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COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

In re Petitions to Amend Interim Instream Flow Standards for Honopou, Huelo (Puolua), Hanehoi, Waikamoi, Alo, Wahinepe'e, Puohokamoa, Haipua'ena, Punalau/Kōlea, Honomanu, Nu'ailua, Pi`ina`au, Palauhulu, Ohia (Waianu), Waiokamilo, Kualani, Wailuanui, West Wailuaiki, East Wailuaiki, Kopili'ula, Puaka`a, Waiohue, Pa`akea, Waiaka`a, Kapa`ula, Hanawī and Makapipi streams.	Case No. CCH-MA13-01 PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION AND ORDER OF MAUI TOMORROW FOUNDATION, INC. AND ITS SUPPORTERS ON RE-OPENED EVIDENTIARY HEARING; CERTIFICATE OF SERVICE

mt/pffcld&o

PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION AND ORDER OF MAUI TOMORROW FOUNDATION, INC. AND ITS SUPPORTERS ON RE-OPENED EVIDENTIARY HEARING

Re-opened contested case hearings in the above-captioned matter were held before Hearings Officer Lawrence H. Miike on February 6, 8 and 9, 2017. Petitioners Na Moku Aupuni o Ko'olau Hui, Lurlyn Scott, and Sanford Kekahuna ("Na Moku") were represented by Ms. Summer L. H. Sylva, Esq. and Ms. Camille K. Kalama, Esq. for the Native Hawaiian Legal Corp. Intervenor Maui Tomorrow Foundation, Inc. and its supporters ("MTF") were represented by Isaac Hall, Esq. The County of Maui Department of Water Supply ("MDWS") was represented by Deputy Corporation Counsel Mr. Caleb Rowe, Esq. A&B, HC&S and EMI ("HC&S")[1] were represented by Mr. David Schulmeister, Esq. and Mr. Elijah Yip, Esq. Intervenor the Hawaii Farm Bureau was represented by Mr. Robert H. Thomas, Esq., who was not present, did not file any pleadings and did not present any evidence. Intervenor Jeffrey C.

[1] HC&S, as referenced herein, actually refers collectively to Hawaiian Commercial & Sugar, Company, Alexander & Baldwin, Inc. ("A&B") and East Maui Irrigation, Co. ("EMI"), all of whom were granted standing to participate in this contested case, pursuant to Minute Order 2 issued on April 21, 2014.

Paisner represented himself, pro se. The Commission on Water Resource Management ("Commission") was represented by Deputy Attorney General Linda L. Chow, Esq.

The Hearings Officer, having received and considered the Proposed Findings of Fact, Conclusions of Law and Orders filed by the parties, the testimonial and documentary evidence proffered by the parties, judging the credibility of the witnesses, and having heard the arguments of counsel, being otherwise fully advised in the premises, hereby by a preponderance of the evidence and all reasonable inferences, finds, concludes and orders as follows:

PROPOSED FINDINGS OF FACT

If it should later be determined that any of these Proposed Findings of Fact should be properly deemed Conclusions of Law, they shall be deemed as such.

I. PROCEDURAL BACKGROUND

1. On January 15, 2016, the Hearings Officer submitted his Hearings Officer's Proposed Findings of Fact ("FOF"), Conclusions of Law ("COL"), and Decision and Order ("D&O") to the Commission and the parties. Minute Order 16. Hearings Officer's FOF No. 45. [2]

2. The proceedings prior to the foregoing submission are recited in the Hearings Officer's FOF Nos. 1 – 44.

3. The parties filed their Exceptions to the Hearings Officer's FOF, COL, and D&O on February 29, 2016.

4. HC&S, in its Exceptions, filed on February 29, 2016, acknowledged that sugarcane growth, that had been the basis of its claims regarding offstream water uses, had terminated and that new circumstances had arisen by which A&B was transitioning to diversified agriculture and "anticipates needing significantly less water than the present." HC&S Exceptions, p. 3.

5. Based upon these allegations, the Commission issued Minute Order 18 "Re-opening of Hearing for Limited Purposes" to take additional evidence leading to the:

1) revision of the Hearings Officer's findings of fact on offstream uses;

2) rebalancing of instream versus noninstream uses; and

3) reassessment of the Hearings Officer's current proposed amendments to the interim instream flow standards.

[2] Supporting citations within to FOF, COL and D&O are to the Hearings Officers' Proposed Findings of Fact ("FOF"), Conclusions of Law ("COL"), and Decision and Order ("D&O") filed on January 15, 2016.

6. The Hearings Officer conducted a conference on Wednesday, March 23, 2016, to discuss 1) the scope of the rehearing and 2) interim actions prior to rehearing and subsequent final Decision and Order by the Commission. Minute Order No. 19.

7. During the conference all parties agreed that restoring the 18 mgd recommended by the Hearings Officer's Proposed Decision should be effective immediately. Minute Order No. 19.

8. After the submission by the Hearings Officer of his Recommendation re Interim Restoration of Stream Flow, on April 1, 2016, and his Amended Recommendation re Interim Restoration of Stream Flow, on May 31, 2016, the Commission issued its Order re Interim Restoration of Stream Flow on July 19, 2016, that provided, as is pertinent here:

a. The Commission adopted the agreement of all parties that restoring the 18 mgd recommended by the Hearings Officer's Proposed Decision is effective immediately, as advocated by the Hearings Officer in his Recommendation re Interim Restoration of Stream Flow on April 1, 2016.

b. The Commission received a letter dated June 15, 2016, in which EMI reported on its restoration of ten (10) petition streams that were described as "currently not being diverted," namely: Waiokamilo, Wailuanui (East and West), Makapipi, Hanawi, Waiohue, East Wailuaiki, West Wailuaiki, Waikamoi, Kopili'ula and Puakaa.[3]

c. The Commission ordered that the foregoing ten (10) streams "that are no longer being diverted shall remain undiverted unless and until further ordered by the Commission."

d. The Commission adopted A&B's commitment to abandon all diversions on the following streams: Honopou, Puolua, Hanehoi, Pi'ina'au and Palauhulu.

e. The Commission recognized the urgency to restore the streams and to provide connectivity mauka to makai as soon as possible.

f. The Commission determined that whenever possible and practical, A&B should attempt to remove all diversions; and

[3] In later correspondence with the Commission EMI states that only some of these streams are the subject of its diversion work abandonment permit application, namely Honopou, Hanehoi, Puolua, Pi'ina'au, Palauhulu, Waiokamilo, West Wailuanui and East Wailuanui. Exhibit E-165. Makapipi, Hanawi, Waiohue and Wailuaiki East and West, Waikamoi, Kopili'ula and Puaka'a are not included in the application. The Hearings Officer found that Puaka'a is a tributary of Kopiliula Stream and not an independent stream. FOF 59. The diversions on Waiokamilo Stream were allegedly closed and sealed in 2007. See, Commission Order re Interim Restoration of Stream Flow issued on July 19, 2016. Finally, EMI has not addressed steps to be taken to assure mauka to makai connectivity or removal of diversion works on these latter streams, as required by the Commission.

g. The Commission determined that any diversion work abandonment permit that comes to the Commission shall require modification that would result in full connectivity in the streams except where connectivity is affected by natural conditions.

9. During the conference on Wednesday, March 23, 2016 it was decided that the reopened hearing will include the following areas:

a. Hawaiian Commercial & Sugar Co. (HC&S)/A&B's current and future use of surface waters and the impact on the groundwater sources for its central Maui fields of HC&S's cessation of sugar operations;

b. The impact HC&S' cessation of sugar operations on MDWS' use of surface water;

c. Maui County's position on the future use of the central Maui fields; and

d. How EMI is managing the decrease in diversions, how it would manage the interim restorations, and any issues concerning the EMI ditch system with the current and any future changes in offstream diversions. Minute Order No. 19 and, later, Minute Order No. 21.

10. The parties filed Motions on the Scope of the Re-Opened Hearing.

11. The MTF, in its Motion on the Scope of the Re-Opened Hearing, argued that it would constitute a breach in the management of these public trust water resources to include within the class of potential reasonable and beneficial users (other than the MDWS) only those who may execute a lease from A&B for portions of the 36,000 acres of former plantation lands, and that the Commission's public trust responsibilities required the Commission to include within the class of potential reasonable and beneficial users entities or individuals who were so situated along or nearby the ditch system that they could currently benefit from, or benefit in the future from, the use of the diverted water, given that: (a) the HC&S sugar plantation had closed, (b) the former plantation lands are now mostly fallow, (c) A&B only possesses one (1) year revocable permits to divert and transmit water and (d) there is no certainty that A&B will prevail on any long-term disposition of East Maui water resources at a public auction conducted pursuant to Chapter 171. As such, MTF argued that new and additional notice of the re-opened hearings, and an opportunity to participate in these proceedings, was required to be given. Without that new and additional notice, A&B is enabled to unlawfully "grandfather" these public trust water resources.

12. The Commission issued, on August 18, 2016, its Order Regarding the Scope of the Re-Opened Hearing to Address the Cessation of Sugar Operations by HC&S, substantially adopting the

position of the Hearings Officer; however, the Commission did not provide any new notice of the re-opened hearings.

13. Re-opened contested case hearings in the above-captioned matter were held before Hearings Officer Lawrence H. Miike on February 6, 8 and 9, 2017.

14. The parties were to file their Proposed Findings of Fact, Conclusions of Law and Decision and Order ("FOF, COL AND D&O") on Friday, April 7, 2017.

15. On April 5, 2017 -- two days before the parties were to file their Proposed FOF, COL, and D&O with the Hearings Officer -- MDWS requested that the proceedings be reopened.

16. On April 6, 2017, the Hearings Officer informed the parties that he was suspending the April 7, 2017 deadline for submission of Proposed FOF, COL, and D&O to provide the County of Maui an opportunity to petition the Commission to allow the contested case hearing to be re-opened.

17. As instructed by the Hearings Officer the MDWS filed its Motion to Reopen Evidence on April 13, 2017 and MTF and Na Moku filed their Memoranda in Opposition on April 20, 2017.

18. The Hearings Officer circulated a draft recommendation for denial of the Motion to Reopen Evidence for consideration by the parties in a telephone conference that took place at 10:00 am on Thursday, May 4, 2017.

19. The Hearings Officer submitted his recommendation for denial of the Motion to Reopen Evidence to the Commission on May 10, 2017.

20. The Commission entered its "Order Denying County of Maui, Department of Water Supply's Motion to Reopen Evidence Dated April 13, 2017" on May 31, 2017.

21. Hearings Officer Miike issued "Minute Order No. 27: Second Amended Deadlines for Submission of Proposed Findings of Fact, Conclusions of Law and Decision and Order and Objections" on May 31, 2017 requiring Proposed FOF, COL AND D&O to be filed by the parties on or by June 7, 2017 and Objections to be filed on or by June 19, 2017.

22. The Hearings Officer's Proposed FOF, COL, and D&O are utilized as the baseline document, subject to the Exceptions filed by the parties and any Proposed FOF, COL and D&O that modify the language contained in any of the Hearings Officer's Proposed FOF, COL, and D&O and the rights of the Commission and the Courts to refuse to adopt and/or to modify and reverse any of the foregoing Proposed FOF, COL and D&O.

II. HOW EMI IS MANAGING THE DECREASE IN DIVERSIONS AND THE INTERIM RESTORATIONS

A. Stream Diversions in the Hanehoi Hydrologic Unit

23. There are three streams within the Hanehoi Hydrologic Unit: Hanehoi Stream, Huelo Stream and Puolua Stream. Exhibits E-162, 163.

24. Hanehoi Stream has two branches, East Hanehoi and West Hanehoi. Id.

25. Huelo Stream and Puolua Stream eventually pour into the main branch of the Hanehoi Stream. Id.

1. Diversions of Hanehoi Stream

a. Diversions of East Hanehoi Stream

26. From mauka to makai, East Hanehoi Stream is diverted by the Wailoa Ditch (W-18), then by the New Hamakua Ditch (NH-17) [4], then by the Lowrie Ditch (L-5) and (L-5a) [5], then by the New Haiku Ditch (H-3). Exhibits E-162, 163.

b. Diversions of West Hanehoi Stream

27. From mauka to makai, West Hanehoi Stream is diverted first by the New Hamakua Ditch (NH-17a) [6], then by the Lowrie Ditch (L-6), (L-5b)[7] (L-5c) before the West Hanehoi Stream joins the East Hanehoi Stream. Exhibits E-162, 163.

2. Diversion of Huelo Stream

28. From mauka to makai, the Huelo Stream is diverted by the Lowrie Ditch (L-7). Diversion (L-7b)[8] is further east of Puolua Stream. Exhibits E-162, 163.

29. Huelo stream joins West Hanehoi Stream mauka of Hana Highway. West Hanehoi Stream joins East Hanehoi Stream mauka of the Haiku Ditch and makai of the Hana Highway. Exhibits E-162, 163.

3. Diversions of Puolua Stream

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[4] West Hanehoi and East Hanehoi are both listed as being diverted by NH-17. It is unclear which of these is correct.
[5] Diversion L-5a is an unnamed tributary, perhaps spring fed, that is captured by the Lowrie Ditch. Exhibits E-162, 163
[6] Diversion NH-17a is mentioned twice because different sources place it in differing locations. Exhibits E-162, 163
[7] Diversions L-5b and L-5c are also unnamed tributaries, perhaps spring fed, that are captured by the Lowrie Ditch. Exhibits E-162, 163
[8] The diversion L-7b intake is located further east of the Puolua Stream. Exhibits E-162, 163

30. From mauka to makai, Puolua Stream is diverted first by EMI's New Hamakua Ditch (NH-17a), then by the Lowrie Ditch (L-7a) above the Hana Highway and then by EMI's diversion works at the New Haiku Ditch (H-4), below Hana Highway. Exhibits E-162, 163.

31. Puolua Stream then joins Hanehoi Stream below (makai) of the New Haiku Ditch. Exhibits E-162, 163.

32. Hanehoi, Huelo and Puolua Streams are diverted at least nine times in around one mile by significant EMI diversion structures which take the vast majority of their flows except during storm events. Exhibits E-162, 163.

33. Hanehoi, Huelo and Puolua Streams and their tributaries have their flows diverted by EMI diversion works at the Lowrie ditch. There are four main diversions of these three streams and several places where spring fed seepages are captured by the ditch. Exhibits E-162, 163.

34. Hanehoi Stream is also diverted by EMI diversion works at the New Hamakua and Wailoa/Ko'olau ditches. Exhibits E-162, 163.

35. Hanehoi and Puolua Streams have their flows diverted by EMI diversion works at the New Ha'iku Ditch. Exhibits E-162, 163.

B. Status of Interim Instream Flow Restoration

36. All parties agreed on March 23, 2016 that the restoration of the 18 mgd recommended by the Hearings Officer in his Proposed Decision should be effective immediately. Minute Order No. 19.

1. Hanehoi Watershed IIFS

37. In his Decision and Order, as part of the 18 mgd stream restoration, the Hearings Officer recommended "Amended IIFS" with regard to streams in the Hanehoi Watershed, at four locations, on pp. 141-142, as follows:

Hanehoi/Puoloa Stream:

Amended IIFS	The lesser of 0.74 mgd (1.15 cfs) or the estimated BFQ50 flow at the site as derived from actual flows.
Location	On Hanehoi Stream above the Lowrie Ditch (*See COL 206).*

Amended IIFS	The estimated BFQ50 flow (H90) at the site as derived from actual flows, currently estimated as 2.21 mgd (3.42 cfs).
Location	Just above the terminal waterfall at the mouth of Hanehoi Stream (*See COL 206).*
Amended IIFS	0.69 mgd (1.07 cfs) or the estimated BFQ50 flow) at the site as derived from actual flows.
Location	On Puolua Stream below the Haiku Ditch (*See COL 206).*
Amended IIFS	1.87 mgd (2.90 cfs) or as explained below.
Location	On Hanehoi Stream below the Haiku Ditch (*See COL 206).*

The purpose of the two IIFS below the Haiku Ditch, one on Hanehoi Stream and the other on Puolua Stream, is to provide 0.35 mgd to meet the taro irrigation requirements, *supra,* COL 142, 202. The sum of both IIFS', 2.56 mgd (0.69 mgd plus 1.87 mgd), is 0.35 mgd greater than the IIFS of 2.21 for habitat restoration located downstream. Thus, if the estimated IIFS cannot be achieved, the IIFS on Puolua Stream would be established as the BFQ50 flow at the site as derived from actual flows, and the IIFS on Hanehoi Stream would be established such that flows from both streams contribute to the 0.35 mgd to meet the taro irrigation requirements, and the remaining combined flows equal 64 percent of BFQ50 flow (H90) at the lowest site as derived from actual flows.

38. The IIFS Site on Puolua Stream below the Haiku Ditch is referred to by the Commission as Site A. Exhibit E-10.

39. The IIFS Site on Hanehoi Stream below the Haiku Ditch is referred to by the Commission as Site B. Exhibit E-10.

40. The IIFS Site on Hanehoi Stream above the Lowrie Ditch is referred to by the Commission as Site C. Exhibit E-10.

2. Lack of Enforcement of Minimum Stream Flows in Hanehoi Watershed

41. Commission staff was not able to testify that any of these standards for minimum stream flows had been met at any of the three Sites or four locations. Exhibit E-10. Testimony of Ayron Strauch, p. 60, l. 17-25, p. 61, l. 1-13; Testimony of Dean Uyeno, p. 508, l. 3-5.

42. Current flow levels in Puolua stream, after the 2008 IIFS decision, did not provide a volume of water that is consistently cool enough to support healthy kalo. Mr. Schupp, and other taro growers, therefore do not now have enough water available in Puolua Stream to grow healthy kalo. Written Direct Testimony ("WDT") of Ernest Schupp; ¶¶ 29 – 37; Testimony of Dean Uyeno, p. 508, l. 3-5.

43. No monitoring of the stream flows on Hanehoi stream, below the New Haiku Ditch, has taken place since 2009 when a report was made to the Commission which concluded that the IIFS that affects Ms. Caveny's property was not being met. Exhibit 10, pp. 36 and 46; WDT of Neola Caveny, ¶¶ 11 - 21; Testimony of Dean Uyeno, p. 508, l. 3-5.

44. The September 2008 Commission decision specified .74 mgd of instream flow to accommodate the Huelo pipe and its community users. That level has not been reached with the present diversions and it is likely that it would not prove adequate for both the domestic and kuleana users and the needs of the stream ecology itself. WDT of Michael D'Addario, ¶¶ 15 -18; Testimony of Dean Uyeno, p. 508, l. 3-5.

3. Status of Full and Permanent Restoration of Seven Priority Taro Streams

45. On April 22, 2016, A&B agreed to "fully and permanently restore" stream flow to seven priority East Maui taro cultivation streams, from east to west:

Wailuanui (East and West)
Kualani
Waiokamilo
Palauhulu
Piinaau
Hanehoi/Puolua
Honopou

Exhibits C-154, C-158

46. The Hearings Officer found that Kualani Stream is below the EMI ditch system and has never been diverted. FOF 58. This means that there are actually six priority East Maui

taro cultivation streams that will be "fully and completely" restored. [9]

47. Even though Mr. Strauch presented written testimony that the priority taro streams were no longer diverted, evidence was introduced demonstrating that at least some of the priority taro streams remained diverted at the time of the contested case proceedings. Testimony of Lucienne de Naie, pp. 400 – 405.

4. EMI Application for Abandonment of Diversion Works

48. The Commission stated in its Order dated July 18, 2016 that it "understands the **urgency** to restore stream flow to the streams and to provide connectivity mauka to makai **as soon as possible**." (Emphasis added). Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016.

49. EMI submitted its application for the "removal/abandonment" of Stream Diversion Works dated September 19, 2016, for the following petition streams, from east to west:

Wailuanui (East and West)
Kualani
Waiokamilo
Palauhulu
Piinaau
Hanehoi/Puolua
Honopou

(Exhibits E-165 and E-172)

50. EMI had informed the Commission that (1) Wailuanui (East and West) was no longer being diverted and (2) Waiokamilo had stopped being diverted six years ago. Kualani Stream was listed by EMI with the Commission as a stream requiring abandonment permits. Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016. Exhibit E-172.

51. Commission staff found the EMI application to be incomplete and that it could not be processed further or presented to the Commission until EMI assembled necessary information to make the application complete and reviewable. Testimony of Dean Uyeno; p. 502, l. 3 – 25, p. 503, l. 1 -3.

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[9] EMI has nevertheless included Kualani Stream in its application for abandonment of diversion works. Exhibit E-172.

52. On Friday, February 3, 2017, just before the commencement of the re-opened contested case evidentiary hearing on Monday, February 6, 2016, EMI submitted further documentation to support its application for the "removal/abandonment" of Stream Diversion Works. Testimony of Dean Uyeno; p. 503, l. 4 – 17.

53. By the close of the re-opened contested case evidentiary hearing on Thursday, February 9, 2017, Commission staff had not been able to determine that the application was complete and ready for processing. Testimony of Dean Uyeno; p. 503, l. 4 – 17.

54. The application divides the work necessary to be done to abandon or remove the stream diversions into four phases: (1) Phase I projects that can be completed 5 to 7 months after obtaining all required approvals; (2) Phase II projects that can be completed in 2 to 3 months after obtaining all required approvals; (3) Phase III projects that can be completed in 4 to 5 months after obtaining all required approvals; and (4) Phase IV projects that can be completed 17 to 23 months after obtaining all required approvals. Exhibits E-165, E-172.

55. In situations in which a stream is diverted several times, the abandonments and removals cannot take place concurrently and must proceed sequentially, one after the other, causing even more lengthy delays. Exhibits E-165, E-172.

56. For example, East Hanehoi, the stream with the greatest flow in the Hanehoi watershed, is diverted four times, from mauka to makai, first by the Wailoa Ditch (W-18), then by the New Hamakua Ditch (NH-17), then by the Lowrie Ditch (L-5) and then by the New Haiku Ditch (H-3). Exhibits E-162, 163.

57. Currently, East Hanehoi is almost totally dewatered by the highest diversion at the Wailoa Ditch (W-18). Testimony of Lucienne de Naie; p. 400, l. 9 – 18. The removal/abandonment would commence at the New Haiku Ditch (H-3) and when this is completed, it move up to the Lowrie Ditch (L-5), and when this is completed, it would move up to the New Hamakua Ditch (NH-17) and when this is completed, it would then move up to the Wailoa Ditch (W-18). Exhibits E-165, E-172.

58. The application of EMI for a diversion work abandonment permit does not include modifications that would result in full connectivity in the streams for native species except where connectivity is affected by natural conditions. Testimony of Garret Hew, p. 134, l. 13 – 17.

59. The application of EMI for a diversion work abandonment permit does not provide connectivity mauka to makai. Testimony of Garret Hew, p. 134, l. 13 – 17.

60. The application of EMI for a diversion work abandonment permit does not include the complete removal of any diversions. Testimony of Garret Hew, pp. 133, l. 24 – 25; 134, l. 1 -3.

61. EMI has not acted with any "urgency" to restore East Maui Streams.

62. This sequential process could take many years to complete before stream flow is restored to this major Hanehoi watershed stream. Exhibit E-172.

63. Full and permanent restoration of the six priority taro streams, including Hanehoi and Puolua Streams, may not actually take place for many years.

5. Petition Streams Subject to Interim Protection by the Commission

64. On June 15, 2016, EMI sent a letter to the Commission reporting that the following ten East Maui petition streams "are currently not being diverted," from east to west:

Makapipi
Hanawi
Waiohue
Puakaa
Kopiliula
East Wailuaiki
West Wailuaiki
Wailuanui (East and West)
Waiokamilo
Waikamoi

Letter referenced in Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016.

65. The Commission ordered that these ten East Maui petition streams "shall remain undiverted unless and until further ordered by the Commission." Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016.

66. The undiverted status of these streams is only documented by sluice gates being fully opened or, in one case, being removed. It is noted that all diversions were closed and sealed in 2007 on Waiokamilo Stream. Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016.

67. The opening or removal of sluice gates is not conclusive proof that streams are undiverted. See MTF Proposed FOF immediately below.

68. Sluice gates were designed and constructed to be of a size and shape to flush the diversion works of debris. Sluice gates were not designed or constructed to release the full flow of the stream diverted by the diversion works. Sluice gates do not, in general, release the full

flow of the stream diverted by the diversion works. Just because a particular sluice gate on a diversion works has been fully opened does not mean that the full flow of the stream can now flow through that sluice gate. Testimony of Garret Hew, p. 119, l. 16 – 23; p. 121, l. 12 – 15.

69. Of the ten East Maui streams that "are currently not being diverted," only two of the "seven" priority East Maui taro cultivation streams are listed, as follows, from east to west:

Wailuanui (East and West)
Waiokamilo

70. The five remaining priority East Maui taro cultivation streams are still diverted, as follows, from east to west:

Palauhulu
Piinaau
Hanehoi/Puolua
Honopou

71. A&B made a commitment to the Commission on April 22, 2016 "to abandon all diversions" on the following priority taro streams, from east to west:

Palauhulu
Piinaau
Hanehoi/Puolua
Honopou

Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016, p. 2.

72. Commission staff was not able to testify that restoration had been accomplished for these enumerated instream purposes.

6. Petition Streams Recognized for Instream Values

73. In his Decision and Order, as part of the 18 mgd stream restoration, the Hearings Officer recommended "Amended IIFS" for the protection of enumerated instream purposes.

74. The Hearings Officer found, that from east to west, the following streams have significant "**Outdoor Recreational Activities**", HAR §13-169-2(2), including in some cases swimming and/or fishing, and nearly all including scenic views for recreational and sometimes educational purposes (FOF 282):

Makapipi
Hanawi
Waiohue
East Wailuaiki,

West Wailuaiki
Wailuanui
Waiokamilo
Ohia [10]
Honomanu
Waikamoi
Hanehoi
Honopou

75. The Hearings Officer found, with respect to "**Maintenance of ecosystems and estuaries, wetlands, and stream vegetation,**" HAR §13-169-2(3), that from east to west, all of the streams, except Waiaka and Ohia Stream, have seasonal non-tidal palustrine wetlands, in the upper watershed of the hydrologic unit. East Wailuaiki, West Wailuaiki, and Waiohue Streams also have estuaries. (FOF 283):

76. The Hearings Officer found, with respect to "**Aesthetic values such as waterfalls and scenic waterways,**" HAR §13-169-2(4), that waterfalls, some including plunge pools at their base, and to a lesser extent, springs, constitute the principal aesthetic values in East Maui Streams. From East to West, the streams include: (FOF 284):

Makapipi
Hanawi
Kapaula
Waiaaka
Paakea
Waiohue
Kopiliula
East Wailuaiki
West Wailuaiki
Wailuanui
Waiokamilo
Palauhulu
Piinaau
Honomanu
Punalau
Haipuaena
Puohokamoa
Waikamoi
Honopou

[10] The Hearings Officer found that Ohia Stream is below the EMI ditch system and has never been diverted. FOF 58.

77. The Hearings Officer found, with respect to "**Maintenance of water quality,**" HAR §13-169-2(7), that streams that appear on the 2006 List of Impaired Waters in Hawaii, Clean Water Act §303(d), include, from east to west:
(FOF 285):

Hanawi
Puakaa
East Wailuaiki
West Wailuaiki
Ohia
Honomanu
Punalau
Haipuaena
Puohokamoa
Waikamoi

78. The Hearings Officer, with respect to "**Maintenance of aquatic life and wildlife habitats,**" HAR §13-169-2(1), noted that only the following streams, from east to west, had their IIFS increased to address the following values:
(COL 99)

Makapipi

Wetland taro, domestic uses and/or habitat improvement
Palustrine wetlands
Outdoor recreation
Aesthetic values

Hanawi

Wetland taro, domestic uses and/or habitat improvement
Palustrine wetlands
Aesthetic values
Impaired water quality

Waiohue

Wetland taro, domestic uses and/or habitat improvement
Estuaries
Palustrine wetlands
Aesthetic values
Impaired water quality

East Wailuaiki

Wetland taro, domestic uses and/or habitat improvement
Estuaries
Palustrine wetlands
Outdoor recreation
Aesthetic values
Impaired water quality

West Wailuaiki

Wetland taro, domestic uses and/or habitat improvement
Estuaries
Palustrine wetlands
Outdoor recreation
Aesthetic values
Impaired water quality

Wailuanui

Wetland taro, domestic uses and/or habitat improvement
Palustrine wetlands
Outdoor recreation
Aesthetic values

Waiokamilo

Wetland taro, domestic uses and/or habitat improvement
Palustrine wetlands
Outdoor recreation
Aesthetic values

Palauhulu

Wetland taro, domestic uses and/or habitat improvement
Palustrine wetlands
Outdoor recreation
Aesthetic values

Waikamoi

Wetland taro, domestic uses and/or habitat improvement
Palustrine wetlands
Outdoor recreation
Aesthetic values
Impaired water quality

Hanehoi/Puolua

Wetland taro, domestic uses and/or habitat improvement
Palustrine wetlands
Outdoor recreation

Honopou

Wetland taro, domestic uses and/or habitat improvement
Palustrine wetlands
Aesthetic values
Outdoor recreation

79. A number of petition streams that have been recognized for their instream values have not had Amended IIFS established for them, from east to west:

Kapaula

Palustrine wetlands
Aesthetic values

Waiaaka

Palustrine wetlands
Aesthetic values

Paakea

Palustrine wetlands
Aesthetic values

Kopiliula

Palustrine wetlands
Aesthetic values

Ohia

Outdoor recreation

Piinaau

Palustrine wetlands
Aesthetic values

Honomanu

Palustrine wetlands
Aesthetic values
Outdoor recreation

Punalau

Palustrine wetlands
Aesthetic values

Haipuaena

Palustrine wetlands
Aesthetic values

Puohokamoa

Aesthetic values

7. Maintenance of Fish and Wildlife Habitats as an Instream Value

80. Article XI, § 7 of the Hawaii State Constitution requires the Commission to protect natural stream environments.

81. HRS §174C-2 states that it is the "Declaration of Policy" of the Hawaii Water Code, in pertinent part, that:

> **... adequate provision shall be made for ... the protection and procreation of fish and wildlife,** the maintenance of proper ecological balance and scenic beauty .... Such objectives are declared to be in the public interest. (Emphasis added)

82. All prior balancing of viable habitat flows in petition streams has been based upon an acquiescence in a robust calculation of the amount of water for offstream uses, assumed by the Hearings Officer to include 140.19 mgd for the HC&S Sugar Plantation for sugar cane cultivation (COL 251), 7.1 mgd for the MDWS (FOF 83), 6.66 mgd for HC&S industrial and other uses (FOF 313) and 34.95 mgd for reasonable losses at 22.7% (COL 252), for a total reasonable and beneficial offstream use of 188.9 mgd. COL 256, p. 135.

83. The Division of Aquatic Resources ("DAR") and the Commission recommended a minimum viable habitat flow based upon the following:

From DAR's perspective, the management goal for the 27 East Maui streams was to find **the minimum amount of water that supported healthy stream animal populations** while providing **maximum water available for other uses.** (Emphasis added)

Declaration of James E. Parham, Appendix E, p. 67, 2015.

DAR staff understood that there are multiple uses for the valuable water resource.

Declaration of Glenn Higashi, ¶ 25.

84. DAR therefore recommended, and the Hearings Officer adopted, a minimum viable habitat flow (Hmin), defined by DAR as 64% of median base flow, 64 percent of BFQ50 flow (H90). (FOF 90, p. 18; FOF 105, p. 21; Decision and Order, Amended IIFS, pp. 139 – 143)

85. At the same time, DAR admitted, on many occasions, that:

If streamflow could be fully restored **the maximum benefit** [for stream habitat] **would be realized.** (Emphasis added).

Declaration of Glenn Higashi, ¶ 14.

The removal of stream diversions and the complete restoration of stream flow would be the best possible condition for native aquatic animals.

Declaration of James E. Parham, Appendix D, p. 3, 2010.

While the return of 100% of the diverted water and elimination of diversion structures would be the most desirable for the protection and management of native stream animals ....

Declaration of James E. Parham, Appendix B, p. 2, 2009.

When considering instream flow quantities to support stream animals, it is axiomatic that 100% flow restoration to natural undiverted flow would be the best for native stream animals.

Declaration of James E. Parham, Appendix E, p. 67, 2015.

86. The Hearings Officer calculated offstream uses to include 140.19 mgd for the HC&S Sugar Plantation for sugar cane cultivation (COL 251), 7.1 mgd for the MDWS (FOF 83), 6.66 mgd for HC&S industrial and other uses (FOF 313) and 34.95 mgd for reasonable losses at 22.7% (COL 252), for a total reasonable and beneficial offstream use of 188.9 mgd. COL 256, p. 135.

87. There are several petition streams mentioned in the "Order re Interim Restoration

of Stream Flow" of the Commission filed on July 19, 2016 that have recognized instream values that (1) do not yet benefit from an Amended IIFS or (2) do not benefit from A&B's termination of diversions or (3) do not yet benefit from A&B's commitment to full and permanent restoration, as follows, from east to west:

Ohia [11]
Haipuaena
Puohokamoa

8. Lack of Enforcement of Minimum Stream Flows Generally

88. Commission staff have not regularly monitored IIFS' that have been established.

89. Commission staff have determined in many instances that the IIFS' that have been established are not being met.

90. Commission staff have not taken enforcement actions to assure that IIFS' are being met.

91. When the IIFS' are not being met, the amounts intended to exist in streams as minimum flows are not present and greater amounts than were intended are diverted and transported for offstream uses, thus upsetting the intended balance between instream uses and offstream uses – in favor of offstream uses, to the prejudice of instream uses.

III. ANY ISSUES CONCERNING THE EMI DITCH SYSTEM WITH THE CURRENT AND ANY FUTURE CHANGES IN OFFSTREAM DIVERSIONS

92. EMI testified that the diminishment in flows in the ditches caused by any current or future changes in offstream diversions would not affect the structural integrity of the ditch systems. Testimony of Garret Hew, p. 115, l. 24 – 25, p. 116, l. 1 – 7.

93. MDWS did not present any evidence regarding any adverse impacts to the MDWS through the diminishment of flows in the Wailoa Ditch.

IV. MAUI COUNTY'S POSITION ON THE FUTURE USE OF THE CENTRAL MAUI FIELDS

94. County witnesses testified that use of the water to irrigate the former sugar plantation lands was consistent with the state and county land use plans and the public interest

[11] The Hearings Officer found that Ohia Stream is below the EMI ditch system and has never been diverted. FOF 58.

and that the County supported the use of the former sugar plantation lands for diversified agriculture. WDT of Michelle McLean, ¶¶ 4 and 5.

95. Community Plans already in the record demonstrate that there are large areas of land in all of these Community Plan Districts that are likewise designated agriculture in the Community plan map, located within the Agriculture District of the State Land Use Commission and zoned Agriculture by Maui County. Hana Community Plan (Exhibit E-142), Paia-Haiku Community Plan (Exhibit E-143), Makawao-Pukalani-Kula Community Plan (Exhibit E-144).

96. Large areas so designated – other than the former HC&S Sugar Plantation – are shown on Community Plan maps to be reasonably close to the EMI/State ditch transmission systems and likewise could benefit from "low-cost" agricultural irrigation water. Hana Community Plan (Exhibit E-142), Paia-Haiku Community Plan (Exhibit E-143), Makawao-Pukalani-Kula Community Plan (Exhibit E-144).

97. Use of the water for agricultural pursuits is also supported in the Hana Community Plan Region, the Paia-Haiku Community Plan Region and the Makawao-Pukalani-Kula Community Plan Region. Hana Community Plan (Exhibit E-142), Paia-Haiku Community Plan (Exhibit E-143), Makawao-Pukalani-Kula Community Plan (Exhibit E-144).

98. No notice or opportunity was provided to other potential agricultural users of this water to participate in these re-opened proceedings. It would constitute a breach in the management of these public trust water resources to include within the class of potential reasonable and beneficial users (other than the MDWS) only those who may execute a lease from A&B for portions of the 36,000 acres of former plantation lands, and that the Commission's public trust responsibilities required the Commission to include within the class of potential reasonable and beneficial users entities or individuals who were so situated along or nearby the ditch system that they could currently benefit from, or benefit in the future from, the use of the diverted water, given that: (a) the HC&S sugar plantation had closed, (b) the former plantation lands are now mostly fallow, (c) A&B only possesses one (1) year revocable permits to divert and transmit water and (d) there is no certainty that A&B will prevail on any long-term disposition of East Maui water resources at a public auction conducted pursuant to Chapter 171. New and additional notice of the re-opened hearings, and an opportunity to participate in these proceedings, was required to be given. Without this new and additional notice, A&B is enabled to unlawfully "grandfather" these public trust water resources.

V. HAWAIIAN COMMERCIAL & SUGAR CO. (HC&S)/A&B'S CURRENT AND FUTURE USE OF SURFACE WATERS AND THE IMPACT ON THE GROUNDWATER SOURCES FOR ITS CENTRAL MAUI FIELDS OF HC&S'S CESSATION OF SUGAR OPERATIONS

A. HC&S Preparations to Close the HC&S Sugar Plantation

99. In April 2010, seven years ago, A&B issued a Press Release, announcing federal grants totaling at least $4,000,000, one for approximately $2,000,000 to the U.S. Department of Energy ("DOE") and one for approximately $2,000,000 to the Navy's Office of Naval Research ("ONR") **"to conduct research at HC&S."** (Emphasis added). Exhibit E-174.

100. Through the grants HC&S stated that "it is the center of significant new Hawaii-based research initiatives on biofuels ..." The grants would support "complementary crop and technology assessments," "an evaluation of long-term resource requirements for biomass production" and would, help Hawaii accelerate sustainable biofuel feedstock production." Exhibit E-174.

101. Of these grants, Chris Benjamin, the general manager of HC&S stated:

> This federal funding represents a vote of confidence in Hawaii and the future of HC&S.

And

> **It is a significant step toward our goal of transforming HC&S into a large-scale energy farm** ..." (Emphasis added). Exhibit E-174.

102. Sorghum trials began five years before in 2011 on 182 acres of HC&S land, according to a Maui News article written before the HC&S plantation closed at the end of 2016. Exhibit E-161.

103. Sorghum was a top contender to replace sugar cane on some of the 36,000 acre plantation. Exhibit E-161.

104. Sorghum uses only about one-quarter as much water, cane experts have said, according to the Maui News article. Exhibit E-161.

105. Experiments include energy crops, such as sorghum plants and corn that can be used for anaerobic conversion to biogas. Exhibit E-161.

106. Another 150 acres is being dedicated to grazing. Exhibit E-161.

B. HC&S Closure of the HC&S Sugar Plantation

107. HC&S publicly announced the closure of the HC&S Sugar Plantation through a press release dated January 6, 2016. Exhibit C-153.

C. Closure of HC&S Sugar Cane Operations

108. HC&S closed its sugar cane operations on its plantation lands and in its mill on December 31, 2016.

109. On December 16, 2016, HC&S stopped producing power and began purchasing power from Maui Electric. Exhibit E-167.

D. Termination of Labor Force

110. HC&S laid off all of its employees as of December 31, 2016. Exhibit E-167.

111. A&B has retained approximately twenty employees to work on the former sugar cane plantation lands. Exhibit E-167.

E. Auction of HC&S Farm Equipment

112. HC&S auctioned more than 450 pieces of its farm equipment on January 18 and 19, 2017. Exhibits E-167, E-175 and E-176.

113. Much of this farm equipment could have been used in diversified agricultural operations on the former HC&S sugar plantation lands had HC&S intended to conduct such operations on these lands. Testimony of Robert Pahia, p. 466, l. 2 – 23.

114. The equipment auctioned by HC&S would be useful for farmers at smaller than industrial scale. Testimony of Robert Pahia, p. 466, l. 13 – 15.

115. A&B retained enough farm equipment for its approximately ten remaining employees. Testimony of Rick Volner, p. 245, l. 15 – 25; p. 246, l. 1 – 13, p. 248, l. 16 – 19.

F. Current Use of Former HC&S Plantation Lands

116. Currently a total of 20 mgd of East Maui water diverted by EMI diversion works and transmission systems is being used either by MDWS or on the former HC&S plantation lands, as follows:

6-8	mgd	MDWS
1	mgd	Cattle operations
2	mgd	Bioenergy crops

5-6	mgd	Reservoirs, seepage, maintenance, Maui Fire Dept.
4	mgd	Allowable system losses @ 22.7%
20	mgd	TOTAL

Testimony of Garret Hew, p. 24, l. 2-8.

117. The bioenergy crops are being grown on a couple hundred acres of land. Testimony of Garret Hew, p. 108, l. 22-24.

118. Cattle operations are taking place on a little over 200 acres of land. Testimony of Rick Volner, p. 168, l. 10-13.

G. Planned Diversified Agriculture Projects

119. A&B has a number of projects planned for 2017 in pursuit of its diversified agriculture plan, including the following:

a. **Pasture.** A potential pasture agreement with Maui Cattle Co. for 4,000 acres.

b. **Renewable Energy.** A&B responded to a Request for Proposals ("RFP") from Maui Electric regarding the availability of land for solar energy projects, wind energy projects and bioenergy projects.

c. **Agriculture Park.** Potential sale of 850 acres to County of Maui for an agricultural park.

d. **Pongamia Orchard.** Establishment of approximately 100 acres of oilseed orchard – the first phase of 250 acres.

e. **Anaerobic Digestion Crop Feedstocks.** Execution of a commercial feedstock agreement for anaerobic digestion crop feedstocks on up to 500 acres.

WDT of Jerrod Schreck, ¶ 6.

H. Inquiries from Potential Agricultural Lessees

120. A&B has received approximately 250 inquiries from prospective agricultural lessees since the cessation of sugar cultivation. WDT of Jerrod Schreck, ¶ 8.

121. A&B has directly followed up with approximately 170. WDT of Jerrod Schreck, ¶ 8.

122. Over 60 have been categorized as "possible" and meriting further discussion. WDT of Jerrod Schreck, ¶ 8.

123. A&B is currently in active discussions with approximately 15 of these "possibles" and have been in the process of conducting site visits and pursuing the negotiation of business terms for potential leases. WDT of Jerrod Schreck, ¶ 8.

124. Those who are looking for small farm plots are considered prospective agricultural park tenants and the prospective County agricultural park is suggested for them. WDT of Jerrod Schreck, ¶ 8.

125. If A&B reached terms with all of the remaining "possibles" the aggregate acreage would amount to approximately 19,500 acres. WDT of Jerrod Schreck, ¶ 8.

126. Mr. Schreck did not or was not able to testify as to their agricultural uses or the amounts of water needed for these approximately 19,500 acres.

127. A&B has a methodology for vetting potential agricultural lessees which methodology includes various junctures at which either A&B or potential agricultural lessees may not find the terms acceptable, the uncertainty reasonable or financial compliance satisfactory and, therefore, withdraw from further consideration of the prospective lease, including the following:

a. the farmer may not have pertinent experience
b. the farmer cannot provide a high-level business plan, with financials for A&B review
c. the proposed farming use may not be compatible with planned adjacent activities
d. proposed lease terms may be unacceptable to one or the other party
e. proposed fees may be unacceptable to one or the other party
f. the farmer may not have a satisfactory credit or legal background

Testimony of Jerrod Schreck, p. 339, l. 1 - p. 343, l. 20.

I. Any Concerns About the Availability of Water Can be Satisfied

128. A&B alleges that some prospective lessees are unwilling to sign leases because A&B cannot assure them of the availability of water or the costs for the same. WDT of Jerrod Schreck, ¶ 9; Testimony of Jerrod Schreck, p. 361, l. 2-25, p. 362, l. 1.

129. A&B asks the parties and the Commission to accept this on its representatives word alone, without any documentary support. Testimony of Jerrod Schreck, p. 361, l. 2-25, p. 362, l. 1.

130. A&B could have attempted to obtain signed documents from prospective lessees who are unwilling to sign leases because A&B cannot assure them of the availability of water or the costs but did not do so -- thus making it impossible for the Commission and the parties to assess with adequate proof whether or not there were any prospective lessees that had come to terms on a lease contingent upon knowing that water would be available when that prospective lessee was ready, willing and able to actually plant crops reliant upon irrigation water. Testimony of Jerrod Schreck, p. 362, 5 – 25, p. 363, l. 1 – 3.

131. The Hearings Officer found that the EMI Ditch System diverts a total of at least 43 streams and that only 23 petition streams are being diverted. FOF 59, COL 248.

132. This means that approximately 20 streams are not subject to the petitions or to any uncertainty that could possibly arise by virtue of the establishment of minimum stream flows.

133. These approximately 20 streams are available to provide irrigation water for the minimal bona fide needs that A&B has presented to date.

134. HC&S presented Exhibit C-159 regarding the status of its Holdover Permits from the Board of Land and Natural Resources ("BLNR"). This letter recites the long history of one year long permits to divert water from the four East Maui License areas. HC&S has used this status over the long term to avoid preparing an EIS and an appraisal for the fair market value of the water diverted. The insecurity of successive one year permits, elected by HC&S, causes far more insecurity for prospective lessees than could these proceedings. Exhibit C-159.

J. Future Use of Former HC&S Plantation Lands

1. Diversified Agriculture Plan

135. Although A&B, EMI and HC&S made repeated references to a "Diversified Agriculture Plan" to guide its current and future uses of its former sugar plantation lands, all of the witnesses for A&B, EMI and HC&S referred only to their Exhibits C-155, C-156, C-157 as their complete and total "Diversified Agriculture Plan."

136. On Friday, February 3, 2017, just before the commencement of the re-opened contested case evidentiary hearing, on Monday, February 6, 2016, over the objections of MTF, A&B, EMI and HC&S presented substitutes for each of the Exhibits allegedly constituting their

"Diversified Agriculture Plan," namely Exhibits C-155-A, C-156-A and C-157-A, that contained substantially different contents from Exhibits C-155, C-156 and C-157.

2. The "Diversified Agriculture Plan" is Not A Bona Fide Plan

137. Albert Perez, the Executive Director of MTF, was qualified as an expert witness in planning. Exhibit E-159; Testimony of Albert Perez, p. 423, l. 20-25, p. 424, l. 1-9.

138. MTF supports diversified agriculture but has not seen any serious planning by HC&S. Testimony of Albert Perez, p. 427, l. 3-6.

139. MTF supports real agricultural use and not just speculative agricultural use that really is land banking. Testimony of Albert Perez, p. 459, l. 8-10; p. 460, l. 14 - 22.

140. Except for the two projects discussed above – the bioenergy crops and the cattle operations – the remainder of the 26,996 acres of former sugar plantation lands are fallow. Testimony of Rick Volner, p. 229, l. 3-13.

141. The HC&S or A&B "Diversified Agriculture Plan" does not constitute a plan. Testimony of Albert Perez, p. 423, l. 20-25, p. 424, l. 1-9.

142. HC&S' map is a Conceptual Sketch, not a Plan. Exhibits C-155, C-156, C-157; Exhibits C-155-A, C-156-A, C-157-A; Testimony of Albert Perez, p. 426, l. 8 – 14.

143. The categories of agricultural uses in the "Diversified Agriculture Plan" are not specific and are generalized, speculative sketches. Testimony of Albert Perez, p. 460, l. 2 – 13.

144. Even this Conceptual Sketch changed significantly as of February 3, 2017. Exhibits C-155-A, C-156-A, C-157-A. Testimony of Albert Perez, p. 426, l. 8 – 14; p. 454, 1. 9 – 25, p. 455, l. 1 – 5.

145. The "Diversified Agriculture Plan" does not provide a basis upon which decisions about public trust stream water can be made. Testimony of Albert Perez, p. 428, l. 8-11.

146. To make decisions regarding public trust stream resources, we would need to know within a reasonable time frame how much acreage would actually be under cultivation. Testimony of Albert Perez, p. 428, l. 11 - 18.

147. The "Diversified Agriculture Plan" only contains speculative uses. Testimony of Albert Perez, p. 428, l. 11 - 18.

148. The "Diversified Agriculture Plan" does not include steps that you are going to take in the future, declare what your goal is and set out the steps you are going to take -- and

identify the resources that you will use – to reach your goal. This would include a business plan and a market plan. Testimony of Albert Perez, p. 426, l. 20-25, p. 427, l. 1-9.

149. The only time line established for the "Diversified Agriculture Plan" is for the two projects discussed by Garret Hew. Testimony of Rick Volner, p. 255, l. 25 – p. 256, l. 1 -2.

150. HC&S has no market analysis for the particular crops that are included in the "Diversified Agriculture Plan." Testimony of Rick Volner, p. 256, l. 20-23.

151. HC&S has no financing plans for the particular crops that are included in the "Diversified Agriculture Plan," except for the two projects discussed by Garret Hew, the bioenergy crops and the cattle operations. Testimony of Rick Volner, p. 256, l. 24-25, p. 257, l. 1-25, p. 258, l. 1-6.

152. The data supporting the "Diversified Agriculture Plan" is not properly or adequately sourced or independently or impartially gathered. Testimony of Albert Perez, p. 452, l. 2 – 10, 17 - 20.

153. The data supporting the "Diversified Agriculture Plan" is for only some of the fields – those with weather stations. Testimony of Albert Perez, p. 428, l. 1 – 7.

154. If A&B was serious about agriculture A&B would come up with an actual plan that includes a timeline, steps and resources. Testimony of Albert Perez, p. 453, l. 22 – 25, p. 454, l. 1 - 6.

3. Malama Aina Report: Reasonable Agricultural Practices to Reduce Irrigation Water Needs

155. The MTF prepared a Report entitled "Malama Aina: A Conversation About Maui's Farming Future." Exhibit E-160.

156. MTF supports diversified agriculture in the Central Isthmus of Maui, however it became apparent to the MTF several years ago that the HC&S sugar plantation was going out of business so that the MTF prepared the Malama Aina Report to study diversified agriculture in this area and how it could be conducted successfully without using so much water. Testimony of Albert Perez, p. 424, l. 20-25, p. 425, l. 1 – 13.

157. The Malama Aina Report determines that water use can be reduced by 10 to 50 percent through the use of regenerative agricultural methods which:

a. rebuilds the soil and increases its water holding capacity, thus increasing effective precipitation;

b. reduces water use by selection of crops that are adapted to the local climate and need less water;

c. reduces evapotranspiration and harvests atmospheric moisture by planting multi-function windbreaks;

d. adjusts the shape and orientation of fields and grades the site to maximize rainwater harvesting, promotes soil infiltration, increases groundwater recharge, and allows storage of storm-water runoff;

e. recharges groundwater and restores hydrological cycles on the land;

f. allows some of the previously wasted water to be returned to the streams; and

g. reduces the need for pumped irrigation water, thus making agricultural operations more viable without requiring stream diversions.

158. These regenerative agricultural methods can and should be implemented on former sugar lands in order to protect public trust instream resources and allow more water to remain in the streams. Rebuttal WDT of Albert Perez, ¶ 9.

4. A&B Focus is Upon Real Estate Development

159. A&B's business strategy is to consider agriculture as a temporary holding strategy along the path to profit from sale or development of land. Testimony of Albert Perez, p. 433, l. 3-6; Exhibit E-173.

160. A&B's business model is to steward land at a low cost and to hold on to the water until they are ready to develop that land. Testimony of Albert Perez, p. 428, l. 1-7; p. 433, l. 3 – 11; Exhibit E-173.

161. A&B is selling property, for example, the sale of the 339 acre parcel. Exhibit E-187. Mr. Volner, the General Manager of HC&S, claimed that he was not aware of the sale, even though the Purchase and Sale Agreement was signed in July 2016, and the sale closed in December 2016. Exhibit E-187. Testimony of Albert Perez, p. 433, l. 12-25; p. 434, l. 1 – 6.

162. MTF does not support conceptual sketches that are designed to hold land until it can be sold while holding the water hostage. Testimony of Albert Perez, p. 434, l. 25; p. 435, l. 1 – 2.

163. Despite selling the 339 acres, HC&S' speculative future need for water stayed about the same when logic would have dictated that the need for irrigation water would have

been reduced. Compare Exhibits C-155, C-156, C-157 with Exhibits C-155-A, C-156-A, C-157-A.

5. A&Bs Methodology for Calculating the Reasonable and Beneficial Potential Offstream Uses

164. Reasonable and beneficial use, even for potential uses, must be based upon the actual commencement of the potential future offstream use. In re Water Use Permit Applications, 94 Haw. 97, 9 P. 3d 409, 469 (2000) ("*Waiahole I*").

165. The Hearings Officer, in COL 101, recognized this principle. He determined that the reasonable and beneficial requirements of HC&S were, at the time, 4,844 gad for its 28,941 acres "**in sugarcane cultivation**" or 140.19 mgd. This determination was based upon the actual cultivation of 28,941 acres with sugarcane.

166. The Sugarcane Plantation has closed.

167. The former plantation lands lie mostly fallow.

168. In its Opening Brief, HC&S now claims that 31,250 acres of its former plantation lands are subject to its Diversified Agriculture Plan, 26,600 acres of which require irrigation.

169. HC&S initially claimed that the aggregate water needs for these 26,600 acres are 3,369 gpad or 90 mgd for diversified agriculture. When system losses are added at the rate of 22.7%, the reasonable and beneficial use claimed by HC&S is for 115.85 mgd or, when rounded, 116 mgd. [12]

170. HC&S has simply multiplied an alleged need for diversified agriculture of 3,369 gpad times 26,600 acres to arrive at its 90 mgd reasonable and beneficial use figure. The Hawaii Supreme Court has already held that this methodology constitutes reversible error. ***In re Water Use Permit Applications***, 94 Hawai`i 97, 9 P.3d 409 (2000) ***(Waiahole I).***

171. Because this calculation includes thousands of acres that are fallow and that are not being cultivated, this figure results in a **"gross over-allocation"of water far exceeding actual need, in violation of the public trust doctrine.** ***In re Water Use Permit Applications***, 94 Hawai`i 97, 9 P.3d 409 (2000) ***(Waiahole I).***

[12] HC&S's groundwater wells have the ability to substantially contribute to the irrigation needs for any diversified agriculture conducted on the former plantation lands, however HC&S has made no commitment to use these alternative sources and, for now, MTF is forced to analyze this plan on a "worst case" basis.

172. HC&S repeats the same rejected analysis with the modified "Diversified Agriculture Plan" that it submitted through Exhibits C-155-A, C-156-A and C-157-A.

173. HC&S presented modified figures in its Irrigation Requirement Breakdown by Water Source. HC&S testified that 115.43 mgd was HC&S' estimate of what is the reasonable and beneficial use for these diversified agricultural lands at HC&S. Exhibit C-156-A. Testimony of Rick Volner, p. 59, l. 3-5.

174. HC&S testified that it used the same basic methodology to calculate its new water needs: multiply the average daily water needs times the total number of acres owned to arrive at its mgd that is the reasonable and beneficial use figure. Testimony of Rick Volner, pp. 230-231.

175. According to Exhibit C-156-A, the gross irrigation requirement for its future crops is 89.21 mgd (28.28 + 60.93). The reasonable system loss of 22.7% (.227 x 89.21 = 20.25) added to this figure results in a total gross irrigation requirement of 109.46 mgd. Exhibit C-156-A, with corrected mathematics.

176. According to Exhibit C-156-A, the total number of acres covered by all of the diversified agricultural uses is 25,196 acres. Exhibit C-156-A.

177. By mathematical calculation, 25,196 acres (the aggregate number of acres) divided by 109.46 mgd (the total gross irrigation requirement) = 236.67 mgd per acre or 4,099 gallons per acre per day.

178. HC&S testified that it could not satisfy the irrigation water needs of just some prospective tenants and that it had to be able to know now that it could supply irrigation water to meet the needs for all of the proposed uses for all of its 36,000 acres. Testimony of Rick Volner, p. 210, l. 8-18.

179. No farmers have committed to begin cultivation within the next five years, other than the bioenergy crops being grown on a couple hundred acres of land and the cattle operations on a little over 200 acres of land. Testimony of Rick Volner, p. 269, l. 1-24.

180. No farmers have committed to begin cultivation within the next ten years, other than the bioenergy crops being grown on a couple hundred acres of land and the cattle operations on a little over 200 acres of land. Testimony of Rick Volner, p. 269, l. 1-24.

181. No farmers have committed to begin cultivation within the next fifteen years, other than the bioenergy crops being grown on a couple hundred acres of land and the cattle operations on a little over 200 acres of land. Testimony of Rick Volner, p. 269, l. 1-24.

182. No farmers have committed to begin cultivation within the next twenty years, other than the bioenergy crops being grown on a couple hundred acres of land and the cattle operations on a little over 200 acres of land. Testimony of Rick Volner, p. 269, l. 1-24.

183. HC&S attempted to support its speculative, unsupported initial calculation of its future use of 160 mgd as reasonable and beneficial by suggesting that:

> .... setting the IIFS levels so high that little or no water would be available for future offstream uses would impede HC&S and any other user from **investing in and developing business plans** for new agricultural ventures on the former plantation lands. (Emphasis added)

And

> .... it would make no business sense to invest significant resources to initiate an agricultural operation **if water could be secured only, after the fact, by filing a petition to amend the IIFS, participating in the contested case hearing that would certainly follow, and waiting potentially years for an uncertain outcome.** (Emphasis added)

HC&S Responsive Brief, p. 3.

VI. THE IMPACT OF HC&S' CESSATION OF SUGAR OPERATIONS ON MDWS' USE OF SURFACE WATER

184. The Hearings Officer calculated reasonable and beneficial offstream uses for MDWS in the amount of 7.1 mgd. FOF 83, COL 256, p. 135.

PROPOSED CONCLUSIONS OF LAW

If it should later be determined that any of these Conclusions of Law should be properly deemed as Findings of Fact, they shall be deemed as such.

I. REVISION OF HEARINGS OFFICER'S CONCLUSIONS OF LAW ON OFFSTREAM USES

1. HRS §174C-3 defines "Reasonable-beneficial use" as:

> ... the use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and the public interest.

2. HAR §13-169-2 further defines "Reasonable-beneficial use" as

> ... the use of water in such a quantity as is necessary for economic and efficient

utilization, for a purpose, and in a manner **which is not wasteful** and is both reasonable and consistent with the state and county land use plans and the public interest. (Emphasis added).

II. CURRENT OFFSTREAM USES OF EAST MAUI STREAM WATER

A. Former HC&S Plantation Lands

3. Of HC&S' former plantation lands, 31,250 acres are subject to its Diversified Agriculture Plan and 26,600 acres require irrigation either from water diverted from East Maui Streams or from groundwater wells.

4. Currently a total of 20 mgd of East Maui water diverted by EMI diversion works and transmission systems is being used either by MDWS or on the former HC&S plantation lands, 13 mgd of which are attributed to HC&S, as follows:

a. Diversified Agricultural Operations

i.	1	mgd	Cattle operations	200 acres
ii.	2	mgd	Bioenergy crops	200 acres
	3	mgd	TOTAL	

b. Non-Agricultural Uses

i.	5-6	mgd	Reservoirs, seepage, maintenance, Maui Fire Dept
ii.	4	mgd	Allowable system losses @ 22.7%13
	10	mgd	TOTAL
	13	mgd	GRAND TOTAL

B. MDWS

5. Currently a total of 6-8 mgd of East Maui water is being used by MDWS.

III. POTENTIAL OFFSTREAM USES OF EAST MAUI STREAM WATER

A. Former HC&S Plantation Lands

1. Vague, Cursory and Unsupported Descriptions of Conjectural Future Agricultural Uses are not a Basis for a Future Reasonable and Beneficial Use of Stream Water

[13] MTF acknowledges that the Hearings Officer has recommended qualifying this as a reasonable-beneficial use, but it is worth noting that it does nothing to directly enhance agricultural production and is thus best characterized as non-agricultural.

6. HC&S has presented, as its "Diversified Agriculture Plan," nothing more than vague, cursory and unsupported descriptions of conjectural future agricultural uses of its mostly currently fallow lands.

7. This cannot provide an allowable evidentiary basis for finding that 116 mgd to irrigate 26,600 acres of former, now fallow, plantation lands is a reasonable and beneficial offstream potential use in this IIFS proceeding.

8. HC&S cannot be permitted to retain as much diverted East Maui stream water in Central Maui as it can, based upon these vague, cursory and unsupported descriptions of conjectural future agricultural uses of its currently fallow lands.

9. In *In re Water Use Permit Applications*, 94 Haw. 97, 9 P. 3d 409, 469 (2000) ("*Waiahole I*"), the Hawaii Supreme Court held, albeit in the context of a water use permit, though also subject to the strictures of the public trust doctrine, that:

> **An applicant must be able to present evidence of, and the Water Commission may consider, projected water needs that are real and supported by evidence.** (Emphasis added).

10. HC&S cannot be allocated East Maui water based upon overly-facile factual determinations. Documentary evidence must be required to substantiate claims to "potential" uses of water. See § V.J. above.

11. HC&S supplies no reliable evidence on the actual future water needs for crops that will be cultivated on the former plantation lands. See § V.J. above.

12. HC&S has failed to demonstrate the existence of any legally recognizable off-stream water uses for its former plantation lands. See § V.J. above.

13. The data HC&S presented was unsupported by any reference material; HC&S just expected that the Commission and the parties would accept their figures on rainfall and crop requirements. See § V.J. above.

14. A Finding that it is a reasonable and beneficial use of public trust waters to apply these waters to **lands** that are **not actually planted and that lie fallow**, such as the HC&S former plantation lands, cannot be justified under the public trust doctrine. See § V.J. above.

2. It Violates the Public Trust to Determine that Certain Amounts of Water for All Lands Possessed, Most of Which Are Fallow, is Reasonable and Beneficial

15. In *In re Water Use Permit Applications*, 94 Haw. 97, 9 P. 3d 409, 469 (2000) ("*Waiahole I*"), in the WUPA portion of the case, the Hawaii Supreme Court reversed a determination that 2,500 gpad for diversified agriculture for all lands possessed was reasonable and beneficial. The Court ruled that the determination was erroneous because large portions of these lands were fallow.

16. It had been argued that the application of a per-acre figure to every acre of agricultural land, including those lying fallow, resulted in a "gross over-allocation" of water "far exceeding actual need." There is no reason, as a matter of logic, why this ruling is not equally applicable to IIFS proceedings.

17. It is not a reasonable and beneficial use to include the application of public trust waters to lands that are not actually planted and that lie fallow, such as the HC&S former plantation lands. This violates the public trust doctrine.

18. Using formulas that are insignificantly different from the formula rejected in *Waiahole I*, and achieving a result no different from the result rejected in *Waiahole I*, HC&S has requested a determination, in its modified plan, that 115.43 mgd is a reasonable and beneficial future use for its entire 25,196 acres, even though these lands are mostly fallow and HC&S did not present any evidence of any cultivation that would commence in the next twenty years, except for its two current projects. Exhibit C-157-A.

19. The result on this issue in Waiahole I compels the rejectance of this proposed determination by HC&S.

3. HC&S Cannot Have a Buffer for Future Speculative Uses

20. In *In re Water Use Permit Applications*, 94 Haw. 97, 9 P. 3d 409, 469 (2000) ("*Waiahole I*"), the Hawaii Supreme Court reviewed the Commission's creation of a "non-permitted ground water buffer" of 5.39 mgd, intended for initial release in the windward streams, but available for offstream uses as a secondary source after the 1.58 mgd proposed reserve. Applicants for the buffer water would not be required to petition to amend the WIIFS.

21. In *Waiahole I*, the Commission released into windward streams an Amended WIIFS amount of 6.0 mgd and then added to this amount, a "supplemental flow" of 6.97 mgd or more, consisting of the 5.39 mgd buffer, the 1.58 mgd proposed reserve, and any water authorized for use in water use permits but not actually used, which the Commission mandated would remain in windward streams "to avoid unlawful waste." *Id.*

22. As the Hawaii Supreme Court described it in *Waiahole I*:

> In all, of the 27 mgd total flow of the ditch, as measured at Adit 8, the Commission assigned 14.03 mgd to permitted leeward agricultural and nonagricultural uses and "system losses." For the near term, the Commission released 12.97 mgd in windward streams. However, 6.97 mgd of this 12.97 mgd remained available for offstream leeward uses as a "proposed agricultural reserve" or "non-permitted ground water buffer."

23. This "buffer" was described, in *Waiahole I*, as being for "unspecified future offstream uses."

24. The Hawaii Supreme Court in *Waiahole I* **reversed** this scheme, as follows:

> ... we disagree with the Commission's designation of 5.39 mgd otherwise available for instream purposes as a "nonpermitted ground water buffer" that the Commission could use to satisfy future permit applications without amending the WIIFS. **Nothing in the Code authorizes such a measure. More fundamentally, the notion of a buffer freely available for unidentified offstream uses, while instream flow standards still await proper designation, offends the public trust and the spirit of the instream use protection scheme.** (Emphasis added)

25. On this subject matter, the *Waiahole I* Court concluded:

> **We have rejected the idea of public streams serving as convenient reservoirs for offstream private use**. *See Robinson,* 65 Haw. at 676, 658 P.2d at 311 (maintaining that **private parties do not have the unfettered right "to drain rivers dry for whatever purposes they s[ee] fit"**). Nonetheless, the buffer achieves that very result, insofar as it reverses the constitutional and statutory burden of proof and establishes a working presumption *against* public instream uses.

26. HC&S seeks a slight, insubstantial variant of the scheme rejected by the Hawaii Supreme Court in *Waiahole I*:

(1) HC&S seeks a determination that 115.43 mgd was HC&S estimate of what is reasonable and beneficial use for all of its 26,000 acres of land, even though the great majority of these lands are fallow and HC&S was not able to testify that cultivation would commence on any of them within the next twenty years, except for two small projects;

(2) HC&S does not want to be required to Amend the IIFS when cultivation actually commences; and

(3) HC&S promises to leave the water not yet being used in the East Maui Streams.

27. HC&S, thus, improperly seeks to use "public streams [to serve] as convenient reservoirs for offstream private use" in a manner that "offends the public trust and the spirit of the instream use protection scheme." *Waiahole I.*

4. Stream Water May Only Be Taken From the East Maui Streams at the Time When an Actual Need for it is Demonstrated or When Cultivation Commences

28. In *In re Water Use Permit Applications*, 94 Haw. 97, 9 P. 3d 409 (2000) (*Waiahole I),* the Hawaii Supreme Court held that a determination that water is reasonable and beneficial for offstream uses should be deferred until the "actual use of water will commence," ruling (with respect to a water use permit application) that:

> In its permit application, KSBE requested 4.2 mgd for, *inter alia,* golf course and landscaping uses in connection with its proposed "Waiawa by Gentry" development. The Commission denied the request without prejudice to reapplication "at such time that [KSBE] obtains the proper land use classification, development plan approvals, and zoning changes, and **when it may be determined that the actual use of water will commence within a reasonable time frame for a proposed project.** (Emphasis added).

29. There is no reason why this ruling with respect to a water use permit application would not be equally applicable here due to the applicability of the public trust doctrine or, put conversely, the overarching application of the public trust doctrine to water use permit application proceedings and IIFS proceedings dictates that this ruling in a water use permit application proceeding is equally applicable in an IIFS proceeding.

30. Only upon the initiation of an actual agricultural use of any portion of the former plantation lands may public trust waters be determined to be reasonable and benficial for that particular use – and not wasteful. See, *Waiahole I.* HC&S was unable to testify **when** any of the proposed uses of its former, now fallow, plantation fields, will actually be cultivated with any of the types of diversified agriculture that it discusses.

31. The timing of the commencement of any actual future agricultural use is important. A potential use for which no commencement date for actual cultivation has been provided in the next twenty years is not a reasonable and beneficial use based upon an application of the public trust doctrine.

5. Preventing Waste

32. The Hawaii Supreme Court held in *In re Water Use Permit Applications*, 94 Haw. 97, 9 P. 3d 409 (2000) (*Waiahole I*) p.469:

> As the Commission recognized, **the policy against waste dictates that any water above the designated minimum flows and not otherwise needed for use remain in the streams in any event.** (Emphasis added)

33. By the holding of the Hawaii Supreme Court in *Waiahole I*, HC&S is not entitled to use East Maui Streams as reservoirs out of which it may unilaterally take predetermined amounts for its now overly vague, barely specified future offstream uses, without being required to amend the IIFS. This would offend the public trust and the spirit of the instream use protection scheme.

34. Stream waters for which HC&S cannot demonstrate an actual need through actual cultivation must remain in the East Maui streams to avoid waste.

35. A water use that involves waste is not, by definition, reasonable and beneficial. HAR §13-169-2.

36. The use proposed by HC&S, beyond current uses, involves waste and, therefore, cannot be reasonable and beneficial potential uses, by definition. HAR §13-169-2.

B. MDWS

37. The Hearings Officer recommended a finding that there was evidence of a demand for 7.5 mgd to meet the needs of the applicants on the County's waiting list for new water connections on the Upcountry System (FOF 472).

38. The Hearings Officer also recommended a finding that this demand was actually 3.75 mgd because one-half of the applicants would not actually proceed with their requests for service due to the costs involved. (FOF 471)

39. The MDWS also expected that the water demand in the Upcountry water system created by the 2030 population increases in the Upcountry area was 1.65 mgd. FOF 473.

40. The MDWS anticipated that it will need to develop between 4.2 mgd and 7.95 mgd to meet these increased demands. FOF 474.

41. The MDWS Upper Kula system begins as a flume (also known as the Waikamoi Upper Flume), capturing surface water from Haipuaena Stream, middle and west branch of Puohokamoa Stream, Waikamoi Stream and Kailua Stream, transmitting the water through the Waikamoi Reservoirs (two 15 million gallons reservoirs) and the Kahakapao Reservoirs (two 50

million gallons reservoirs) before reaching the Olinda WTF that has a production capacity of 2.0 mgd and an average production of 1.6 mgd. FOF 459, 460.

42. Improvements to the leaky Waikamoi Flume should have resulted in greater amounts of water reaching the Olinda WTP. COL 123, COL 124, COL 124.

43. The total average production from the MDWS Upper and Lower systems is 4.1 mgd. See above.

44. By the Hearings Officer's Proposed Decision and Order, MDWS was to report upon "[w]ater deliveries at the Upper Waikamoi Flume, including any amounts ascribed to reduced losses from replacing the flume," however MDWS failed to do so during the reopened hearing such that evidence of the increased amounts of water available through the repairs was not made part of this record by MDWS.

45. The MDWS Lower Kula system (also known as the Waikamoi Lower Pipeline) captures surface water primarily from Honomanu Stream, Haipuaena Stream, all branches of Puohokamoa Stream, and the east and west branch of Waikamoi Stream which water is treated at the Piiholo WTF that has a production capacity of 5.0 mgd and an average production of 2.5 mgd. FOF 459, 461.

46. The MDWS draws 10 to 20 percent of its Upcountry water from basil wells that supply a total of 3.4 mgd. FOF 466.

47. In times of emergency, including declared Stage 1 emergencies, MDWS may withdraw 1.5 mgd from the Hamakuapoko Wells. FOF 467.

48. The combined surface and ground water sources have a production capacity of 17.9 mgd. FOF 468. The figure for reliable capacity was reduced, according to the testimony of David Taylor, to 9.1 mgd, based upon the unlikely supposition that a number of these sources would all be unavailable at precisely the same time. FOF 469.

49. MDWS can receive 12 mgd from the Wailoa Ditch with an option for another 4 mgd. COL 129.

50. MDWS withdrawals from the Wailoa Ditch are constrained, however, by the physical limitations of the Kamole Weir WTP intake structure that currently has a 6 mgd capacity and an average production of 3.6 mgd. FOF 459, 497, COL 129.

51. Based upon the average production of 3.6 mgd at the Kamole Weir WTP, served by the Wailoa Ditch, the average production could only be increased by an additional 2.4 mgd before the 6 mgd physical limitation of the Kamole Weir WTP was reached.

52. The MDWS has the reasonable alternative available of constructing a 100 or 200 million gallon reservoir at the Kamole Weir WTP to supply more water. FOF 484, FOF 486, COL 126, 133, 134.

53. A 100 million gallon reservoir at the Kamole Weir WTP would increase the reliable capacity of the Kamole Weir WTP to 4.6 mgd. FOF 500.

54. A 200 million gallon reservoir at the Kamole Weir WTP would increase the reliable capacity of the Kamole Weir WTP to 7.1 mgd, above the current capacity of 6.0 mgd for the Kamole Weir WTP. FOF 501.

55. Deliveries at Wailoa Ditch are affected by instream uses in this case and not the other sources relied upon by MDWS.

56. MDWS has reasonable alternatives available to increase the reliable capacity at the Kamole Weir WTP, served by the Wailoa Ditch, by the 2.4 mgd that it will take to reach the physical capacity of the Kamole Weir WTP.

IV. REBALANCING OF INSTREAM VERSUS NONINSTREAM USES

57. HRS §174C-71(2)(D) provides that the Commission, in adopting interim instream flow standards, shall:

> ... weigh the importance of the **present or potential instream values** with the importance of the **present or potential** uses of water for **noninstream** purposes, including the economic impact of restricting such uses. (Emphasis Added)

A. Present or Potential Instream Values

1. Full and Permanent Restoration

58. EMI shall fully and permanently restore natural flow to petition streams that follow:

Wailuanui (East and West)
Kualani
Waiokamilo
Palauhulu
Piinaau
Hanehoi/Puolua
Honopou

59. The full and natural flow of these streams shall not be obstructed or impeded in any way by any diversion works and diversion works shall be fully and completely removed within one (1) year.

60. EMI shall promptly assure that the full and natural flow of these streams shall not be obstructed or impeded in any way by any diversion works.

2. The Maximum Benefit for Stream Habitat

61. Offstream reasonable and beneficial uses have significantly and dramatically decreased such that the management goal of finding "the minimum amount of water that supported healthy stream animal populations while providing maximum water available for other uses" is no longer applicable. See Section III.B. below.

62. The "maximum benefit" can now be realized by fully restoring stream flows and eliminating diversion structures. This solution is recognized as "the most desirable for the protection and management of native stream animals." (Emphasis added).

63. As such, for the "maximum benefit" for stream species and habitats, the remaining twenty-three petition streams diverted by EMI (minus the seven already addressed above), totaling sixteen petition streams, shall also be fully restored and all diversion works fully and completely removed within one year.

64. The full and natural flow of these streams shall not be obstructed or impeded in any way by any diversion works.

65. Prior to the full and complete removal of any and all diversion works in these streams, EMI shall promptly assure that any obstruction or impediment to the full and natural flow of these streams shall be minimized.

B. Present or Potential Uses of Water for Noninstream Purposes

1. HC&S Former Plantation Lands

a. Present Uses of Water for Noninstream Purposes

66. Reasonable and beneficial present irrigation requirements for diversified agricultural operations on the 26,996 acres of former sugar plantation lands are 3 mgd.

67. 5-6 mgd is not a reasonable or beneficial potential irrigation requirement for the reservoirs on the 26,996 acres of former sugar plantation lands for the purposes of filling them,

allowing them to leak out or to be available for undefined uses in undefined locales by the Fire Department of the County of Maui.

68. Reasonable and beneficial system losses at 22.7% of total water uses on 3 mgd shall be permitted.

b. Potential Uses of Water for Noninstream Purposes

69. 115.43 mgd is not a reasonable or beneficial potential irrigation requirement for diversified agricultural operations on the 26,996 acres of former sugar plantation lands, for all of the reasons stated above and no amount of East Maui Stream water is determined, at this juncture, to be a reasonable or beneficial potential irrigation requirement for diversified agricultural operations on the 26,996 acres of former sugar plantation lands based upon the record established in these reopened contested case proceedings.

70. The above determination is without prejudice to a farmer, ready to actually cultivate some of the 26,996 acres of the former sugar plantation lands, to file an application in these proceedings to Amend the IIFS.

2. MDWS

a. Present Uses of Water for Noninstream Purposes

71. Reasonable and beneficial present requirements of the MDWS from the Wailoa Ditch are 7.1 mgd.

b. Potential Uses of Water for Noninstream Purposes

72. The Hearings Officer recommended finding that there was evidence of a demand for 7.5 mgd to meet the needs of the applicants on the County's waiting list for new water connections on the Upcountry System (FOF 472).

73. The Hearings Officer also recommended finding that this demand was actually 3.75 mgd because one-half of the applicants would not actually proceed with their requests for service due to the costs involved. (FOF 471)

74. MDWS also expected that the water demand created by the 2030 population increases in the Upcountry System was 1.65 mgd. FOF 473.

75. MDWS anticipated that, in total, it will need to develop between 4.2 mgd and 7.95 mgd to meet these increased demands in the Upcountry area. FOF 474.

76. The MDWS has the reasonable alternatives available of constructing a 100 or 200 million gallon reservoir at the Kamole Weir WTP to supply more water (FOF 484, FOF 486, COL 126, 133, 134) and improvements to the leaky Waikamoi Flume which should have resulted in greater amounts of water reaching the Olinda WTP. (COL 123, COL 124, COL 124).

77. MDWS can receive 12 mgd from the Wailoa Ditch with an option for another 4 mgd (COL 129), however MDWS withdrawals from the Wailoa Ditch are constrained by the physical limitations of the Kamole Weir WTP intake structure that currently has a 6 mgd capacity so that it would be futile and wasteful to supply more water through the Wailoa Ditch to the MDWS to attempt to increase drinking water supplies in the Upcountry area. (FOF 497, COL 129).

78. The above determination is without prejudice to MDWS filing an application in these proceedings to Amend the IIFS when and if its ability to withdraw water from the Wailoa Ditch increases to the extent that the increased drinking water demands for the Upcountry area can be supplied by withdrawals from the Wailoa Ditch.

V. JOINDERS

MTF joins in the Proposed FOF, COL and D&O of Na Moku generally and, particularly, regarding Honomanu Stream, when the Proposed FOF, COL and D&O of Na Moku are otherwise not directly inconsistent with the Proposed FOF, COL and D&O of MTF.

PROPOSED DECISION AND ORDER

I. ADOPTION OF HEARINGS OFFICER'S PROPOSED DECISION & ORDER

MTF adopts and incorporates by reference those Decisions and Orders proposed by the Hearings Officer that are not modified by the following.

II. REASSESSMENT OF THE HEARINGS OFFICER'S CURRENT PROPOSED AMENDMENTS TO THE INTERIM INSTREAM FLOW STANDARDS

A. Types of Petition Stream Protection

The First Column in the Chart below indicates the ten (10) Petition Streams protected by the Commission Order. See, Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016 requiring that these ten (10) East Maui petition streams "shall remain undiverted unless and until further ordered by the Commission."

The Second Column in the Chart below indicates the priority taro petition streams with

regard to which EMI has committed to permanently abandon diversion works. See, A&B letter date April 22, 2016 in which A&B agreed to "fully and permanently restore" stream flow to seven priority East Maui taro cultivation streams, from east to west: Wailuanui (East and West), Kualani, Waiokamilo, Palauhulu, Piinaau, Hanehoi/Puolua and Honopou. See, also, Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016.

The Third Column in the Chart below lists those petition streams with recognized instream values for which the Hearings Officer has adjusted the IIFS upwards to support these instream values. See, FOF 117-181, 233-249 and COL 99.

The Fourth Column in the Chart below lists those petition streams with recognized instream values for which the Hearings Officer has not yet recommended any upwards adjustment in the IIFS to support these instream values. See, FOF 282 ("outdoor recreational activities), 283 ("palustrine wetlands"), 284 ("aesthetic values such as waterfalls") and COL 97.

Interim Protection (Comm. Order)	**Protection** (Currently Undiverted, (Permanent Abandon, Taro Streams)	**Instream Value Current Protection** (IIFS increased)	**Instream Value No Current Protection** (Value recognized but IIFS not increased)
Makapipi		Makapipi	
Hanawi		Hanawi	
			Kapaula
			Waiaka
			Paakea
Waiohue		Waiohue	
Puakaa			
Kopiliula			Kopiliula
East Wailuaiki		East Wailuaiki	
West Wailuaiki		West Wailuaiki	
Wailuanui (E&W)	Wailuanui (E&W)	Wailuanui (E&W)	
Waiokamilo	Waiokamilo	Waiokamilo	
	Palauhulu	Palauhulu	
	Piinaau		Piinaau
			Nuailua
			Honomanu
			Punalau
			Haipuaena

			Puohokumoa
			Wahinepee
Waikamoi		Waikamoi	
	Hanehoi/Puolua	Hanehoi/Puolua	
	Honopou	Honopou	

B. Full and Permanent Restoration

The Commission stated in its Order dated July 18, 2016 that it "understands the **urgency** to restore stream flow to the streams and to provide connectivity mauka to makai **as soon as possible**." (Emphasis added). Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016.

EMI has not acted with any "urgency" to restore East Maui Streams, as required by the Commission.

EMI shall, within one year of the date of the entry of this Order, permanently abandon diversions and fully and permanently restore total undiverted flow to the following six priority taro petition streams, shown in the Second Column to the right in the Chart above, as follows:

Wailuanui (East and West)
Waiokamilo
Palauhulu
Piinaau
Hanehoi/Puolua
Honopou

C. The Maximum Benefit for Stream Habitat

In order to provide the "maximum benefit" and "the most desirable ... protection and management of native stream animals," EMI shall, within one year of the date of the entry of this Order, fully restore stream flows and eliminate diversion structures, in the following petition streams, that have not already been protected through the Commission's interim order (First Column above) or as priority taro petition streams (Second Column above), as listed in the Third Column to the right in the Chart above, as follows:

Makapipi
Hanawi
Waiohue
East Wailuaiki
West Wailuaiki

Wailuanui (E&W)
Waiokamilo
Palauhulu
Waikamoi
Hanehoi/Puolua
Honopou

D. Removal of Diversion Structures

The Commission determined that whenever possible and practical, A&B should attempt to remove all diversions. See, Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016.

The application of EMI for a diversion work abandonment permit does not include the complete removal of any diversions, as required by the Commission, as practical and reasonable.

EMI presented no evidence as to whether or why such removal is not practical and reasonable.

EMI has neglected to consider the removal of diversion structures and has provided no basis for determining that it is not possible or practical to remove all or some of the diversion structures.

EMI is ordered to include in its diversion works abandonment or modification application modifications that would result in the removal of diversions, as provided herein, and to implement and construct these modifications within one (1) year from the entry of this Order.

E. Total Undiverted Flow Areas: Remedy for Long-term Failure to Manage and Protect Instream Values and the Public Trust

There has been a long-time failure by Commission staff to manage and protect petition streams to assure that the minimum stream flows ordered by the Commission exist in those petition streams, such that the minimum stream flows have not been met, the minimum flows ordered by the Commission have not existed in petition streams and more water from petition streams has been diverted and transported for noninstream purposes than intended by Commission Orders.

In result, the balance intended and sought by Commission Orders between instream uses and offstream uses, pursuant to HRS §171-71(2)(D), has been undermined, to the prejudice of instream uses and to the unintended benefit of offstream uses, in violation of public trust principles.

This long-term lack of enforcement can no longer be excused and a remedy, within the powers of the Commission, must be fashioned to promptly assure that minimum stream flows, where required, actually exist in petition streams.

HRS §174C-71(1)(E) provides:

> In order to avoid or minimize the impact on existing uses of preserving, enhancing, or restoring instream values, **the commission shall consider physical solutions**, including water exchanges, **modifications of project operations**, changes in points of diversion, changes in time and rate of diversion, uses of water from alternative sources, **or any other solution;**

The Commission, pursuant to HRS §174C-71(1)(E), possesses the power and authority to require the removal of diversion works where to do so will "avoid or minimize the impact on existing uses of preserving, enhancing, or restoring instream values."

The Commission finds and determines that the complete removal of diversion works in certain areas is necessary to "avoid or minimize the impact on existing uses of preserving, enhancing, or restoring instream values."

The complete removal of diversion works in these areas will avoid problems caused by the long-term lack of effective monitoring and enforcement of minimum stream flows and how this has undermined the balancing and weighing that lies at the heart of IIFS adjudications.

To remedy this imbalance and to protect against such unintended imbalances through this Order and in the future, the Commission therefore creates several "Total Undiverted Flow Areas" within which all diversion works shall be removed by EMI, within one (1) year from the date of the entry of this Order, to allow the "total undiverted flow" of the stream to exist as the minimum stream flow, from the highest reaches of the stream to the makai discharge point of the stream.

The following shall be "Total Undiverted Flow Areas" and the petition streams protected within the "Total Undiverted Flow Areas" are as follows:

a. The Nahiku License Area Streams

   Makapipi
   Hanawi
   Kapaula

b. The Keanae License Area Streams

   Waiakaa
   Paakea

Waiohue
Kopiliula
East Wailuaiki
West Wailuaiki
Wailuanui
Waiokamilo
Palauhulu
Piinau

In this regard, the Interim Order of the Commission that the following ten (10) petition streams "shall remain undiverted" is now made a Permanent Order of this Commission with respect to these same ten (10) streams, as follows:

Makapipi
Hanawi
Waiohue
Puakaa
Kopiliula
East Wailuaiki
West Wailuaiki
Wailuanui (East and West)
Waiokamilo
Waikamoi

F. Connectivity Mauka to Makai Generally

The Commission stated in its Order dated July 18, 2016 that it "understands the **urgency** to restore stream flow to the streams and to provide connectivity mauka to makai **as soon as possible**." (Emphasis added). Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016.

EMI has not acted with any "urgency" to provide connectivity mauka to makai in East Maui petition streams **as soon as possible**, as required by the Commission.

The Commission determined that any diversion work abandonment permit that comes to the Commission shall require modification that would result in full connectivity in the streams except where connectivity is affected by natural conditions. See, Commission "Order re Interim Restoration of Stream Flow" filed on July 19, 2016.

The application of EMI for a diversion work abandonment permit does not include modifications that would result in full connectivity in the streams except where connectivity is affected by natural conditions, as required by the Commission.

The application of EMI for a diversion work abandonment permit does not provide connectivity mauka to makai, as required by the Commission.

EMI has neglected to include in its diversion works abandonment or modification application modifications that would result in full connectivity mauka to makai as soon as possible in the streams except where connectivity is affected by natural conditions.

EMI is ordered to include in its diversion works abandonment or modification application modifications that would result in full connectivity mauka to makai as soon as possible in the streams except where connectivity is affected by natural conditions and to implement and construct these modifications within one (1) year from the entry of this Order.

G. MDWS Modifications to Upper and Lower Waikamoi Flumes

The mandate of the Commission that there be connectivity in petition streams from the highest reaches of the stream to the makai discharge point of the stream requires that the MDWS Diversions also be modified to permit upward and downward migration of stream species.

The diversion structures in the Waikamoi Upper Flume, capturing surface waters from Haipuaena Stream, the middle and west branch of Puohokamoa Stream, and Waikamoi Stream, shall be modified, within one (1) year from the entry of this Order, to permit upward and downward migration of stream species in each of these streams.

The diversion structures in the Waikamoi Lower Flume, capturing surface waters from Honomanu Stream, Haipuaena Stream, all branches of Puohokamoa Stream, and the east and west branch of Waikamoi Stream, shall be modified, within one (1) year from the entry of this Order, to permit upward and downward migration of stream species in each of these streams.

H. Amended IIFS

An IIFS of 100% of natural baseflow shall be adopted and implemented for the petition streams with recognized instream values for which IIFSs have not yet been established, to the extent that they have not received greater protection as provided elsewhere herein, as listed in the Fourth Column to the right in the Chart above, as follows:

Kapaula
Waiaka
Paakea
Kopiliula
Piinaau
Nuailua
Honomanu

Punalau
Haipuaena
Puohokumoa
Wahinepee

This same IIFS shall also apply to Alo and Kolea streams.

The MDWS relies upon Haipuaena, Puohokamoa and Waikamoi streams in its Upper and Lower Waikamoi Flumes ultimately delivering public drinking water to Upcountry residents. The status quo shall be the IIFS for Haipuaena, Puohokamoa and Waikamoi streams at the Upper and Lower Waikamoi Flumes; however, as these three streams gain below the Upper and Lower Waikamoi Flumes and diversions, the IIFS for each of these three streams shall then be 100 percent of natural baseflow.

Although they should no longer be necessary, as minimum protections, the Amended IIFSs initially proposed by the Hearings Officer, in Section III.A., are hereby restated and incorporated by reference, to the extent that the greater or increased instream protections recommended and proposed in Sections II.A. through G. immediately above are not adopted.

DATED: Wailuku, Maui, Hawaii 6.7.17

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CERTIFICATE OF SERVICE

I hereby certify that one copy of the foregoing document was duly served upon the parties listed below by email, on June 7, 2017.

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