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COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

PETITION TO AMEND INTERIM INSTREAM FLOW STANDARDS FOR HONOPOU, HUELO (PUOLUA), HANEHOI, WAIKAMOI, ALO, WAHINEPEE, PUOHOKAMOA, HAIPUAENA, PUNALAU/KOLEA, HONOMANU, NUAAILUA, PIINAAU, PALAUHULU, OHIA (WAIANU), WAIOKAMILO, KUALANI, WAILUANUI, WEST WAILUAIKI, EAST WAILUAIKI, KOPILIULA, PUAKAA, WAIOHUE, PAAKEA, WAIAAKA, KAPAULA, HANAWI, AND MAKAPIPI STREAMS

Case No. CCH-MA13-01

HAWAIIAN COMMERCIAL & SUGAR COMPANY'S FIRST AMENDED WITNESS LIST; CERTIFICATE OF SERVICE

HAWAIIAN COMMERCIAL & SUGAR COMPANY'S FIRST AMENDED WITNESS LIST

No.	Name/Organization/Position	To Be Qualified as an Expert in:	Subject Matter	Requested Length of Direct
1.	Garret Hew, East Maui Irrigation Co., Ltd., President		HC&S water use and collection; operations of EMI and HC&S	1 hour
2.	Rick W. Volner, Jr., HC&S, General Manager		HC&S water use and collection; operations of EMI and HC&S	1 hour

DATED: Honolulu, Hawaii, January 27, 2015.

CADES SCHUTTE LLP

DAVID SCHULMEISTER
ELIJAH YIP
Attorneys for HAWAIIAN COMMERCIAL & SUGAR COMPANY

COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

PETITION TO AMEND INTERIM INSTREAM FLOW STANDARDS FOR HONOPOU, HUELO (PUOLUA), HANEHOI, WAIKAMOI, ALO, WAHINEPEE, PUOHOKAMOA, HAIPUAENA, PUNALAU/KOLEA, HONOMANU, NUAAILUA, PIINAAU, PALAUHULU, OHIA (WAIANU), WAIOKAMILO, KUALANI, WAILUANUI, WEST WAILUAIKI, EAST WAILUAIKI, KOPILIULA, PUAKAA, WAIOHUE, PAAKEA, WAIAAKA, KAPAULA, HANAWI, AND MAKAPIPI STREAMS	Case No. CCH-MA13-01 **RESPONSIVE DECLARATION OF GARRET HEW**

RESPONSIVE DECLARATION OF GARRET HEW

I, GARRET HEW, hereby declare:

1. I have reviewed the submissions of the Petitioners and am submitting this testimony in response.

Honopou (Hydrologic Unit 6307)

2. In Table No. 1 at page 10 of Na Moku's Opening Brief, Na Moku claims 26.06 acres of cultivable area in Honopou and "Total Estimated Water Needs for Taro (in addition to 64% base flow)" of 2.61 – 7.82 mgd. This is said to be based on Exhibits A-137 (the "Na Moku TMK Spreadsheet") and Exhibits A-138 and A-139 (tax maps with highlighted areas referencing certain parcels in Honopou).

3. Based on my review of Na Moku's submissions and my personal knowledge of this area, the 26.06 acre estimate of cultivable area is greatly overstated.

4. First, the 26.06 acres is simply the sum of the total acreage of TMK Nos. 2-9-01-14, 2-9-01-23, 2-9-01-25, 2-9-14-13, and 2-9-14-23, which are described in the declaration of

Lurlyn Scott ("Scott") as parcels in which her family has an interest. These appear to be the same properties referenced generally in the declarations of her cousins, Sanford Kekahuna, Jonah Jacintho, Juliana Jacintho and Lezley Jacintho.

5. The only information offered about the specific locations on these properties currently being used or planned to be used for taro cultivation is in Scott's declaration and Exhibit A-149, a schematic drawing she prepared to show the loi system on her family's properties in Honopou. She estimated this system to be approximately one acre in size.

6. I am personally familiar with the area of the loi system shown on A-149 as a result of efforts made by EMI, beginning in March of 2004, to assure adequate water to assist Beatrice Kekahuna's reopening these loi, which had not been in use for many years. This is discussed my me in my June 10, 2008 letter to the Water Commission (Exhibit C-52) and my testimony given in the contested case hearing that took place in 2005 before the BLNR (the "BLNR proceeding"). Exhibit C-107 is a copy of my Rebuttal Declaration and referenced exhibits (BLNR Exhibits A-9 through A-40) dated August 22, 2005 in the BLNR proceeding. BLNR Exhibit A-10 is a schematic diagram hand drawn by me showing the approximately 4000 square foot area that EMI cleared, tilled and planted with taro on August 1, 2003 in the same loi shown on Scott's schematic (A-149) as loi nos. 3, 4, 5 and 10. I agree with Scott's estimate that the loi system comprises approximately one acre.

7. Na Moku has estimated the water need for taro on Honopou by simply multiplying the total acreage of all the parcels in which Scott's family has an interest by Paul Reppun's ("Reppun") estimate of 100,000 to 300,000 gad as the irrigation requirement for taro, which resulted in the 2.61 mgd – 7.82 mgd (in addition to 64% baseflow) claimed by Na Moku.

8. The baseflow of Honopou at the level of the Haiku Ditch, according to USGS, is 2.3 mgd, with 50% being contributed by ground water above Wailoa Ditch and 50% between Wailoa Ditch and Haiku Ditch. See September 24, 2008 Staff Submittal at pp. 13-16. This is the average amount estimated by USGS to be in the stream at the level of the Haiku Ditch in its natural condition when it is not raining. Na Moku wants 1.472 mgd (64% of 2.3 mgd) to be left in the stream before calculating the amount to be restored to satisfy taro needs. This only leaves .828 mgd of average baseflow from which to meet Na Moku's taro water claim of 2.61 mgd – 7.82 mgd. This far exceeds what can be "restored" to Honopou since it is much greater than the average base flow in its natural undiverted condition.

9. Honopou Stream can, however, support cultivation by Scott's family of the entire one acre loi system shown on A-149. Using the Reppun taro irrigation requirement, there needs to be from 100,000 to 300,000 gad available in the stream. The Water Commission in the Na Wai Eha case, in which Reppun testified, determined that a reasonable irrigation requirement for taro, considering its crop cycle and expected fallow periods, to be from 130,000 to 150,000 gad. At the current IIFS of 1.29 mgd below the Haiku Ditch, this irrigation requirement can easily be satisfied without dewatering the stream between the loi intake diversion and the outflow ditch.

10. Na Moku complains that EMI has not complied with the IIFS set for Honopou because there have been several periods of dry weather when the flow below Haiku Ditch has been measured at less than 1.29 mgd. My understanding of the intent and rationale of the IIFS, however, was to set the IIFS at an amount that would be satisfied on average due to the ground water arising between the Wailoa Ditch and the Haiku Ditch plus any additional gain below the Haiku Ditch. This does not mean that there would not be days during dry periods where the flow could be less than the IIFS.

11. EMI has worked closely with CWRM staff to modify its diversion structures, as directed, on all four of its ditches on Honopou Stream. If it is determined that additional modifications are needed to satisfy the IIFS, EMI is committed to continuing to cooperate with staff to insure that the IIFS is met. It is my understanding that the data that has been collected is still in need of analysis with regard to average flows over time.

Hanehoi (Hydrologic Unit 6037)

12. Petitioners complain that EMI has not complied with the IIFS for Hanehoi Stream because the flows that have been measured at IIFS site C since the IIFS has been amended have consistently been less than what was hoped for when the IIFS was set. EMI, however, has worked closely with CWRM staff and taken all actions that have been directed with regard to passing water at EMI's diversions.

13. My understanding is that the September 24, 2008 Staff Submittal recommending the amended IIFS for Hanehoi was based on a similar intent as the recommendation for Honopou, which was to rely on ground water arising in the stream below the level of the Wailoa Ditch to satisfy the IIFS. Hanehoi is a smaller stream than Honopou, however, and unlike the situation with Honopou, there was very little measured streamflow data from which to estimate how much water the stream gains between the EMI diversions.

14. The 1.15 cfs (0.74 mgd) IIFS set for site C on Hanehoi is below the Wailoa and New Hamakua Ditches. It is my understanding that 1.15 cfs is the flow that Staff expected to be naturally present at low flow conditions without any releases from the Wailoa Ditch (it is uncertain whether, at low flow conditions, any water arising above Wailoa Ditch would reach site C).

15. Water is passed over the Lowrie Ditch below site C by two pipes. Water can then bypass the Haiku Ditch through a sluice gate. After the IIFS was amended, based on discussions with Staff, EMI was directed to open the Haiku Ditch sluice gate as needed to allow the proposed IIFS of 0.63 cfs for site B, below the Haiku Ditch, to be met. EMI opened the sluice gate on the Haiku Ditch, as directed, to implement the IIFS for site B, which is below Haiku Ditch but above the confluence of Hanehoi and Puoloa Stream.

16. After several site visits and measurements, it appeared that much less water than expected was present at site C, above. This is because the amount of ground water that arises in Hanehoi between the Wailoa Ditch and the Lowrie Ditch is less than had been estimated.

17. Puoloa Stream, which is a tributary of Hanehoi, originates below the Wailoa Ditch. Water is passed over the Lowrie Ditch through a pipe. Water can then bypass the Haiku Ditch through a sluice gate. This is similar to the situation on Hanehoi, which crosses the Lowrie and Haiku Ditches just to the east. Below the Haiku Ditch, Puoloa merges into Hanehoi.

18. Since the IIFS was amended, EMI has passed water over the Lowrie Ditch on Puoloa Stream and through the sluice gate on the Haiku Ditch below, as directed by Staff.

19. EMI has stayed in close communication with CWRM Staff and complied with all directions it has received regarding the operation of its diversions on Hanehoi and Puoloa Streams. EMI is committed to continuing to cooperate with Staff to implement any changes that may be proposed to its diversions to increase the flow at the specified IIFS measurement sites.

Piinaau (Hydrologic Unit 6053)

20. In Table No. 1 at page 10 of Na Moku's Opening Brief, Na Moku claims 29.695 acres of cultivable area in Keanae and a total estimated water need for taro (in addition to 64% base flow) of 2.97 – 8.91 mgd. This is said to be based on the Na Moku TMK Spreadsheet and

Exhibit A-140, which is a tax map with highlighted areas referencing certain parcels in Keanae.

21. Based on my review of Na Moku's submissions and my personal knowledge of this area, the 29.695 acre estimate of cultivable area in Keanae is overstated.

22. First, the 29.695 acre estimate of cultivable area is the simple sum of the aggregate acreages for all the TMK parcels listed on A-137 from the 1-1-03 plat. No testimony or other information has been offered to quantify what percentage of each of these parcels actually contain loi as opposed to being house lots, constituting open space or being in other uses.

23. Palauhulu Stream, the sole water source for Keanae, was within the scope of the 2005 BLNR proceeding held for the purpose of determining whether interim relief was needed for Na Moku members using these streams, but no users came forward to claim that they were not receiving adequate water for cultivating taro in Keanae.

24. Exhibit C-108 is a copy of an excerpt from a report published by the USGS in 2007 of a study conducted in 2006 entitled, "Water Use in Wetland Kalo Cultivation in Hawaii." Keanae was one of the loi complexes studied on Maui. As shown on in Figure 35 on page 57 of that report (the "USGS 2007 Taro Water Report"), the entire Keanae complex was 10.53 acres when studied.

25. Exhibits C-109 and 110 are copies of aerial photographs taken of Keanae on January 5, 2015. The configuration of the loi shown in these recent photographs is very similar to the schematic of the entire 10.53 acre Keanae loi system contained in Figure 35 of the USGS 2007 Taro Water Report. Throughout the course of the nearly 30 years that I have been associated with EMI, the level of taro cultivation in Keanae has been fairly consistent.

26. Application of the 130,000 to 150,000 gad irrigation requirement for taro from the

Na Wai Eha case to the 10.53 acre Keanae loi complex results in a taro water need of from 1.37 to 1.58 mgd. This is less than half of the current IIFS of 3.56 mgd for Palauhulu stream.

27. EMI is currently releasing water into Palauhulu Stream from the Koolau Ditch but the water is lost in the leaky sections of the streambed between the release point and the origin of Store Spring, which is the source of the water in Palauhulu Stream that supplies the Keanae loi complex. This was documented in a site visit that took place on September 15, 2010 attended by CWRM staff, Isaac and Gladys Kanoa, and EMI personnel. Exhibits C-111 and C-112 are photos taken during that site visit showing water being released just below the Koolau Ditch. The water being released constituted the entire flow of the stream on that date, and the sluice gate has remained open to the same setting ever since. Exhibit C- 113 is a photo taken during that site visit of the last of several sinkholes in the streambed between Koolau Ditch and Store Spring. Exhibit C-114 is a copy taken during that site visit of the source of Store Spring.

28. As a result of the loss into the streambed of the entire base flow of Palauhulu Stream between the Koolau Ditch and Store Spring, there is nothing further that can be done to increase the availability of water in Palauhulu Stream during periods of low flows. At the current sluice gate setting, all of the low flows are already being released, but they do not reach Store Spring.

29. In the 2005 BLNR proceeding, Na Moku never sought interim relief with regard to Piinaau Stream. There are a few loi at the Keanae Arboretum on land owned by the State of Hawaii that are irrigated directly from Piinau Stream above the elevation of the flume intake on Palauhulu Stream that serves Keanae. None of the TMKs on the Na Moku TMK Spreadsheet include the area of the Keanae Arboretum. Upon review of the written testimony submitted by Na Moku in this proceeding, it does not appear to include testimony from any user who takes

directly from Piinaau Stream.

Waiokamilo (Hydrologic Unit 6055) and Wailuanui (Hydrologic Unit 6056)

30. In Table No. 1 at page 10 of Na Moku's Opening Brief, Na Moku claims 90.992 acres of cultivable area and a total estimated water need for taro (in addition to 64% base flow) of 9.1 – 27.3 mgd in "Wailua." This is an area that encompasses two separate hydrologic units, Waiokamilo and Wailuanui. This is said to be based on the Na Moku TMK Spreadsheet and Exhibit A-142, which is a combined set of three tax maps (plats 1-1-04, 05 and 06) with highlighted areas referencing certain parcels in Wailuanui.

31. Based on my review of Na Moku's submissions and my personal knowledge of this area, this 90.992 acre estimate of cultivable area is greatly overstated.

32. First, the 90.992 acres for which Na Moku claims a need for water for taro is again arrived at by simply adding the total acreage of TMK parcels listed on the Na Moku TMK Spreasheet within the 1-1-04 plat, the 1-1-05 plat and the 1-1-06 plat without taking into account what portion of those parcels have ever been or are currently cultivated with taro. There is also no clear breakdown of which of these parcels are served by Waiokamilo Stream and which are served by Wailuanui Stream.

33. During the 2005 BLNR proceeding, Na Moku stated that they needed more water from Waiokamilo Stream for taro loi that they wanted to reopen, but they did not ask for more water from Wailuanui Stream. In support of their request, Na Moku submitted testimony by paralegal Theresa Gomes, similar to her declaration submitted in this case, summarizing the total acreage of various parcels in Wailuanui. As in this case, however, Na Moku did not identify the specific acreages actually cultivated and provided no breakdown of the parcels by stream source.

34. In an effort to determine the acreage in actual cultivation in Wailuanui, EMI

consulted TMKs and aerial photographs and prepared several exhibits that were received in the BLNR proceeding. Exhibit C-115 is a summary of loi in cultivation as of October 25, 2005 that was submitted by EMI in the BLNR proceeding and Exhibit C-116 is the annotated aerial photograph upon which this summary was based. Including the Lakini loi complex above the Hana Highway, the total number of acres being cultivated in Wailuanui was 19.484, of which 2.505 were irrigated solely from Wailuanui Stream.

35. The BLNR ruled in March of 2007 that EMI should release 6 mgd from Waiokamilo Stream (See Exhibit C-83). As explained in detail in my June 10, 2008 letter to CWRM, EMI thereafter closed all of its diversions of Waiokamilo Stream because EMI knew that the natural undiverted flows would not sustain a flow of 6 mgd except during rainy conditions. There is nothing more that can be done to further "restore" Waiokamilo Stream.

36. The 2007 USGS Taro Water Report (Exhibit C-108) included findings regarding regarding water use in what it referred to as the "Wailua (Waikani) complex" which is the loi system that is irrigated solely with water from Wailuanui Stream. As of the summer of 2006, this system comprised 2.80 acres as shown Figure 32 on page 54. It is my understanding that this system was being cultivated at that time by Norman "Bush" Martin and Joseph "Kimo" Day with water drawn from the pond below Waikani Falls on Wailuanui Stream.

37. In 2008, CWRM amended the IIFS above Waikani Falls to 1.97 mgd. To implement this IIFS, EMI partially opened the sluice gates on its diversions of the East and West branches of Wailuanui Stream and closed some smaller diversions as directed by CWRM staff. Since Wailuanui is a gaining stream, this has resulted in a consistent flow of from 2 to 3 mgd entering the pond below Waikani Falls (and much more during rain events).

38. In spite of this increased flow to Waikani Pond after 2008, it is my understanding

that the loi system that was previously being cultivated with water from Waikani Pond may no longer be in operation. Mr. Day testified in paragraph 5 of his declaration that he stopped farming "about four years ago." Exhibits C-117 and C-118 are copies of aerial photos taken on January 5, 2015. From these photos, the area previously irrigated with Wailuanui Stream water appears to now be substantially, if not entirely, removed from taro production.

39. Application of the 130,000 to 150,000 gad irrigation requirement for taro from the Na Wai Eha case to the 2.80 acres that were being irrigated from Waikani Pond in 2006 results in a taro water need of from 0.36 to 0.42 mgd. Since this is far less than the 2-3 mgd that has been available for the past six years, it appears that the supply of irrigation water to the area served by Waikani Pond is much greater than needed.

HC&S and EMI Reservoir Count

40. Petitioner Maui Tomorrow has raised questions about the number of reservoirs operated by HC&S and EMI. HC&S has 48 reservoirs, 36 of which are operated in conjunction with water received by HC&S from EMI and are detailed in Exhibit C-71. Additionally, EMI has 6 reservoirs with a combined capacity of 267 mgd which are operated separately by EMI to periodically store water east of Maliko Gulch, i.e., before delivery to HC&S. The EMI reservoirs are not used during low ditch flows.

I, GARRET HEW, declare, verify, certify, and state under penalty of perjury that the foregoing is true and correct.

DATED: Maui, Hawaii, _____.

_____

GARRET HEW

ImanageDB:2996125.3

COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

PETITION TO AMEND INTERIM INSTREAM FLOW STANDARDS FOR HONOPOU, HUELO (PUOLUA), HANEHOI, WAIKAMOI, ALO, WAHINEPEE, PUOHOKAMOA, HAIPUAENA, PUNALAU/KOLEA, HONOMANU, NUAAILUA, PIINAAU, PALAUHULU, OHIA (WAIANU), WAIOKAMILO, KUALANI, WAILUANUI, WEST WAILUAIKI, EAST WAILUAIKI, KOPILIULA, PUAKAA, WAIOHUE, PAAKEA, WAIAAKA, KAPAULA, HANAWI, AND MAKAPIPI STREAMS	Case No. CCH-MA13-01 **RESPONSIVE DECLARATION OF RICK W. VOLNER, JR.**

RESPONSIVE DECLARATION OF RICK W. VOLNER, JR.

I, RICK W. VOLNER, JR., hereby declare:

1. I have reviewed the submissions of the Petitioners and am submitting this testimony in response.

Reuse of Wastewater from Kahului Wastewater Treatment Plant

2. HC&S retained Austin Tsutsumi & Associates, Inc. ("***ATA***") to address the feasibility of utilizing treated effluent from the Kahului Wastewater Treatment Plant ("***KWWTP***") as an alternative source to Na Wai Eha stream water in the Na Wai Eha IIFS contested case proceeding. Exhibit C-119 is a copy of the resulting report dated January 22, 2014. The fields that would be served by such a project are on the western side of the plantation, in the opposite direction of the HC&S infrastructure that distributes water received from EMI.

3. According to the ATA Report, there is approximately 2.95 mgd of R-2 treated effluent that could potentially be reliably made available to HC&S 365 days a year from the WWRF upon a definitive agreement being reached between HC&S and the County of Maui and

the construction of improvements at an estimated capital cost of approximately $16.9 million associated with making the water accessible to HC&S for its Nā Wai 'Ehā fields. Upon completion of the improvements, projected to be sometime in 2020 at the earliest, there would then be an additional annual operating and maintenance ("***O&M***") cost to HC&S of approximately $521,000, which includes $161,512.50 in fees that the County of Maui would charge for treated effluent at the rate of $0.15/1,000 gallons as stated in the County of Maui's letter to ATA dated January 15, 2014 (attached as Appendix A to the ATA Report).

4. The ATA Report focused on the potential use of reclaimed R-2 water on fields that are in relatively close proximity to the KWWTP utilizing existing pipelines formerly operated to transport cannery wastewater from the now closed Maui Land & Pineapple Company, Inc. facility in Kahului. It would be much more difficult and costly to design and construct a system to transport reclaimed water to irrigate the East Maui fields that would be most impacted by reductions in EMI water since they are located much farther away from the KWWTP and at much higher elevations.

Kuhiwa Well

5. Kuhiwa Well was formerly operated by Maui Land & Pine ("***MLP***"). It produced approximately 1 mgd, and was served by a single line from MECO that was frequently out of service. There was also community opposition to MLP's operation of this well. The cost for HC&S to put this well back in service and operate it utilizing power purchased from MECO would not be justified by the amount of water added to the EMI Ditch System, and may face community opposition.

Important Agricultural Lands

6. The fact that less than 100% of the cultivated acreage of HC&S has been designated as "Important Agricultural Lands" does not signal any imminent reduction in HC&S'

cultivated acreage. Approximately 2,500 acres of the plantation are not owned by A&B, but are instead leased by HC&S from the State and other private land owners, and thus could not be included by A&B in its designation. Areas that had been previously identified as within the urban growth boundaries for the County of Maui were also left out of the designation, but there are no current plans to take these acres out of production.

Green Harvesting of Cane

7. Green harvesting of cane, i.e., without burning off the cane trash, will not in and of itself reduce total water usage. Leaving a trash blanket on the ground can reduce evaporation from the soil surface, but since our drip irrigation tubing is installed below ground the impacts to water usage are minimal. In fact, because single season mechanically cut sugar cane is harvested and ratooned multiple times over a 4-5 year period, it has a shorter ripening and drying off phase which would most likely result in higher annual water usage than the current two year crop cycle.

I, RICK W. VOLNER, JR., declare, verify, certify, and state under penalty of perjury that the foregoing is true and correct.

DATED: _____, 2015.

_____
RICK W. VOLNER, JR.

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COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

PETITION TO AMEND INTERIM INSTREAM FLOW STANDARDS FOR HONOPOU, HUELO (PUOLUA), HANEHOI, WAIKAMOI, ALO, WAHINEPEE, PUOHOKAMOA, HAIPUAENA, PUNALAU/KOLEA, HONOMANU, NUAAILUA, PIINAAU, PALAUHULU, OHIA (WAIANU), WAIOKAMILO, KUALANI, WAILUANUI, WEST WAILUAIKI, EAST WAILUAIKI, KOPILIULA, PUAKAA, WAIOHUE, PAAKEA, WAIAAKA, KAPAULA, HANAWI, AND MAKAPIPI STREAMS	Case No. CCH-MA13-01 **RESPONSIVE DECLARATION OF ELIJAH YIP**

RESPONSIVE DECLARATION OF ELIJAH YIP

I, ELIJAH YIP, hereby declare:

1. I am a partner with Cades Schutte LLP, counsel of record for Hawaiian Commercial & Sugar Company ("***HC&S***") in the above-captioned matter. I make this declaration based upon my personal knowledge, unless otherwise stated.

2. Attached hereto as Exhibit C-120 is a true and correct copy of the Findings of Fact, Conclusions of Law and Decision and Order issued by the Commission on Water Resource Management in *In re ʻĪao Ground Water Management Area High-Level Source Water-Use Permit Applications and Petition to Amend Interim Instream Flow Standards of Waiheʻe River and Waiehu, ʻĪao, & Waikapū Streams Contested Case Hearing* (CCH-MA06-01).

3. Attached hereto as Exhibit C-121 is a copy of an article authored by Henry R. Hudson, Andrea E. Byrom, and W. Lindsay Chadderton entitled "A critique of IFIM – instream habitat simulation in the New Zealand Context", which was published in Science for Conservation 231 in 2003.

4. Attached hereto as Exhibit C-122 is a copy of an article authored by Steven F. Railsback, Howard B. Stauffer, and Bret C. Harvey entitled "What Can Habitat Preference Models Tell Us? Tests Using a Virtual Trout Population," published in volume 13(6) of Ecological Applications in 2003.

5. Attached hereto as Exhibit C-123 is a copy of an article authored by J. Craig Fischenich entitled "Stream Restoration Benefits," published in Stream Restoration in Dynamic Fluvial Systems: Scientific Approaches, Aanlyses, and Tools in 2011 (edited by Andrew Simon, Sean J. Bennett, and Janine M. Castro).

I, ELIJAH YIP, declare, verify, certify, and state under penalty of perjury that the foregoing is true and correct.

DATED: Honolulu, Hawai'i, January 27, 2015.

ELIJAH YIP

COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

PETITION TO AMEND INTERIM INSTREAM FLOW STANDARDS FOR HONOPOU, HUELO (PUOLUA), HANEHOI, WAIKAMOI, ALO, WAHINEPEE, PUOHOKAMOA, HAIPUAENA, PUNALAU/KOLEA, HONOMANU, NUAAILUA, PIINAAU, PALAUHULU, OHIA (WAIANU), WAIOKAMILO, KUALANI, WAILUANUI, WEST WAILUAIKI, EAST WAILUAIKI, KOPILIULA, PUAKAA, WAIOHUE, PAAKEA, WAIAAKA, KAPAULA, HANAWI, AND MAKAPIPI STREAMS	Case No. CCH-MA13-01 **CERTIFICATE OF SERVICE**

CERTIFICATE OF SERVICE

The undersigned hereby certifies that, on this date, a true and correct copy of the foregoing document was duly served on the following parties as stated below:

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VIA EMAIL (kathy.s.yoda@hawaii.gov) and HAND DELIVERY

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