

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawai'i 96813

November 13, 2020

Board of Land and Natural Resources
State of Hawai'i
Honolulu, Hawai'i

MAUI

Holdover/Continuation of Revocable Permits S-7263 (Tax Map Key (2) 1-1-001:044), S-7264 (Tax Map Keys (2) 1-1-001:050, 2-9-014:001, 005, 011, 012 & 017) and S-7265 (Tax Map Key (2) 1-1-002:por. 002) to Alexander and Baldwin, Inc., and S-7266 (Tax Map Keys (2) 1-2-004:005 & 007) to East Maui Irrigation Company, Limited, for Water Use on the Island of Maui.

Pursuant to Section 92-5(a) (4), Hawaii Revised Statutes (HRS), the Board may go into Executive Session in order to consult with its attorney on questions and issues pertaining to the Board's powers, duties, privileges, immunities and liabilities.

I. BACKGROUND

The four revocable permits for the island of Maui are RP S-7263, S-7264 and S-7265 to Alexander & Baldwin, Inc. (A&B), and S-7266 to East Maui Irrigation, Ltd. (EMI), referred to collectively as "Permittee." On May 26, 2000, the Board approved the issuance of revocable permits to A&B and EMI to take water from four license areas on Maui. The diverted water is transported to central and upcountry Maui for agricultural and domestic purposes. In addition to the use of water and the irrigation system, the four license areas included in the permits consist of approximately 33,000 acres of the Ko'olau Forest Reserve and the Hanawā Natural Area Reserve¹ under the DLNR Division of Forestry and Wildlife (DOFAW). The four revocable permits cover the four revocable permit areas as follows, respectively, S-7263 (Honomanu), S-7264 (Huelo), and S-7265 (Keanae) to A&B, and S-7266 (Nahiku) to EMI. See maps attached as **Exhibit A**. Due to the voluminous amount of background materials, an appendix with links to various reference sources is attached as **Exhibit B**.

On May 14, 2001, A&B and EMI filed an Application for Long Term Water License with the Board. The application sought a continuation of the existing diversions for the same agricultural and domestic uses through a 30-year lease of water originating from state lands. At its meeting on May 25, 2001, the Board heard the request, which included the continued issuance of interim revocable permits on an annual basis pending the issuance of a long-term disposition. During the

¹ In 2019 the Board withdrew the Hanawā Natural Area Reserve from the Nahiku revocable permit area.

meeting, there was a request for a contested case hearing to challenge the legality of the long-term license by Nā Moku Aupuni O Ko‘olau Hui (Nā Moku), which was granted by the Board. Pending the outcome of the contested case, the Board deferred action on the request and granted holdover revocable permits to A&B and EMI. In addition to the contested case hearing on the long-term water license, Nā Moku also filed petitions with the Commission on Water Resource Management (CWRM) to amend the Interim Instream Flow Standards (IIFS) for certain east Maui streams. The IIFS petitions resulted in litigation and a contested case hearing.

The Board affirmed the holdover status of the water permits at its meeting on May 24, 2002 and its intention to preserve the status quo until the resolution of the contested case. The water license contested case also led to litigation and ultimately resulted in the Board issuing a Findings of Fact, Conclusions of Law and Decision and Order on March 23, 2007. The intent was to provide interim relief until the IIFS petitions were resolved, requiring A&B and EMI to decrease diversions on Waiokamilo Stream to allow for more water to flow downstream to the local taro growers.² The March 23, 2007 decision acknowledged that the environmental review and IIFS would likely take years to resolve, and that the holdover was essential to the Board’s proper discharge of its public trust responsibilities.

In 2015, Nā Moku filed a separate action with the First Circuit Court challenging that the annual renewal of the revocable permits did not undergo the appropriate environmental review under Chapter 343, HRS.³ The court decided that the continuance of the revocable permits was not an action subject to Chapter 343, HRS. However, the court, independent of any claims made by Nā Moku, determined that the Board exceeded its authority under Sections 171-10 and 171-55 Hawaii Revised Statutes (HRS), in placing the revocable permits into holdover status for 13 years, and declared the revocable permits invalid. The decision was appealed to the Intermediate Court of Appeals (ICA), which vacated the Circuit Court’s decision. Certiorari was granted to the Hawai‘i Supreme Court, where the case is now pending.

The Board reaffirmed that the permits were in holdover status at its meeting on December 11, 2015. Nā Moku filed another action with the State’s Environmental Court challenging the December 11, 2015 reaffirmation.⁴ That matter has been stayed pending resolution of the appeal.

On June 18, 2019, the Intermediate Court of Appeals (ICA) issued an opinion vacating the Circuit Court decision and remanded the case back to the Circuit Court. Of note to the present action, the ICA concluded that the wording in Section 171-55, HRS, that applied the phrase “notwithstanding any law to the contrary” authorized the Board to continue the revocable permits despite the one-year term prescribed by Section 171-58, HRS. The ICA also noted that the revocable permits must be temporary and issued under such conditions and rent which would serve the best interests of the State. The ICA determined that whether these requirements were

² A&B eventually ceased all diversions of Waiokamilo Stream in 2007.

³ *Carmichael v. Bd of Land and Natural Res.*, First Cir. Court, Civ. No. 151-0650-04 (RAN) (*Carmichael*).

⁴ *Nā Moku Aupuni O Ko‘olau Hui v. Bd of Land and Natural Res.*, First Cir. Court, Civ. No. 16-1-0052-01 (JPC).

met were genuine issues of material fact and should not have been resolved by the Circuit Court via summary judgment.

Additionally, the ICA affirmed the Circuit Court's conclusion that Chapter 343, HRS is not applicable to the holdover of the water permits. The ICA reasoned that the phrase in section 171-55, HRS, "notwithstanding any other law to the contrary," nullified HRS chapter 343 EA and EIS requirements for temporary permits. The ICA interpreted the purpose behind section 171-55 as authorizing the Board "to issue a temporary permit in the interim while a permittee pursues a long-term lease, for which an environmental review process under HRS chapter 343 must be undertaken."

Despite the ruling of the ICA, and out of an abundance of caution, an exemption notice for the continuation of the revocable permits is included for the Board's review and approval. The ICA decision was appealed to the Hawaii Supreme Court, which heard argument in the case in May 2020. The Court has yet to render a decision.

Between 2016 and 2018, the Board has approved the holdover of revocable permits for water use statewide pursuant to Act 126, Session Laws of Hawaii 2016. The legislature passed Act 126 in response to a decision by the Circuit Court of the First Circuit (Circuit Court) regarding litigation of the water permits held by Alexander & Baldwin, Inc. (A&B) and East Maui Irrigation Co., Ltd. (EMI). As discussed above, the Circuit Court in *Carmichael* invalidated the revocable permits on the basis that the uninterrupted use of the land by A&B/EMI was not a "temporary" use authorized under Sections 171-10 and 171-55, HRS. Act 126 authorized the holdover of revocable permits for the use of water under certain conditions. Under the Act, the Board could authorize three consecutive one-year holdovers. Pursuant to its terms, Act 126 was automatically repealed on June 30, 2019.

On June 20, 2018, CWRM issued its Findings of Fact, Conclusions of Law & Decision and Order in the contested case hearing regarding the petition to amend the IIFS for the 27 east Maui streams that were subject to petitions. Of those 27 streams, the CWRM ordered that flows in 10 of those streams should be fully restored, with no diversion of water allowed.

In determining the IIFS, CWRM noted that its duty was to protect instream values to the extent practicable and to protect the public interest. However, CWRM must also weigh the importance of offstream uses of water, including the economic impact of restricting those uses. CWRM also determined that the offstream use of water in preserving agricultural lands and assuring adequate water supplies for Maui was in the public interest. Finally, CWRM stressed that the IIFS determined the amount of water that must remain in the identified streams, but that allocations for the offstream use of water is under the authority of the Board. In the decision CWRM requested that the Board consider the following issues for future water leases:

1. Require improvements in the water delivery system to minimize leakage and waste, as well as to provide accurate and timely gaging and monitoring of all offstream water uses; and

2. Set aside a portion of water lease revenues to support the East Maui Watershed Partnership, monitoring stream flows and native habitat restoration in east Maui.

CWRM's June 20, 2018 decision, was not appealed by any party and is now final and binding. A link to the entire contested case record, including CWRM's written Findings of Fact, Conclusions of Law & Decision and Order (CWRM D&O) is available through the following link:

<https://dlnr.hawaii.gov/cwrn/newsevents/cch/cch-ma13-01/>

Originally, the Board had placed these four permits into holdover status as a result of the original contested case requests. The Board has maintained its position that these permits were correctly placed into holdover status. Act 126 provided for a statutory holdover of these permits. Although the Board is continuing the revocable permits pursuant to section 171-55, HRS, the Board maintains that these revocable permits remain in holdover status as the contested case hearing has not yet been resolved and the Board has not acted to take these permits out of holdover status.

A&B has sold most of its former sugar cane lands in central Maui and a portion of the ownership in EMI to Mahi Pono, LLC (Mahi Pono). Mahi Pono's goal is to engage in diversified agriculture on the former sugar cane lands and has begun cultivating various food crops on those lands. At this time, A&B and EMI remains as the revocable permit holders, as well as the applicants for the water lease.

On September 23, 2019, a Draft Environmental Impact Statement (EIS) for the water lease was published in the Office of Environmental Quality Control's (OEQC) *The Environmental Notice*. Upon completion of the public comment period and subsequent revision, the Final EIS will be brought before the Board for review and acceptance. The Draft EIS can be accessed through the link below:

http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2019-09-23-MA-DEIS-East-Maui-Water-Lease.pdf

At its meeting on November 9, 2018 under agenda item D-7, the Board approved, as amended, the holdover of all four permits. Sierra Club of Hawaii (Sierra Club) verbally requested a contested case at the meeting and submitted a written petition thereafter. At its meeting on December 7, 2018, the Board voted to deny the contested case. Sierra Club again requested and submitted a written petition for the Board's subsequent approval of the continuation of the four permits at the Board's October 11, 2019 meeting under agenda item D-1. At its meeting on January 24, 2020, the Board voted to deny the contested case. Sierra Club did not appeal the Board's decisions but instead filed an original action against the State, alleging public trust

violations regarding the Board's approval of the 2018 and 2019 holdovers.⁵ The case went to trial in August 2020.

II. DISCUSSION

A. Public Trust

1. Authorizing the continued holdover of the RPs is consistent with the "dual mandate" of the public trust.

Title to water resources is held in trust by the State for the benefit of its people. Pursuant to *In re Water Use Permits*, 94 Hawai'i 97, 9 P.3d 409 (2000) (*Waiāhole I*), and *In re Wai'ola O Moloka'i, Inc.*, 103 Hawai'i 401, 83 P.3d 664 (2004), the Hawai'i Supreme Court has identified four public trust purposes with respect to water:

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; and
4. Reservations for Hawaiian home lands.

In addition, the Courts have indicated that the "dual mandate" of the public trust not only calls for the protection of water resources, but also requires the Board to promote the reasonable and beneficial use of water resources in order to maximize their social and economic benefits to the people of this state. *Waiāhole I*, 94 Hawai'i at 139, 141, 9 P.3d at 451, 453 ("The public has a definite interest in the development and use of water resources for various reasonable and beneficial public and private offstream purposes, including agriculture."). In order to satisfy its public trust obligations, the Board must balance the proposed use of water against the foregoing public trust purposes, as well as competing uses.

In addition to its public trust duties, the Board also has a constitutional duty to promote diversified agriculture. The Hawai'i Constitution provides:

The State shall conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable lands.

Hawai'i Constitution, Article XI, Section 3.

⁵*Sierra Club v. Bd of Land and Natural Res.*, First Cir. Court, Civ. No. 19-1-0019-01 (JPC) (The Court's ruling in the bench trial, which concluded September 24, 2020, is pending at the time of drafting). The Complaint alleged public trust violations regarding the Board's approval of the 2018 holdover. The Complaint was later amended to include the 2019 holdover.

The public lands shall be used for the development of farm and home ownership on as widespread a basis as possible, in accordance with procedures and limitations prescribed by law.

Hawai'i Constitution, Article XI, Section 10.

Staff notes that 22,254 acres out of HC&S's 30,000 acres of former sugar cane land in central Maui, which is now owned by Mahi Pono, had been designated as Important Agricultural Lands (IAL). See CWRM D&O at Finding of Fact (FOF) 111. By statute, IAL:

- (1) Are capable of producing sustained high agricultural yields when treated and managed according to accepted farming methods and technology;*
- (2) Contribute to the State's economic base and produce agricultural commodities for export or local consumption; or*
- (3) **Are needed** to promote the expansion of agricultural activities and income for the future, even if currently not in production.*

HRS § 205-42(a) (emphasis added).

The IAL designation may be removed from lands if a sufficient supply of water is no longer available to allow profitable farming of the land due to governmental actions, acts of God, or other causes beyond the farmer's or landowner's reasonable control. HRS § 205-50(g).

[A]s a general matter, water use for diversified agriculture on land zoned for agriculture is consistent with the public interest. Such use fulfills state policies in favor of reasonable and beneficial water use, diversified agriculture, conservation of agricultural lands, and increased self-sufficiency of this state. See Haw. Const. art. XI, §§ 1 & 3; HRS § 174C-2(c).

Waiāhole I, 94 Hawai'i at 162, 9 P.3d at 474.

Making irrigation water available for food crops supports the long-term viability and security of local agricultural operations. This is critical to the State's compliance with the constitutional mandates of Article XI, and it is consistent with the State's "dual mandate" under the public trust to balance resource protection against maximum reasonable-beneficial use. It also allows for the local production of food, supporting the goal of food sustainability and food security for Hawai'i. Given the large size of Mahi Pono's planned operation, there is a potential to achieve economies of scale that could translate into lower prices for consumers when produce does not have to be shipped to Hawai'i from outside of the state. Although Mahi Pono has not planted this year as much as planned due to the COVID-19 pandemic, Mahi Pono has confirmed that it intends to still achieve full build out of its 30,000 acres pursuant to its farm plan by 2029. In addition to the direct irrigation of crops, the continued diversion of water through the ditch system is necessary to preserve the operational integrity of the ditch system, which will in turn allow for the expansion of Mahi Pono's diversified agriculture operations.

Additionally, a portion of water diverted through the ditch system is used for domestic purposes through the Maui Department of Water Supply (MDWS) that services approximately 35,251 people as well as businesses, churches, organizations, and government facilities. There is no feasible way to provide enough water to MDWS's upcountry customers without the use of water from East Maui streams. The diverted water is also provided to the Kula Agricultural Park for the use of the farmers in that area.

The continued diversion of water through the revocable permits on a temporary basis serves the public trust purpose of providing domestic water for the public, including drinking water. If the revocable permits were to be terminated and diversions interrupted, it would negatively impact the critically important delivery of water to about 36,000 residents of upcountry Maui.⁶

With respect to the "protection" prong of the public trust's dual mandate, the Board "bears an 'affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.'" *Waiāhole I*, 94 Haw. at 141, 9 P.3d at 453. However, "reason and necessity dictate that the public trust may have to accommodate offstream diversions inconsistent with the mandate of protection, to the unavoidable impairment of public instream uses and values." *Id.* Staff believes that the additional conditions which have been imposed by the Board over the course of its holdover approvals fulfill its public trust obligations as a steward of the public's water resources, and recommends the Board approve the continued holdover of the revocable permits allowing the diversion of water under such conditions.

2. The Board should continue to impose conditions on the RPs to fulfill its public trust duty to protect water resources and maximize their reasonable beneficial use.

In addition to the conditions that were contained in the original permits, between 2016 and 2019 the Board imposed the following additional conditions, that are still in effect, in order to ensure that the use of water is properly balanced against the public trust purposes:

1. Require the holdover of the revocable permits to incorporate the June 20, 2018 CWRM order. There shall be no out of watershed diversions from the streams listed as full restoration streams in the CWRM order, and the timing for stopping the diversions shall be in accordance with the aforesaid CWRM order.⁷

⁶ It is uncertain whether Permittee would continue the system solely to provide water to the County of Maui in the event the revocable permits are terminated. It is also questionable whether the County has the resources and expertise to acquire, operate, and maintain the system in the event it is no longer operated by the Permittee.

⁷ CWRM issued orders addressing diversion modifications and abandonment dated February 19, 2019 and August 29, 2019 for Category 2 and 3 diversions respectively. CWRM will issue future decisions to address Category 1 and 4 diversions.

2. There shall be no waste of water. All water diverted shall be put to beneficial agricultural use or municipal use.
3. Any amount of water diverted under the revocable permits shall be for reasonable and beneficial use and always in compliance with the amended interim instream flow standards (IIFS).
4. The holdover shall comply with all conditions required by the CWRM's Amended IIFS decision.
5. Permittee shall provide a specific report on the progress regarding the removal of diversions and fixing of the pipe issues before the end of the holdover period.
6. Permittee shall cleanup trash from revocable permit areas starting with areas that are accessible and close to streams.
7. The revocable permits shall be subject to any existing or future reservations of water for the Department of Hawaiian Home Lands (DHHL).
8. Establish an interim committee to discuss water usage issues in the license area. The committee shall consist of five members, representing Alexander & Baldwin, Farm Bureau, Office of Hawaiian Affairs, the Native Hawaiian Legal Corporation and the County of Maui. The interim committee shall meet once a month for the first quarter, then at least quarterly thereafter, more often as useful.
9. Permittee shall provide quarterly written reports to the Board containing the following information:
 - a. The amount of water used on monthly basis, including the monthly amount of water delivered for: the County of Maui Department of Water Supply (DWS) and the County of Maui Kula Agricultural Park; diversified agriculture; industrial and non-agricultural uses, and reservoir/fire protection/hydroelectric uses. Also, provide an estimate of the system loss for the EMI ditch system and the A&B field system. Diversified agricultural uses shall also provide information as to location, crop, and user of the water. Industrial and non-agricultural uses shall specify the character and purpose of water use and the user of the water.
 - b. For each stream that is subject to the CWRM order, a status update as to the degree to which the flow of each stream has been restored, and which artificial structures have been removed as required by CWRM.
 - c. Update on removal of trash, unused man-made structures, equipment and debris that serve no useful purpose, including documenting any reports of such items received from the Department, other public or private entities and members of the general public and action taken by Permittee to remove the reported items.

- d. The method and timeline for discontinuing the diversion of water from Waipio and Hanehoi streams into Ho`olawa stream, including status updates on implementation.
10. The Permittee may not divert an amount of water exceeding an average of 45 million gallons per day (mgd), averaged annually, for all permits combined, further subject to all water diverted shall be for reasonable and beneficial uses.
11. For RP S-7266, the area identified as the Hanawā Natural Area Reserve shall be removed from the revocable permit premises. Additionally, A&B/EMI shall continue discussions with DOFAW to identify additional forest reserve lands to be removed from the license areas to be implemented in connection with the issuance of a water lease, if any, or sooner.
12. Require Mahi Pono to advise any third-party lessees that their decisions be based on a month to month revocable permit for water use until a lease is completed.
13. For the streams in the revocable permit area that have not had interim instream flow standards set, Permittee shall continue to clean up and remove debris from the permit areas and staff shall inspect and report every three months on the progress of the clean-up. For the purposes of clean-up, debris shall not include any structures and equipment currently used for the water diversions.
14. Staff is to inspect the streams and report on whether those lands could be developed for agricultural uses, including the viability of agricultural land or water leases.⁸

The requirements imposed by the Board serve to effectuate the priorities outlined by CWRM in their decision. In issuing its decision, CWRM was also bound to fulfill the dual mandate of the public trust. As part of the IIFS process, CWRM classified specific streams in order to prioritize the protection of the following resource values: taro and community streams, native habitat streams, public use streams, and other streams. In doing so, CWRM recognized that streams classified as other streams could be diverted to support diversified agriculture. In addition to protecting resource values for specific streams, CWRM looked at the entirety of the affected streams in an integrated manner considering the overall ecological ramifications. CWRM acknowledged that diverting water for diversified agriculture was reasonable and beneficial use due to the economic benefits provided and the contribution to food sustainability.

CWRM set IIFS for the petitioned streams not to protect public trust purposes at the expense of all other offstream uses, but rather to balance them in a manner that ensures that a sufficient amount of offstream water is available to support the cultivation of diversified agricultural crops on central Maui IAL lands. CWRM was also concerned that leaving those land uncultivated would increase wind-blown erosion that would damage the near shore environment, air quality and tourism competitiveness. CWRM also recognized the value of municipal uses of water and

⁸ Regarding the last two requirements, staff did not conduct any inspections of the license areas due to the COVID-19 pandemic.

noted that the continued use of diverted water for that purpose was appropriate. *See* CWRM D&O at Conclusions of Law (COL) 149.

3. The Board should hold the Permittee to its burden to prove its need for stream water and the reasonable-beneficial use of all water diverted.

In compliance with the Board's requirements, Permittee has submitted quarterly reports for the first three quarters of the calendar year, providing information requested by the Board. The most recent report for the third quarter of the year is attached as **Exhibit C**. The reports provided updates on several key issues that have arisen in the water disposition process. Permittee reported that the diversions and use of water is consistent with the CWRM IIFS order and the Board's revocable permit requirements. In terms of water usage, Permittee noted that approximately 27.79 mgd, 22.60 mgd and 18.9 mgd of water was diverted during the first, second, and third quarters respectively. The amount of water was within the 45 mgd limit imposed by the Board as well as the amount allowed to be diverted under the IIFS. The uses of the water included agricultural uses in central Maui, supplying the County of Maui water for upcountry Maui and the Kula Agricultural Park, fire suppression, and historical industrial/non-agricultural uses.

Diversified agricultural uses of water averaged 2.50 mgd, 3.64 mgd and 2.5 mgd in the first, second and third quarters respectively. Specific uses of the water include irrigation of food crops consisting of coffee and hau; citrus and pongamia; papaya; potato and onions; and sweet potato. Water supplied to the County of Maui averaged approximately 1.44 mgd, 2.21 mgd and 3.5 mgd for the first, second and third quarters respectively. Water used for historical and industrial uses averaged 1.10 mgd for each quarter. The report states that historical and industrial uses are "uses other than plantation and A&B uses." Included are uses by other entities located either adjacent to or within the boundaries of the farm. Water used for reservoir storage, fire suppression, evaporation, dust control and hydro-electric purposes averaged 16.44 mgd and 10.51 mgd for the first and second quarters respectively. In their responses to the Department's request for further information, Permittee confirmed that water used for hydroelectric purposes was non-consumptive and returned to the ditch and consumptively re-used for the other purposes noted in the reports. The water is stored in reservoirs both for agricultural use and to ensure that the County of Maui has an available water supply to combat brush fires. The end of sugar cultivation has resulted in a reduction of irrigated areas and an increased risk of brush fires. Finally, systems losses averaged 6.31 mgd and 5.13 mgd for the first and second quarters respectively. For the third quarter report, Permittee did not provide a separate amount for system losses but instead incorporated the estimate into the other uses including reservoir storage, fire suppression, evaporation, dust control and hydro-electric purposes reporting a third quarter average of 11.7 mgd.

Staff followed up with Permittee to provide further information regarding system loss and evaporation. Permittee provided the following background and explanation for system losses as follows:

"System Losses" for the EMI Ditch System both east and west of Maliko Gulch have

been evaluated by the Commission on Water Resource Management ("CWRM") as recounted in CWRM's June 20, 2018 Decision and Order (the "D&O").

The EMI Ditch System east of Maliko Gulch is the integrated system of diversions, intakes, tunnels, ditches and reservoirs located on both State owned and private lands that run from Makapipi Stream at the eastern boundary of the License Areas to Maliko Gulch, which is located several miles west of Honopou Stream. Honopou Stream represents the western boundary of the License Areas.

USGS conducted a field study from March to October 2011 to identify ditch characteristics and quantify seepage losses and gains in the EMI Ditch System. The study was undertaken in cooperation with CWRM and its results were summarized in USGS Open-File Report 2012-1115, which was presented to CWRM at its meeting held on January 23, 2013. USGS concluded that there were both seepage gains and losses in the EMI Ditch System which largely cancelled each other out. As summarized in Finding of Fact (FOF) No. 723 of the D&O:

"Thus, because both open ditches and tunnels in the EMI diversion system not only incur seepage losses but also gains from ground water, especially in the tunnels, it is not clear whether net seepage losses even occur in the EMI diversion system. At low flows, the USGS study results show that losses are greater than gains, but at higher flows, gains are greater than losses, supra, FOF 721"

System losses in the HC&S irrigation system of ditches, reservoirs and related infrastructure west of Maliko Gulch were evaluated by CWRM based on the evidence submitted by HC&S in the contested case hearing that resulted in the D&O. HC&S submitted testimony and documentary evidence supporting its estimate that the average annual amount of "system losses" in the HC&S irrigation system was 41.67 mgd, or 22.7 percent of the total of the surface water delivered to HC&S at Maliko Gulch and ground water pumped from HC&S brackish water wells to irrigate the Central Maui fields then cultivated in sugar. This was illustrated in a table prepared by HC&S analyzing data from 2008 to 2013, which was submitted as Exhibit C-137, and was discussed in FOF Nos. 724-727. This estimate included not only water assumed to be lost to seepage and evaporation, but also to "miscellaneous losses such as back-flushing of filters, drip tube ruptures or breaks, animal damage, pipeline breaks, misreported irrigation (if they are not applying the correct hours to the amount they ran), testing of systems prior to planting, or where water is taken out of the system but not accounted for in daily irrigation." D&O FOF No. 733.

To cross check the reasonableness of this estimate, HC&S performed a separate estimate of seepage and evaporation by 1) calculating the range of expected seepage rate losses through the lined and unlined surfaces of HC&S's on-farm (non-EMI) ditches and reservoirs utilizing factors published by the United States Department of Agriculture ("USDA") in its National Engineering Handbook, and 2) calculating direct evaporation into the atmosphere from the surface area of the water typically present in the ditches and reservoirs. The result was presented in a table submitted as Exhibit C-139. The methodology used was discussed in detail in FOF Nos. 728 - 732 of the D&O. As found by CWRM, "the average of high and low estimated losses from

seepage and evaporation is 27.55 percent, and HC&S's losses of 22.7% fell below this average."
D&O FOF No. 731 and Exhibit C-139. CWRM concluded:

Thus, HC&S's system losses of 22.7 percent (41.67 mgd of 183.61 mgd of surface water delivered and ground water pumped) were reasonable losses under sugarcane cultivation. Because the same distribution system would be used for diversified agriculture, the same rate of 22.7 percent losses should be applicable."

In the quarterly reports filed with the BLNR up until Q2 2020, the 22.7% "System Losses" referred to above was presented in a separate column. This was not a directly measured amount but simply represented the average rate of HC&S system losses CWRM had validated as reasonable during sugar cultivation. The current rate of system losses is not precisely known, though it is thought that while the absolute amount of system losses is lower, the rate of system losses is higher since most of the seepage losses occur in the reservoirs of the former HC&S plantation, and those are still generally being filled for fire suppression purposes for the County, even though the total amount of water deliveries is currently only a fraction of what was being imported during sugar cultivation. The seepage losses thus represent significantly more than 22.7% of current EMI deliveries, which are far less than the deliveries during sugar cultivation. Recognizing that this may cause confusion, and to eliminate such confusion, starting with the Q3 2020 quarterly report, the 22.7% column was eliminated and all system losses of the on-farm (non-EMI) irrigation system were combined with all the water that is not otherwise separately measured and accounted for, i.e., for reservoirs, fire protection, dust control, and hydroelectric uses, along with system losses associated with those uses ("Other Uses"). The figure apportioned to these Other Uses represents the net amount of water remaining after the Honopou East Maui water deliveries are allocated to the County of Maui DWS and Kula Ag Park, A&B's tenants and other historical water users, and Mahi Pono's agricultural operations.

Again, total "system losses" west of Maliko Gulch are currently higher than the 22.7% rate determined to be reasonable under sugar cultivation, or under the anticipated full buildout of Mahi Pono's diversified agricultural farm plan. This is primarily due to the need to continue to maintain water levels in the reservoirs largely for the County of Maui's fire suppression needs. Seepage losses from the reservoirs are thus expected and continue to occur in the unlined reservoirs just as they did during sugar cultivation. This water is not being irretrievably "lost," however, or 'lost' at all, since it is being returned to the underlying aquifer, which is the source for the brackish water wells that supplement the current and future irrigation needs of the Mahi Pono farm plan as well as other users in Central Maui.

In their responses to the Department's request for additional information, Permittee further clarified that water classified as evaporation is the amount of water lost through evaporation from the surface of water in the ditches and reservoirs that are located on-farm, west of Maliko Gulch. According to the Permittee, this amount was estimated during the course of the CWRM East Maui IIFS contested case hearing, using a pan evaporation rate of 0.40-acre inches a day, to be approximately 2.645 million gallons per day during sugar cultivation. Permittee stated that the majority of this amount, 2.37 mgd, was estimated to be the amount of water lost by direct evaporation into the atmosphere from HC&S' on-farm reservoirs. Permittee reiterated that the

reservoirs are currently being kept generally full at the request of the Maui Fire Department to help with fire suppression needs. Permittee noted that with the more wetted perimeter, there will be greater evaporation.

Staff notes that CWRM discussed this issue in its decision, Executive Summary at vi, noting that:

“In addition, although estimates of over 20 percent transmission system losses may comport with current industry standards, they do not reflect best practices, will not serve the interests of future generations and are not acceptable. Modern agribusiness investors should not expect to build a new industry on the back of century-old infrastructure. Investment in ditch systems must be made to avoid leakage and waste, install modern ground water storage technologies, optimize use of non-potable water, and improve water capture and storage from storm events that increase total flow availability.”

Furthermore, CWRM requested that the Board consider requiring improvements in the water delivery systems to minimize leakage and waste, as well as to provide accurate and timely gaging and monitoring of all offstream water uses. In consideration of the foregoing, staff believes that Permittee should be required to proactively address this issue prior to the Board’s consideration of a water lease. Therefore, staff recommends that Permittee submit to the Department a plan for their proposed upgrades to the irrigation system intended to address CWRM’s concerns no later than June 30, 2021. This will allow staff to review and consult with CWRM to determine whether the plan is sufficient and include it for the Board’s future review. Staff also recommends that the Board also amend its previous requirement prohibiting the waste of water to specifically exclude system losses and evaporation.

According to the reports, the use of water by the Permittee is generally in compliance with the revocable permit requirements. However, staff noted that the reported historical and industrial uses may not be consistent with the Board’s requirements. As part of its 2019 approval, the Board required that all diverted water shall be put to beneficial agricultural or municipal use. According to the report some of those uses are agricultural in nature such as pasture, orchard and stock water/cattle. Those uses appear to be consistent with the revocable permit and not an issue. However, the report identifies multiple industrial users, but does not specify the exact nature of the water use and the amount of water used. These uses may not be compatible with the revocable permits. In order to get further clarity on the issue, the Board is requested to require the Permittee to provide more information on the non-agricultural historical and industrial uses, identifying the specific uses of the water, explaining how those uses are ancillary to agricultural operations or are otherwise reasonable and beneficial, and the amount used. If those uses are ancillary to the agricultural uses (such as base yard operations), then it may be permissible.

Permittee has stated that the users are not individually metered, so they are unable to identify the amounts of water used by the individual users. However, staff believes that Permittee must provide further information on the historic and industrial uses of water. If those uses are unrelated to the agricultural operations or municipal use, the Permittee must justify those uses as reasonable and beneficial and request that the Board expand the permissible uses of water under the revocable permits to include these additional uses. Staff notes that regardless of whether

those uses are historical, they are not permitted under the Board's current requirements. The draft EIS does not include these uses as part of the proposed water lease. These additional uses would need to be addressed in the Final EIS in order to be permitted uses under a long term disposition. Although the amount of water used for these purposes are relatively small in relation to the total amount of water diverted, it is not an insignificant amount and Board action would be appropriate.⁹

Opponents to the continued holdover of the revocable permits argue that the amount of water the Permittee is allowed to divert is excessive and that Permittee is using the diverted water for unauthorized uses in violation of the revocable permits. Regarding the amount of water diverted, the Permittee is well under the 45 mgd limit imposed by the Board and has made effort through the quarterly reports to verify that their use is reasonable and beneficial. However, staff recommends that Permittee further report how much water is needed for each crop per acre, to ensure that Permittee is not diverting more water than necessary. The farm plan provided by permittee does provide an estimate of the acreage dedicated to certain types of crops, but does not specify the crops nor provide any estimates on how much the water is needed for the various types of crops intended to be planted. Furthermore, the farm plan does provide projections for estimated future water needs, but does not provide any justification for those estimates, such as a timeline for crop plantings. Permittee estimated its water demand at 24.5 mgd in 2020 and 32.3 mgd in 2021.

CWRM recognized that relying solely on groundwater sources would not be a feasible alternative to the use of surface water. While the CWRM decision calculated 17.84 mgd as an estimate of how much well water might be used for HC&S's then-existing diversified agriculture plan, there is some concern with that continued level of groundwater use at this time. According to comments from CWRM's groundwater division, Central Maui, or the Kahului Aquifer System Area, has an estimated sustainable yield of 1 million gallons per day (mgd) based on natural conditions. However, this does not consider the historic or continued importation of water from both EMI and Wailuku Water, which historically exceeded an average 200 mgd and undoubtedly contributes to return-irrigation recharge of very low salinity water. The ground water in the area is not overly brackish and is actually quite good to the point where the county is relying on some wells (Maui Lani wells) for potable needs. Yet, CWRM is not sure this freshwater condition for the area will continue with the reduction of imported water from EMI and Wailuku Water Co.

Regarding water service to upcountry Maui, CWRM's groundwater division also advises that it will be very costly to move groundwater upcountry for both capital and operational expenses for a resource that may become too brackish in the future for potable needs.

Mahi Pono confirmed that it is using groundwater this year to supplement surface water used for crop irrigation. In the third quarter of 2020, Mahi Pono used approximately 12.7 million gallons of brackish groundwater. According to Mahi Pono, this was necessitated by their growing farm operation as well as lack of surface water availability due to uncommonly dry weather conditions.

⁹ As noted previously all historical and industrial uses (including agricultural) averages approximately 1.10 mgd per quarter.

Given the Permittee has complied with the Board's requirements to be transparent about the water use, staff recommends no adjustment to the current 45 mgd limit provided that the Permittee continue to provide timely and thorough quarterly reports. As to the potentially unauthorized use of the water, staff presents recommendations below to address that specific issue in lieu of reducing the 45 mgd limit.

4. The Permittee is complying with the CWRM order's requirement to restore flow and modify/abandon diversion structures to the extent required by CWRM.

Opponents to the holdovers argue that the Board should order that diversion structures in the streams which were subject to the CWRM decision be removed or modified to prevent the entrainment of native species. However, the CWRM decision specifically says that its intention is 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[,] and that the issue of how specific diversions are to be modified "will be before the Commission in a subsequent process." Indeed, that "subsequent process" is already taking place.

Permittee reports that they are working with CWRM and making progress in carrying out CWRM's order with respect to restoring stream flow and modifying or abandoning stream diversion structures. Permittee has obtained all initial approval for the abandonment of taro stream diversions to allow for full restoration. Permittee is working to meet the conditions of those approvals so abandonment work can proceed. Permittee has initiated discussions with CWRM regarding the non-taro streams, including submitting a draft work plan and seeking to establish measurement protocols for flow compliance. Further action has been delayed due to COVID-19 restrictions, but staff has consulted with CWRM, who noted that Permittee is working with CWRM to fulfill connectivity requirements in the IIFS to the extent possible without conducting work requiring a permit.

Staff does not recommend that the Board supplant the CWRM's decision as to how diversions should be modified. The continued holdover of the RPs at this time does not prevent the Board from later determining that certain diversions should be removed entirely if it is determined that they no longer serve a purpose after the full implementation of Mahi Pono's diversified agriculture operations.

Opponents have also raised issues about the timeliness or lack thereof regarding the removal of diversions and stream restoration. Given that CWRM requires permits for such work and the fact that other state and federal agencies may also have jurisdiction, the Permittee appears to be working in good faith to complete the permitting process. Staff recommends that the Board take no further action on this particular issue. Imposing an arbitrary deadline may result in compromising CWRM's ability to adequately review and process the permits and potentially result in the Permittee having to conduct unauthorized work in order to comply with the revocable permits. If the Permittee fails to continue working in good faith to obtain the permits, this issue can be brought back to the Board for further action.

5. The Board's conditions fulfill its duty to protect and preserve and the trust resources.

As to the issue of trash and debris removal, Permittee has developed procedures regarding cleanup of trash and debris. Permittee continues to remove trash when observed during field inspections. Permittee reports removing PVC and steel pipes, old wooden and steel gates, discarded wooden structures and remnant pieces of concrete. Permittee's report contains photo documentation of trash removed over the first two quarters of the year. Permittee has also discussed with DOFAW the potential removal of additional forest reserve lands from the license areas beyond the Hanawī Natural Area Reserve. Staff has further consulted with DOFAW who stated that both parties reached mutual agreement in concept for future withdrawals and agreed to work on the specific details. DOFAW met with A&B/EMI on a limited basis due to COVID-19, most recently in September and twice overall for the year; and feel they have been productive discussions.

In its litigation against the Department, Sierra Club made repeated assertions that the Permittee is in violation of the revocable permits by failing to adequately address the trash and debris issue. Staff believes that the Permittee has satisfactorily complied with this requirement. Permittee has provided information on their ongoing efforts to identify and remove trash. Furthermore, staff is unaware of any instances where the Permittee has disregarded any reports or complaints of trash and debris. Rather than expect the Permittee to conduct a comprehensive search of the entire license area to identify and remove trash, a reasonable alternative would be to remove trash on a case by case basis, either as encountered in the field or via a report or complaint.

There has been disagreement with the Sierra Club as to what constitutes trash and debris that requires removal by Permittee. In order to provide clarity on this issue, staff recommends that the Board define "trash and debris" as any loose or dislodged diversion material such as concrete, rebar, steel grating, corrugated metals, railroad ties, etc., that can be removed by hand (or by light equipment that can access the stream as is). This definition is consistent with CWRM's prior practice.

Staff has also consulted with other divisions to provide information addressing Sierra Club's concerns. Staff consulted with DOFAW regarding the issues of conducting inspections, clean up and removal of trash and mosquito breeding in the abandoned diversions.

DOFAW noted that they do not schedule regular inspections of the forest reserve or natural area reserve specifically for the A&B and EMI RPs. Furthermore, DOFAW has not been requested or assigned to support with the monitoring of the RPs at this time, but remains available to support Land Division in this capacity as needed. DOFAW has supported the monitoring of these RP most recently with abandonment of the diversions and submitted a report to CWRM with recommendations dated June 28, 2019. While DOFAW does not have an established schedule of regular inspections for the RP areas; DOFAW conducts routine management in forest reserve and natural area reserve throughout the year. Routine management of the area is done on a 1 week per month on average (i.e.: 1 forest reserve crew, 1 natural area reserve crew, and 1 forest bird crew (that mostly works in the Natural Area Reserve). As the forest reserve and natural area

reserve are very large areas and the majority of the work is done in the higher elevation and in areas that are not necessarily adjacent to the water infrastructure.

DOFAW is able to report any issues or concerns to Land Division that are observed or encountered during its route management missions. DOFAW accepts reports from the public via its office phone, by mail or email. If/when a report is received, DOFAW investigates and takes appropriate action. If the report is related to the RP areas, then DOFAW would consult with Land Division to work with and determine the appropriate action. Staff believes that current inspection actions are appropriate and sufficient. Given the limited staffing of both Land Division and DOFAW on Maui, it would be overly burdensome to require Land Division and DOFAW staff to thoroughly inspect the entire RP areas on a routine basis. It would be most effective for Land Division and DOFAW to respond to complaints of trash as received and then address with the Permittee as appropriate. Staff notes that we have not received further complaints of trash after the reports in 2018, and the Permittee has been providing updates on trash removal in their quarterly reports.

To address the spread of invasive species, DOFAW and partners conduct ongoing forest management throughout the forest reserve and natural area reserve. The majority of intensive management actions, including those related to the control of invasive species, is focused within fenced units above 2000 to 4000 feet elevation with the goal of protecting native biodiversity and associated watershed health. Management actions below the fence areas are focused on maintaining existing forest cover and preventing further advancement of invasive species. At the lower elevations, invasive species control is focused on addressing incipient species (such as pampas grass, African tulip, etc.) to prevent their further establishment in the area. Ko'olau Forest Reserve and Hanawai Natural Area Reserve are high-priority watershed management areas, and DOFAW and partners spend significant resources and funds annually on the management of this area (millions annually). However due to the overall limited budget for the managing an area of this size, DOFAW implements the most cost-effective strategies to address natural resource threats in the region, as detailed above.

DOFAW's primary concern is the spread of mosquitoes carried diseases, such as avian malaria, that impact Hawaii's native birds. The June 2019 report to CWRM identifies the areas that need to be addressed more immediately and provides the details on the associated concerns for those sites. The report identifies sites that are being abandoned and should correspondingly address/remove the infrastructure that promotes mosquito breeding. While there is an elevation concern with mosquitoes and forest birds, DOFAW believes that mitigating sites, especially if they are no longer needed for water conveyance, that create ideal situations where mosquitoes can breed, would be in the best interest of the health of our ecosystems - especially with potential impacts associated with climate change, and change in mosquito breeding elevations. The Department has initiated an inquiry with the State Department of Health (DOH) regarding the concerns about the impact mosquito breeding on human health at lower elevations.

Staff discussed the mosquito breeding issue with DOFAW further and clarified whether DOFAW considered any alternatives to diversion removal in the event that abandoned diversions may be re-activated in the future if appropriate. DOFAW is not aware of alternative measures to removal that effectively prevent mosquito breeding as none have been presented to them.

DOFAW would review and assess alternatives if presented to them. In consideration of the foregoing, staff recommends that the Board not impose additional conditions on diversion removal beyond those already required by CWRM, given that CWRM has the regulatory authority and expertise to address diversion abandonment and removal. However, staff recommends that the Board require the Permittee to work with CWRM and DOFAW to determine whether there are alternatives to diversion removal that effectively prevent mosquito breeding and can be feasibly implemented. The Board is also recommended to require the Permittee to include the status of alternatives in their quarterly reports.

DOFAW, as previously stated, recommends that future RPs and/or lease agreements be limited to only the areas needed for the intended purpose of the RP or lease. For the A&B and EMI RP this would be limited to the areas needed for maintenance of the water infrastructure and conveyance, and would result in a substantially reduced area under the RP (i.e.: they currently cover the majority of the forest reserve and natural area reserve). DOFAW recommends that Land Division, A&B, and EMI work with DOFAW to identify the specific area needed for the RP and/or lease area. Staff concurs with DOFAW's recommendation and remains available to assist as needed.

The Division of Aquatic Resources (DAR) has summarized information and conducted an evaluation of 12 East Maui Streams within the Huelo license area. Information was also provided for Puakea stream, however since this stream occurs within the Nahiku license area, it was excluded from the Huelo complex stream evaluation. With these comments DAR attempts to prioritize streams based on biological recovery potential, or in other words, which stream's restoration of flow would have the greatest benefit to aquatic resources. For this evaluation indigenous aquatic species and their habitat is of great importance. These include stream species such as oopu alamoo (*lentipes concolor*), oopu nopili (*Sicyopterus stimpsoni*), oopu nakea (*Awaous guamensis*), oopu naniha (*Stenogobius hawaiiensis*), opae kalaole (*Atyoida bisulcate*), opae oehaa (*Macrobrachium grandimanus*), hihiwai (*Neritina granosa*), and endangered damselflies (*Megalagrion spp.*). Although this is an evaluation of streams, the status of an estuary is directly tied to the status of the stream that feeds it. Therefore, estuary species such as aholehole (*Kuhlia xenura*), amaama (*Mugil cephalus*), moi (*Polydactylus sexfilis*), and others are also considered of great importance. To a lesser extent prawns (*Macrobrachium lar*) are considered. Although introduced, this species serves as an important food resource, consumed by many rural communities and adds to our State's food security.

Relative to other stream systems within the region of East Maui, little is known about the 12 Huelo license area systems, therefore the best available information was used for this evaluation. Additional studies are needed to better understand these systems and re-evaluate accordingly. To evaluate these systems, DAR considered information from three data sources: potential habitat units, geospatial assessment of available estuary habitat types, and input from DAR's Maui Stream Biologist.

Potential habitat units relate to the amount of habitat available within a stream during natural flow conditions. This data is derived from the East Maui Habitat Evaluation Study prepared by Parham (2019). A summary table of this information was provided by CWRM to DAR.

The geospatial assessment of available estuary habitat types was conducted by DAR staff. This analysis attempted to identify the presence of estuary bays (a setting where marine water is being intruded by freshwater, usually outside the stream mouth), and riverine estuaries (a setting where a stream is being intruded by marine water, usually landward of the stream mouth). Estuary bays was primarily determined by the two-dimensional shape of the coastline and the presence of a freshwater source. Riverine estuaries were primarily determined by the underlying slope of the stream near the coastline. From an estuary perspective, systems with multiple estuary types are valued higher.

Input from DAR's Maui Stream Biologist came from Skippy Hau. With the onset of expressed interest on these streams he initiated spot checks to quickly assess the aquatic resources. Although he was able to visit only six streams, the information provided was invaluable to this effort. Additionally, based on Skippy's knowledge and experience, recommendations on streams recommended for prioritization of natural flow restoration was provided.

Although the presence of a terminal waterfall and geographic distribution were also considered, they were not weighed as heavily as other factors described above given that terminal waterfall may have a variety of influences on the distribution of native and non-native aquatic organisms. More studies related to terminal waterfalls would help to better understand the influence of these features on aquatic resources. The Huelo license area is predominantly represented by coastal terminal waterfalls, which is reflected in DAR's recommendation. Prioritization based on geographic distribution was also considered to ensure that high priority streams have a broad distribution across the east Maui coastline to promote estuarine productivity, and habitat and population connectivity.

The following summarizes the best available information on the 12 East Maui Streams of the Huelo license area in addition to Puakea stream of the Nahiku license area and prioritized (Huelo license area only) based on restoration potential and overall contribution to the ecosystem.

Kolea

Restoration Priority: Low

Kolea stream has the potential for 572,600 habitat units, which is in the lower range relative to other streams in this evaluation. It abruptly enters marine waters on the open coast with a terminal waterfall. The estuarine area at this site is likely to be minimal. A recent stream check in October 2020 revealed an occurrence of prawns and important local food source. Due to a low potential for habitat units, a relatively small estuary, and lack of knowledge on this system, Kolea stream is of low priority (8th) relative to other streams in this evaluation.

Punaluu (Puaaluu)

Restoration Priority: Low

Punaluu or Puaaluu stream has the potential for 320,200 habitat units, which is the lowest relative to other streams in this evaluation. It abruptly enters marine waters on the open coast with a terminal waterfall. The estuarine area at this site is likely to be minimal. This stream has not been visited by DAR recently. Due to a low potential for habitat units, a relatively small estuary, and lack of knowledge on this system, Punaluu stream is of low-priority (11th) relative to other streams in this evaluation.

Kaiea (Kaaiea)

Restoration Priority: Medium

Kaiea or Kaaiea stream has the potential for 2,088,000 habitat units, which is in the upper range relative to other streams in this evaluation. It abruptly enters marine waters on the open coast with a terminal waterfall. The estuarine area at this site is likely to be minimal. A recent stream check in October 2020 revealed an occurrence of prawns and guppies (*Poecilia reticulata*). Although Kaiea is in the upper tier for habitat units it is ranked as medium priority (5th) due to a relatively substantial diversion in this system.

Oopuola

Restoration Priority: High

Oopuola stream has the potential for 611,200 habitat units, which is in the lower range relative to other streams in this evaluation. It gradually enters marine waters at Makaiwa Bay, with no major barriers. Estuaries within this system are represented by a riverine estuary and estuarine bay. A recent stream check in October 2020 revealed an occurrence of juvenile oopu alamoo. Although Oopuola is in the lower range for habitat units, it does have multiple estuary types, and a recent visit confirmed presence of indigenous aquatic resources. These considerations resulted in a high priority (3rd) relative to other streams in this evaluation. Additionally, it is important to note that the inclusion of this stream within the group of streams ranked as high priority and maintains the appropriate ratio of streams with terminal waterfalls to streams with no major barriers near the coastline within the Huelo license area.

Puehu

Restoration Priority: Low

Puehu stream has the potential for 653,500 habitat units, which is in the mid-range relative to other streams in this evaluation. It abruptly enters marine waters on the open coast with a terminal waterfall. The estuarine area at this site is likely to be minimal. This stream has not been recently visited by DAR staff. Due to a relatively small estuary, and lack of knowledge on this system, Puehu stream is of low priority (9th) relative to other streams in this evaluation.

Nailiilihaele

Restoration Priority: High

Nailiilihaele stream has the potential for 5,936,100 habitat units, which is in the upper range relative to other streams in this evaluation. It abruptly enters marine waters at Kailua Bay with a terminal waterfall. An estuarine bay is found at the coastline of this system. A recent stream check in October 2020 revealed an occurrence oopu nakea, opae kalaole, guppies, prawns, and swordtails (*Xiphophorus helleri*). This stream has a high potential for habitat units, an identified estuary, and a recent confirmed presence of indigenous aquatic resources. These considerations resulted in a high priority ranking (1st) for Nailiilihaele relative to other streams in this evaluation. It is important to note that Nailiilihaele ends in the same bay as Kailua, which was also evaluated as a high priority stream. This should be considered in determining which streams to restore flows in order to ensure a broader distribution of restoration efforts within the Huelo license area.

Kailua

Restoration Priority: High

Kailua stream has the potential for 9,361,700 habitat units, which is the most relative to other streams in this evaluation. It abruptly enters marine waters at Kailua Bay with a terminal waterfall. An estuarine bay is found at the coastline of this system. A recent stream check in October 2020 revealed an occurrence of prawns. This stream has a high potential for habitat units, an identified estuary, and recent confirmed presence of a resource species. These considerations resulted in a high priority ranking (1st) for Kailua relative to other streams in this evaluation. It is important to note that Kailua ends in the same bay as Nailiilihaele. Nailiilihaele is also ranked as high priority. This should be considered in determining which streams to restore flows in order to ensure a broader distribution of restoration efforts within the Huelo license area.

Hanahana (Hanawana)

Restoration Priority: Medium

Hanahana or Hanawana stream has the potential for 683,000 habitat units, which is in the mid-range relative to other streams in this evaluation. It gradually enters marine waters at Hanawana Bay, with no major barriers. Estuaries within this system are represented by a riverine estuary and estuarine bay. This stream has not been recently visited by DAR staff. Due to the combination of multiple estuaries and limited biological information Hanahana stream received a medium priority ranking (6th).

Hoalua

Restoration Priority: Medium

Hoalua stream has the potential for 1,234,300 habitat units, which is in the mid-range relative to other streams in this evaluation. It enters marine waters at Hoalua Bay with no major barrier. An estuarine bay is found at the coastline of this system. This stream has not been recently visited by DAR staff. Due to the presence of an estuarine bay and limited biological information Hoalua stream received a mid-priority ranking (4th).

Waipio

Restoration Priority: Low

Waipio stream has the potential for 548,800 habitat units, which is in the lower range relative to other streams in this evaluation. It abruptly enters marine waters at Waipio Bay with a terminal waterfall. An estuarine bay is found at the coastline of this system. This stream has not been recently visited by DAR staff. With a low potential for habitat units and limited biological information, Waipio stream received a low priority ranking (10th).

Mokupapa

Restoration Priority: Medium

Mokupapa stream has the potential for 666,000 habitat units, which is in the mid-range relative to other streams in this evaluation. It enters marine waters on the open coast with no major barrier. The estuarine area at this site is likely to be minimal. This stream has not been recently visited by staff from DAR. Due to a moderate potential for habitat units, a relatively small estuary, and lack of knowledge on this system, Mokupapa stream is of mid-priority (7th) relative to other streams in this evaluation.

Hoolawa

Restoration Priority: High

Hoolawa stream has the potential for 3,627,000 habitat units, which is in the upper range relative to other streams in this evaluation. It abruptly enters marine waters at Hoolawa Bay, with a terminal waterfall. Estuaries within this system are represented by a riverine estuary and estuarine bay. A recent stream check in October 2020 revealed an occurrence guppies, prawns, and swordtails. This stream has a high potential for habitat units, multiple estuary types, and recent confirmed presence of a resource species. These considerations resulted in a high priority ranking (2nd) for Hoolawa relative to other streams in this evaluation.

Puakea

Restoration Priority: Not Included in Ranking

Puakea stream has the potential for 1,826,100 habitat units. It gradually enters marine waters at a bay with no major barriers. Estuaries within this system are represented by a riverine estuary and estuarine bay. This stream has not been recently visited by DAR staff. Puakea stream is part of the Nahiku complex, located quite a distance away from the Huelo complex. Due to the large distance from the other streams described above, it was omitted from the Huelo license area stream evaluation and was not prioritized.

6. Staff recommends that Permittee be allowed to divert water from streams which did not have new IIFS set by the 2018 CWRM decision.

In its most recent lawsuit against the Department, Sierra Club opposed the continued diversions of approximately 13 streams in the license areas that are not subject to the IIFS (13 streams). Staff has consulted CWRM on this issue, and below is CWRM's response:

In the 2018 Decision and Order, the Commission [(i.e., CWRM)] used a holistic perspective to balance instream and non-instream uses by prioritizing streams for restoration that supported substantial instream values such as traditional and customary practices, habitat for aquatic biota and wildlife, and aesthetic and recreational values. The Commission recognized that non-instream uses, such as for municipal water supply and the irrigation of lands designated as IAL [(important agricultural lands)], were public trust uses (domestic water supply) or reasonable-beneficial uses of water in the public interest. In this prioritization, the Commission presumed the availability of water to meet these needs would come from certain streams identified within the 2001 petitions as well as streams not part of the 2001 petitions but part of the larger license area. The Commission estimated the availability of water to meet these needs using the available hydrological data that was part of the contested case record, specifically the flow of water in each ditch at the end of individual license areas, the amount of water distributed to Maui County Department of Water Supply at the Kamole Weir and at the Kula agricultural park, the amount of groundwater pumped from available wells, and the water used for the irrigation and processing of sugarcane by Hawaiian Commercial & Sugar.

This explanation echoes CWRM's unchallenged Conclusion of Law from the 2018 Decision and Order, in which the CWRM explained:

In not requiring the full restoration of all streams, the Commission has allowed for the some [sic] streams to continue to be diverted so that the Board may continue to license the diversion of water not needed to meet the IIFS from these streams for noninstream use. The available water would also include freshets and stormwater which are not included in the calculation of the IIFS.

See CWRM D&O at Conclusion of Law (COL) 150.

Sierra Club members have testified before the Board and during the litigation that their recreational use and enjoyment of the 13 streams is negatively impacted by Permittee's diversions. While the Board has considered these members' interests, and should again consider all testimony in connection with this submittal, staff recommends that the interest of these members should not outweigh the overwhelming interest of the public in ensuring that Permittee has sufficient water to meet the needs of diversified agriculture and the domestic use of MDWS's customers.

While the members of the public express a recreational interest in the 13 streams, staff is not aware of any reason preventing any members of the public from enjoying other streams in the East Maui area, including those that have been ordered fully restored by CWRM. Further, while Sierra Club has previously asked that the Permittee's water use be capped at 27 mgd, it appears undisputed that limiting Permittee to that much water will not necessarily fully restore the 13 streams in any event.

Although staff is recommending that the Permittee be allowed to continue diverting from the streams that did not have new IIFS set by the CWRM decision, staff acknowledges and appreciates DAR's analysis and recommendations. Therefore, staff is recommending that the Board require the Permittee to cooperate with CWRM and DAR in studies, site inspections and other actions as necessary to address the streams in the license areas not covered by the CWRM order.

A. The Coastal Zone Management Act (CZMA); HRS Chapter 205A.

In its litigation against the Board, the Sierra Club alleged that the Board violated certain sections of the Coastal Zone Management Act (CZMA). It argues that the CZMA applies insofar as it sets out requirements for the "coastal zone management area" which includes all lands of the State. HRS § 205A-1.

The objectives of the CZMA include the: "[p]rotect[ion of] valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems." HRS § 205A-2(b)(4)(A).

Its policies include:

(A) Exercis[ing] an overall conservation ethic, and practice[ing] stewardship in the protection, use, and development of marine and coastal resources;

....
(D) Minimiz[ing] disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs[.]

HRS § 205A-2(c)(4)(A) & (D).

HRS § 205A-4 directs State agencies to follow the objectives and policies of the CZMA:

- (a) In implementing the objectives of the coastal zone management program, the agencies shall give full consideration to ecological, cultural, historic, esthetic, recreational, scenic, and open space values, and coastal hazards, as well as to needs for economic development.
- (b) The objectives and policies of this chapter and any guidelines enacted by the legislature shall be binding upon actions within the coastal zone management area by all agencies, within the scope of their authority.

HRS § 205A-5 further states:

- (a) All agencies shall ensure that their rules comply with the objectives and policies of this chapter and any guidelines enacted by the legislature.
- (b) All agencies shall enforce the objectives and policies of this chapter and any rules adopted pursuant to this chapter.

The Sierra Club contends that the Board violated each of the above-quoted sections of the CZMA by approving the continued holdover of the RPs. Staff disagrees.

Protection of coastal ecosystems. While the diversion of certain streams may prevent native amphidromous species from migrating to the ocean as larvae, where they would become part of the coastal ecosystem, the ecosystem at large should be sufficiently protected because of the presence of streams that have been ordered to be fully restored by CWRM, and those which have been designated as “habitat streams.” Flow in these streams should be sufficient to allow larvae to migrate to the ocean and join the coastal ecosystem. Further, even in streams that are not fully restored or are not habitat streams, larvae may still be flushed out into the ocean by freshets, which can bypass diversion structures. Ensuring connectivity, which the CWRM order commands, will also allow stream animals to complete their life cycle by migrating from the ocean upstream as they mature.

Effective regulation of stream diversions recognizing competing water needs. As discussed at length above, the staff believes that the continued holdover of the RPs, subject to the conditions recommended, constitutes the effective regulation of stream diversions recognizing competing instream and offstream needs.

Ecological, cultural, and historic values. Staff has considered the comments of DAR and CWRM with respect to the ecological, cultural, and historic values of the streams in the RP areas, as well as the DEIS published by the Permittee, public testimony provided at past

meetings, and testimony presented during the trial in the Sierra Club litigation. Staff is satisfied that the ecological, cultural, and historic values of the petitioned streams have been sufficiently protected by the CWRM decision, as CWRM acted as a public trustee, exercised its expertise, and no party appears to contest its findings. With respect to the “13 streams” or the non-petitioned streams, staff is satisfied that CWRM is in the process of ascertaining the ecological values of these streams and the propriety of setting IIFS for these streams, and that continuing the RPs on a temporary basis will not interfere with CWRM’s analysis. CWRM staff has developed a draft Instream Flow Standard Assessment Report (IFSAR) Summary, which is included as part of the Appendix for the Board’s information. However, staff notes that the summary has not been reviewed or accepted by the Commission itself. Staff will provide DAR’s comments for their review.

Aesthetic, recreational, scenic, and open space values. As discussed above, the CWRM decision takes into account and balances the aesthetic, recreational, scenic, and open space values with respect to the petitioned streams. Sierra Club has also presented extensive testimony regarding these values in connection with previous board meetings, which staff and the Board have considered.

Coastal hazards. Staff is unaware of any coastal hazards that are implicated by the continuation of the RPs.

Needs for economic development. As discussed extensively above, continuing the holdover of the RPs is in the best interest of economic development.

III. RENT

Staff is consulting with DHHL to ensure that dispositions of water sufficiently address the State’s trust obligations to DHHL beneficiaries. As DHHL is entitled to 30% of water license revenues pursuant to section 213 of the Hawaiian Home Commission Act, DHHL was concerned that revocable permit rents remained static for an extended period with no adjustment and requested that, at a minimum, rents be adjusted annually for inflation. Acknowledging the difficulty in appraising a holdover revocable permit, staff concurred with DHHL’s recommendation as an interim measure, and the Board approved adjusting the rents accordingly. As the permits were originally granted in the year 2000, as part of its 2018 and 2019 approvals, the Board authorized the adjustment of revocable permit rent consistent with the Consumer Price Index (CPI). The current 2020 revocable permit rents are as follows:

RP S-7263:	\$2,518.59 per month
RP S-7264:	\$9,831.49 per month
RP S-7265:	\$5,155.93 per month
RP S-7266:	\$2,116.04 per month

Adjusted for CPI calculated from September 2019 to August 2020, the 2021 rents are as follows:

RP S-7263:	\$2,549.58 per month
RP S-7264:	\$9,952.45 per month

RP S-7265: \$5,219.37 per month

RP S-7266: \$2,142.07 per month

In addition to the rent issue, pursuant to HRS § 171-58(g), any lease of water rights shall be subject to the rights of DHHL and include a reservation of water rights sufficient to support current and future homestead needs. To fulfill that obligation, DHHL and Department conducted a beneficiary consultation on January 14, 2018 to determine an appropriate reservation. However, DHHL has also requested that any holdover be consistent with the public trust doctrine, and furthermore that all revocable permits shall also be subject to any existing or future reservations of water for DHHL. Staff concurred with DHHL's comments and the Board has approved incorporating them into the revocable permits.

IV. CONCLUSION

The most prudent action would be to maintain the status quo while the parties properly comply with the extensive requirements of the water leasing process, which is underway and in progress. Because the permits are temporary in nature, the Board retains the authority to terminate them at any time in the event that it deems that the Permittee is not working in good faith toward obtaining a water lease.

In conclusion, staff recommends that in addition to any pre-existing requirements, the Board approve the continuation of the revocable permits subject further to the following requirements:

1. Permittee shall cooperate with CWRM and DAR in studies, site inspections and other actions as necessary to address the streams in the license areas not covered by the CWRM order.
2. Permittee shall work with CWRM and DOFAW to determine whether there are alternatives to diversion removal that effectively prevent mosquito breeding and can be feasibly implemented. Permittee shall include the status of alternatives in their quarterly reports.
3. If the Board finds that a use of water is not reasonable and beneficial and does not comply with the permitted uses, Permittee shall cease such use within a timeframe as determined by the Department.
4. For water used for agricultural crops, Permittee are to estimate how much water is required for each crop per acre per day.
5. Permittee shall submit to the Department a plan for their proposed upgrades, including an implementation timeline, to the irrigation system intended to address CWRM's concerns no later than June 30, 2021.
6. Permittee shall pay the 2021 monthly rent amounts as determined above.

7. "Trash and debris" shall be further defined as "any loose or dislodged diversion material such as concrete, rebar, steel grating, corrugated metals, railroad ties, etc., that can be removed by hand (or by light equipment that can access the stream as is)."
8. System losses and evaporation shall not be considered as a waste of water.

V. RECOMMENDATION

That the Board:

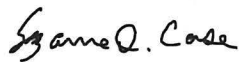
1. Find that the continuation of the subject revocable permits is consistent with the public trust doctrine;
2. Declare that, after considering the potential effects of the proposed dispositions as provided by Chapter 343, HRS, and Chapter 11-200.1, HAR, these projects will probably have minimal or no significant effect on the environment and are therefore exempt from the preparation of an environmental assessment;
3. Subject to the terms and conditions noted in this submittal, approve the holdover or continuation of the revocable permits on a month-to-month basis for another one-year period through December 31, 2021,

Respectfully Submitted,



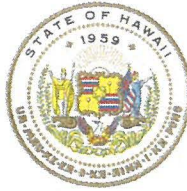
Ian Hirokawa
Special Projects Coordinator

APPROVED FOR SUBMITTAL:



Suzanne D. Case, Chairperson

DAVID Y. IGE
GOVERNOR OF HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

November 13, 2020

EXEMPTION NOTIFICATION

Regarding the preparation of an environmental assessment pursuant to Chapter 343, Hawaii Revised Statutes (HRS), and Chapter 11-200.1, Hawaii Administrative Rules (HAR):

Project Title:	Holdover/Continuation of Revocable Permits S-7263 (Tax Map Key (2) 1-1-001:044), S-7264 (Tax Map Keys (2) 1-1-001:050, 2-9-014:001, 005, 011, 012 & 017) and S-7265 (Tax Map Key (2) 1-1-002:por. 002) to Alexander and Baldwin, Inc., and S-7266 (Tax Map Keys (2) 1-2-004:005 & 007) to East Maui Irrigation Company, Limited, for Water Use on the Island of Maui.
Project Location:	Maui
Project Description:	Revocable permits for interim water use.
Chap. 343 Trigger(s):	Use of State Water (Land)
Exemption Class No. and Description:	In accordance with HAR § 11-200.1-15 and the Exemption List for the Department of Land and Natural Resources reviewed and concurred on by the Environmental Council on March 3, 2020, the subject request is exempt from the preparation of an environmental assessment pursuant to Exemption Class No. 1 that states, "Operations, repairs or maintenance of existing structures, facilities, equipment, or topographical features, involving negligible or no expansion or change of use beyond that previously existing," and Item 45 that states, "Permits, licenses, registrations, and rights-of-entry issues by the Department that are routine in nature, involving negligible impacts beyond that previously existing."
Cumulative Impact of Planned Successive Actions in Same Place Significant:	No, this action applies only to pre-existing diversions, and will not serve to authorize any new diversions of water beyond that currently occurring.
Action May Have Significant Impact on	No. Revocable permits are temporary in nature and applicants are conducting environmental reviews.

**Particularly Sensitive
Environment:**

Analysis:

The State Intermediate Court of Appeals has determined that pursuant to Section 171-55, HRS the Board may issue a temporary permit in the interim while a permittee pursues a long-term water lease. The proposed use under the revocable permits will involve negligible or no expansion or change of use beyond that previously existing.

Consulted Parties:

Commission of Water Resource Management, Division of Forestry and Wildlife, Division of Aquatic Resources.

Recommendation:

That the Board find this project will probably have minimal or no significant effect on the environment and is presumed to be exempt from the preparation of an environmental assessment.

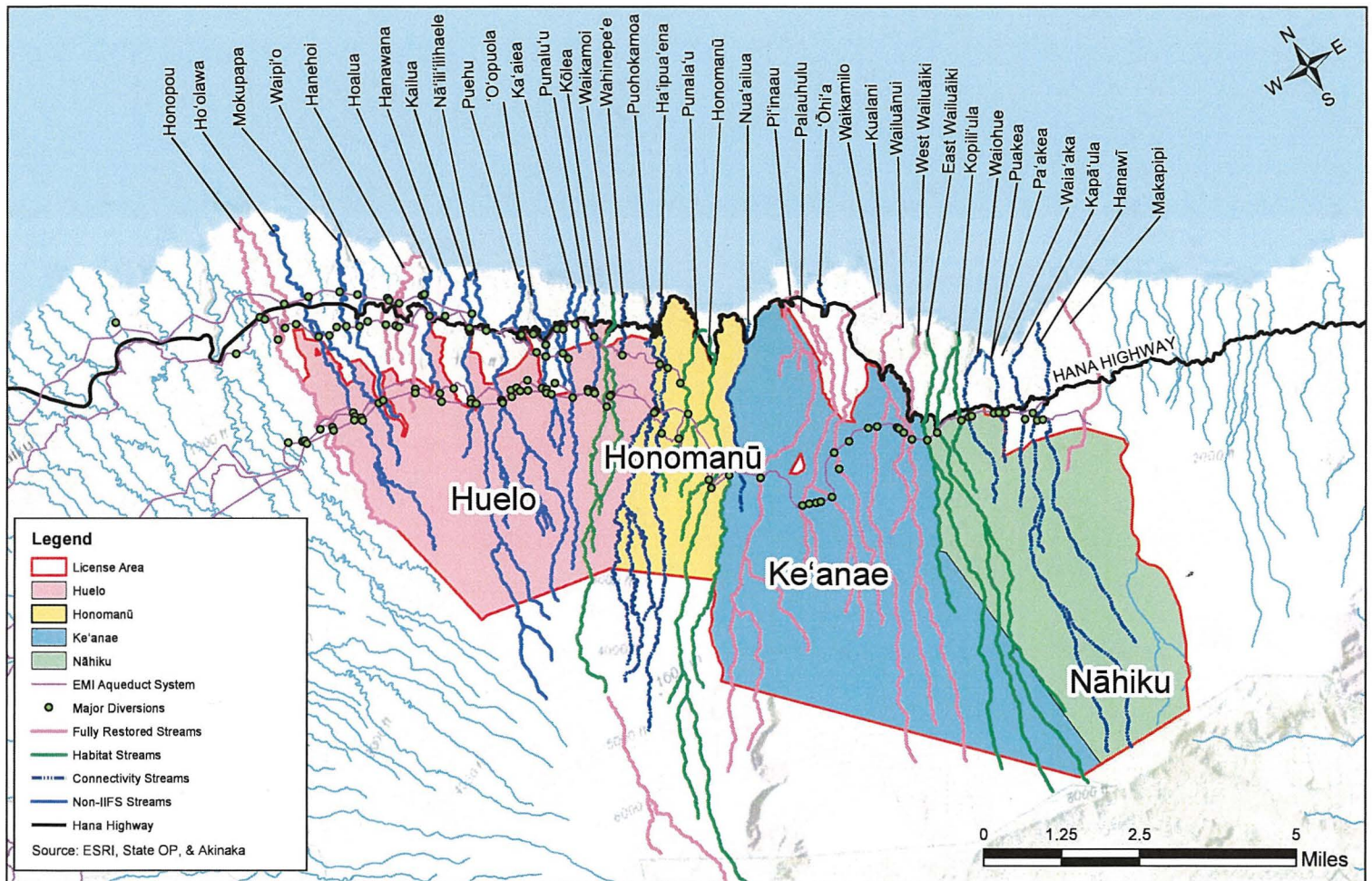


FIGURE 1-3

CWRM IIFS DECISION & ORDER MAP

PROPOSED LEASE (WATER LEASE) FOR THE NĀHIKU, KE'ANAE, HONOMANŪ, AND HUELŌ LICENSE AREAS

EXHIBIT A

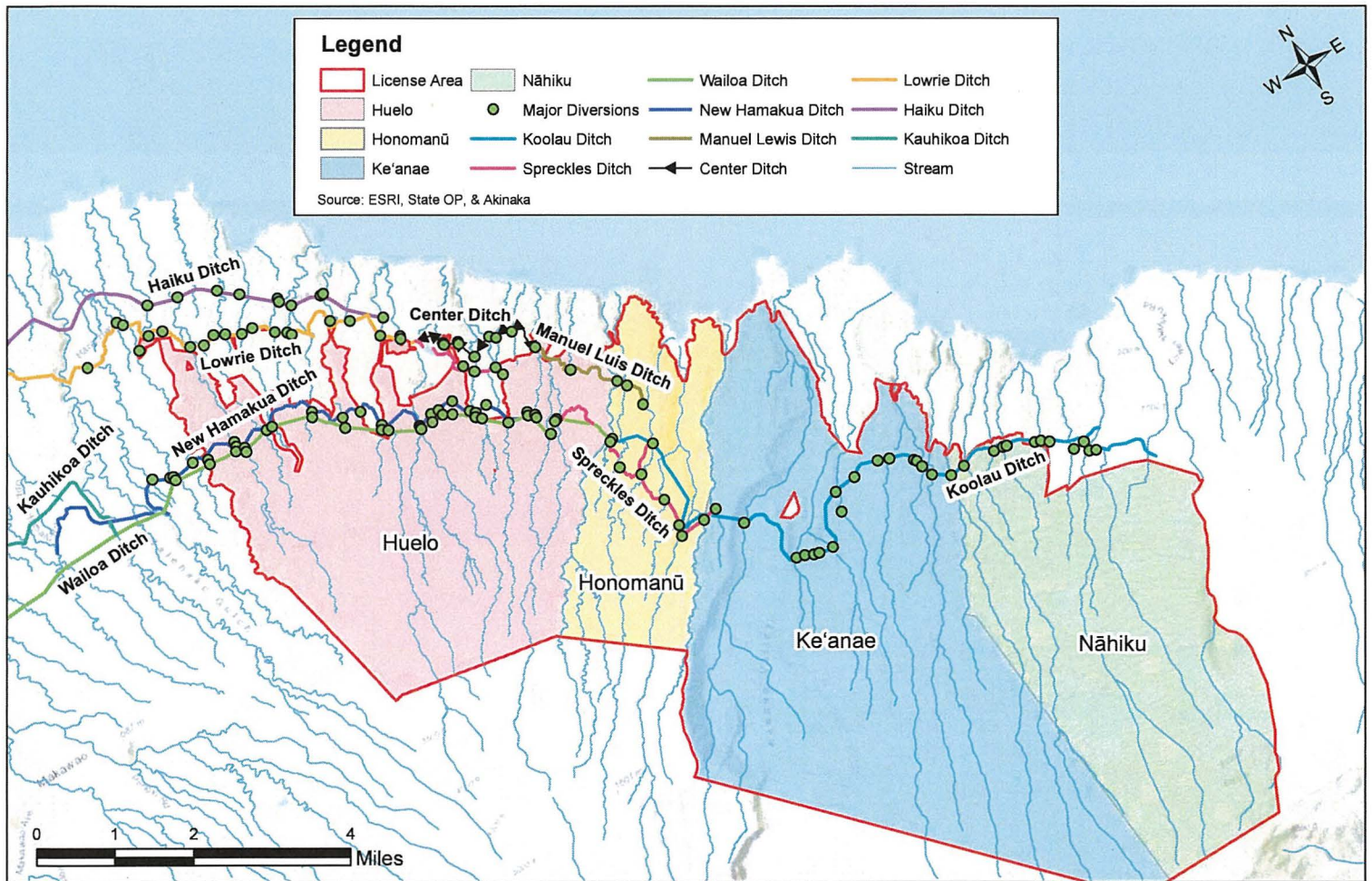


FIGURE 2-1

EMI AQUEDUCT - EAST MAUI

PROPOSED LEASE (WATER LEASE) FOR THE NĀHIKU, KE'ANAE, HONOMANŪ, AND HUELO LICENSE AREAS

Additional Records, Documents and Reference Materials, including Revocable Permits, Previous Water Leases and Quarterly Status Reports https://dlnr.hawaii.gov/ld/additional-records-documents-and-reference-material-111320_d8/
Commission on Water Resource Management Surface-Water Hydrologic Units: A Management Tool for Instream Flow Standards, PR-2005-01 (June 2005), <i>available at</i> https://files.hawaii.gov/dlnr/cwrmpublishedreports/PR200501.pdf
Mitchell, C., et al., 2005. Hawaii's Comprehensive Wildlife Conservation Strategy, Department of Land and Natural Resources. Honolulu, Hawai'i (Oct. 1, 2005), 722 pp., <i>available at</i> https://dlnr.hawaii.gov/wildlife/files/2013/09/CWCS-Full-Document-2005Oct01.pdf
Gingerich, S.B., 2004, Median and Low-Flow Characteristics for Streams under Natural and Diverted Conditions, Northeast Maui, Hawaii: Honolulu, HI, U.S. Geological Survey, Scientific Investigations Report 2004-5262, 72 p., <i>available at</i> https://pubs.usgs.gov/sir/2004/5262/pdf/sir2004-5262.pdf
Gingerich, S.B. and Wolff, R.H., 2005, Effects of surface-water diversions on habitat availability for native macrofauna, northeast Maui, Hawaii: U.S. Geological Survey Scientific Investigations Report 2005-5213, 93 p., <i>available at</i> https://pubs.usgs.gov/sir/2005/5213/pdf/sir2005-5213.pdf
Hawaii Stream Assessment: a Preliminary Appraisal of Hawaii's Stream Resources, Report R84 (December 1990), <i>available at</i> https://files.hawaii.gov/dlnr/cwrmpublishedreports/R84_HSA.pdf
"The Use of Hawaiian Stream Habitat Evaluation Procedure to Provide Biological Resource Assessment in Support of Instream Flow Standards for East Maui Streams," by Bishop Museum and DAR (Nov. 20, 2009) [104 pages] https://files.hawaii.gov/dlnr/cwrmp/activity/iifismaui1/dar-hshep.pdf
Cheng, C.L., 2016, Low-flow characteristics for streams on the Islands of Kaua'i, O'ahu, Moloka'i, Maui, and Hawai'i, State of Hawai'i: U.S. Geological Survey Scientific Investigations Report 2016-5103, 36 p., <i>available at</i> https://pubs.usgs.gov/sir/2016/5103/sir20165103.pdf
J. Michael Fitzsimons, Mark G. McRae, & Robert T. Nishimoto, <i>Behavioral Ecology of Indigenous Stream Fishes in Hawai'i</i> , in <i>Biology of Hawaiian Streams and Estuaries</i> (N.L. Evenhuis & J.M. Fitzsimons, eds. 2007), Bishop Museum Bulletin in Cultural & Environmental Studies 3:11-22, <i>available at</i> http://hbs.bishopmuseum.org/pubs-online/strm/03-fitzsimons.pdf
Parham, J.E., et al., 2008, <i>Atlas of Hawaiian Watersheds and Their Aquatic Resources</i> , Island of Maui, Division of Aquatic Resources & Bishop Museum, Honolulu, HI, 866 p., <i>available at</i> http://hawaiiwatershedatlas.com/

EXHIBIT B- APPENDIX

<p>Parham, J.E., et al., 2009, The Use of Hawaiian Stream Habitat Evaluation Procedure to Provide Biological Resource Assessment in Support of Instream Flow Standards for East Maui Streams (Nov. 20, 2009), Bishop Museum & Department of Aquatic Resources, Honolulu, HI, 104 p., available at https://files.hawaii.gov/dlnr/cwrn/activity/iifsmaui1/dar-hshep.pdf</p>
<p>Maui County DWS reports regarding water delivery for their Upcountry system can be found here: https://www.mauicounty.gov/1085/Upcountry-Water-Levels</p>
<p>CWRM Staff Submittal re: SDWP 4915.6 (Category 2 Diversions) (Feb. 19, 2019) https://files.hawaii.gov/dlnr/cwrn/submittal/2019/sb20190219B3.pdf</p>
<p>CWRM - STAFF SUBMITTAL - re: SDWP 4950.6 (Category 3 Diversions) (Aug. 29, 2019) https://files.hawaii.gov/dlnr/cwrn/submittal/2019/sb20190829B2.pdf</p>
<p>CWRM - Meeting MINUTES - re: SDWP 4950.6 (Category 3 Diversions) (Aug. 29, 2019) https://files.hawaii.gov/dlnr/cwrn/minute/2019/mn20190829.pdf</p>
<p>CWRM Staff Submittal re: SDWP 4951.6 (Category 4 Diversions) (Nov. 20, 2019) https://files.hawaii.gov/dlnr/cwrn/submittal/2019/sb20191120C1.pdf</p>
<p>CWRM minutes re: SDWP 4951.6 (Category 4 Diversions) (Nov. 20, 2019) https://files.hawaii.gov/dlnr/cwrn/minute/2019/mn20191120.pdf</p>

EXHIBIT B- APPENDIX

EAST MAUI IRRIGATION COMPANY, LLC

P.O. BOX 791628, PAIA, MAUI, HAWAII 96779-1628 • (808) 579-9516

October 15, 2020

The Honorable Suzanne Case, Chair
and Members of the Board of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

RE: Holdover of Revocable Permits Nos. S-7263, S-7264, and S-7265 issued to Alexander & Baldwin, Inc. ("A&B") and Revocable Permit No. S-7266 issued to East Maui Irrigation Company, Limited ("EMI") for Water Use on the Island of Maui: Q3 2020 Status Report

Dear Chair Case:

The purpose of this letter is to provide the 3rd quarter status report on A&B/EMI's compliance with permit conditions imposed by the Board of Land and Natural Resources ("**BLNR**") as part of its October 11, 2019 approval of the holdover of Revocable Permits Nos. S-7263, S-7264, and S-7265 issued to A&B and Revocable Permit No. S-7266 issued to EMI for the calendar year 2020. We are providing this status report at this time in compliance with the conditions of the permits requiring quarterly written reports to the BLNR.

The attached document lists each of the permit conditions and corresponding compliance actions undertaken as of September 30, 2020. As you know, the agenda, minutes, and staff recommendation for the BLNR's October 11, 2019 meeting relating to the subject permits are the source of the permit conditions listed on the attached.

Since the last report that was submitted, water collection enabled by these East Maui revocable permits continued to serve the needs of the public water systems that serve Upcountry Maui and Nahiku, both owned and operated by the County of Maui Department of Water Supply, as well as the County's Kula Ag Park and increasing diversified agricultural activities in Central Maui undertaken by Mahi Pono. Maintaining these Central Maui lands in agriculture is consistent with the state's constitutional mandate to protect important agricultural lands, as well as the Hawaii State Plan, Maui Countywide Policy Plan, Maui Island Plan, and Maui community plans. These uses of East Maui stream water are further recognized and confirmed by the June 20, 2018, Interim Instream Flow Standard ("**IIFS**") decision issued by the Commission on Water Resource Management ("**CWRM**") for East Maui streams, 24 of which are within the area covered by the East Maui RP's. The diversion and use of East Maui stream water this year has been in compliance with the CWRM's June 2018 IIFS decision.

EXHIBIT C

A&B and EMI continue to work with Mahi Pono on the preparation of the Environmental Impact Statement ("**EIS**") for the proposed long-term water lease for East Maui, in lieu of these revocable permits. We expect to complete the EIS for DLNR review in the fourth quarter of this year.

Additionally, previously scheduled MP/A&B East Maui Revocable Permit Committee meetings for the year 2020 had been postponed because of the COVID-19 pandemic. With travel restrictions still in place throughout Q3 2020, a Committee meeting was held through video conference on September 25, 2020. The meeting was well attended by representatives from the County of Maui Department of Water Supply, Native Hawaiian Legal Corporation, Maui County Farm Bureau, Nā Moku Aupuni O Ko'olau Hui, Office of Hawaiian Affairs, East Maui Irrigation, and Mahi Pono. Updates relating to the IIFS, EIS, and Mahi Pono's farming operations were provided to the Committee. The minutes of this 9/25/20 meeting will be submitted as part of a future quarterly report, once approved by the RP Committee.

Please do not hesitate to contact us should you have any questions on the attached permit compliance status report.

Sincerely,

A handwritten signature in black ink, appearing to read "Meredith J. Ching", written over a horizontal line.

Meredith J. Ching, A&B

A handwritten signature in black ink, appearing to read "Mark Vaught", written over a horizontal line.

Mark Vaught, EMI

cc: Ian Horikawa, DLNR Land Division (via email)

EAST MAUI IRRIGATION COMPANY, LLC

P.O. BOX 791628, PAIA, MAUI, HAWAII 96779-1628 • (808) 579-9516

BLNR CONDITIONS FOR HOLDOVER OF EAST MAUI WATER PERMITS STATUS OF COMPLIANCE AS OF SEPTEMBER 30, 2020

CONDITIONS PER 11/9/18 STAFF SUBMITTAL

3. Require the holdover of the revocable permits to incorporate the June 20, 2018 order of the Commission on Water Resource Management (CWRM). There shall be no diversion from the streams listed in the CWRM order, and the timing for stopping the diversions shall be in accordance with the aforesaid CWRM order.

The need for water from the East Maui streams averaged approximately 18.9 million gallons per day (MGD) during the third quarter of 2020, and only that amount of water is being diverted from the East Maui watershed. This amount continues to be well within the bounds of the 2018 IIFS decision concerning total quantity as well as the use of specific streams, and is also significantly less than the 45 mgd allocation set by the BLNR at its October 11, 2019. This is primarily related to two factors:

- *COVID-19 Impact on Mahi Pono Planting Schedule* – The pandemic has negatively impacted the availability of farming supplies, including equipment, plants, and irrigation materials. While Mahi Pono has continued to plant citrus, coffee, and food crops, due to current conditions, its focus has partly shifted to place a higher priority on land preparation in anticipation of an accelerated planting schedule in 2021.
- *Low Rainfall During Q3 2020 in East Maui* – EMI is strongly committed to IIFS compliance. During periods of particularly low rainfall in Q3 2020, this commitment has severely limited EMI's ability to divert water from East Maui. In order to compensate for this lack of surface water availability, EMI supplemented its irrigation supply by pumping 12.7 million gallons of groundwater during Q3 2020.

Despite the impact of COVID and the low rainfall conditions in East Maui, the water that was diverted in Q3 2020 continued to supply the County of Maui for its Nahiku and Upcountry Maui water systems, the Kula Ag Park, as well as fire suppression needs, historical industrial/non-agricultural use, and agricultural uses in Central Maui, on lands now owned and managed by Mahi Pono.

Mahi Pono will continue the expansion of its agricultural operations, which will result in a corresponding increase in the need for water from East Maui over the remainder of the year. In addition to the expansion that occurred in Q3 2020, Q4 2020 will see the planting of an

**HOLDOVER OF EAST MAUI WATER PERMITS
2019 BLNR CONDITIONS: STATUS OF COMPLIANCE
AS OF SEPTEMBER 30, 2020
Page 2 of 14**

additional 1,000 acres of citrus and 150 acres of coffee. The Permittees – and by extension, Mahi Pono – remain committed to the efficient use of East Maui stream water. Mahi Pono's total amount of water usage, together with that of the County of Maui, will not exceed the limits of the IIFS decision at any point during its expansion.

All of the initial approvals have been sought and received from the CWRM for the abandonment of the use of the diversions on the “taro streams” to achieve full restoration of their streamflow. EMI is currently working to meet conditions of those approvals, including the development of Best Management Practices (BMP) to be implemented at each diversion so that the diversion work can proceed. We are currently working on a diversion-by-diversion analysis of the “Category 1” diversions as requested by the CWRM as part of its deliberations of the abandonment permits for these 15 diversions.

The Permittees have also initiated discussions with CWRM staff on IIFS compliance for the ‘non-taro streams.’ A draft work plan has been submitted to CWRM for 41 diversions on 17 additional streams that are implicated by the 2018 IIFS decision. Prior to the issuance of the needed permits to undertake the work, CWRM will need to conduct site visits to each diversion site. In the meantime, the Permittees are complying with the IIFS decision with respect to instream flow requirements (i.e., by individual streams and the total quantity of flow). This compliance is subject to CWRM staff verification through the use of CWRM-installed and maintained gauges along IIFS streams. The Permittees also opened discussions with CWRM field staff on establishing proper measurement protocols for flow compliance, but the furthering of these discussions was delayed due to COVID travel restrictions. Connectivity requirements of the IIFS decision are being met to the extent possible without the physical modifications that require governmental reviews and approvals. The draft work plan transmitted by the Permittees to the CWRM does address means of achieving full connectivity compliance for these additional non-taro streams.

In summary, the Permittees’ diversion of water under the subject 2020 RP’s has been in compliance with the CWRM’s June 20, 2018, IIFS order concerning flow volumes, by individual streams, compliance with connectivity requirements has been met to the extent legally possible without further governmental review and approvals and significant progress has been made on pursuing the modifications and abandonment of diversions on the seven ‘taro streams,’ an established and continued priority for both the permittees and the State.

4. There shall be no waste of water. All diverted water shall be put to beneficial agricultural use or municipal use.

Status: See uses outlined in response to #3 above. All are beneficial uses related to agriculture and municipal/public needs.

**HOLDOVER OF EAST MAUI WATER PERMITS
2019 BLNR CONDITIONS: STATUS OF COMPLIANCE
AS OF SEPTEMBER 30, 2020
Page 3 of 14**

5. Any amount of water diverted under the revocable permits shall be for reasonable and beneficial use and always in compliance with the amended IIFS.

Status: See responses to #3 and #4 above.

6. The holdover shall comply with all conditions required by the CWRM's Amended IIFS Decision.

Status: As mentioned above, total water diverted for use in Upcountry and Central Maui approximated an average of 18.9 MGD this past quarter, which is well within the bounds of the CWRM's 2018 IIFS decision concerning the diversion of specific streams and the total amount of water diverted. The Permittees achieved significant progress in 2019 and in the first nine months of 2020 relative to pursuing the ditch system/diversion modifications that are necessary to ensure IIFS compliance as water needs increase.

7. Permittee shall provide a specific report on the progress regarding the removal of diversions and fixing of the pipe issues before the end of the holdover period.

Status: This permit condition was initially imposed in 2018 and we believe relates to a pipe at Pualoa (aka Puolua) Stream at the Lowrie Ditch. In last year's status report, we reported that the pipe had been extended to provide wetted pathways for the movement of stream biota on Pualoa Stream. At the 2018 BLNR hearing on the subject RP's (for 2019), statements were made that the pipe needs to be extended further to go under the road and that two 4" rusted pipes needed to be removed. Accordingly (and as reported in previous quarterly reports), the two 4" pipes have since been removed from the watershed and a new design intended to improve fish migration has been incorporated in the diversion modification plan for compliance with the IIFS, and approved by the CWRM in its approval of the Category 3 SWUP's. This specific scope of work was part of the overall work plan referenced earlier. Road maintenance and repair activities were also conducted in order to better facilitate access to several of the remaining intakes that are subject to Category 2 permits. A BMP plan for these intakes will be submitted to the Department of Health Clean Water Branch shortly.

8. Permittee shall clean up trash from revocable permit areas starting with areas that are accessible and close to streams.

Status: The Permittees have established a number of standard operating procedures to address the cleanup of trash and debris in the license areas. Besides recognizing unnecessary debris in the field during routine maintenance tasks, EMI has conducted specific identification and removal operations of debris that has been observed from previous field work. In the third quarter of 2020, EMI has continued to remove PVC and steel pipe, old wooden and steel gates, discarded wooden structures and remnant pieces of concrete. EMI

**HOLDOVER OF EAST MAUI WATER PERMITS
2019 BLNR CONDITIONS: STATUS OF COMPLIANCE
AS OF SEPTEMBER 30, 2020
Page 4 of 14**

also has in place a practice of removing any equipment and excess materials it brings into the license area to perform work on the ditch system as soon as the job(s) is completed. Additional pictures of trash that has been removed over the past 9 months is attached as Exhibit D, including trash that was removed from locations surrounding the streams outside of the IIFS area.

BLNR ADDITIONAL CONDITIONS (11/9/18 BLNR Meeting):

- 1. The Board established an interim committee to discuss water usage issues in the license area. The committee shall consist of five members, representing Alexander & Baldwin, Farm Bureau, OHA, Native Hawaiian Legal Corporation and the County of Maui. The interim committee shall meet once a month for the first quarter, then at least quarterly thereafter, more often as useful***

Status: Previously scheduled MP/A&B East Maui Revocable Permit Committee meetings for the year 2020 had been postponed because of the COVID 19 pandemic. With travel restrictions still in place throughout Q3 2020, a Committee meeting was held through video conference on September 25, 2020. The meeting was well attended by the following:

- Jeff Pearson – Director, County of Maui Department of Water Supply
- Summer Sylva – Executive Director, Native Hawaiian Legal Corporation
- Warren Watanabe – Executive Director, Maui County Farm Bureau
- Mahealani Wendt – Nā Moku Aupuni O Ko’olau Hui
- Mark Vaught – Director, East Maui Irrigation
- Carmen Hulu Lindsey (via Kanani laea) – Trustee, Office of Hawaiian Affairs
- Grant Nakama – Vice President of Operations, Mahi Pono LLC

An update on the work related to the IIFS and EIS were provided by EMI, and an update on ongoing farming operations was provided by Mahi Pono. Updates were well-received by attendees. The minutes of this 9/25/20 meeting will be submitted as part of a future quarterly report, once approved by the RP Committee.

CONDITIONS PER 10/11/19 STAFF SUBMITTAL

- 1. Permittees shall provide quarterly written reports to the Board containing the following information:***
 - a. The amount of water used on a monthly basis, including the monthly amount of water delivered for: the County of Maui DWS and the County of Maui Kula Agricultural Park; diversified agriculture; industrial and non-agricultural uses, and***

reservoir/fire protection/hydroelectric uses. Also provide an estimate of the system loss for the EMI ditch system and the A&B field system. Diversified agricultural uses shall also provide information as to location, crop, and user of water. Industrial and non-agricultural uses shall specify the character and purpose of water use and the user of water.

Status: The amount of water used on a monthly basis, including the monthly amount of water delivered for the County of Maui DWS and Kula Ag Park, diversified agriculture, industrial and non-agricultural uses, and reservoir/fire protection/hydroelectric uses can be found in the table attached as Exhibit A. The existence of and continued use of reservoirs is extremely important for fire safety reasons. They are a major source of water for fighting fires on Maui, which occur during the dry months of the year. The location, crop, and users of agricultural water, and the specifics on industrial and non-agricultural uses can be found in the table attached as Exhibit B.

- b. For each stream that is subject to the CWRM order, a status update as to the degree to which the flow of each stream has been restored, and which artificial structures have been removed as required by CWRM.

Status: EMI prioritizes its compliance with the CWRM order and has been working with CWRM staff on implementation plans and permitting. EMI notes that the language of the CWRM order relating to the removal of artificial structures is spelled out on page 269 of the D&O, items i, j, and k which state in part that “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.” and “The intent of the Commission is to allow for the continued use and viability of the EMI ditch system and will not require the complete removal of diversions unless necessary to achieve the IIFS. A status update is provided in the table attached as Exhibit C. Also included in Exhibit C is a copy of the section of the CWRM order relating to the removal of artificial structures.

- c. Update on removal of trash, unused man-made structures, equipment and debris that serve no useful purpose, including documenting any reports of such items received from the Department, other public or private entities, and members of the general public and action taken by Permittee to remove the reported items.

Status: See above response to #8 of Conditions per 11/9/18 Staff Submittal and also Exhibit D.

- d. The method and timeline for discontinuing the diversion of water from Waipi'o and Haneho'i streams into Ho'olawa stream, including status updates on implementation.

Status: As the stream levels fluctuate during times of inclement weather, EMI personnel are dispatched to manually control the intake gates for the prevention of excess stream water inflow to the ditch. As for Haneho'i, all intakes have been sealed (per the 2018 D&O) therefore no water enters the ditch from this stream. In regards to Waipi'o stream, EMI personnel manually control the intakes on the ditch to prevent excess flow from entering the ditch. Thus, all flows to the ditch are delivered to and used by Mahi Pono and the County of Maui. The flows are no longer controlled into Hoolawa stream.

2. ***The permittee may not divert an amount of water per month exceeding an average of 45mgd, further subject to all water diverted shall be for reasonable and beneficial uses.***

Status: The third quarter need for water from the East Maui streams has averaged approximately 18.9 million gallons per day (MGD), and only that amount of water is being diverted from the East Maui watershed. The year-to-date need for water from the East Maui streams has averaged 23.3 MGD. This amount continues to be well within the bounds of the 2018 IIFS decision concerning total quantity as well as the use of specific streams. This water is being used to supply the County of Maui for its Nahiku and Upcountry Maui water systems, the Kula Ag Park, as well as fire suppression needs, historical industrial/non-agricultural use, and agricultural uses in Central Maui, on lands now owned and managed by Mahi Pono.

3. ***For RP S-7266, the area identified as the Hanawi Natural Area Reserve shall be removed from the revocable permit premises. Additionally, A&B/EMI shall continue discussions with DOFAW to identify additional forest reserve lands to be removed from the license areas to be implemented in connection with the issuance of a water lease, if any, or sooner.***

Status: Representatives from EMI and DOFAW held two meetings so far this year to discuss general logistics related to the potential removal of forest reserve acreages from the license area. These meetings were held on March 18th and September 24th. The initial meeting included an exchange of information related to access routes and a discussion relating to potential impacts on EMI's operations as a result of a reduction in the license area. The most recent meeting in September furthered this discussion, and focused on certain access routes in greater detail. Future meetings will be scheduled as more information becomes available, and as COVID restrictions ease in the upcoming months.

AMENDMENTS PER MINUTES OF 10/11/19 BLNR MEETING:

- 1. *Mahi Pono is to advise any third-party lessee's, that any decisions they make is based on availability of water on a month-to-month basis renewed annually unless there is a permanent lease***

Status: All third-party lessees have been informed through existing language in their lease agreements that the availability of water is subject to change based on various conditions, one of which would be the nature of the water availability from East Maui through an annually renewed revocable permit or an eventual permanent lease.

- 2. *the (14) streams outside of the IIFFS (sic) area continue to be cleaned of debris and Applicant is to provide a status report every three months to Staff***

Status: EMI has continued to remove debris and trash from stream areas. These efforts include locations surrounding the streams located outside of the IIFS area. Attached as Exhibit D are pictures of debris removed during Q3 2020.

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EXHIBIT A – MONTHLY WATER USAGE

All Figures in Millions of Gallons per Day ("MGD")

<i>Month</i>	<i>East Maui Water @ Honopou</i>	<i>County of Maui DWS¹</i>	<i>County of Maui Ag Park²</i>	<i>Diversified Agriculture³</i>	<i>Historic/Industrial Uses⁴</i>	<i>Reservoir/Fire Protection/ Evaporation/Dust Control/ Hydroelectric⁵</i>
July	16.8	3.2	0.45	2.6	1.1	9.47
August	19.7	2.5	0.46	2.5	1.1	13.20
September	20.1	3.4	0.69	2.4	1.1	12.49
QUARTERLY AVERAGE	18.9	3.0	0.5	2.5	1.1	11.7

1. The numbers in this column are based on reports received from the County of Maui and have not been independently verified by EMI. Operationally, a minimum of approximately 6 MGD must be reliably conveyed to / made available to the County each and every day so that the County has flexibility regarding when to run its plan depending upon weather conditions, demand, water available from its Piihola plant, etc. Water conveyed by EMI but not used by the County is redirected by EMI to reservoirs located on the former plantation.
2. The numbers in this column are based on reports received from the County and have not been independently verified by EMI. Operationally, a minimum of approximately 1.5 MGD must be reliably conveyed to / made available to the County each and every day so that the County can be flexible regarding how to meet the needs of the Ag Park. Water conveyed by EMI but not used by the County is redirected by EMI to reservoirs located on the former plantation.
3. Diversified Ag includes the users/uses described in Exhibit B.
4. Historical/Industrial Uses are uses other than plantation and A&B uses that have historically relied on water from the EMI system. These include uses by entities located either adjacent to or within the boundaries of the farm and are further described in Exhibit B.
5. The numbers in this column include water not separately accounted for in the columns to the left. The EMI system is operated in a manner that ensures continuous water availability in the reservoirs to meet the County's needs for fire protection for brush fires, the risk of which has increased due to the reduction of the irrigated acreage following the cessation of sugar cultivation, but is decreasing as Mahi Pono continues to implement its farm plan. System losses (generally in the form of seepage and evaporation) are also included in this column. The water used by the Mahi Pono's hydroelectric system is non-consumptive and is returned to the ditch and re-used consumptively by one of the other uses.

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EXHIBIT B – WATER USAGE SPECIFICS

Diversified Agriculture Users

Entity	Crop	Location (TMK)	Field	Acreage
<i>Mahi Pono</i>	Coffee	250030030000	301	95
<i>Mahi Pono</i>	Citrus	380010010000	604	356
<i>Mahi Pono</i>	Citrus	380010010000	605	225
<i>Mahi Pono</i>	Citrus	380040010000	803A	208
<i>Mahi Pono</i>	Pongamia	380040010000	803B	32
<i>Mahi Pono</i>	Avocado	380040010000	803C	8
<i>Mahi Pono</i>	Papaya	380030020000	807	22
<i>Maui Best (Tenant)</i>	Sweet Potato	250010010000	408	281
<i>Maui Best (Tenant)</i>	Sweet Potato	250010010000	409	180
TOTAL				1,407

Historic / Industrial Uses

Water Users	Source / Delivery Point	Water User's Location	Relationship to EMI / A&B / Mahi Pono	Use
HC&D, LLC and subtenant Maui Paving (Camp 10 Puunene Quarry)	Haiku Ditch & 702 Cistern South of Pulehu Rd	3-8-001-001 3-8-003-004 3-8-003-021	Tenant	Restrooms, concrete batching, fire suppression, and dust control
Imua Energy Maui, LLC, dba Maui EKO Systems LLC (Tenant of County Central Maui Landfill)	Pumped from Haiku Ditch	3-8-003-019	Gov't Tenant	General Use for Compost Operation
HC&S Mill Area Fire Suppression	702 Cistern	3-8-006-001 CPR #1	A&B - Owned	Fire suppression for ag offices & Puunene Post Office
New Leaf Ranch (Non-Profit)	702 Cistern	3-8-006-029	Tenant	Irrigation water for non-profit providing ag-related work opportunities and training as mental health & substance use dependency treatment
Maui Demolition & Construction Landfill (Decoite Trucking)	Reservoir 91	3-8-005-002	Tenant	Tank & Standpipe for Irrigation & Dust Control
Costo Maddela	Haiku Ditch	3-8-001-001	Tenant	Pasture & Animal Water
Harriet, Michael, & Jordan Santos	Kauhikoa Ditch	2-5-001-018 & 019	Tenant	Pasture & Animal Water
Leonard Pagan	Kauhikoa Ditch	2-5-002-001	Tenant	Pasture & Animal Water
Harry Cambra	Kauhikoa Ditch	2-5-003-026, 027, 036, 037, 038	Tenant	Pasture & Animal Water

EXHIBIT C – CWRM ORDER STATUS UPDATE

Section i, j, & k from CWRM 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. 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 Ditch system and will not require the complete removal of diversions unless necessary to achieve the IIFS.

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EXHIBIT C – CWRM ORDER STATUS UPDATE (Continued)

IIFS STREAM UPDATE

Stream Name	Restoration Status	BRQSO at IIFS (cfs)	IIFS Value (cfs)	IIFS Location	Current Status
Makapi'i	Full	1.3	n/a	Above Hana Highway	Gate removed, water flowing downstream below intake
Hanawi	Connectivity	4.6	0.92	Below Hana Highway	Gate open, water flowing downstream below intake
Kapaula	Connectivity	2.8	0.56	On diversion at Koolau Ditch	Main gate open, water flowing downstream below intake
Waiakea	None	0.77	0.77	Above Hana Highway	Gate open, water flowing downstream below intake
Pa'akea	Connectivity	0.9	0.18	At Hana Highway	Intake gate closed, water flowing downstream over dam
Waiohale	Full	5	n/a	At Hana Highway	Intake gate closed, sluice gate removed. All water flowing downstream.
Puakaka	Connectivity	1.1	0.2	Above Hana Highway	Gate open, water flowing downstream below intake
Kopiliula	H90	5	3.2	Below Hana Highway	Main gates open, ditch control gates closed. Water flowing downstream.
East Wailuaki	H90	5.8	3.7	At Hana Highway	Gates open, water flowing downstream below intake
West Wailuaki	Full	6	n/a	Above Hana Highway	Gates open, water flowing downstream below intake
Wailuanui	Full	6.1	n/a	At Hana Highway	All intakes sealed (Category 1) water flowing downstream below intake
Oni'a/Maunu	None	4.7	n/a	None	No diversion
Waikamilo	Full	3.9	n/a	Below diversion at Koolau Ditch	All intakes closed, water flowing downstream
Palaehulu	Full	11	n/a	Above Hana Highway	All water either passing intakes or flowing out of the Kano sluice gate. Water flowing downstream.
Pineau	Full	14	n/a	Above Hana Highway	Intake sealed, water flowing downstream.
Nu'uanu	Connectivity	0.28	2.2	To Be Determined	Intake gate closed, water flowing downstream over dam
Honomanu	H90	4.2	4.2	Above Hana Highway	All 4 diversion sluice gates are open, water flowing downstream
Punalau/Koia	H90	4.5	2.9	Above Hana Highway	Sluice gate open, water flowing downstream below intake
Hai'au'ena	Connectivity	4.9	1.36	Below Hana Highway	Intake gate closed, water flowing downstream, dam will require modification
Puohokamoa	Connectivity	8.4	1.1	Below Hana Highway	Intake gate will be used to ensure water flowing downstream, intake dam will require significant modification
Wahinepe	None	0.9	0.9	Above Hana Highway	No diversion. Water flowing downstream.
Wahinepe	H90	6.7	3.8	Above Hana Highway	Center ditch sluice gate open. Water flowing downstream.
Hanaho'i	Full	2.54	n/a	Upstream of Lower Ditch	Intakes sealed, water flowing downstream.
Huelo (Punalau)	Full	1.47	n/a	Downstream of Haku Ditch	Lower intake will require significant modifications & corresponding permit approvals. Haku intake sealed
Honopou	Full	6.5	n/a	Below Hana Highway	Three sluice gates open, one intake sealed. One of two Wailole intakes sealed, water flowing downstream

EXHIBIT D – EMI TRASH REMOVAL



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EXHIBIT D – EMI TRASH REMOVAL (Continued)



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EXHIBIT D – EMI TRASH REMOVAL (Continued)

