

III. DECISION AND ORDER [East Maui Streams - Recommendation to Commission on Water Resource Management August 2, 2017](#)

This CCH was being held to establish IIFS and not to determine nor limit which parties may use waters available after the IIFS are established. Legal conclusions made in this proceeding pertaining to a particular party's water rights, traditional and customary rights, water use requirements, alternative water sources, and system losses are made without prejudice to the rights of any party and the Commission to revisit these issues in any proceeding involving the use of water from any of the East Maui streams that are the subject of this contested case hearing. The burden of proof with respect to such issues will be upon the petitioner rather than upon the Commission.

In considering a petition to adopt IIFS, the Commission must 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.

It is the Commission's duty to establish IIFS that protect instream values to the extent practicable and to protect the public interest.

The public interest includes not only protecting instream values but also preserving agricultural lands and assuring adequate water supplies for Maui.

The Commission needs only to reasonably estimate instream and offstream demands, and may base the IIFS not only on scientifically proven facts but also on future predictions, generalized assumptions, and policy judgments.

In amending the IIFS for the 24 streams that are the subject of this contested case, the Commission has increased flows for 12 of the 22 streams that have been diverted by the EMI Ditch system, adding approximately 26.49 mgd to the streams from their diverted base flows, including 6 streams that will have their flows returned to their undiverted, natural flows. An undetermined amount of rainwater would also be returned to these 6 streams. (FOF 243-249, 263.)

For noninstream uses, the Commission estimates that maximum requirements would be 83.75 mgd for HC&S and 16 mgd for MDWS. (FOF 448, 461.) However, HC&S's projections are for 26,996 acres, of which 22,254 acres are Important Agricultural Lands, and the requirements for actual irrigated fields are bound to change, and total acreage may be reduced to as low as 22,254 acres due to the urbanization of Maui. (COLs 131-133.) For MDWS, 16 mgd is the maximum deliveries from EMI under the agreement, and projected future needs to 2030 are for an additional 4.2 mgd to 7.95 mgd in addition to the current 7.1 mgd delivered by the Wailoa Ditch. (FOF 461, 470.)

Between 2011-2014, approximately 108.89 mgd was diverted by EMI from the lease lands as measured at Honopou Stream. (FOF 444.) During this time, from the combined 2008 and 2010 Commission Orders, wet season restoration was 13.95 mgd and dry season restoration was 5.61 mgd. (FOF 14.) If we assume that these amounts would be included in the 26.49 mgd of base flows that will be returned to the streams. the additional restoration over the 2008 and

2010 Orders would be 12.54 mgd to 20.88 mgd, leaving 88.01 mgd to 96.35 mgd of the 108.89 mgd that was diverted.

Compared to the maximum requirements for HC&S of 83.75 mgd and MDWS of 16 mgd, the total of 99.75 mgd is 3.4 mgd to 11.74 mgd short of the estimated surface water that would be available and well within what might be reasonably expected to be actually required in the future.

A. Amended IIFS

The Commission's Order of July 18, 2016 that Makapipi, Hanawi, Waiohue, Kopiliula/Puakaa, East Wailuaiki, West Wailuaiki, Wailuanui (East and West), Waiokamilo, and Waikamoi Streams remain undiverted is hereby rescinded, to be replaced by the following amended IIFS. EMI may continue to leave the streams undiverted that the Commission has not ordered to fully restore base flows, until EMI Ditch diversions increase to the point that their flows are required to meet HC&S's expanding irrigation requirements on their East Maui fields. (COL 260.)

The IIFS of the following streams are amended from their previous IIFS, at the approximate locations specified, with final locations approved by the Commission, if necessary, after implementation by Commission staff.

The six streams restored to natural, undiverted base flows plus rainwater represents all the water that was historically available to the communities along each specific stream before the EMI Ditch system was built. If, under current climate, rainfall, and stream flow conditions, such stream flows are insufficient to meet all irrigation and domestic uses, it is incumbent upon such users to develop a system of reasonable sharing, including adequate stream flows for resuscitation of stream life. The Commission has established estimated H₉₀ flows for Makapipi, Wailuanui, Hanehoi/Puolua, and Honopou Streams. Waiokamilo and Palauhulu Streams will have H₉₀ flows of zero (0), as explained in COL 251-259, *supra*.

The IIFS are the estimated 0.64xBFQ₅₀ (H₉₀) flows for stream restoration, and the numbers are only estimates, to be eventually confirmed by actual flows from which the H₉₀ can be established, and for which stream restoration results in recruitment, retention, and reproduction of stream wildlife.

Makapipi Stream:	<p>IIFS: 0.54 mgd (0.83 cfs) Location: Downstream of Koolau Ditch, near Hana Highway Natural (undiverted) flow estimated at 0.84 mgd (1.3 cfs) Amount available for diversions upstream: 0.30 mgd (0.47 cfs)</p>
Hanawi Stream:	<p>IIFS: 0.06 mgd (0.10 cfs) Location: Downstream of Koolau Ditch, near Hana Highway Diverted flow: 0.00 mgd (0.00 cfs) Amount available for diversions upstream: 0.00 mgd (0.00 cfs)</p>
Waiohue Stream:	<p>IIFS: 2.07 mgd (3.2 cfs) Location: Downstream of Koolau Ditch, near Hana Highway Diverted flow: 0.00 mgd (0.00 cfs) Amount available for diversions upstream: 0.00 mgd (0.00 cfs)</p>
Kopiliula/	<p>IIFS: 2.07 mgd (5.2 cfs) Location: Downstream of Koolau Ditch, near Hana Highway Diverted flow: 0.00 mgd (0.00 cfs) Amount available for diversions upstream: 0.00 mgd (0.00 cfs)</p>
Puakaa Stream:	<p>IIFS: 0.45 mgd (0.7 cfs) Location: Downstream of Koolau Ditch, near Hana Highway Diverted flow: 0.00 mgd (0.00 cfs) Amount available for diversions upstream: 0.00 mgd (0.00 cfs)</p>
East Wailuaiki Stream:	<p>IIFS: 2.39 mgd (3.7 cfs) Location: Downstream of Koolau Ditch, near Hana Highway Diverted flow: 0.00 mgd (0.00 cfs) Amount available for diversions upstream: 0.00 mgd (0.00 cfs)</p>
West Wailuaiki Stream:	<p>IIFS: 2.46 mgd (3.8 cfs) Location: Downstream of Koolau Ditch, near Hana Highway Diverted flow: 0.00 mgd (0.00 cfs) Amount available for diversions upstream: 0.00 mgd (0.00 cfs)</p>
Wailuanui Stream:	<p>IIFS: 2.52 mgd (3.9 cfs) Location: Downstream of Koolau Ditch, near Hana Highway Natural (undiverted) flow estimated at 3.94 mgd (6.1 cfs) Amount available for diversions upstream: 1.42 mgd (2.2 cfs)</p>

Waiokamilo Stream:	IIFS: 0.00 mgd (0.00 cfs) Location: Downstream of Koolau Ditch, near Hana Highway Natural (undiverted) flow estimated at 3.17 mgd (4.90 cfs) Amount available for diversions upstream: 3.17 mgd (4.90 cfs)
Palauhulu Stream:	IIFS: 0.00 mgd (0.00 cfs) Location: Downstream of Koolau Ditch, near Hana Highway Natural (undiverted) flow estimated at 7.11 mgd (11 cfs) Amount available for diversions upstream: 7.11 mgd (11 cfs)
Waikamoi Stream:	IIFS: 2.78 mgd (4.3 cfs) Location: Downstream of Koolau Ditch and downstream of confluence with Alo Stream, near Hana Highway Diverted flow estimated at 0.13 mgd (0.2 cfs) Amount available for diversions upstream: 0.00 mgd (0.00 cfs)
Hanehoi/	IIFS: 0.71 mgd (1.1 cfs) Location: downstream of the Haiku Ditch. Natural (undiverted) flow estimated at 2.52 mgd (3.9 cfs) Amount available for diversions upstream: 1.81 mgd (2.8 cfs)
Puolua Stream:	IIFS: 0.06 mgd (0.1 cfs) Location: downstream of the Haiku Ditch. Natural (undiverted) flow estimated at 0.97 mgd (1.5 cfs) Amount available for diversions upstream: 0.91 mgd (1.4 cfs)
Honopou Stream:	IIFS: 2.71 mgd (4.2 cfs) Location: downstream of the Haiku Ditch. Natural (undiverted) flow estimated at 4.20 mgd (6.5 cfs) Amount available for diversions upstream: 1.49 mgd (2.3 cfs)

B. Status Quo IIFS

The remaining streams shall continue with their status quo IIFS as of October 8, 1988
(See COL 266-268).

C. Method of Monitoring

Monitoring of the IIFS will be through 12-month moving averages. This method recognizes that requiring a specific amount of flow at all times at a specific location is incompatible with the objectives of providing sufficient flow to meet irrigation and domestic requirements and/or providing sufficient habitat for growth, reproduction, and recruitment of native stream animals. (See COL 167-173, 191-196.)

D. Reporting

Approximately one year from the date of this Order, the following information shall be provided on a regular basis, the intervals to be determined after consultation with Commission staff:

- a. Commission staff shall report on:
 1. Whether or not continuous flow could be established in Makapipi Stream.
 2. All other aspects of the implementation of the amended IIFS.
- b. DAR is requested to report on:
 1. The Commission has no authority over DAR and therefore requests that BLNR authorize DAR to perform the following tasks:
 - a. Whether or not the flows implemented for East Wailuaiki, West Wailuaiki, Waikamoi, and Waiohue Streams that were estimated at 64 percent of BFQ₅₀ did in fact result in H₉₀ habitat.
 - b. Whether or not the assumptions that there is a threshold and that it is H₉₀ are inconclusive or conclusive.
 - c. How it will evaluate the three classes of restoration methods identified in COL 261 and discussed in COL 246-260, *supra*.
- c. Nā Moku shall report on:
 1. Adequacy of water deliveries in terms of inflow quantity and outflow water temperatures from Pauluhu Stream, Waiokamilo and Wailuanui Streams, Honopou Stream, and Hanehoi/Puolua Streams, including taro loi from which outflows continue to lower loi or return to the stream; and loi from which outflows are not reused or returned.

2. Actual and potential maintenance, irrigation and farming practices for more efficient use of stream waters.
 3. Nā Moku members as "konohiki" for the streams that they use for irrigation and/or domestic uses, including managing their uses so that the downstream IIFS for habitat restoration are met.
- d. EMI shall report on:
1. Modifications to diversions to meet the amended IIFS.
 2. Water deliveries at Honopou Stream and Maliko Gulch, and any changes EMI ascribes to the amended IIFS.
 3. Changes in stream diversions and ditch settings as HC&S's irrigation requirements increase.
- e. HC&S shall report on:
1. Surface, pumped, and total water usage.
 2. Crops and acreage planted.
 3. Changes in its initial diversified agriculture plan, including major changes in type of crops planned and reduction of planned irrigation acres through changes in use or sales of land.
- f. MDWS shall report on:
1. Water deliveries at the Upper Waikamoi Flume, including any amounts ascribed to reduced losses from replacing the flume.
 2. The status of plans for a 100-million or 200-million gallon reservoir at the Kamole WTP.