

EAST MAUI IRRIGATION COMPANY, LLC

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June 28, 2021

VIA EMAIL

The Honorable Suzanne Case, Chairperson
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, HI 96809

Dear Chair Case:

The purpose of this letter is to respond to the additional information requested per your letter dated June 9, 2021, stemming from the Sierra Club's review of our 1Q 2021 status report for the East Maui water revocable permits. Those questions and responses follow:

- 1. Can it be estimated how much water is specifically lost to evaporation and seepage at this time? Can you more specifically state how much water is routed to the reservoirs each day? How much water is routed to hydroelectric use each day?**

As a reminder, net seepage losses do not likely occur in the EMI diversion system as determined by a 2012 USGS seepage study conducted on the EMI ditch system (see CWRM 2018 IIFS D&O, FOF 723). Evaporation and seepage do occur, however, in the on-farm distribution system of ditches and reservoirs. This water is not lost, but rather returns to the water cycle/water resources of the island—to the atmosphere to return as rainfall, or to the underlying aquifers in Central Maui which are relied upon by various users.

To estimate the amount of evaporation and seepage at this time is not possible. To try to measure this amount would involve closing sections of the ditches and reservoirs, allowing the water to remain in those structure for a period of time and taking before and after readings. This would disrupt Mahi Pono's ongoing farming operations. The figure used by the CWRM in its 2018 D&O (22.7%) was based on the amount of water that could not be specifically accounted for when under full sugar production on the 30,000 acres that were irrigated by the EMI system at that time.

Mahi Pono has 35 reservoirs (that receive east Maui water) on the farm and currently has 13 in active use. Water from east Maui is directed to each planted field for crop irrigation. Once the irrigation interval is complete, water is routed to other fields that are

scheduled for watering. Should there be any residual water, or during periods of no irrigation, water is then sent through a system of reservoirs for storage and use at a later date. Water is routed to the hydroelectric plants only on those days where there is enough water available. While that water is returned to the in-field ditch system and used, it can only be used in the areas of the farm downstream of the hydro plants.

- 2. Please request the County of Maui to provide information regarding how much water the county typically uses for fire protection annually; and the most amount of water that has been used in any given year for that purpose.**

Please find attached the communication received from the County of Maui in response to your request.

- 3. Please provide further clarification regarding the estimated water needs for agricultural crops (item 4 on page 7). For example, based on other information provided, approximately 3.62 mgd of water was used for diversified agriculture in the first quarter, irrigating approximately 2499 acres of crops; which results in approximately 1449 gallons per acres. This is significantly less than the estimates provided, please explain the discrepancy.**

As mentioned in the status report, water requirements for each crop are highly dependent on several factors including soil composition, weather and the maturity of the crop itself. The estimates we provided are noted to be the average water requirements for Mahi Pono's agricultural crops—over the life of the crop. A number of factors could account for the 1Q 2021 water consumption by Mahi Pono's crops—rainfall levels that varied from the "average" (February rainfall was 26% below the long-term average and March rainfall was 300% of the long-term average) and the young age/size of the planted crops.

- 4. Is Mahi Pono considering lining the reservoirs as part of its planned upgrades to the irrigation system?**

Mahi Pono is evaluating this. To be assessed in the evaluation is the impact this may have on recharge of the underlying aquifer and the long-term reliability of the 10 brackish water wells that Mahi Pono includes as part of the water resources available in the long-term to irrigate its farm operation. This is also a very expensive improvement to make in the context of year-to-year access to the East Maui stream water resource.

- 5. Please provide an estimated timeline for when the work on all the diversion structures on Pualoa/Puolua stream will be completed.**

Our best estimate is 18 months, based on all of the IIFS compliance projects that need to be done and available resources.


- 6. At the Board's November 13, 2020 meeting, it imposed a condition requiring that a member of the Huelo community be added to the interim committee formed to discuss water usage issued in the license area. Please explain why a**

representative from the Huelo community was not invited to January 29, 2021 meeting of the interim committee.

Mahi Pono consulted with several families in the Huelo area and, following their recommendation, approached a member of the Huelo community to join the interim committee. This individual was unable to make the scheduled meeting date in January, but will be attending the next meeting of the interim committee.

Please do not hesitate to contact us should you have any questions on the above.

Sincerely,


Meredith J. Ching, A&B


Mark Vaught, EMI