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Attention: Mr. Earl Matsukawa, Project Manager

Mr. Ian Hirokawa
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Re: Draft Environmental Impact Statement (DEIS) for the Proposed Lease (Water Lease) for the Nāhiku, Ke'anae, Honomanū, and Huelo License Areas

Dear Mr. Matsukawa and Mr. Hirokawa,

Following are the comments of Maui Tomorrow Foundation (MTF) re. the Draft Environmental Impact Statement (DEIS) for the Proposed Lease (Water Lease) for the Nāhiku, Ke'anae, Honomanū, and Huelo License Areas. Maui Tomorrow is part of a coalition that has long requested environmental review for the removal of such large quantities of water - which is a public trust resource held in trust for all the peoples of Maui - from public lands. Unfortunately, now that the process is underway, we are disappointed to see that the DEIS mischaracterizes many important facts, glosses over others, and incorrectly attempts to portray the resumption of major diversions of millions of gallons of stream water every day as a benign act. This is not consistent with public representations by Mahi Pono that they want to be transparent, they don't need much water, and will take only what they need.

The type of information that must be included in the Draft EIS is specified in the content requirements established by Hawai'i Administrative Rules (HAR) Sections 11-200-16 and 11-200-17. If these sections are not complied with, the document will not disclose enough information to government agencies, the general public, stakeholders, and decision-makers about the anticipated impacts of the project, alternatives to the proposed action and feasible measures that might be taken to mitigate potential impacts, sufficient to allow informed decision making.

Spirit of the Environmental Impact Statement Law, Chapter 343, HRS
HRS 343-1 provides, in pertinent part, that

“... the process of reviewing environmental effects is desirable because environmental consciousness is enhanced, cooperation and coordination are encouraged, and public participation during the review process benefits all parties involved and society as a whole. It is the purpose of this chapter to establish a system of environmental review which will ensure that environmental concerns are given appropriate consideration in decision making along with economic and technical considerations.”

In addition, HAR 11-200-19 provides that

“In developing the EIS, preparers shall make every effort to convey the required information succinctly in a form easily understood, both by members of the public and by public decision-makers, giving attention to the substance of the information conveyed rather than to the particular form, or length, or detail of the statement.”

The 2,700-page length of this DEIS is excessive, to the point where it frustrates the legislative purpose of public participation (as expressed in HRS 343-1 and HAR 11-200-19 above) during the review process. As a result, the benefits that should accrue to “all parties involved and society as a whole” are diminished. In addition, due to its length, the legislature’s goal of ensuring that “environmental concerns are given appropriate consideration in decision making” is thwarted as well. The EIS should be made more concise, and should clearly describe the impacts of a resumption in stream diversion upon the environment.

This DEIS is more than just deficient; in its current form, there are so many inadequacies that it would be better to start over. The DEIS does not discuss much of the information that we asked to be included in our comments on the EISPN. As detailed in our latest comments below, this document fails to meet the standards for an environmental impact statement. It does not incorporate known information about the natural and cultural resources of this area, and it relies on misleading assumptions for its conclusions. The DEIS fails to disclose the amount of water taken from each stream, omits essential maps, and glosses over known impacts that have long been raised by various participants in this process. These deficiencies need to be corrected; the current DEIS should be withdrawn, and a new DEIS should be released for another full DEIS public comment period.

Following is a list of our concerns. Please make sure to respond in a point-by-point fashion in the Final EIS, as required by HRS 11-200-22(c)(1).

1. Scope of the Draft EIS

The Project Summary statement contains several inaccuracies that need to be corrected, as follows:

“The Water Lease . . . will allow for the continued operation of the EMI Aqueduct System to deliver water to the MDWS for domestic and agricultural water needs in Upcountry Maui ...”

This is misleading, because it is not a complete representation of the facts. A reader of this statement could come away with the idea that ALL of Upcountry Maui water needs are dependent on the granting of a lease. This is incorrect, because

- a) Upcountry water needs are also supplied by wells
- b) Upcountry water needs are predominantly supplied by surface water obtained outside of the Lease Area, and treated at the Piiholo and Olinda water treatment facilities.
- c) These surface water treatment facilities have storage reservoirs that can supply the Upcountry system for periods when there is no rainfall and little stream flow.
- d) Upcountry water needs have historically used water from the Kamole water treatment facility only during drought periods, or when the other water treatment facilities are offline for maintenance.
- e) The Maui County Department of Water Supply regularly uses its authority to declare several stages of water shortage, each of which results in conservation of water Upcountry, thus extending the supply.
- f) It is well known that as long as the County relies on surface water, periodic water shortages and shortage declarations will continue. A statement to this effect is included in the draft Maui County Water Use and Development Plan.
- g) Development tunnels in the Lease Area will continue to produce millions of gallons of water every day that will enter the EMI Aqueduct System, even during droughts; it will also continue to flow with or without a Lease.

The EIS needs to include and analyze data, available from CWRM, that provides monthly surface water production figures for the Piiholo, Olinda and Kamole surface water treatment plants, as well as the monthly pumpage reports for all of the wells that serve Upcountry Maui.

According to Stearns & McDonald, "East Maui has few perennial streams in proportion to its size, and they are chiefly small due to the water sheds being underlain with permeable lavas. Forty tunnels recover 6 million gallons a day of high-level water in East Maui and all from structures other than dikes."

The EIS needs to include and analyze data showing the amount of water obtained from all development tunnels and/or wells in the Lease Area. This water, which will continue to flow, even during drought, with or without a Lease, can be used to supply MDWS and/or the Mahi Pono fields in Central Maui. This information should be incorporated into evaluation of all Alternatives.

Similarly, the following statement in the Project Summary is potentially misleading: "The Water Lease . . . will allow for the continued operation of the EMI Aqueduct System . . . to deliver water . . . for the Nahiku community, which, through the MDWS, draws up 20,000 to 45,000 gallons per day (gpd), dependent on weather, directly from the EMI Aqueduct System." The EIS needs to provide a diagram of the relationship of the Nahiku Water System to the EMI Aqueduct System, showing exactly where it obtains its water from, and demonstrating, if possible, why it would be impacted by failure to get a lease. For example, on East Makapipi Stream, there is a separate development tunnel inside the Koolau tunnel that gathers water and pipes it OVER the water that is flowing in the Koolau tunnel to a pipe that serves the Nahiku system. This water is not commingled with the Koolau tunnel water, and will continue to flow regardless of whether the proposed lease is obtained.

2. The DEIS document needs to acknowledge that "existing conditions" and operations of the East Maui Irrigation (EMI) system for over a century already have multiple impacts on streams, stream life, aquifers, watershed health, local subsistence agriculture, traditional farming and gathering and economic viability of rural families. These current conditions need to be discussed, and viable

alternatives to the status quo presented, in the alternatives section of the DEIS. The scope of alternatives discussed in the EISPN is too narrow to comply with the standards set out in HAR 11-200.

3. The EISPN states in many places that the Proposed Action will maintain existing conditions, and that no significant impacts are anticipated. This is a seriously flaw that will invalidate the entire EIS if it remains unchanged. Currently, Alexander and Baldwin/East Maui Irrigation/Hawaiian Commercial & Sugar (A&B) is using less water than they were using prior to the end of sugar operations; it may be years before they use much more. In terms of environmental impacts of the Proposed Action, it does not matter what their stated future intent is. 'Opae and other stream life currently have access to habitat that currently exists. The Proposed Action will reduce or eliminate this existing habitat. The impacts of the proposed action must be analyzed in the current context.
4. Similarly, kalo farmers currently have water available for kalo that will be reduced or eliminated by the Proposed Action. The many impacts of a reduction in available water, as compared to existing conditions must be analyzed.
5. Many people at the EISPN hearings on February 22nd and 23rd, 2017 testified regarding positive impacts that they have already seen from increased stream flow resulting from the cessation of sugar operations. The EIS must discuss the following:
 - a) information about known impacts that occurred in the past, which are likely to occur again if water is diverted as it was in the past
 - b) present impacts that are continuing, such as watershed degradation as a result of invasive species having gained a foothold because of low stream flows.
6. Although the DEIS discusses a public auction of the proposed lease, it is clear that the DEIS is written from the perspective of EMI obtaining that lease. If this EIS is truly intended to be able to serve for a multiple bidder auction, many more scenarios need to be included, including the possibility of bids from government entities such as the state or Maui County, bids from nonprofits, water utilities, water authorities, or bids from other for-profit companies. The DEIS needs to discuss whether other potential bidders would need to comply with HRS 343 on their own, and if so, how the timing of submission of any associated HRS 343 documents would be coordinated to achieve the public benefits associated with making a public auction competitive.
7. Since the proposed action of issuing a lease is an agency action, the EIS also needs to discuss why it would not be more appropriate for the Board of Land and Natural Resources to prepare the EIS and consider all relevant factors associated with a multiple bid auction scenario.
8. The DEIS is inconsistent with regard to how the terms "lease area" and "license area" are used. In the Summary on page i, reference is made to "Issuance of one long-term lease of State land from the Board of Land and Natural Resources pursuant to Hawai'i Revised Statutes (HRS) Section 171-58(c) for the "right, privilege, and authority to enter and go upon" the State-owned Nāhiku, Ke'anae, Honomanū, and Huelo License Areas ..." Judging by this language, the "lease area" is comprised of four "license areas". However, this relationship is not maintained throughout the document; the relationship between "lease" and "license" is reversed in several sections. For the sake of clarity, our comments will refer to the "lease area" as being comprised of the four separate "license areas". The

relationship between the terms “lease area” and “license area” needs to be clearly described in the EIS, and this relationship must be maintained throughout the document in order for it to make sense.

9. We also note that the responses to our comments on the EISPN for this project were difficult to make sense of. Although we sent in 14 pages of very specific comments, the responses were very generic, and did not directly correspond to many of the points we raised. As stated previously, this frustrates the purpose and the spirit of the EIS law. As required by HRS 11-200-22(c)(1), the Final EIS must include a) a Point-by-point discussion of the validity, significance, and relevance of comments; and b) a discussion as to how each comment was evaluated and considered in planning the proposed action.
10. The Listing of Permits and Approvals section states that issuance of the Lease “would ... lead to construction activities such as expanding the KAP and building facilities in support of diversified agriculture in Central Maui.” The EIS needs to analyze the many impacts of other types of potential agricultural construction that could be facilitated by the issuance of a Lease, such as farm dwellings and/or farm labor dwellings in the event of creation of subdivisions or condominium property regimes.
11. The EIS needs to discuss the condominium property regimes that have already been created, or could be created in the future, within the land that was sold by A&B to Mahi Pono’s various LLCs. It also needs to discuss the potential impacts that would result if such dwellings were to obtain access to diverted surface water from East Maui.
12. The EIS needs to provide evidence, such as chain of title from Kingdom days, showing how each parcel of land in the lease area, as well as in the central Maui agricultural area was legally acquired, and is now the property of A&B, EMI, and/or Mahi Pono.
13. The EIS needs to identify the underlying ownership of every portion of every ditch and tunnel in the lease area, and provide evidence, such as chain of title from Kingdom days, showing how each parcel of land in the lease area, as well as in the central Maui agricultural area was legally acquired, and is now the property of A&B, EMI, and/or Mahi Pono.
14. The EIS needs to provide a clear explanation and diagram(s) of the management and financial relationships among A&B, EMI, the Canadian Public Sector Pension Investment Board, Trinitas, Pomona Farming, and Mahi Pono. It also needs to evaluate exogenous events like natural disasters, or changes in ownership or management objectives in any one of the above mentioned entities, could impact the natural, economic, cultural and/or social environment on Maui.
15. Over the past few months, huge plumes of dust have been seen over Central Maui, which are generated by Mahi Pono farming equipment. The EIS should provide information regarding the expected farming practices of Mahi Pono, which will be facilitated by issuance of the proposed Lease, and how they will impact air quality and offshore ecosystems, including sediment-sensitive species.
16. Under the DEIS Section 3 – Alternatives, Subsection 3.3 - No Action (page 3-6), Line 6, reads:

“However, under the **1938 agreement and a related calculation involving isohyet analysis of rainfall patterns**, it is understood that approximately 30% of the water in the License Area streams is derived from the privately-owned lands. Therefore, the EMI Aqueduct system could continue to divert approximately 30% of the water available from the Collection Area, plus...” (emphasis ours)

The 1938 agreement, Section VIII, paragraph (4), by and between the Territory of Hawaii and East Maui Irrigation Company, Limited dated March 18, 1938, reads as follows:

“Long term average water yield” shall be the arithmetical average annual water yield which would have been diverted from any given drainage area under consideration had the aqueduct system, at the time of the determination, been in existence during the entire period in which

water records are available for such area, and shall be determined jointly by the Territory's and the Company's hydrographers based on all available applicable water measurements and long term rainfall records;"

The DEIS statement "that approximately 30% of the water in the License Area streams is derived from the privately-owned lands" is a significant water resource baseline metric. As such, the variables utilized to determine the "30%" are important to understand and verify. They need to be provide in this DEIS.

The 'related calculation involving isohyet analysis of rainfall patterns' referred to in Subsection 3.3 should be made available for public review and comment in this DEIS. This calculation should include the yield calculations as defined in the 1938 agreement: "...the arithmetical average annual water yield which would have been diverted from any given drainage area under consideration..."

This EIS needs to make available for public review and comment a detailed parcel listing & associated map(s) of the License Area's 'privately owned lands' from which the 30% right to the stream water flow referred to in Subsection 3.3 is derived.

This EIS should explicitly document the private land owner's source of rights, if any, to divert License Area stream flow for private purposes, in light of the adoption of the State Water Code and the mandated protection of the Public Trust.

The EIS should state what volume percentage of the asserted 'privately owned lands' water rights are defined and documented as "appurtenant water rights", as well as the volume of water yield ascribed to this water right.

The EIS should state what percentage of these private lands hold water rights only to the usufruct (riparian right) in each of the Lease Area Streams, as well as the volume of water yield ascribed to this particular water right.

17. The EIS should examine and disclose the relative local financial impact of a foreign-owned (California) company, in comparison to the relative local financial impact of granting the lease to either a Hawaii-based company, a Maui Water Authority, or a local nonprofit organization.
18. The EIS should describe the expected fair-market cost of water to the County that would be provided via the Wailoa Ditch/Tunnel. It should also describe the potential impacts to the Upcountry domestic water users if the cost of the small annual percentage of Upcountry water (about 26% annually) that is supplied by the lease area were to rise significantly. Similarly, the EIS should evaluate the impact on Upcountry farmers if this cost were to rise significantly.
19. The DEIS states that 7.1 million gallons per day of Upcountry Maui's water comes from the East Maui irrigation aqueduct system. This is VERY misleading, since only about 26 percent on an annual basis (depending on the year) is coming from the lease areas that are being analyzed in the EIS document. The rest is coming from other Mahi Pono lands, which are outside the proposed lease area, and are not the subject of this EIS. This statement needs to be corrected based on actual numbers based on CWRM water usage reports.

20. Impacts to Hawaiian Homelands Water Supply

§11-200-16 HAR Content requirements: The environmental impact statement shall contain an explanation of the environmental consequences of the proposed action. The contents shall fully declare the environmental implications of the proposed action and shall discuss all relevant and feasible consequences of the action. In order that the public can be fully informed and that the agency can make a sound decision based upon the full range of responsible opinion on environmental effects, a statement shall include responsible opposing views, if any, on significant environmental issues raised by the proposal.

The current DEIS contains no specific information regarding the water reservation amounts from the East Maui lease area needed by DHHL. This information is now available and was publicly offered by DHHL staff at the Oct 9, 2019 BLNR meeting. These specific legally protected water reservations should be INCLUDED in the DEIS, and Mahi Pono water use plans adjusted accordingly to reflect this amount, in order for the public and agency comment process to be based upon accurate information. The DEIS also assumes in the Executive Summary that Mahi Pono can utilize the East Maui Water until the time that DHHL needs its reservation.

The Mahi Pono Farm Plan figures presented in appendix I estimate that 68 mgd of East Maui stream water will be available for Mahi Pono crops after 22.7 percent system losses, and 7.1 mgd for the Maui County DWS system. No water is allotted for DHHL in the Mahi Pono Farm Plan calculations.

A discussion of whether it is legal for A&B/Mahi Pono to assume that the DHHL “water reservation” can be utilized by Mahi Pono until it is “needed by DHHL” should also be included in the DEIS. It is our understanding that the Waiola o Molokai vs DHHL case dealt with a similar situation, and the DHHL prevailed.

There is no indication in the DEIS how the Mahi Pono Farm Plan will be adjusted to accommodate the 11.5 mgd of East Maui Water that DHHL is reserving. The EIS should plainly discuss this, as well as whether such adjustment would be based upon a need for more water over the first few years of planting, and less water when crops are established, using regenerative agricultural methods, as was envisioned in the 2018 CWRM Decision and Order:

“115. The estimated water requirements will change not only because some potential partners and lessees are expected to rotate multiple crops that could potentially have different crop coefficients but also because water requirements could change significantly through the use of regenerative agricultural methods.”

If Mahi Pono Water demand is expected to decrease over the years, as suggested by the CWRM 2018 review, a timetable for restoration of non-IIFS streams in the Huelo Lease area should also be discussed in the EIS.

21. Lack of Accurate Information re. the Viability of the Mahi Pono Farm Plan

- The EIS should acknowledge that Mahi Pono has no track record of successful farming under Maui conditions.

A&B's SEC filings inform their shareholders of the risk that plans for diversified farming on their Maui lands may not work out, even given the Company's long history of farming. A&B's 2015 SEC filing states:

"The Company is currently evaluating several categories of replacement agricultural activities in the transition to the diversified model, including but not limited to energy crops, agroforestry, grass finished livestock operations, diversified food crops/agricultural park, and orchard crops. There is no assurance that the Company's replacement agricultural activities will be economically feasible or improve the Agribusiness segment's operating results."

The EIS needs to provide the same disclaimer, and should not predict the entire success of Mahi Pono farming operations based on how much East Maui water is sent to Central Maui.

- The EIS needs to provide accurate information about the benefits of Central Maui farming. The numbers provided for proposed Mahi Pono profits and past performances of HC&C sugar do not seem logical:

(Executive Summary, page v) "Mahi Pono farm plan is projected to generate more than 338 pounds per year of crops, generating \$155.9 million per year in annual food sales and \$329.5 million per year in combined direct and indirect sales." This would mean each pound of crop brought a return of \$461,242. The EIS needs to describe what kind of crop would bring this type of return, or correct what appears to be an obvious error in the calculation.

Table 6 in Appendix I lists "recent sugar" payroll of \$68,000,000 a year. HC&S had 675 workers when they announced that sugar would shut down in 2016. Did those workers earn an average of \$100,740 a year (\$68 mil divided by 675)? The EIS needs to provide a factual basis for this claim, and all claims, made in the document.

- The potential "recent sugar profits" presented in Table 6 of Appendix I also needs additional information.

A&B's SEC filings (10K reports) show a very different range of "profits" from 2009 to 2015 - the most recent era of sugar growing. In only 4 of those 7 years did the sugar operations show a profit (2010-2013.) The other three years showed sizable losses. The DEIS says that all these years (2008-2013) had poor crop yields due to low rainfall, but 2014 and 2015 also showed poor returns. The DEIS needs to discuss this evidence that water availability is not the only factor that determines crop success in Central Maui. Only one year (2011) had a profit of \$22 mil. The average of the 4 profitable years was \$14.9 mil. The figures in the EIS should reflect accurate amounts, not cherry pick one promising year.

- A&B's 2015 10-K statement (filed with the Securities & Exchange Commission) acknowledges that the four state lease areas supplied "approximately 58 percent of the irrigation water used by HC&S" and "A&B also holds rights to an irrigation system in West Maui, which provided approximately 15 percent of the irrigation water used by HC&S over the last ten years." This would indicate that 27 % of irrigation water came from A&B wells.

- The EIS needs to include a list and map of the A&B/Mahi Pono wells available to help irrigate the Mahi Pono fields and the latest chloride tests and pumping abilities of each of those wells. The map should also depict the historical and prospective areas that can be irrigated using well water.
- The EIS states that Mahi Pono's farm plan will use less water than the HC&S sugar operations, and provides elaborate tables in Appendix I. The Mahi Pono Farm Plan is one plan, which includes around 34,000 acres irrigated by both East Maui and West Maui stream waters.

The EIS content rules do not allow for segmentation of separate parts of the same project. The 4,000 acres of fields irrigated by West Maui Water should be included in the overall analysis of how much water is needed from which source to have a viable Mahi Pono Farm Plan.

The EIS needs to clearly describe the overall Mahi Pono Farm Plan, and indicate what amounts and proportions of water for the farm plan will come from East Maui streams, West Maui streams and Mahi Pono wells.

22. Public Trails:

a) The draft EIS is incomplete because it does not include an inventory of roads and trails in the Ko'olau Forest Reserve.

HRS 264 (Public Highways and Trails) protects public right-of-way on roads and trails owned by the state. When the Ko'olau forest reserve was created, all roads and trails in the forest reserve became protected rights-of-way. The draft EIS needs to be extended to show the protected roads and trails in the Ko'olau Forest Reserve.

HRS 171-35 (Lease provisions) requires leases to protect rights-of-way and access to other public lands. The draft EIS needs to be extended to show how the proposed water lease protects rights-of-way and access to other public lands.

The Hawaii Supreme Court has ruled (1908 19 H. 168) that the lease of public land can not affect a public right-of-way existing across it.

2) The draft EIS is incomplete because it does not include an inventory and history of roads and trails on East Maui Irrigation land.

HRS 264 (Public Highways and Trails) requires that historic roads and trails are protected rights-of-way. The draft EIS needs to be extended to show which historic roads and trail are protected.

HRS 115 (Public Access to Coastal and Inland Recreational Areas) requires public rights of way to be provided at reasonable intervals to inland recreational areas. Many parts of the Ko'olau Forest Reserve are land-locked by East Maui Irrigation property. The draft EIS needs to be extended to show public rights-of-way across EMI property to the Ko'olau Forest Reserve.

3) The Division of Forestry and Wildlife, in their December 19, 2016 letter, included in the draft EIS, says, "Thus the Division recommends that the areas to be conveyed for a water license be done so through a land agreement that is limited to the infrastructure required

for maintenance and conveyance of water, and that any terms of any agreement established for the delivery of water ensure unrestricted public access to the reserves and any state owned roads and trails.” The DEIS needs to address the positive impacts of implementing this recommendation as part of a considered Alternative action.

23. Stream and Ocean Assessment (appendix B)

Appendix B and the DEIS conclude that East Maui stream flows don’t affect conditions for marine life in East Maui, and that East Maui has the wrong ocean conditions to have substantial fish populations. Appendix B offers these conclusions even though it includes no survey of ocean fish, and measures water chemistry at only 7 of the 36 streams in the lease area. Kumupono Assoc. study of East Maui: “Wai o ke Ola – He Wahi Mo’olelo no Maui Hikina” was prepared for A&B / EMI in 2001, and provides much historic and contemporary discussion of the robust presence of marine life along east Maui coasts and longtime dependence of East Maui communities on the sea for food supplies. The connection of fresh water stream flows to algae that feeds marine life is well established. The conclusions of Appendix B are erroneously used throughout the DEIS to justify the “lack of impacts” from EMI’s proposed Alternative 1: diverting all the East Maui streams to the extent permitted by the 2018 CWRM D&O.

The EIS needs to acknowledge that an increase of diversion from present levels will impact ocean fisheries, describe those impacts, and propose mitigations.

24. Flora and Fauna Review (Appendix C)

This brief (4 days supposedly covering 33,000 acres on the ground and 1 day in the air) drive-by review of flora and fauna is entirely inadequate to inform decision makers of the impacts of the proposed action.

In addition, the following deficiencies in the DEIS need to be corrected:

None of the Endangered damselfly populations seen by DAR surveys in 2005-06 were seen. Are they no longer found in the 33,000 acre area, or were they just missed by the superficial review?

No plant list was included in the survey report.

The Survey does not refer to baseline data available from the extensive 1985 mapping of the East & West Wailuaiki stream basin area that was done as part of a Proposed Hydroelectric plant EIS (Kepler, 1985)

The Flora and Fauna survey also included the 30,000 acres of potential farm lands (referred to as the “use area”)in the 5 day visit and did a poor job of describing impacts there.

It was not clear if the gulches in the “use area” were surveyed - they often serve as habitat areas.

No acoustical survey for native bats was done at either survey location.

In section 5.2.3, the survey reported that no reptiles or amphibians were detected, but hikers regularly encounter a very small frog at Hanawi stream near the Wailoa ditch.

In section 6.1.1 of Appendix C the consultants conclude that under the proposed action (30-year lease) "Vegetation would remain substantially the same" in the state Lease Area. Given that Citizens have watched invasive species such as melastomes, Job's tears, gingers, African Tulip and other pests spread substantially through the Lease Area over the past 30 years of access hikes, while the density and variety of native species diminish, the EIS needs to change this conclusion, acknowledge this impact, and provide adequate mitigation.

The EIS needs to address what types of mitigation would be needed to make sure that a 30-year lease would not result in the disappearance of most native species in the 1,000 to 2,000 ft elevations in the Lease Area.

The EIS should have far more detailed information, and provide evidence before declaring that a 30-year extension of the current management style will result in "no impacts."

The East Maui Watershed Partnership includes the Lease area lands on their maps , but only actively manages of East Maui lands above 3,000' elevation, which is above the Lease Area. The EIS needs to make this fact clear.

The public waters diverted by the EMI systems are the product of two factors: a) natural rainfall, and b) the watershed lands that receive the rainfall and discharge it into springs and streams. The quantity and quality of future stream flows will depend upon the health of the surrounding watershed lands. The EIS needs to examine the impact of each Alternative on these flows.

In section 6. of Appendix C, the consultants conclude that the proposed action will have no Impacts- because "no habitat removal or loss is proposed..."

The EIS ignores the well documented fact that dewatered streams over time lead to the decimation of native ecosystems and flora and fauna.

The EIS proposes no mitigations to improve watershed health other than some mechanisms to prevent introduction of more invasive species on equipment or supplies.

The Appendix C survey provides no guidance for any restoration activities in the Lease Area, which is widely done in other EIS documents that are involved with projects, like this one, that will, by law, trigger future management plans.

Appendix C and the DEIS make the erroneous assumption that 140 years of EMI use and management has had no impact on the substantial loss of native flora and fauna on public lands in the Lease Area. This assumption needs to be corrected to reflect known studies that prove otherwise.

Section 6.2 of Appendix C concludes that the No Action alternative (no lease awarded) would mean that it would likely not be viable for EMI to maintain the ditch system. The EIS needs to include supporting information for this conclusion. It also needs to further explore the beneficial impacts of

the No Action alternative on native stream life, offshore fisheries, cultural use, recreational use, and aesthetic use.

The EIS needs to discuss and analyze the possibility of others such as County or State maintaining portions of ditch system for a much-reduced level of diversion. The idea is simple dismissed as “too speculative” at this time, although the Maui Board of Water Supply has issued a report after investigating the topic.

EIS needs to discuss the implications of the fact that EMI controls the 4 levels of ditch system west of the lease area, which are connected to the East Maui ditch system, but not affected by the lease decision.

Section 6.3 concludes that the Reduced Water alternative (alternative 2) would result in more ditch maintenance required and “more human activity in area and greater chance of potential for negative impacts.” This section also concludes (with no proof offered) that “increased water flows in the stream would likely have very little impact on native land-based flora and fauna” and that “Impacts on aquatic fauna (damselflies, etc.) would vary by stream.” The EIS offers no proof that either of these conclusions is true, yet they are offered as a rationale to decision makers to support the Alternative 1 lease.

Appendix C refers to a future Management Plan for the Lease area that will be done by the State of Hawaii for the lease lands as part of any future lease agreement. The lease requirements found in HRS 171-58 specify that A&B/Mahi Pono need to jointly prepare a management plan with the State:

“(e) Any new lease of water rights shall contain a covenant that requires the lessee and the department of land and natural resources to jointly develop and implement a watershed management plan. The board shall not approve any new lease of water rights without the foregoing covenant or a watershed management plan.”

Appendix C - “Assessment of Terrestrial Flora and Fauna” makes absolutely no reference to any need for restoration or management of the public lands in its analyses or recommendations. The DEIS clearly quantify the impacts of a long term lease, and must evaluate and mitigate those impacts.

Section 6.5 discusses Alternative ownership/ Management of the ditch system and lease area- and concludes that such management “would have effects identical to those described in the “proposed Action” on Terrestrial Flora-Fauna. The DEIS needs to include analysis of increased investment in watershed management that could come with a new “ownership” model.

Section 6.6 dismisses the Greater Public Access alternative (smaller lease area) and concludes that greater access would impact flora and introduce more alien species and impact habitat of native birds. The DEIS needs to analyze the beneficial impacts of increased access that results in greater restoration/management activities in the watershed lands, as has been the case in various areas on Maui that manage public access.

Section 7 offers Avoidance & Minimization measures such as :

- Biological monitor during maintenance in waterfall /cliffside areas
- Wash and inspect equipment before maintenance
- inspect any materials used for maintenance
- monitor ESA damselflies- work with USFWS
- training for onsite staff to recognize endangered species
- sensitivity to i'iwi nests during tree trimming
- use of barbless strand for top wire of fences to avoid bat injuries

While these would be a step forward from current conditions, there is no accountability for these practices actually being employed. Take the example of fencing mentioned. Thousands of acres of Mahi Pono land have recently been fenced, some of which has stands of trees that could serve as potential endangered bat habitat. All of the fencing observed has barbed wire on its top strand, which is detrimental to bat survival. Will all this be changed only if the lease is granted?

25. Historic Resources Assessment (Appendix E)

DEIS consultants have misrepresented East Maui Lease conditions to SHPD, after SHPD initially requested an AIS be done. The Action was described as “involving no ground altering activities” in order to be exempted for performing any ground based Archaeological Inventory Survey.

The 3-day field visit of 21 intakes on the EMI system cannot be held up as any proof that historic sites are not present either on state or EMI lands. The Fig 47 map in Appendix E indicates that 8 of those intakes were located on EMI land. Mahi Pono has informed the public that if they secure 30-year leases they plan to invest \$2 mil in ditch repairs. Other repairs and maintenance are needed on roads and ditch trails. A number of intakes on fully restored streams still need to have construction work undertaken. All of this ground altering construction activity has the potential to affect cultural and/or historic sites.

These are all secondary impacts of the 30 Year Lease being granted. SHPD should be fully informed of the secondary impacts and proposed activities in an area with no previous Archaeological review, and a full AIS should be completed,

EMI maintenance activities associated with the leases will take place both on State and EMI land, and both should be included in a full AIS as part of the EIS process.

The EIS needs to include ground surveys of the roads and trails found in the lease area, which are also historic properties. Many stone paved trails are found in the East Maui Lease area, but these are not mapped or referred to in Appendix E.

The Proposed action will involve, as secondary impacts, extensive mechanical clearing of these same roads, as well as EMI ditches and intake areas. It will also include the agreed upon modification of intakes to restored streams in the Lease Area ordered by CWRM.

The EIS cannot meet the HAR 11-200-16 content requirements “ to discuss all relevant and feasible consequences of the action” if it ignores the fact that these secondary impacts will occur as part of the granting of a 30-year lease to access state lands and maintain EMI ditch system and trails.

Whether these actions occur on state lease land or on EMI lands, our State Historic preservation laws would require an Archaeological field survey, to determine the presence or absence of historic properties, if the agency was aware of the true nature of the implications of the 30-year lease.

None of these sites have been recorded: Patsy's Minks family (Takemoto's) lived in the Waihinepe'e area and the same area included the legendary pohaku that gave the valley its name when it sheltered an escaping Ali'i wahine. This pohaku is near an EMI access road. The historic review also ignores historic sites located in Mahi Pono fields, like the Papanene Heiau in the Spreckelsville area and the cultural practice associated with the site. A&B operates a construction dumping ground adjacent to the heiau remains. No archaeological work has been done on the site.

These are just a few examples of why the EIS is not complete, and cannot be found to have discussed and mitigated all impacts, without the addition of an AIS.

Due to lack of management of heavily diverted dry stream beds over the years, storm surges have uprooted large trees along stream banks and carried them downstream, where they put historic kalo lo'i, house platforms and other structures at risk. None of these historic properties have been surveyed or recorded in the lease area, except by volunteers. After 140 years of diversions, it is time for EMI to undertake a proper historical survey. The EIS needs to include this information, analyze potential impacts, and propose appropriate mitigation.

Unintended destruction of Hawaiian historic sites also impacts native Hawaiian cultural practice, which the EIS should also discuss and mitigate by directly involving East Maui communities in historic site preservation activities. Aha Moku Council representatives also refer to historic sites in the state or EMI lands surrounding the EMI ditch system, and Aha Moku representatives for Hamakuapoko and Ko'olau moku should be part of the AIS fieldwork process.

26. Cultural Impact Assessment (appendix F)

The EIS does not fully acknowledge the impact that past and proposed reduced stream flows have had on the native stream life and marine life that is so directly connect with the ability of Native Hawaiians to engage in traditional cultural practice of fishing and gathering in East Maui.

Appendix F, the Cultural Impact Assessment (CIA), concludes that as long as Stream Flow standards are met in the East Maui streams subject to the 2018 Water Commission decision, all other streams can be diverted with no impacts to traditional Hawaiian cultural practices. It also concludes that the East Maui coasts do not have reefs, and therefore do not support related marine species, even though information in Kama'aina interviews mentions the importance of stream flows to the abundance of ocean fisheries and related cultural practices of fishing and gathering. This conclusion does not reflect generational knowledge, or marine life and stream life studies from East Maui found in the statements of numerous East Maui kama'aina included in Appendix F.

Hawaiian cultural users whose interviews are in the CIA agree: increased stream flows are needed to support stream and marine life in enough abundance to allow traditional gathering from both streams and ocean coastlines. The EIS does not include recent studies of marine fish populations in East Maui or recent interviews with East Maui residents. These residents inform us they have

observed that the recent increase in East Maui flows due to the closure of sugar, with stream diversions reduced to 20-25 mgd, has already resulted in increased fish populations in East Maui.

The EIS needs to include studies on current fish populations, and needs to discuss how this trend of increasing fish populations that support traditional Hawaiian gathering practices can continue, rather than not mention that it is happening.

The EIS also needs to evaluate the Cultural impacts of rediverting the 12 streams in the Huelo lease area that were not evaluated in the CWRM IIFS proceeding. These streams have had regular flows for the past two years, allowing residents of the surrounding communities a chance to gather native stream life.

27. Mitigation Measures

The mitigation measures proposed on page viii need to be strictly enforced; for example, it only takes one exception to introduce an invasive species.

In order to make them effective, all mitigation measures must be mandatory. For example, the wording “A monitor should have familiarity with plants of the area” needs to be changed to say “A monitor shall have familiarity with plants of the area.” Also, instead of “recommending” consultation with lineal and cultural descendants of the area in the event that iwi kūpuna and/or cultural finds are encountered, such consultation needs to be required.

The DEIS also needs to present a detailed plan – to include funding - about how these mitigation measures will be enforced.

28. The Draft EIS needs to clearly indicate how much diverted surface water, water from development tunnels, and/or water from wells will be available to meet A&B’s diversified ag needs from areas outside (east and west) of the proposed lease area. Specific information should be provided about these sources and their output to the EMI system. Currently, the DEIS **only discusses East Maui Lease stream water and well water**.
29. Information contained in the main body of the DEIS and its Appendices should be fully reflected in the Executive Summary.
30. Maps Need More Clarity:

The Fig 1-1 ditch system map does not very clearly delineate the EMI ditch systems. The colors used to indicate abandoned or active ditch sections are not very distinguishable. The dotted lines used to indicate ditch tunnel sections make the relationship of the various ditches hard to determine. Showing sections of the lease area at larger scale (zoomed in) and using contrasting colors to mark tunnel sections would facilitate public review.

The DEIS does provide several additional maps. (Fig 1-1, 1-3, 2-2, 2-2. All are more detailed, but they are still hard to understand.

Fig 1-3 shows the Alexander and Baldwin (A&B) use area for diverted water but does not indicate the County of Maui Department of Water Supply (MDWS) use area that depends upon the EMI diversions. The EIS needs to provide this information.

Fig 2-3 shows the MDWS service area, but needs to show which parts can be served by the Upper and Lower Waikamoi pipelines, which parts are served by the Wailoa ditch, and which parts are served by wells.

Fig 2-4 shows MDWS treatment plants and the upper Kula ditch, but needs to show which areas are served by these facilities.

- The location of the MDWS aqueduct systems (Upper and lower Kula Pipelines) which occur almost entirely outside the lease area and are not dependent upon continued water diversion from the lease area by EMI is not illustrated at all in the DEIS; it needs to provide this information.
- The DEIS needs to show and discuss the area containing streams outside the lease area that are diverted by EMI and provided to the A&B use area regardless of the outcome of the License agreements

All of these are important parts of the information the Board of Land and Natural Resources (BLNR) needs in order to understand what the EMI system does. If these items are not included on this map, new maps should be created to clearly include this information.

- In chapter 4, Fig 4-15, the “Haiku” label is actually in Hamakuapoko west of Maliko Gulch. Haiku is located east of Maliko Gulch.
31. In Appendix E, fig 47, the field inspections map has the label “Ho’olawa” where the stream and community of Honopou is located. It has the label “Haiku” where the Honopou stream intake on New Haiku ditch may be located. These labels create confusion, and need to be corrected.
 32. The DEIS states that, “Settlements along Hāna Highway from west to east, toward Hāna, include Huelo and Kailua makai of the Huelo License Area, Ke’anae and Wailua makai of the Ke’anae License Area and Nāhiku makai of the Nāhiku License Area.” Many communities in the lease area have no public water systems, and the DEIS needs to specifically discuss mitigation plans to restore sufficient flows to Puniawa, Ho’olawa, Mokupapa, Honokalā, Waipio, East Waipio, Waipio iki and Hanawana streams to provide domestic water to the hundreds of families who live in these communities. Their streams are not part of the 2001 IIFS petition for the East Maui Lease areas, yet the continued diverted conditions of their streams impacts their daily lives and their rights to have sufficient water for their domestic needs.
 33. Section 1.1 states that the “need” for the Water Lease is due to the lack of existing adequate alternative sources of water and infrastructure to meet these demands. This section of the DEIS needs to clearly define the amount and location of A&B acreage that actually needs irrigation, the availability of additional EMI sources of stream water outside the lease area, and the availability of reclaimed water from the Wailuku-Kahului wastewater treatment plant, to provide that irrigation. It also needs to note that a portion (roughly half) of the water in the Upcountry MDWS system comes from diversions outside the proposed lease area, or from fresh water wells, and is not dependent on the EMI system. The DEIS also needs to discuss the new Upcountry wells being planned by the MDWS and DHHL as potential “alternative sources”. None of this is made very clear by maps or text in the DEIS, and this needs to be corrected.
 34. The DEIS needs to discuss the current “Memorandum of Understanding” (MOU) executed between EMI and MDWS. It should also refer to the section of the MOU where both A&B and DWS agree to

work on plans to restore stream flows if agricultural needs change (which they already have!!) The DEIS should specify those plans for stream restoration that have been discussed by A&B and DWS.

35. The DEIS should have an accurate list of streams that are diverted by the Wailoa-Ko'olau Ditch: East & West Wailua Iki, and East & West Wailua Nui, Waipio, Hoalua, Ho'olawa, Na'ili'ili haele, Kailua, Waiohue, Kopili'ula, Wahinepe'e, Waiokamilo, Puakea, Puaka'a and Palauhulu.
36. The Alternative's section of the DEIS needs to discuss crops and growing methodologies that will use significantly less water than the maximum amount allowed by the IIFS. The Maui Tomorrow Foundation's report, "Mālama 'Āina: A Conversation About Maui's Farming Future," provides information on these proven methods. HC&S historically used their brackish wells for up to 40% of their water needs up to 2002. They are part of a reliable system. Despite this, A&B also reported being short of water 10 months out of the year, even though they had unrestricted access to all of the water they could divert from East Maui, and 25 mgd from Na Wai Eha and their system of 15 wells. This needs to be discussed in the EIS.
37. The Lowrie, New Hamakua, Manuel Luis, and Center Ditches intercept and divert dozens of streams. A complete chart of all the ditches and diversion points inside and outside of the lease area should be provided in the EIS. The County's upper and lower Kula pipelines traverse EMI lands, and are serviced by intakes on the upper reaches of several streams that flow through the East Maui lease area. The intakes, mostly above the East Maui lease area, are maintained by EMI, which charges the county for "water delivery" that arrives at the DWS reservoirs through the Kula pipelines. It is important that the DEIS clearly explains the workings of this system.
38. The DEIS should discuss the alternative of the system being managed as a public irrigation district, being managed by a partnership of agencies and stakeholders, and other possible management scenarios. Maui DWS also referred to a need to have the DEIS discuss these options in their comments. The DEIS should also discuss the option of individual lease areas being awarded to the residents of the area who depend upon the streams. Dismissal of this alternative as "speculation" and as offering "no environmental benefit" does not meet the required EIS content standard that requires a realistic examination of alternatives. The transition of other plantation ditches to irrigation districts has already happened to several Hawaii systems, and this alternative needs to be examined just as thoroughly as the evaluation of the alternative of Mahi Pono getting 88 mgd of East Maui water is examined.
39. The alternatives section needs to discuss a variety of updated fee schedules and a funding structure that creates enough revenue to actually actively manage the lease lands for watershed productivity.
40. The DEIS should clearly explain that no one else has bid on these East Maui leases, and A&B/EMI have had a defacto monopoly on their use.
41. Appendix B states that the amount of water flowing in streams has no impact on terrestrial flora and fauna. Appendix F says that cultural impacts are addressed by the 2018 CWRM decision. The DEIS needs to discuss how industrialization and dewatering of streams has left lasting and continuing impacts on the watersheds and the community members who dwell there, and who are trying to perpetuate native Hawaiian cultural practices despite artificially fluctuating water levels. The EIS should acknowledge those impacts and propose mitigation that will achieve the following:
 - a) restore watershed health and productivity in lease areas

- b) restore native stream life and viable stream flows for traditional agriculture, including in the Ha'ikū and Huelo communities.
- c) restore soil health and productivity, and adopt other regenerative practices such as windbreaks and Keyline contouring to reduce water demand in central Maui.

42. The DEIS must discuss the relative benefits of regenerative agricultural methods in future plans for the irrigated former sugar lands. Examples would be: rotational grazing; extensive cover cropping; contour plowing and water collection swales (see MTF "Mālama `Āina report referenced earlier). The DEIS cannot conclude that "sustainability" will be achieved by using the same outmoded methods that lead to past chronic water shortages and lost soil health.

43. The current set of Alternatives examined in the DEIS is extremely lacking. Dismissal of alternatives was done without factual information. The discussion of Alternatives must provide sufficient information for the reader to gain a good understanding of why particular alternatives are rejected. HAR 11-200-16 requires that:

"The draft EIS shall describe in a separate and distinct section alternatives which could attain the objectives of the action, regardless of cost, in sufficient detail to explain why they were rejected. The section shall include a rigorous exploration and objective evaluation of the environmental impacts of all such alternative actions. Particular attention shall be given to alternatives that might enhance environmental quality or avoid, reduce, or minimize some or all of the adverse environmental effects, costs, and risks."

Unfortunately, none of the 3 Alternatives considered; or the 3 Alternatives dismissed, were explored with enough rigor or objectivity to meet this standard of evaluation.

44. The DEIS needs to disclose impacts of continued large scale diversions in the event of climate change, and provide strategies for the EMI system to respond to changes in rainfall patterns. There also needs to be a discussion of funding needed to increase resiliency and increase the capacity of the East Maui watersheds to store and release surface and ground water that will continue to supply the EMI system during changing weather events. The continued mass dewatering of streams will have impacts if rainfall patterns change; the impact of this must also be discussed.

45. The DEIS needs to discuss impacts of proposed large-scale diversions on aesthetic resources. Examples include the dry and diminished appearance of streams, pools and waterfalls enjoyed by the public during hiking and nature study and by local residents in areas like Ho'olawa, Hanawana, Mokupapa and Waipio.

46. Current EMI use of the lease area limits public use and enjoyment of public lands, as noted in comments from DLNR lands division and Na Ala Hele. The proposed lease area also includes streams that are part of recreation use at such facilities as the Garden of Eden arboretum, Twin Falls Community and Camp Ke'anae. Recreational use of many streams in the lease area, especially in local neighborhoods such as Hanawana, Hoolawa, Mokupapa, Honokala, Honopou and Huelo is already significantly impacted under the former lease conditions. The proposed diversions will continue those impacts and need to be discussed in the EIS.

47. The DEIS needs to discuss removal of decades worth of debris and waste from ditch system maintenance that has been left to clutter the natural features of the lease area.

48. If stream water is used for central Maui development, there will be a cumulative impact on public facilities and services that must be considered. A&B has "provided" stream water allotments to Maui County in the past to secure additional water meters for developments on A&B's own former agricultural lands

(such as Haiku Hill, Haiku Makai). The full range of potential development impacts resulting from this type of water allotment should be discussed.

49. The EIS needs to discuss the potential for and cumulative effects of A&B and/or Mahi Pono having access to millions of gallons of water to use for development if Ag operations “fail to be profitable.”

50. The DEIS needs to provide information on every stream in the lease area, including the amount of water that is diverted or planned to be diverted, from each section of each stream, from each stream as a whole, from each license area, and from all licensed areas as a whole.

51. Aquifers from Nahiku to Ke’anae are believed to be fully saturated, with no separated levels between the Kula and Honomanū basalt layers. (Gingerich, 1998). This implication and the deep connection between surface and ground water in a “saturated” aquifer needs to be discussed in the EIS. It should also acknowledge that diversions over the last century have had significant impacts on the aquifers and watershed health, which continue to progress; the DEIS needs to discuss the impact associated with cause a resumption of diversions.

52. Existing and ongoing impacts to our coastal waters and fisheries need to also be discussed in the DEIS. It should also be acknowledged that East Maui diversions over the last century have had significant impacts on coastal waters and fisheries, not just on Maui, but throughout the Hawaiian Islands; the proposed lease would cause a resumption of those impacts, and those impacts need to be discussed.

53. Significant native plant communities are found above Puohakamoa, Waikamoi, Haipuaena. Impacts of maintenance equipment bringing in invasive species needs to be discussed and mitigated.

54. Impacts on endangered fauna and flora (plants and avian species) need to be discussed in the EIS, as well as impacts on existing native stream life resources and anticipated impacts on all native stream life species used for traditional practices. We concur with USFWS comments, which should be used to formulate content of the DEIS.

55. Previous and ongoing impacts to archaeological resources such as lo’i, ‘auwai and house sites in the lease areas need to be fully documented. The EIS needs to discuss the fact that these types of impacts can be expected to continue if the proposed lease is granted.

56. Hamakuapoko has cultural sites in A&B and/or Mahi Pono agricultural fields that need to be identified and protected; Hamakualoa also has cultural sites in the lease area lands that need to have proper recording and protection. Old ditch structures such as the Spreckels Old Haiku ditch, are also deteriorating and drifting downstream in chunks. Impacts to all of these sites and structures, and impacts to the gathering and cultivation of traditional crops need to be addressed in the DEIS. This needs to include a discussion of impacts in areas where no restoration is being proposed, such as the Hanawana and Kailua areas, Waipio and Waipio Iki, Hoolawa, Honokala, Makapipi and Mokupapa.

57. The DEIS needs to use Kepa Maly’s East Maui study as part of the Cultural Impact Assessment.

58. Cumulative Socio-Economic impacts of A&B controlling use of such a large amount of water for 30 years, as proposed, must also be discussed in the EIS.

59. The EIS needs to discuss abandonment of ditch structures on permanently restored streams and what happens to diverted water on streams while they await “permanent restoration.” It also needs to discuss the effect of diversion design and its impact on native streamlife migration, as well as the impacts/benefits of permanently removing all ditch structures on the permanently restored streams. In addition, there needs to be a discussion in the EIS of who controls the diversion structures, how any allowable streamflow amounts will be enforced, and the relationship that public access to the leased areas has on the likelihood of streamflow violations being reported.

60. Some DWS Kula Pipelines intakes appear to divert streams in the lease area. The intake for the Nahiku DWS supply is in the lease area. Community water systems for Huelo, Honopou, Ho’olawa, and Waipio residents are in the lease area. What happens there in the lease area affects many potable water users; this should be discussed in EIS.

61. The DEIS needs to include a discussion of impacts of utilizing water for any uses other than agriculture that are anticipated over the 30-year term of the proposed lease.

62. The DEIS needs to provide details of plans to restore stream courses and watersheds in the lease area where diversions are being permanently abandoned and removed, as well as any positive and/or negative impacts of such restoration.

Mahalo for the opportunity to comment.

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