.36 cfs)
Hanehoi/Puolua Streams	0.74 mgd (1.15 cfs)	
	1.87 mgd (2.90 cfs)	3.30 mgd (5.12 cfs)
Track Waller H. Church	0.69 mgd (1.07 cfs)	0.20 1/2.70 5
East Wailuaiki Stream	2.39 mgd (3.70 cfs)	2.39 mgd (3.70 cfs)
West Wailuaiki Stream	2.46 mgd (3.80 cfs)	2.46 mgd (3.80 cfs)
Waikamoi Stream	1.81 mgd (2.80 cfs)	1.68 mgd (2.60 cfs)
Waiohue Stream	2.07 mgd (3.20 cfs)	2.07 mgd (3.20 cfs)
Hanawi Stream	0.06 mgd (0.10 cfs)	0.06 mgd (0.10 cfs)
Kopiliula/Puakaa Streams	2.07 mgd (3.20 cfs)	1.75 mgd (2.70 cfs)
	0.45 mgd (0.70 cfs)	0.06 mgd (0.1 cfs)
Makapipi Stream	0.60 mgd (0.93 cfs) <b>test</b>	0.60 mgd (0.93 cfs) <b>test</b> <sup>6</sup>
	Total (with Makapipi Stream):	18.60 mgd (28.80 cfs)
	Total (without Makapipi Stream)	18.00 mgd (27.87 cfs)

No longer diverted due to BLNR ordering 6 mgd to be restored, but without diversions, flow is only 3.17 mgd (4.90 cfs).

The five days of test releases were not enough to determine if infiltration losses could be overcome with a constant flow. Therefore, it is proposed that a longer test period be conducted before concluding whether or not continuous flow to the ocean from the Ko`olau Ditch can be achieved with a flow of 0.60 mgd (0.93 cfs) to provide 0.54 to 0.63 mgd for irrigation requirements.

Any objections or exceptions to this recommendation should be fil	ed within twenty (20)
days of the date of this recommendation.	

DATED: Honolulu, Hawaii, <u>April 1, 2016</u>

LAWRENCE H. MIIKE Hearings Officer

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	)

# **CERTIFICATE OF SERVICE**

On April 1, 2016, a copy of the foregoing document was served on:

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