Of Counsel:
PAUL, JOHNSON, PARK & NILES
Attorneys At Law, A Law Corporation

PAMELA W. BUNN 6460-0
RONALD N.W. KIM 8306-0
Suite 1300, ASB Tower
1001 Bishop Street
Honolulu, Hawai`i 96813
Telephone: 524-1212/Facsimile: 528-1654

Attorneys for OFFICE OF HAWAIIAN AFFAIRS

BEFORE THE COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

`Īao Ground Water Management Area High-Level Source Water Use Permit Applications and Petition to Amend Interim Instream Flow Standards of Waihe`e, Waiehu, `Īao, & Waikapū Streams Contested Case Hearing	Case No. CCH-MA-06-01 INTERVENOR OFFICE OF HAWAIIAN AFFAIRS' (1) EXCEPTIONS TO HEARINGS OFFICER'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER AND (2) JOINDER IN PETITIONERS HUI O NĀ WAI `EHĀ AND MAUI TOMORROW FOUNDATION, INC.'S EXCEPTIONS TO HEARINGS OFFICER'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER; EXHIBITS "A" AND "B"; CERTIFICATE OF SERVICE

INTERVENOR OFFICE OF HAWAIIAN AFFAIRS' (1) EXCEPTIONS TO HEARINGS OFFICER'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER AND (2) JOINDER IN PETITIONERS HUI O NĀ WAI `EHĀ AND MAUI TOMORROW FOUNDATION, INC.'S EXCEPTIONS TO HEARINGS OFFICER'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER

Pursuant to Minute Order 21, dated April 9, 2009, Intervenor Office of Hawaiian Affairs ("OHA"), by and through its counsel, PAUL JOHNSON PARK & NILES, Attorneys at Law, A Law Corporation, hereby submits its exceptions to the Hearings Officer's Proposed Findings of Fact, Conclusions of Law, and Decision and Order ("Proposed Decision"), and joins

in Petitioners Hui O Nā Wai `Ehā and Maui Tomorrow Foundation, Inc.'s[1] exceptions to the Proposed Decision.

OHA first wishes to express its appreciation for the tireless efforts of the Hearings Officer, who selflessly devoted enormous amounts of his time and considerable talents in his quest for a just result, and the Commission staff, whose support to the Hearings Officer and the parties was invaluable.

I. OHA Objects To The Proposed Failure to Decide Issues That Could, And Should, Be Decided On This Record

This contested case required an extraordinary commitment of resources by the parties, the Hearings Officer, and the Commission's staff, all of whom have invested countless hours, at huge cost, to provide the Commission with as clear and complete a factual record as possible upon which to decide the important issues in this case. Given the constraints imposed by current budgetary realities, particularly for the Commission and the government-entity parties, it is unlikely that such an undertaking could be repeated in the immediately foreseeable future. OHA therefore objects to the indication in Proposed Decision that determinations regarding the non-instream user's "reasonable-beneficial" uses and the appurtenant rights of numerous kuleana users will be deferred for future proceedings. (*See, e.g.,* COL 218, 53-54). On these issues the record is fully developed so re-litigation is unnecessary, and the financial burdens it would impose are unjustifiable. In the interests of efficiency and timely resolution, all issues that can be decided on this record should be, and the issues that *have* been decided should not be subject to re-litigation.

A. Reasonable-Beneficial Use has Already Been Litigated in this Proceeding and There is No Legitimate Reason For it to be Re-litigated in the WUPA Proceedings

At the prehearing conference in June, 2007, the Hearings Officer made clear that the non-instream users would have the burden to prove their "reasonable-beneficial" uses, including the lack of practicable alternatives, which would then form the basis for the issuance of Water Use Permits following the anticipated designation of Nā Wai `Ehā as a Surface Water Management Area:

[1] Petitioners Hui O Nā Wai `Ehā and Maui Tomorrow Foundation, Inc. are hereinafter referred to as the "Community Groups" and cited as "Hui/MTF." Citations to "FOF" and COL" are to the proposed findings of fact and proposed conclusions of law in the Proposed Decision.

> . . .in this CCH the burden of proof and the types of proof to show reasonable and beneficial use and no practical alternatives would be the same as basically if we were applying for water use permit.
>
> So for any of the off-stream diversions that we would -- that the Commission ultimately would decide the quantity that would be standing in place of when we actually finish the designation process, can use that to decide the amount of water under the water use permit.
>
> I thought about the practical alternatives for a little while, but it's quite clear that the supreme court said that not only is it found in the code, but in the Public Trust Doctrine, so whether or not it's under a permit under the code or under common law, I think it still is a burden on those seeking off-stream diversions to prove that they have no practical alternatives.
>
> * * *
>
> I've said this before, but remember that there is a two step process going on for the off-stream diversions. One is that they have to show the amount that is reasonable and beneficial, which may or may not be what they're currently using, but you have to come up with your burden of proof is showing that the amount of water that you want is reasonable and beneficial and myself and the Commission might disagree and award you something different.

(Tr. 6/14/07, p. 5, l. 12 to p. 6, l. 19). The primary off-stream diverters, Wailuku Water Company, LLC ("WWC") and Hawaiian Commercial & Sugar Company ("HC&S"), recognized that the amount of their reasonable-beneficial use was an issue that would be decided in this proceeding, attempted to satisfy their burden to demonstrate that their uses were, in fact, reasonable-beneficial, and proposed conclusions of law to the effect that their uses were reasonable-beneficial. (*See, e.g.,* Opening Statement of Wailuku Water Company, p. 23; Hawaiian Sugar & Commercial Company's Opening Brief, pp. 11-12; WWC proposed COL 926, 933; HC&S proposed COL 9-10, 13-16.)

The Proposed Decision is the first indication, in the more than four years that the Community Groups' IIFS Petition has been pending, that the Commission would not apply the reasonable-beneficial use standard, and that determinations made in this proceeding are "not

determinative of the 'reasonable-beneficial' requirement for WUPAs under the surface water management area designation of Nā Wai `Ehā. COL 37-43, *supra.*" (COL 218.) Instead, according to proposed COL 218, in this proceeding, "the Commission makes a general, collective assessment of *reasonableness* of offstream uses and not the WUPA-specific assessment with the burden of providing information on the parties seeking water use permits." *Id.* (emphasis added).[2]

However, as described in the Proposed Decision, there is virtually no distinction (other than the name) between the "reasonableness" standard proposed after-the-fact for this proceeding and the "reasonable-beneficial" standard imposed by the Code and the public trust, which all parties were apprised of and operated under. "Reasonable-beneficial use," as defined in HRS § 174C-3, means "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." (*See also,* COL 8.) The Proposed Decision would conclude that the new "reasonableness" standard refers to use of amounts of water that are "justifiable," and thus would exclude "water that may be used in an unreasonable manner and/or amount, which would be contrary to the public trust's duty of both protection and maximum reasonable and beneficial use" (COL 42) and "water that is being used inefficiently, losses that could be prevented through practical actions, or waters that have practical alternatives" (COL 218).

Because the standards are substantively the same,[3] it is impossible to conceive of any circumstances under which a use that the Commission concludes is not reasonable in this proceeding could nevertheless be deemed reasonable-beneficial in subsequent WUPA proceedings. Indeed, it appears that the *only* circumstance under which the reasonableness standard and the reasonable-beneficial standard could have different outcomes would be one in

---

[2] OHA recognizes that, with respect to, for example, kuleana users, many of whom were not present or represented, a "collective assessment" based on the best information available may appropriate, with more specific information to be provided in the permitting process. However, with respect to the major diverters, all of whom were parties, the Proposed Decision does not, in fact, propose a collective assessment; it proposes individual conclusions regarding the "reasonableness" of their uses. (*See, e.g.,* COL 62, 65, 90-93, 231, 232.)

[3] Accordingly, unless it is clear from the context that a distinction is intended, "reasonable" and "reasonable-beneficial" are hereinafter used interchangeably.

which the Commission fails to hold an offstream user to its burden of proof in concluding that the use is reasonable (as is unfortunately suggested by COL 218), and then faithfully applies the burden of proof in the WUPA proceeding to conclude that the use is not reasonable-beneficial. However, if the Commission holds the existing offstream users to their burden to prove reasonable use, as defined in the Proposed Decision, then the two standards produce identical results. Accordingly, there is no legitimate purpose to be served by putting the parties through the burden of re-litigating reasonable-beneficial use in the WUPA proceedings given that all parties were aware that issue would be litigated in this proceeding, and it *actually was* litigated in this proceeding. All that remains is to hold the offstream users to their burdens of proof in *this* proceeding.

B. Appurtenant Rights that were Proven in this Proceeding Should be Recognized

One of the most important offstream uses of Nā Wai `Ehā stream water is the exercise of appurtenant rights, which is a public trust purpose protected by the Hawai`i constitution and the Code. (*See, e.g.,* COL 13, 21, 23, 24.) In light of the Hearings Officer's admonition that appurtenant rights cannot be proven in the abstract but must be proven by an individual claiming that right in order for it to be considered in establishing the IIFS (Tr. 6/14/07, p. 11, ll. 6-9; p. 35, ll. 7-10), numerous witnesses came forward in the contested case hearing with proof of their appurtenant rights in the form of Land Commission Awards, Royal Patents, and the foreign and/or native testimony in support of the claims demonstrating that the land was in kalo at the time of the Māhele; they also testified about their uses or planned uses, their crops, their cultivated acreage, the location and TMK numbers of their kuleana parcels, and the `auwai serving their land. (*See, generally,* Hui/MTF FOF D-1 to D-458.[4])

These witnesses testified under oath and, except in a few instances where cross-examination was expressly waived, were subject to cross-examination. There was no dispute that these witnesses have appurtenant rights and WWC and its predecessors have recognized such rights by delivering water to the `auwai that serve their kuleana parcels. (*See, e.g.*, Exh. D-7.) As WWC explained to its unit holders in 2003, "the Company provides water to several

[4] These proposed findings of fact also include findings of fact regarding the exercise of traditional and customary rights to cultivate kalo on one's kuleana. OHA's exception to the failure to determine appurtenant rights does not implicate traditional and customary rights.

kuleana users free of charge (a kuleana is a parcel of land that was growing taro at the time of the Great Māhele in 1848 and is entitled to water as an appurtenant right)." (Exh. B-5, p. 3.)

Although the evidence of these witnesses' appurtenant rights was undisputed, the Proposed Decision would reject the Community Groups' proposed conclusions of law (in which OHA joined) determining the witnesses' appurtenant rights and amounts of water associated with those rights.[5] The Proposed Decision would conclude that, "[a]s of the close of the evidentiary phase of this CCH, there were no petitions to the Commission from kuleana landowners for appurtenant rights and the amounts of water that such rights would be entitled to from the Nā Wai `Ehā streams, as required by law." (COL 53). However, if the failure to determine the appurtenant rights proven during the contested case were to be based on the fact that the evidence of those rights was presented in a form other than a petition, it would be without support in the law.

The Code imposes on the Commission the duty to "determine appurtenant water rights, including quantification of the amount of water entitled to by that right," HRS § 174C-5(15); *see also* COL 30; it does not, however, dictate the procedures by which the Commission must fulfill that duty. Nor has the Commission adopted administrative rules to establish procedures for determining appurtenant rights.[6] There is simply no law that specifies a petition as the exclusive procedure for determination of appurtenant rights, and/or and relieves the Commission of its duty to make that determination if that procedure is not adhered to. Accordingly, there is no legal impediment to recognizing the appurtenant rights that were proven in this case.

As a practical matter, there is no purpose served by requiring each of the approximately thirty witnesses whose kuleana lands have appurtenant water rights to file a petition which would merely present the same information that is already before the Commission in this proceeding. Doing so would require the Commission and staff to divert valuable time and increasingly scarce resources from the other pressing matters currently requiring their attention,

---

[5] See Hui/MTF proposed COL 128, 131-133, 135 - 136, 138 - 139, 141 - 146, 149, 151 - 152, 154 - 156, 158 - 160, 162 - 163, 165, 167, 172 - 173, 175, 177 - 178, 180.

[6] In fact, holders of appurtenant rights are given no guidance whatsoever on the process for having their appurtenant rights determined; even the Commission's website is silent on the subject.

including implementation of the IIFS for the East Maui streams and processing the scores of existing use WUPAs for Nā Wai `Ehā surface water. OHA therefore urges the Commission to adopt Hui/MTF's proposed COL 128, 131 - 133, 135 - 136, 138 - 139, 141 - 146, 149, 151 - 152, 154 - 156, 158 - 160, 162 - 163, 165, 167, 172 - 173, 175, 177, 178, 180.

II. The Proposed Conclusions of Law Regarding HC&S's Reasonable Use are Based on Erroneous Findings of Fact and Conclusions that are Contrary to the Record

OHA objects to the proposed conclusion that HC&S's reasonable use of diverted Nā Wai `Ehā water is 20.29 to 21.59 mgd (COL 231), because it is based on (1) an obvious misunderstanding of Dr. Fares's water balance methodology;[7] (2) the unsubstantiated conclusion that Well No. 7 does not have the present capacity to replace more than 14 mgd of Nā Wai `Ehā water and the absence of *any* conclusion regarding the practicability of using Well No. 7 to replace all diverted Nā Wai `Ehā water on the Waihe`e-Hopoi Fields; and (3) the unlawful conclusion that it is reasonable to allow 3-4 mgd of waste that has not been proven to be impracticable to reduce or eliminate. The record demonstrates that Well No. 7 is a practicable alternative to diverted Nā Wai `Ehā water for irrigation of the Waihe`e-Hopoi Fields; therefore, use of Nā Wai `Ehā water on these fields is not reasonable as a matter of law.

A. The Proposed Decision Reflects a Misunderstanding of Dr. Fares's Methodology[8]

Dr. Fares was jointly retained by Hui/MT, MDWS, and OHA to calculate the optimal irrigation requirements for sugar cane grown on HC&S's West Maui Fields using a computerized daily water budget model which is accurately described in proposed FOF 455 through 467. For the Waihe`e-Hopoi Fields, Dr. Fares calculated that the optimal irrigation requirement for sugar cane on those fields over the 54-year period of rainfall data ranged

---

[7] Dr. Fares's water management software was developed for the Commission (*see* Water Management Software to Estimate Crop Irrigation Requirements for Consumptive Use Permitting in Hawaii, Final Report, dated May 2008) and has been correctly applied by the Commission Staff to calculate water requirements for purposes of water use permitting. *See, e.g.,* Staff Submittal dated February 18, 2009, Item D-2, pp. 8, 9. The mistaken application of the methodology reflected in the Proposed Decision, however, will result in gross overallocation of water if adopted.

[8] Correcting the erroneous application of Dr. Fares's methodology will implicate COL 74, 87-93, 227-228, 231-233, 280-281, and 291(b).

between a minimum of 4,211 gad (xmin) in the wettest year during that period and a maximum of 6,005 gad (xmax) in the driest year, and that 5,674 gad would be sufficient to satisfy the optimal irrigation requirements for sugar cane grown in the Waihe`e-Hopoi Fields in 80% of those years. (FOF 464.) For the `Īao-Waikapū Fields, excluding Field 920,[9] Dr. Fares calculated that the optimal irrigation requirements ranged between a minimum of 3,483 gad (xmin) in the wettest year and a maximum of 5,444 (xmax) in the driest, and that 5,026 gad would satisfy the optimal irrigation requirements in 80% of the 54-years for which there was rainfall data. (FOF 467.)

The Proposed Decision would conclude that a model such as Dr. Fares's "should be the starting point for determining actual irrigation requirements" (COL 92), but would make adjustments to the optimal irrigation requirements calculated by Dr. Fares. First, Dr. Fares' calculations would be adjusted to assume 80% irrigation efficiency rather than the 85% efficiency that Dr. Fares's model uses (which is the industry standard for drip irrigation and the minimum efficiency for which such systems are designed – *see* FOF 473), in order to account for the "real world conditions in which HC&S operates" (COL 83-86). Second, the adjusted result would be increased by 25%, "so that water is delivered daily instead of four out of five days." (COL 90; *see also* COL 87-93.)

This latter adjustment reflects an obvious misunderstanding of Dr. Fares's methodology; the 80% probability of satisfying the needs of the crop has absolutely nothing to do with delivering water "four out of five days." (*See, e.g.,* COL 87, 90, 91.) Dr. Fares's methodology calculated, on a daily basis over the historical period covered by the rainfall data (in this case, 54 years), how much irrigation water would have been required to grow the crop.

---

[9] Field 920 is excluded because HC&S is no longer using that field. (*See* FOF 311.) HC&S has recognized for some time that Field 920 is a "marginal" field (Tr. 1/31/08 (Holaday) p. 68, l. 20 to p. 69, l. 6), and, by May 2005, had a plan for soil remediation work on Field 920 because the field "is very sandy and has a low yield history" (Exh. D-56, p. 2). Despite HC&S's acknowledgement that, in its unremediated state, Field 920 was one that it would consider leaving fallow if water availability was an issue (Tr. 1/30/08 (Volner), p. 159, l. 24 to p. 160, l. 3), and that "Waiale [Field 920] could be taken out [of production] without harming HC&S very much" (Tr. 1/31/08 (Holaday), p. 73, ll. 17-18), HC&S continued to use that field without remediation through 2007 (Exh. C-76, pp. HCS 09001, 09002), and poured an average of **11,220 gad** on it from 2004 through 2006 (*see* fn. 20, *infra*). Field 920 is slated for development as part of A&B's proposed 800-acre, 4,500-unit, residential development at Waiale. (Exh. C-48; Exh. A-204, p. 3; Tr. 1/30/08 (Volner), p. 161, ll. 17-24; Tr. 1/31/08 (Holaday), p. 69, ll. 19-22.)

(Exh. A-80, p. 5; Tr. 2/15/08 (Fares), p. 34, l. 20 to p. 35, l. 9.) The results were then statistically analyzed to determine, *inter alia*, the average daily amount of irrigation water needed in the wettest year (xmin) and the driest year (xmax) in the period of record, as well as the irrigation requirements having non-exceedance probabilities of 50%, 80%, 90% and 95%. (Exh. A-80, pp. 5-7; Tr. 2/15/08 (Fares), p. 35, ll. 10-23.) Dr. Fares reported the irrigation requirements at the 80% non-exceedance probability, which does not mean that the crop gets water only 80% of the time; it means that in 80% of the years in the period of record of the rainfall data, the optimal irrigation requirements of the crop did not exceed the reported amount. Satisfying the needs of the crop with an 80% probability is the industry standard for calculating crop water duties in both the government and private sectors, including the Hawai`i Natural Resource Conservation Service of the United States Department of Agriculture. (Exh. A-80, pp. 5-7; Tr. 2/15/08 (Fares), p. 35, ll. 10-23.)

It appears that the intent of increasing Dr. Fares' calculations by 25% was to make sure that the crop received water daily, rather than four out of five days. (*See* COL 87, 90.) If that is the case, the 25% increase is unnecessary, because the amounts calculated by Dr. Fares at the 80% probability level are daily amounts; Dr. Fares's model does not contemplate delivery only four out of five days. Alternatively, it may be that the intent of the 25% increase was to approximate the amount of water that would satisfy the irrigation requirements of the crop with a 100% probability, rather than the industry-standard 80% probability. As explained below, allocating for 100% probability is not an appropriate measure of reasonable use but, even if it was, Dr. Fares's computer program has already calculated the amount of water needed to satisfy the irrigation requirements with 100% probability by calculating the xmax, which is the maximum irrigation requirement (*i.e.*, the irrigation requirement for the driest year) during the period of record. (*See, e.g.*, FOF 464-467.) In other words, the xmax is the amount that would be sufficient to satisfy the requirements of the crop 100% of the time, based on the 54-year period of record for the rainfall data. Even when adjusted to assume only 80% irrigation efficiency, the xmax for the Waihe`e-Hopoi Fields is 6,380 gad.

The reason that the industry standard is to satisfy irrigation requirements to an 80% probability rather than a 100% probability is that, virtually by definition, using the amount of water that would satisfy irrigation needs with 100% probability would result in overirrigation most of the time. For example, the values Dr. Fares calculated for the 50%, 80% and 90% non-

exceedance probabilities for the Waihe`e-Hopoi Fields (Exh. A-80, p. 6), adjusted to assume 80% irrigation efficiency rather than 85%, are 5,649 gad, 6,028 gad and 6,198 gad, respectively, and the xmax, or 100% probability level, is 6,380 gad. Allocating for the 100% probability level means that in 9 out of 10 years, there is an overallocation of at least 182 gad (6,380 gad minus 6,198 gad); in 8 out of 10 years, there is an overallocation of at least 352 gad (6,380 gad minus 6,028 gad); and in 5 out of 10 years, there is an overallocation of at least 731 gad (6,380 gad minus 5,649 gad). Allocating for the 80% probability level, on the other hand, results in an underallocation in only 2 out of 10 years of 352 gad or less.

The 7,535 gad that the Proposed Decision would conclude is a "reasonable" use on the Waihe`e-Hopoi Fields (*see* COL 91, 227) is more than would be required to satisfy the irrigation needs of the Waihe`e-Hopoi Fields even in the driest year of the 54 years for which complete rainfall data was available. Applying 7,535 gad to the Waihe`e-Hopoi Fields would result in overirrigation by at least 1,227 gad literally 100% of the time; 80% of the time, the excess irrigation would be at least 1,500 gad and 50% of the time, the excess would be at least 1,886 gad.. The error of the calculation is further confirmed by the fact that the 7,535 gad the Proposed Decision would conclude is a reasonable use on the Waihe`e-Hopoi Fields is substantially more than the 6,826 gad HC&S calculated would be required to replace evaporation on those fields, which the Proposed Decision would find, correctly, *overstates* the irrigation requirement because, among other things, that amount does not consider rainfall. (*See* FOF 490-493; COL 81.)

In the following table, columns (1) and (2) are the irrigation requirements at 80% probability and 100% probability (xmax) as calculated by Dr. Fares. Columns (3) and (4) adjust those values by assuming that HC&S achieves only 80% irrigation efficiency instead of the 85% industry standard efficiency assumed by Dr. Fares. Column (5) increases the value in column (3) by 25%. Column (6) is HC&S's claimed average water use for 2004-2006. Even if it were reasonable for HC&S to use on a daily basis the volume of water that would supply its irrigation requirements in the driest year in the 54-year period of record (*i.e.,* with a 100% probability instead of an 80% probability) delivered through an irrigation system of below average efficiency (*i.e.,* 80% instead of 85%), the correct calculation of that volume is in column 4, not column 5.

	Dr. Fares's Calculations (85% efficiency)		Proposed Adjustments (80% efficiency)			HC&S Claimed Use
	80% prob. (1)	**xmax** (2)	**80% prob.** (3)	**xmax** (4)	**Col. 3+25%** (5)	**(2004-2006)** (6)
Waihe`e-Hopoi	5,674[10]	6,005[10]	6,028[11]	6,380	7,535[12]	6,828[13]
`Īao-Waikapū (w/o 920)	5,026[14]	5,444[14]	5,340[15]	5,784	6,675[16]	7,098[17]
Field 920 only[18]	5,752[19]	6,109[19]	6,111	6,491	7,639	11,220[20]

(all values are in gad)

At the industry-standard 80% probability of satisfying the irrigation requirements of the crop, and incorporating the assumption that it is reasonable to make allowances for substandard irrigation efficiency (an assumption to which OHA takes exception, and which appears to be in derogation of the Commission's duty to adopt "provisions that encourage system repairs and limit losses" (COL 36)), HC&S's irrigation requirements are as follows:

---

[10] FOF 464

[11] COL 84

[12] COL 88

[13] FOF 436

[14] FOF 467

[15] COL 85

[16] COL 89

[17] FOF 444

[18] Field 920 is included in the event HC&S returns it to cultivation.

[19] FOF 466

[20] For the period 2004-2006, HC&S calculated that an average of 10.42 mgd was used on the `Īao-Waikapū Fields including Field 920 and an average of 7.78 mgd was used on the `Īao-Waikapū Fields excluding Field 920. (Exhs. E-6 and E-7.) The difference, 2.64 mgd, is thus the average water use on Field 920 over the period 2004-2006. During that period, HC&S had 235.3 acres of Field 920 planted (156.5 acres in crop cane and 78.8 acres in seed cane) (Tr. 1/30/08 (Volner), p. 25, ll. 11-16; p. 26, l. 8 to p. 27, l. 7), so the average use of 2.64 mgd on Field 920 amounts to 11,220 gad.

Waihe`e-Hopoi Fields	6,028 gad x 3,350 acres[21]	=	20.2 mgd
`Īao-Waikapū Fields	5,340 gad x 1,210 acres[22]	=	6.5 mgd
Total			26.7 mgd

If the Commission assumes it is reasonable to ignore the industry standards and determine HC&S's actual water needs based on the driest year in the 54-year period of record, *i.e.*, at the 100% probability level (an assumption to which OHA also takes exception) the correct calculation of HC&S's water needs under that assumption would be as follows:

Waihe`e-Hopoi Fields	6,380 gad x 3,350 acres	=	21.4 mgd
`Īao-Waikapū Fields	5,784 gad x 1,210 acres	=	7.0 mgd
Total			28.4 mgd

B. The Proposed Conclusion that Only Fourteen mgd from Well No. 14 is a Reasonable Alternative for the Waihe`e-Hopoi Fields is Contrary to the Record and Contrary to Law

Before HC&S received the windfall of "surplus" Nā Wai `Ehā water in the late 1980s, its primary source of irrigation water for the Waihe`e-Hopoi Fields was Well No. 7, a brackish water well that was described by the USGS in 1942 as "the well with the largest yield in the Territory," with "a pumping capacity of 40,000,000 gallons a day [which] is the largest for any single well in the Hawaiian Islands and is sufficient to supply a city the size of Honolulu." (FOF 494; Exh. A-143, pp. 127, 156 (map), ¶ 4.) Between 1927 and 1985, HC&S pumped an average of about 21 mgd from Well No. 7, and, when it suits HC&S's purposes, it continues to pump that well heavily. (*See* FOF 495.)

---

[21] The Proposed Decision uses 3,250 as the acreage for the Waihe`e-Hopoi Fields to account for 100 acres leased to a third party, Monsanto. *See* FOF 436. That 100 acres, however, is included in 600 acres leased to Monsanto which was subtracted from the 3,950 acres of the Waihe`e-Hopoi Fields to calculate the 3,350 acres HC&S uses for sugar cane and irrigates with Nā Wai `Ehā water. *See* FOF 428, 429. Therefore, HC&S should be credited with 3,350 acres for the Waihe`e-Hopoi Fields instead of 3,250 acres.

[22] The Proposed Decision uses 1,330 as the acreage of the `Īao-Waikpau Fields, comprising 1,080 acres in the "leased fields" and 250 acres in Field 920. FOF 429. However, HC&S now cultivates the 129-acre field 767 (only 40 acres of which it leases, because "development plans are in progress" for the remaining 89 acres (FOF 310)) *instead of* Field 920, FOF 311, so the correct acreage for the `Īao-Waikapū Fields is no more than 1,209 acres (1,080 + 129) and, depending on the status of the 89-acre section of Field 767 that is slated for development in the short term, could be 1,120 acres (1,080 + 40).

Proposed COL 230 would conclude that only 14 mgd of water from Well No. 7 is a reasonable alternative source for HC&S, because to require HC&S to replace more than 14 mgd of Nā Wai `Ehā water with water pumped from Well No. 7, as it did for many decades, "would incur costs of $1 million and constraints on power to run the pumps on a consistent and sustained basis because of HC&S's power contract with MECO. COL 105-106, *supra*." That proposed conclusion, however, is contrary to the record because it is based on nothing more than claims made by HC&S which were admittedly inaccurate. Moreover, it is contrary to law, which requires HC&S to demonstrate that it has no practicable alternatives, and requires the Commission to enter findings of fact and conclusions of law "as to whether [HC&S] satisfied its burden of establishing that no practicable alternatives existed." *In re Waiāhole Ditch Combined Contested Case Hearing* ("*Waiāhole II*"), 105 Hawai`i 1, 17, 93 P.3d 659 (2004). HC&S failed to prove that any use of Nā Wai `Ehā water on the Waihe`e-Hopoi Fields is reasonable, because Well No. 7 is a demonstrably practicable alternative water source for those fields.

1. Well No. 7 can provide more than 14 mgd with no additional infrastructure

Well No. 7 is configured with three pumps: pumps 7A and 7B are at water level and can each pump 17.5 mgd to ground level; pump 7C is a booster pump which can pump 14 mgd from pump 7A to HC&S's Waihe`e Ditch (which is an internal irrigation ditch not to be confused with WWC's Waihe`e Ditch), from which the water can be distributed to all of the Waihe`e-Hopoi Fields except for the 175-acre Field 715. (FOF 496.) HC&S estimates that it would cost $525,000 to add another booster pump and distribution pipeline to increase the volume that can be pumped from Well No. 7 to HC&S's Waihe`e Ditch from 14 mgd to 28 mgd, and that it would cost $475,000 to install an additional pipeline to reach Field 715. (FOF 498; COL 105.[23])

The Proposed Decision observes that, "*[a]ccording to HC&S,* as currently configured, Well No. 7 can supply only 14 mgd to the Waihee-Hopoi Fields, with the exception

[23] Proposed COL 243 suggests that the $1 million in additional infrastructure would be required in order for HC&S to replace even 14 mgd of Nā Wai `Ehā water with water pumped from Well No. 7. That appears to be a simple oversight; elsewhere, including in proposed COL 105 which was cited in support, the Proposed Decision recognizes that $525,000 of the estimated infrastructure costs would be incurred only to *increase* the volume that can be pumped from Well No. 7 to HC&S's Waihe`e Ditch from 14 mgd to 28 mgd.

of Field 715." (FOF 497 (emphasis added); COL 104). That observation is correct (although it is not a finding of fact[24]); HC&S did, indeed, so claim. Specifically, HC&S's testimony was that "[t]he only existing means HC&S has of providing alternative irrigation to the West Maui Fields is by pumping up to 14 mgd of brackish water from HC&S Well No. 7[,]" (Volner Dec. 10/26/07, ¶ 5), and that "without adding a new booster pump and constructing a new pipeline, Well No. 7 can only supply 14 MGD to the Waihee Hopoi Fields, with the exception of Field 715" (Volner Dec. 11/16/07, ¶ 3). On cross-examination, however, the proponent of that testimony *admitted that it was not accurate*; what he meant was that only 14 mgd could be pumped from Well No. 7 to a point (HC&S's Waihe`e Ditch) from which it could reach all of the Waihe`e-Hopoi Fields except for Field 715. (Tr. 1/30/08 (Volner), p. 41, l. 9 to p. 42, l. 1.) Mr. Volner acknowledged that, as Well No. 7 *is* currently configured, although only 14 mgd can be pumped by pump 7C to HC&S's Waihe`e Ditch, *additional* water from Well No. 7 can be delivered to the 800 acres comprising Waihe`e-Hopoi Fields 904, 908, and 909 without the use of pump 7C (Tr. 1/30/08 (Volner), p. 37, l. 3 to p. 38, l. 2), and the Proposed Decision would so find and conclude (FOF 496; COL 103).

Of those 800 acres, approximately 485 are leased to Monsanto (FOF 428) and the remaining 315 are used by HC&S to grow sugar cane. Without *any* additional investment in infrastructure, Well No. 7 can supply the 2 mgd required to irrigate sugar cane on Fields 904, 908, and 909 (315 acres x 6,380 gad (assuming 80% irrigation efficiency and overallocation at the xmax value)) *as well as* the 14 mgd it can pump to HC&S's Waihe`e Ditch. Given that HC&S pumped an average of 21 mgd from Well No. 7 for more than half a century (FOF 494, 495; COL 103), there is no question that it has the capacity, as currently configured, to pump the total of 16 mgd that would be required to irrigate Fields 904, 908 and 909 in addition to pumping 14 mgd to HC&S's Waihe`e Ditch for distribution to other Waihe`e-Hopoi Fields.

2. HC&S can pump more than 14 mgd from Well No. 7 with available power

The proposed conclusion regarding purported "constraints on power to run the pumps on a consistent and sustained basis because of HC&S's power contract with MECO" (COL 230), is likewise based entirely on a claim made by HC&S that was disproven. In support

[24] *See, e.g., Kilauea Neighborhood Ass'n v. Land Use Comm'n,*(7 Haw. App. 227, 232-233 (1988) ("mere recapitulations of evidence do not constitute findings of fact").

of that conclusion, the Proposed Decision cites only COL 106, which is that "HC&S further states that it does not have adequate electrical power to run the pumps for Well No. 7 on a consistent and sustained basis because of its power contract with MECO. FOF 499." Although it later admitted otherwise, HC&S did make that claim. HC&S offered testimony that "HC&S does not have adequate electrical power to run the pumps for Well No. 7 on a consistent and sustained basis . . . .[and] cannot supplement its energy supply simply by purchasing more" (Volner Dec. 9/14/07, ¶ 20), and "HC&S has a firm power contract with Maui Electric Company ("MECO") pursuant to which HC&S is obligated to supply to MECO 12 MW of power from 7:00 a.m. to 9:00 p.m. daily except Sunday and 8 MW at all other times, subject to events of force majeure. The contract provides for monetary penalties in the event these requirements are not met." (*Id.*, ¶ 20B.) Therefore, according to Mr. Volner, "If HC&S were to utilize its pumps at Well No. 7 to compensate for diminished flows to the Waiale Reservoir, it would have to reduce power consumption somewhere else on the plantation, principally by reducing the pumping from its other wells that are used to supplement water delivered from the East Maui irrigation system." (*Id.*, ¶ 20B.)

Again, however, HC&S's claim was belied by the evidence. The evidence was that, from 1991 (the first full year of operation under the Amended and Restated Power Purchase Agreement ("PPA") between HC&S and MECO, which became effective, as amended, in November 1990 (Exh. C-27)) through 2003, the combined pumping from all HC&S wells ranged from a low of 60 mgd in 1998 to a high of 112.9 mgd in 1996, and averaged 84.1 mgd. (Exh. C-74, pp. HCS 06006 to HCS 06011; *see also* Exh. C-50.) For the years 2004, 2005 and 2006, HC&S's combined pumping from all wells dropped to an average of 40.5 mgd, 43.4 mgd, and 41.6 mgd, respectively. (Exh. C-74, pp. HCS 06002 to HCS 06004; *see also* Exh. C-50). There is no evidence in the record that, during the thirteen years after entering the PPA in which it had enough electrical power to run all of its pumps and was pumping a combined average of 84.1 mgd, HC&S was ever unable to meet its contractual obligations, or required to pay liquidated damages, to MECO and, other than extensions of its term, the PPA has never been amended. (Tr. 1/31/08 (Holaday), p. 133, ll. 4-13.)

When HC&S cut its overall pumping in half starting in 2004, it was not because it discovered that it suddenly no longer had enough electrical power to continue pumping its wells at the previous levels. HC&S reduced its pumping of irrigation water beginning in 2004 in order

to capitalize on the windfall of higher fuel costs, which increased the "avoided cost" that MECO was required to pay HC&S for electrical power. A&B's 10-K filing for 2004 reported that, "HC&S limited irrigation pumping of well water during the second half of 2004 to sell additional power." (Exh. C-29, p. 33.) In its 2005 10-K filing, A&B explained that "management made a concerted effort to increase power sales in order to take advantage of higher power prices." (Exh. C-29, p. 36.) A&B's 2006 10-K filing reported that, "[i]n 2006, HC&S produced and sold, respectively, approximately 208,000 MWH and 98,000 MWH of electric power (compared with 219,000 MWH produced and 96,300 MWH sold in 2005). The increase in power sold was due to management's effort to increase power sales in order to take advantage of higher power prices[.]" (Exh. E-8, p. 15.)

In light of the evidence, Mr. Volner, the proponent of HC&S's "power constraint" testimony, admitted that HC&S is *not,* in fact, limited to its current reduced level of pumping by the electric power available. (Tr. 1/30/08 (Volner), p. 120, l. 15-24.) Rather, whether to pump from Well No. 7 is "simply an economic decision" -- there is a cost associated with operating Well No. 7, which is either the cost to run the pumps or the loss of the revenues HC&S would have realized had it sold the power to MECO instead of using it to run the pumps. (Tr. 1/30/08 (Volner), p. 120, ll. 15 to p. 121, l. 24.)

In sum, the proposed conclusion of law that Well No. 7 is a reasonable alternative water source for only 14 mgd because (1) pumping more than 14 mgd from Well No. 7 would require HC&S to invest $1 million in additional infrastructure and (2) HC&S does not have sufficient electrical power to run the pumps for Well No. 7 due to its contract with MECO (COL 230) is unsupported by, and contrary to, the record. The record shows, and HC&S has admitted, that HC&S can pump more than 14 mgd from Well No. 7 as currently configured and is not limited to its current reduced level of pumping by constraints on available electrical power.

3. HC&S failed to prove, and the Proposed Decision fails to find or conclude, that Well No. 7 is not a practicable alternative for all diverted Nā Wai `Ehā water used to irrigate sugar cane on the Waihe`e-Hopoi Fields

Not only is proposed COL 230 contrary to the record to the extent that is concludes that only 14 mgd from Well No. 7 is a reasonable alternative for the Waihe`e-Hopoi Fields, the Proposed Decision contains no findings or conclusions regarding whether HC&S met its burden to demonstrate that Well No. 7 is not a practicable alternative replace *all* of the Nā

Wai `Ehā water diverted to irrigate those fields. HC&S clearly could not satisfy that burden, given that the 21.4 mgd that it would take to irrigate the entire 3,350 acres of the Waihe`e-Hopoi Fields (even with substandard irrigation efficiency and in 1 in 54 year drought conditions) is an amount that HC&S consistently pumped from Well No. 7 for more than half a century (including several periods since entering the PPA with MECO (FOF 495)), and could continue to pump at a cost less than what other farmers pay for water. Therefore, although the Proposed Decision implicitly concludes that using more than 14 mgd from Well No. 7 is not reasonable, it does not, and on this record could not, conclude that it is not practicable. Therefore, as a matter of law, *no* use of diverted Nā Wai `Ehā water on the Waihe`e-Hopoi Fields is reasonable.

The requirement that offstream users "demonstrate the absence of practicable mitigating measures, including the use of alternative water sources," *In re Waiāhole Ditch Combined Contested Case Hearing* ("*Waiāhole I*"), 94 Hawai`i at 161; 9 P.3d at 473, is not confined to "the WUPA or water use permit application proceedings," as suggested in proposed COL 37. As the remainder of the quoted passage makes clear, that requirement "is intrinsic to the public trust, the statutory instream use protection scheme, and the definition of 'reasonable-beneficial' use, and is an essential part of any balancing between competing interests." COL 37 (quoting *Waiāhole I,* 94 Hawai`i at 161; 9 P.3d at 473). Because this case was brought under the statutory instream use protection scheme, requires balancing between competing interests, and is governed by the public trust, there is no question that HC&S was required to demonstrate the lack of a practicable water source.[25]

"An alternative is practicable if it is available and capable of being used after taking into consideration cost, existing technology, and logistics." (COL 31.) Given its long history of pumping Well No. 7, HC&S was obviously unable to demonstrate that Well No. 7 was unavailable or incapable of being used considering existing technology or logistics. It focused, therefore, on the cost of pumping Well No. 7, but simply provided lump sums for the infrastructure costs and costs of electrical power, which the Hawai`i Supreme Court has admonished "has little meaning without evidence and analysis of the actual per-unit breakdown

[25] As the Hearings Officer made clear at the prehearing conference, "it's quite clear that the supreme court said that not only is it found in the code, but in the Public Trust Doctrine, *so whether or not it's under a permit under the code* or under common law, I think it still is a burden on those seeking off-stream diversions to prove that they have no practical alternatives." (Tr. 6/14/07, p. 5, l. 23 to p. 6, l. 4 (emphasis added)).

of those costs relative to the cost of [] other alternatives." *Waiāhole I,* 94 Hawai`i at 165, 9 P.3d at 477. Broken down into per unit costs, HC&S's estimates are well below what other farmers, and this Commission, have deemed practicable.

With respect to infrastructure costs, HC&S estimated it would cost $425,000 to install a pipeline to Field 715, which is the only field in the Waihe`e-Hopoi Fields that cannot currently be irrigated with water from Well No. 7. (FOF 498, 496.) Adding another booster pump and distribution line to increase the volume that could be pumped from Well No. 7 to HC&S's Waihe`e Ditch from 14 mgd to 28 mdg is estimated to cost $525,000. (FOF 498.) In addition, HC&S estimates that it would cost another $777,650 to upgrade its pumps and related equipment so that MECO would install a direct service connection to Well No. 7 to provide power in the event HC&S did not have enough internally generated power to run the pumps for Well No. 7. (Volner Dec., 11/16/07, ¶ 8.) The total construction costs, $1,777,650, amortized over ten years and assuming an 8% cost of money, result in a cost of $0.0188 per thousand gallons, based on 28 mgd. If HC&S decided to fallow Field 715, which it testified might be more prudent than expending funds for additional infrastructure to irrigate it (Holaday Dec. 10/26/07, ¶¶ 5, 7), its total construction costs would be $1,302,650, which amounts to a cost of $0.0138 per thousand gallons when amortized over ten years assuming an 8% cost of money.

For electrical power to run the pumps for Well No. 7, HC&S could either forego sales to MECO, resulting in lost revenue, or purchase electrical power from MECO. (Volner Dec. 11/16/07, ¶¶ 6, 8.) In January 2008, HC&S estimated that the lost revenue from MECO sales associated with using internally generated electrical power to pump from Well No. 7 would be $2,900 per day for each 14 mgd increment (or $0.2071 per thousand gallons) based on MECO's avoided cost for fossil fuel, which was, at the time, adjusted quarterly. (Tr. 1/29/08, p. 206, l. 21 to p. 207, l. 22; Volner Dec. 11/16/07, ¶ 4.) HC&S's estimates were based on 12 MWH to pump 14 mgd (24 hours @ .5 MW per hour) (*id.*), so MECO was paying HC&S $241.67/MWH (or $0.2417/kWh) for electrical power. However, MECO's avoided cost has plummeted since the first quarter of 2008 due to decreased fuel prices and a new methodology

approved by the Public Utilities Commission for calculating avoided cost.[26] As of May 1, 2009, the avoided cost MECO pays to HC&S, and thus HC&S's lost revenues from using internally generated power to pump Well No. 7, is only $0.09295/kWh ($92.95/MWH) during peak hours and $0.08987/kWh ($89.87/MWH) during off-peak hours. (Exhibit "A.") Currently, therefore, assuming 12 MWH to pump each 14 mgd increment, HC&S's lost revenues resulting from using internally generated electrical power to pump from Well No. 7 translate to, at most, $0.07967 per thousand gallons.

There is no evidence of what it would currently cost HC&S to purchase electrical power from MECO given the decrease in the fuel surcharge. Pursuant to the PPA, the rate MECO would charge HC&S is "the lowest rate schedule in effect for similar industrial, agricultural or cogeneration operations" (Exh. C-27, Exh, II, § VI), which is MECO's "Schedule P" (Exh. C-51; Tr. 3/3/08 (Kauhi), p. 70, ll. 4-17). HC&S estimated the cost of MECO electrical power at $200 to $230 per MWH (Exh. E-21) or, alternatively, "$310 per MWH or $7,440 per day" (Volner Dec. 11/16/07, ¶ 9). Even assuming an electrical cost of $310/MWH, which Mr. Volner estimated based on what HC&S paid MECO for electricity for office use and drip stations (Tr. 1/30/08, p. 123, ll 8-14) at a time when MECO's fuel surcharge was considerably higher than it is now, HC&S's pumping costs would be only $0.2657 per thousand gallons.

Accordingly, HC&S's combined construction and operating costs to pump 28 mgd from Well No. 7 to irrigate the Waihe`e-Hopoi Fields would range from $0.0935 per thousand gallons (assuming Field 715 is left fallow and internally generated electrical power is used) to $0.2845 per thousand gallons (assuming Field 715 is cultivated and electrical power is purchased from MECO at the rates charged in late 2007 for office electricity). The apparent reluctance in the Proposed Decision to expressly find or conclude that the costs of using Well No. 7 render it an impracticable alternative is understandable; those costs are less than the Maui County agricultural water rates (*see* Exh. E-13), and other farmers and this Commission have deemed more expensive alternatives to be practicable from a cost perspective. *See, e.g., In re Waiāhole Ditch Combined Contested Case Hr'g*, Case No. CCH-OA65-1, Findings of Fact,

---

[26] The Commission is asked to take judicial notice, pursuant to HAR § 13-167-59(i), of the "Avoided Energy Costs" schedule attached as Exhibit "A", which was printed from the HECO website:
http://www.heco.com/vcmcontent/StaticFiles/FileScan/PDF/EnergyServices/Tarrifs/HECO/AvoidedCost04-8-09.pdf

Conclusions of Law, and Decision and Order (July 13, 2006), at 50 (observing that current price of water from Waiāhole Ditch is $0.40 per thousand gallons); and at 56 (concluding that a new well, with combined construction and operating costs of $0.74 per thousand gallons "is a reasonable alternative to Ditch waters on the basis of cost, existing technology, and logistics"). However, before concluding that HC&S's use of diverted Nā Wai `Ehā water on its Waihe`e-Hopoi Fields is reasonable, the Commission is *required* to find and/or conclude that HC&S met its burden to demonstrate the lack of practicable alternatives. *See Waiāhole II,* 105 Hawai`i at 17; 93 P.3d at 659 (remanding for further proceedings "inasmuch as the Water Commission entered no FOFs or COLs s to whether [the offstream user] satisfied its burden of establishing that no practicable alternatives existed). On this record, the Commission could not so conclude.

Because HC&S failed to establish the absence of any practicable alternative source of water to irrigate the Waihe`e-Hopoi Fields, and in fact has an alternative source that it deemed practicable to use for more than half a century, use of any diverted Nā Wai `Ehā water on those fields is not reasonable as a matter of law.

C. The Proposed Decision would Impermissibly Conclude that it is Reasonable for HC&S to Waste 3-4 mgd of Diverted Nā Wai `Ehā Water

In this contested case proceeding, HC&S quantified and disclosed for the first time the amount of diverted Nā Wai `Ehā water that is delivered to the Wai`ale Reservoir but *not* used to irrigate sugar cane, or for any other purpose. (See Tr. 1/29/07 (Volner), p. 201, ll. 5-12.) What HC&S characterized as the "differential" between the amount of water delivered to Wai`ale Reservoir and amount used to irrigate the Waihe`e-Hopoi Fields (Exh. E-5) represents "part of the system loss." (Tr. 1/31/08 (Holaday) p. 135, ll. 10-15.) During the period 2004 through 2006, the total "differential" was 9.88 billion gallons, or approximately 9 mgd (Exh. E-5; Tr. 1/30/08 (Volner), p. 56, ll. 17-24), which is 25.69% of the diverted Nā Wai `Ehā water delivered to Waiale Reservoir.

HC&S explained that the average 9 mgd "discrepancy" between the delivery and usage was due to evaporation, seepage and delivery of water to other users; it estimated that seepage from Wai`ale Reservoir is 6-8 mgd, seepage from the rest of the HC&S ditch and reservoir system (which comprises reservoirs 91 and 92 in the Waihe`e-Hopoi area and HC&S's internal ditches, most of which are "shock treated" (Tr.1/30/08 (Volner, p. 59, ll. 6-11, 18-22)) is 3-4 mgd, and an estimated 1-2 mgd was provided to a third party lessee on a little over 100 acres

(Volner Dec. 09/14/07, ¶ 16). Mr. Volner acknowledged that the usage of the third party lessee, Monsanto, was actually metered and, when presented with Monsanto's metered use for 2002 through 2004, which was 5% to 10% of his 1-2 mgd estimate, Mr. Volner acknowledged that his estimate was inaccurate; the 1-2 mgd of diverted Nā Wai `Ehā water he testified was being used by Monsanto, was instead, presumably, "in one of the other categories" (i.e., seepage from Waiale Reservoir or seepage from HC&S's other reservoirs and ditches) but was not going onto the Waihe`e-Hopoi Fields. (Tr. 1/30/08, p. 63, l.3 to p. 65, l. 25.)[27]

With respect to the total of 9 mgd that is lost as seepage from the Waiale Reservoir and HC&S's other reservoirs and ditches, the Proposed Decision would conclude that "WWC [sic – HC&S] has not established the lack of practicable mitigating measures to address these losses" (COL 123) and that, "[g]iven that HC&S has stated that 'high density polyethylene lining could negate much of the seepage, not all of it" *for Waiale Reservoir*, FOF 425, the Commission *estimates* that it is practical to prevent 6-8 mgd of losses, *or the seepage of the Waiale Reservoir*" (COL 229 (emphases added)); the estimated 3-4 mgd of seepage from HC&S's other reservoirs and ditches, on the other hand, is included as part of "HC&S's reasonable uses" for the Waihe`e-Hopoi Fields (COL 231).

Nothing in the Proposed Decision explains the disparity of treatment between the seepage from Wai`ale Reservoir and the seepage from Reservoirs 91 and 92 and the irrigation ditches. If the intention is to conclude that high density polyethylene lining would *not* negate seepage from HC&S's other reservoirs and ditches, proposed COL 229 should so state, in any event, such proposed conclusion is without any support whatsoever in the record.

Given the proposed conclusions that (1) "[o]ffstream users have the burden to prove that any system losses are reasonable-beneficial by establishing the lack of practicable mitigation measures, including repairs, maintenance, and lining of ditches and reservoirs" (COL 35), and (2) that HC&S did not satisfy that burden (COL 123), the continued loss of 9 mgd through seepage is not "reasonable" as a matter of law, and COL 229 should so state, rather than "estimating," without identifying the basis for the estimate, the amount of seepage it might be practical to mitigate. To allow up to 4 mgd of seepage from unlined reservoirs, with no showing

[27] FOF 436 is thus plainly contrary to the record to the extent it finds that 1-2 mgd was used by Monsanto in 2004 through 2006. FOF 436 also incorrectly states the acreage of the Waihe`e-Hopoi Fields used by HC&S, because the 100 acres leased to Monsanto was already subtracted to derive 3,350 acres. (*See* FOF 428, 429).

that preventing that loss is not practicable, violates the public trust and the Commission's duty to "account for water lost or missing by adopting 'provisions that encourage system repairs and limit losses'" (COL 36); further, it is irreconcilable with the proposed conclusion that "water not actually put to reasonable-beneficial use would be wasted and must remain in the stream." (COL 18 (citing *Waiāhole I,* 94 Hawai`i at 118, 156, 9 P.3d at 430, 468).)

D. <u>HC&S's Reasonable Use is No More than 10.4 mgd</u>

Because HC&S failed to prove, and the Proposed Decision fails to conclude, that Well No. 7 is not a practicable alternative for the Waih`e-Hopoi Fields, use of Nā Wai `Ehā water on those fields is not reasonable, and would violate the public trust. With respect to the `Īao-Waikapu Fields, even assuming that it would be reasonable to allow additional water to account for substandard irrigation efficiency, the actual needs, and therefore the reasonable use, on these fields is 6.5 mgd (5,340 gad x 1,210 acres). Further assuming that it could be reasonable to allocate sufficient water to satisfy the needs of the crop with 100% probability, notwithstanding that it would result in overallocation in more than nine years out of ten, the reasonable use on the `Īao-Waikapū Fields is no more than 7.0 mgd (5,784 gad x 1,210 acres).

If, *but only if*, the Commission concludes that a cost between $0.09 and $0.28 per thousand gallons renders it impracticable for HC&S to use Well No. 7 as an alternative to diverted Nā Wai `Ehā water, then HC&S's reasonable use, again employing the assumptions of 80% efficiency and 100% probability (to which OHA objects), would be no more than 10.4 mgd, as follows:

Waihe`e-Hopoi Fields:	6,380 gad x 3,350 acres		21.4 mgd,
	minus 18 from alternative sources (16 mgd from Well No. 7 and 2 mgd other)		**3.4 mgd**
`Īao-Waikapū Fields:	5,784 gad x 1,210 acres	=	**<u>7.0 mgd</u>**
TOTAL			**10.4 mgd**

III. The Proposed Conclusion That 6.84 mgd is Reasonable to Satisfy the Needs of <u>Kuleana Users in Nā Wai `Ehā Needs Clarification</u>

The Proposed Decision would conclude that the estimated 6.84 mgd reportedly being provided to kuleana users currently is reasonable and sufficient not only for their current uses (which most testified were reduced due to lack of water) but also for the increased uses they

would engage in if sufficient water is restored (COL 220). If the proposed conclusion is clarified to reflect consistency with the underlying analysis, *i.e.*, that 6.84 mgd is sufficient to satisfy the current and planned needs of the kuleana users who came forward and testified regarding their uses (*see, e.g.*, FOF 332), OHA would generally agree. However, the reason that the kuleana users who appeared at the contested case hearing almost universally testified that there is insufficient water to satisfy their desired level of kalo cultivation (*see, e.g.*, FOF 234, 296, 335), is that they are not getting 6.84 mgd for their uses. That is not because there are "substantial losses", such that "much of the water reported by WWC as being delivered to the kuleana lands is being lost" and "the kuleana ditches must be leaking to such an extent that water is inefficiently being delivered to the kuleanas." (FOF 336, COL 57, COL 111.) It is because the estimated 6.84 mgd reportedly being provided to the kuleana users is not all used by the kuleana users who came forward to testify; it is shared with those who did not.

Summarized, the reasoning in the Proposed Decision is as follows: (1) WWC reports delivering 6.16 mgd for kuleana use, and there are three known kuleana diversions directly from the streams, so the total available for kuleana users is probably 6.84 mgd (FOF 227,[28] FOF 293); (2) kuleana users who testified at the contested case had a total of about 135 acres, of which about 45 acres were or were intended to be cultivated, primarily in wetland kalo (FOF 233, 294); (3) the estimated 6.84 mgd currently provided to kuleana users divided by the 45 acres in or planned to be in kalo cultivation results in an average inflow of 152,000 gad (FOF 332); (4) the Community Groups' expert testified that an average wetland taro complex requires inflow of 100,000 gad to 300,000 gad to maintain water temperatures cool enough to prevent crop failure due to rot and pests (FOF 320); (5) as a general average throughout Hawai`i, no water is required to flow into taro patches approximately 40 to 50% of the time (FOF 330[29]); therefore, (6) 152,000 gad is sufficient for current and planned kalo cultivation of those who testified and, since the calculation includes acreage that is not currently cultivated, the per acre water delivery is even higher for current uses (FOF 332); and (7) if the current delivery is not

[28] OHA assumes that the reference to 6.84 mgd in the second sentence of FOF 227 was intended to refer to 6.16 mgd, which makes more sense in context.

[29] OHA takes exception to this finding of fact because it is based on information that is not in the record. Exhibit A-171, as admitted in evidence, does not have an Appendix A (*see* Exh. A-171) and OHA has been unable to locate the cited reference.

sufficient, it must be because most of the water is lost through substantial leakage from the kuleana `auwai (FOF 336).

The analysis, therefore, leads to the conclusion that 6.84 mgd is sufficient to satisfy the needs of the kuleana users who came forward and testified regarding their current and planned uses on approximately 45 cultivated acres, and OHA would not fundamentally disagree with such a conclusion. However, 6.84 mgd is clearly *not* sufficient to satisfy the needs of *all* Nā Wai `Ehā kuleana users, including those who did not testify, which is what needs clarification. A copy of Tables 3 through 6 to the Proposed Decision, which are derived from WWC's records of the kuleana users on its system,[30] is attached as Exhibit B, with the identified kuleana users/parcels who did not testify highlighted. The total acreage of the identified parcels, obtained from the County of Maui's website, is 108.17 acres. In addition to the users identified in Tables 3 through 6 who did not testify about their uses, there is evidence in the record that there are other existing kuleana users who did not testify. See Declaration of Koalani L. Kaulukukui filed October 26, 2007, ¶ 4. Although many of these kuleana users remain unidentified, some have been identified and include Harders, Kapalu, and Miyamoto, who have a total of 1.22 acres. *Id.* Accordingly, kuleana users who did not testify about their uses have a combined total of at least 109.39 acres.

In the absence of better information, an estimate of the acreage these non-testifying users are cultivating or intend to cultivate can be calculated by assuming the same ratio of current and planned cultivated acreage to total acreage as the users who testified (45/135, or 0.333), and applying it to the total of 109.39 acres, which results in an estimate of approximately 36 acres that these non-testifying users cultivate or intend to cultivate. While the estimated 6.84 mgd reportedly provided for kuleana use may be sufficient to satisfy the water needs for kalo on the 45 acres represented by the testifying kuleana users, if that same amount of water is spread over the estimated total of 81 acres in cultivation or planned to be in cultivation, it would be only 84,444 gad, substantially less than the 100,000 to 300,000 gad required to maintain cool enough temperatures to prevent crop failure.

---

[30] Tables 3 through 6 include some users of the kuleana water delivered by WWC who are not kuleana users (*see, e.g.,* Tr. 12/14/07 (Suzuki), p. 140, l. 17 to p. 141, l. 3), and omit some kuleana parcels owned by witnesses who testified about their uses (*see, e.g.,* Sakata WT 10/26/07, ¶ 2 (0.61-acre parcel, TMK No. (2) 3-2-005:013, on Waihe`e Valley South `auwai)); Kamasaki WT 9/14/07, ¶ 1 (0.7-acre parcel, TMK No. (2) 3-6-007:010, on Reservoir 1 `auwai)).

The Proposed Decision should therefore clarify that the 6.84 mgd it would conclude is reasonable for Nā Wai `Ehā kuleana users is the reasonable amount only for those kuleana users who came forward and testified about their uses and planned uses; it does not include any amount to satisfy the needs of existing kuleana users who did not testify, and does not take into account new users who may seek to exercise their appurtenant and/or traditional and customary rights in the future. If the Commission intends to make a "collective assessment" (*see* COL 218) of the reasonable needs of all Nā Wai `Ehā kuleana users, as opposed to just those who testified, the assessment would obviously have to be increased substantially. As the nearly unanimous testimony indicated, the estimated 6.84 gad that is reportedly being provided currently is not sufficient to satisfy the needs of all existing Nā Wai `Ehā kuleana users, let alone accommodate the future exercise of appurtenant and traditional and customary rights.

IV. OHA Objects To The Unfair Criticism Of Dr. Chan-Halbrendt

OHA objects to the stinging criticism that the Proposed Decision would level at Dr. Chan-Halbrendt, a University of Hawai`i economist who was jointly retained by OHA and the Community Groups to evaluate an economic analysis they expected HC&S to submit in order to demonstrate the economic impacts of restricting its access to Nā Wai `Ehā water.[31] (*See* COL 150-152.) What makes the criticism particularly unfair is that, as explained briefly below, it is based on a distortion of her conclusions. More fundamentally, however, even if the criticism were on-point, directing it so personally at a dedicated professional who volunteered her time to assist the Commission is overly harsh.

Dr. Chan-Halbrendt reviewed HC&S's initial submission, which did not include the anticipated economic analysis; it consisted only of unsubstantiated statements such as "[a]ny curtailment of irrigation water" will have "an immediate negative impact on HC&S' profitability" (Holaday Dec. 9/14/07, ¶ 11) and "[i]f HC&S were to shut down its sugar operations, there would be enormous negative impacts suffered by A&B, the State of Hawai`i and the entire community on Maui" (*id.*, ¶ 15). HC&S described the potential impacts "[i]f HC&S were to cease sugar operations" (*id.*, ¶ 17, ¶¶ 16-20), but did not provide any analysis of what level of water reduction for the West Maui Fields, if any, would cause HC&S to shut down

[31] The Hearings Officer made clear at the June 14, 2007 Prehearing Conference that offstream users would have the burden to show the economic impact if their water use was curtailed, and that they should "provide as much information as you can." (Tr. 6/14/07, p. 7, ll. 4-25.)

entirely. Dr. Chan-Halbrendt's report essentially concluded that, because HC&S had provided no economic analysis, or the data that would be required to conduct an analysis, HC&S's claims of economic impact could not be evaluated. (Exh. C-46.)

Dr. Chan-Halbrendt did not, as the Proposed Decision would conclude, insist that the Commission follow the dictates of her preferred method of economic analysis, a partial equilibrium analysis feeding into a general equilibrium analysis (COL 146, 150, 151), and she most certainly did not focus on the impact on HC&S's total sugar operations over 35,000 acres instead of focusing on the incremental decreases in surface water to the 5,000 acres of the West Maui Fields (COL 154). To the contrary, it was Dr. Chan-Halbrendt who pointed out, in response to HC&S's claims of "enormous negative impacts" to the Maui and State economies if its plantation shut down, that "the relevant issue requiring analysis is the economic impact of decreasing the supply, or increasing the cost, of water to approximately 15% of HC&S's fields" and "[a]bsent that analysis, there is no reason to suppose that cessation of all sugar cultivation would be an economically rational response." (Exh. C-46, p. 4.)

Dr. Chan-Halbrendt opined that, to assess the economic impact of "incremental reductions on use of Nā Wai `Ehā water" would require a partial equilibrium analysis, which is the generic term for an analysis "which focuses on the direct economic impact to an industry or enterprise." (Exh. C-46, p. 1.) Such an analysis could examine HC&S's profitability under several scenarios (*see* Exh. C-46, p. 1; COL 147), and **"[i]f** the predicted economic impact under a partial equilibrium analysis is such that it may affect the larger economy, as HC&S claims, analysis of those impacts would require use of a general equilibrium model[,]" which extends beyond the direct impacts on the enterprise to "also include[] the indirect and induced effects on the regional or national economy." (Exh. C-46, p. 1.)

Dr. Chan-Halbrendt's point was not that HC&S needed to do a partial equilibrium analysis feeding into a general equilibrium analysis; it was that without doing at least a partial equilibrium analysis there was no basis for believing that incremental reductions in surface water to 15% of the plantation would shut HC&S down, and if a partial equilibrium analysis did suggest that possibility, then a general equilibrium analysis would be required to determine the economic impacts of such a shutdown on the Maui and State economies. Dr. Chan-Halbrendt did not substitute her approach for the Commission's balancing test or express a legal opinion (COL 150, 151) by simply pointing out that the Commission is unable to evaluate HC&S's

claims of "enormous negative impacts" on Maui County and the State from a shutdown of HC&S (*see* Holaday Dec. 9/14/07, ¶¶ 15-20) because they are essentially hypothetical without an analysis to determine whether, and at what level, reduction of water to 15% of its acreage would cause HC&S to shut down. (*See, e.g.,* Tr. 2/22/08 (Chan-Halbrendt), p. 83, ll. 18-24.) Moreover, in the final analysis, the Proposed Decision does not evaluate those claimed impacts. (*See* COL 243.)

In addition to the unwarranted criticism of Dr. Chan-Halbrendt, OHA takes exception to the suggestion in COL 154 that any party other than HC&S could have, or should have, provided "information on incremental decreases in surface water to the 5,000 acres of West Maui Fields." The information required is solely in HC&S's control, which is why the burden on that issue lies squarely on HC&S and not on any other party.

V. OHA Takes Exception To Proposed COL 134, Which Is Unsupported By The Record Or The Law

Without any relevant findings of fact or citation to law, Proposed COL 134 would conclude, in part, that WWC "is not legally obligated to continue providing water to kuleana lands through its system[.]" What is so stunning about this Proposed COL is that WWC itself has *never disputed*, or asked to be relieved of, its obligation to provide water to kuleana users. Proposed COL 134, if adopted, would inexplicably and gratuitously nullify an obligation that WWC has recognized for generations, and would literally invite WWC to interfere with the appurtenant rights of the kuleana users by cutting off their water. As the Proposed Decision recognizes in another context,

> So if a riparian proprietor should interfere with an ancient auwai, by which other lands had been watered from time immemorial, he would be liable in damages, because this was clearly an easement for the benefit of those lands through which the ancient water course extended.

COL 202 (quoting *Peck v. Bailey,* 8 Haw. 658, 661-662 (1867)).

The fact that WWC's predecessors interfered with the ancient `auwai that watered these kuleana lands from time immemorial by dewatering the streams from which they drew water and physically altering the `auwai to suit their needs obviously does not *relieve* WWC of its obligation to provide water to kuleana users through its ditch system; rather, it *created* the obligation that WWC continues to recognize. WWC's predecessors' interference with the ancient `auwai would have rendered it liable to the kuleana users had it not provided water from

its ditch system, because those users had appurtenant rights, which are "an easement for the benefit of those lands through which the ancient water course extended." *Id.* Providing water to the kuleana users through its ditch system is part of the social contract to which WWC's predecessor was a willing party, and to which WWC is still a willing party. There is no conceivable basis for the Commission to void the social contract that has existed in Nā Wai `Ehā for generations.

Proposed COL 134 is without factual or legal support and should not be adopted.

VI. General Objections

A. OHA objects to the proposed rejection or partial rejection of all findings of fact and conclusions of law proposed by the Community Groups (in which OHA joined) that were not clearly accepted, on the grounds that each finding of fact proposed by the Community Groups is material to the issues in the case and is supported by the portion of the record cited in each proposed finding, and by the record as a whole, and each conclusion of law proposed by the Community Groups is an accurate statement of the relevant law.

B. OHA objects to the proposed conclusions of law in the Proposed Decision to the extent that they are inconsistent with, or do not include, each of the proposed conclusions of law submitted by the Community Groups (in which OHA joined) on the ground that each of the Commuty Groups' proposed conclusions of law is an accurate statement of the relevant law.

DATED: Honolulu, Hawai'i, May 11, 2009.

PAMELA W. BUNN
RONALD N.W. KIM
Attorneys for OFFICE OF HAWAIIAN AFFAIRS

Avoided Energy Costs

Hawaiian Electric Company
Hawaii Electric Light Company
Maui Electric Company

Avoided Energy Cost (> 100 kW)
Schedule "Q" Rates (< or = 100 kW)
¢/kWh

	HECO			HELCO			MAUI			LANAI			MOLOKAI		
	On Peak	Off Peak	Sched Q	On Peak	Off Peak	Sched Q	On Peak	Off Peak	Sched Q	On Peak	Off Peak	Sched Q	On Peak	Off Peak	Sched Q
5/1/2009	11.521	7.116	9.28	13.585	10.778	12.05	9.295	8.987	8.74	19.398	14.722	16.72	14.618	13.268	13.38
4/1/2009	12.099	7.136	9.61	14.216	11.353	12.65	9.701	9.380	9.14	20.004	15.176	17.25	15.602	14.134	14.31
3/1/2009	12.278	7.301	9.78	16.027	12.988	14.38	10.287	9.926	9.70	20.432	15.497	17.84	17.289	15.599	15.87
2/1/2009	12.854	7.894	10.36	16.576	13.364	14.85	10.111	9.777	9.55	21.662	16.418	18.73	19.556	17.611	18.04
1/1/2009	17.230	10.475	13.95	19.540	15.751	17.58	13.155	12.724	12.51	25.992	19.861	22.59	22.217	19.950	20.54
12/1/2008	19.045	15.208	16.97	23.034	18.609	20.77	18.544	17.133	17.45	36.871	27.809	32.28	24.942	22.330	23.11
11/1/2008	23.480	19.099	21.12	25.104	19.940	22.52	21.825	19.906	20.38	39.181	29.539	34.34	28.797	25.720	26.74
10/1/2008	25.198	20.466	22.69	26.376	20.817	23.82	23.224	21.248	21.85	40.967	30.877	35.93	31.354	27.968	29.18
9/1/2008	28.049	21.439	23.59	27.192	21.508	24.38	25.680	23.894	24.36	43.263	32.597	37.98	34.699	30.911	32.31
8/1/2008	24.347	19.959	21.99	25.939	19.909	22.99	25.986	24.512	24.80	43.436	32.727	38.13	33.718	30.045	31.38

As of August 1, 2008 the calculation of Avoided Cost is based on the methodology approved in Docket No. 7310, D&O 24086
HELCO and Maui Avoided Cost values were updated to reflect the 1-1-09 filing.

EXHIBIT A

Table 3: Waihe`e River Waters: Ditch and Kuleanas

Kuleana System	Type of Gauge	TMK and Name		Acres
Waihe`e Valley North Ditch	No Gauge	3-2-03:24	Majorie Barrett	3.08
		3-2-03:30	Lawrence Koki	0.93
		3-2-004:007	Dinnah K.L. Goo	
		3-2-004:008	Dinnah K.L. Goo	
		3-2-004:009	Dinnah K.L. Goo	
		3-2-004:010	Dinnah K.L. Goo	
		3-2-04:11	Richard Emoto/Roys Ellis	
		3-2-004:012	Roys Ellis	
		3-2-04:13	Julia & Stanley Faustino	
		3-2-04:14	Nattie Kalanui	0.56
		3-2-004:015	Michael Rodrigues	
		3-2-004:016	Michael Rodrigues	
		3-2-04:017	Nathan Kanae/Michael Rodrigues	
		3-2-002:037	William "Ka`u" Freitas	
Waihe`e Valley South Ditch	Weir	3-2-004:002	Kenneth Kahalekai	
		3-2-004:003	Kenneth Kahalekai	
		3-2-004:018	Kaniloa Kamaunu	
		3-2-004:019	Kenneth Kahalekai	
		3-2-05:11	Burt Sakata	
		3-2-05:15	Burt Sakata	
		3-2-05:16	Ronald Nakata	0.45
		3-2-05:17	Peter Fritz/Burt Sakata	
		3-2-05:20	Lorraine Anakalea	1.20
		3-2-05:21	Scott Linden	0.1
		3-2-05:22	James & Kenneth Kahalekai	
		3-2-05:23	Nalia & Kenneth Kahalekai	
		3-2-05:024	Kenneth Kahalekai	

EXHIBIT B

Table 3 (continued): Waihe`e River Waters: Ditch and Kuleanas

Kuleana System	Type of Gauge	TMK and Name		Acres
		3-2-05:025	Kenneth Kahalekai	
		3-2-05:027:	Kenneth Kahalekai	
		3-2-05:31	Thomas Texeira	0.61
		3-2-05:032	Thomas Texeira	0.06
		3-2-05:036	Kenneth Kahalekai	
		3-2-05:039	Burt Sakata	
		3-2-06:001	Charlene Kana	
		3-2-06:04	D. Furukawa/Cordell Chang	
		3-2-06:10	James Murakami	1.34
		3-2-06:18	Jacob & Charlene Kana	
		3-2-07:10	Noel Texeira	0.83
		3-2-07:16	Bryan Sarasin	
		3-2-11:06	Willie & Janet Goo/Dinnah K.L. Goo	
		3-2-11:07	James & Barbara Goo/Dinnah K.L. Goo	
		3-2-11:19	Jeffrey & Gale Goo/Dinnah K.L. Goo	
		3-2-11:65	Lawrence & Diannah Goo/Dinnah K.L. Goo	
		3-2-11:66	Joni Kawamura/Ester Goo/Dinnah K.L. Goo	
		3-2-11:67	Joni Kawamura/Willie Goo/Dinnah K.L. Goo	
Field 4 Pipe	1 ½ inch meter	3-2-07:17	Leonard Kaili/James Kaili, Jr.	0.51
		3-2-07:18	Merle Ideoka	1.10
		3-2-07:021	Donald Miyashiro/Waihe`e School	
Reservoir 27	No Gauge	3-2-18:05	Alex Buttaro	
		3-2-18:06	Heinrich Eisenburger	2.10
		3-2-18:07	Clarence & Magdalen Hoopi	
		3-2-18:09	Donalee Singer	
		3-2-18:14	William Morris	

Table 3 (continued): Waihe`e River Waters: Ditch and Kuleanas

Kuleana System	Type of Gauge	TMK and Name		Acres
		3-2-18:16	Lester Nakama	0.16
		3-2-18:17	David & Donalee Singer	
		3-2-18:44	Cook Trust	1.46
		3-2-18:45	Louis Silva/Magdalen Hoopi	
		3-2-18:46	Louis Silva/Magdalen Hoopi	
Piihana – Mill Pipe	3 inch meter	3-4-21:08	Elmer & Naone Ching	0.27
		3-4-21:09	Terumi Eya	0.26
		3-4-21:37	Robert Fujioka	0.24
		3-4-24:22	Alfred & Patricia De Mello/Alfred Santiago	
		3-4-24:27	Alson & Vera De Mello Trust/Alfred Santiago	
		3-4-25:42	Ronald Kim/Robert Kim	0.24
		3-4-33:14	Charles & Judy Dando	0.54
Piihana – Field 49 Pipe	1 ½ inch meter	3-4-31:08	Winifred L. Nakoa Cockett	
		3-4-31:09	Annie Aola	0.13
		3-4-31:10	Gaznen Elizares	0.27
		3-4-31:11	Annie Aola	0.31
Wailuku Town Ditch/Pipe	4 inch meter	3-4-04:72	Jo Ann Howard	0.22
		3-4-04:78	Val & Lianne Ogata	0.15
		3-4-07:42	Anne & Vernon J.K. Bal	

(Exh. D-7.) WWC FOF 414.

Table 4: North Waiehu Stream Waters: Ditch and Kuleanas

Kuleana System	Type of Gauge	TMK and Name		Acres
North Waiehu Pipe	no gauge	3-2-018:21	William Robinson	1.10
		3-2-18:14	Donnalee Singer	
		3-2-18:15	Donnalee Singer	
		3-2-18:17	Donnalee Singer	
		3-2-18:27	Magdalen Hoopii	
		3-2-18:31	Magdalen Hoopii	
		3-2-18:32	Magdalen Hoopii	
		3-2-18:33	Magdalen Hoopii	
		3-2-18:34	Donnalee Singer	
		3-2-18:40	Kenneth Lee	2.13

(Exh. D-7, Hoopii, Tr. 12/4/07, pp. 196-207, Sinter, Tr. 12/13/07, p. 29.) WWC FOF 658.

Table 5: ʻĪao Stream Waters: Ditch and Kuleanas

Kuleana System	Type of Gauge	TMK and Name		Acres
ʻĪao-Maniania Pipe	meter	3-3-02:17	Harold Graham	1.88
		3-3-02:18	Henry Ito's Orchid & Garden	4.38
Puuohala Pipe	meter	3-3-02:03	Valentine Haleakala	
		3-3-02:25	Henry Kailiehu	
		3-3-02:29	Gary & Evelyn Brito Trust	
Waiko Road	meter	3-5-04:14	Avery Chumbley	1.21
		3-5-04:18	Avery Chumbley	67.41
		3-5-04:57	Glenn McClean	1.14
Reservoir 10	meter	3-5-04:38	Harumi Sanamura	0.63
		3-5-04:39	Roger Yamaoka	1.78
		3-5-04:41	Robert & Claire Pinto	0.47
		3-5-04:42	Royal & Earlette Vida	1.29
		3-5-04:44	Donald Vida	1.41
		3-5-04:51	Robert Pinto	0.66
		3-5-04:56	Leslie Vida	0.92
		3-5-04:91	Leslie Jr. & Michelle Vida	0.35
		3-5-04:100	Annie Vida	0.24

(Exh. D-7; Brito, Tr. 12/7/07, pp. 29-38.) WWC FOF 544.

Table 6: Waikapū Stream Waters: Ditch and Kuleanas

Kuleana System	Type of Gauge	TMK and Name		Acres
Reservoir 1	no gauge	3-6-05:19	David Kaliponi/Alfred Santiago through Colin Kaliiponi	
		3-6-06:01	Barbara Pawn	1.30
		3-6-06:09	Clayton Suzuki Trust	
		3-6-06:13	Clayton Suzuki Trust	
		3-6-06:17	Barbara Pawn	0.4
		3-6-06:21	Mae Balmores/Nadao Makimoto	0.59
		3-6-06:22	Sakae & Bernadette Inouye	0.60
		3-6-06:24	David Kaliponi/Alfred Santiago through Colin Kaliiponi	
		3-6-06:25	Elaine Mullaney/Crystal Alboro	
		3-6-06:27	Jinsei & Patricia Miyashiro	0.71
		3-6-06:29	Elaine Mullaney/Crystal Alboro	
		3-6-06:33	Barbara Pawn	0.3
		3-6-06:42	Sharlee Dieguez	0.15

(Exh. D-7; Exh. A-194.) WWC FOF 761.

BEFORE THE COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

Iao Ground Water Management Area High-Level Source Water Use Permit Applications and Petition to Amend Interim Instream Flow Standards of Waihee, Waiehu, Iao, & Waikapu Streams Contested Case Hearing	)	Case No. CCH-MA-06-01 CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on May 11, 2009, a true and correct copy of the foregoing was served on the following parties by U.S. Mail, addressed as follows:

DAVID SCHULMEISTER, ESQ.
(dschulmeister@cades.com)
Cades Schutte, LLP
1000 Bishop St., Suite 1200
Honolulu, HI 96813

Attorney for HAWAIIAN COMMERCIAL & SUGAR COMPANY (HC&S)

PAUL R. MANCINI, ESQ.
(PRM@mrwlaw.com)
Mancini, Welch & Geiger LLP
33 Lono Avenue, Suite 470
Kahului, HI 96732

Attorney for WAILUKU WATER COMPANY LLC

D. KAPUA SPROAT, ESQ.
(ksproat@earthjustic.org)
ISAAC H. MORIWAKE, ESQ.
(imoriwake@earthjustice.org)
Earthjustice
223 S. King Street, Suite 400
Honolulu, HI 96813

Attorneys for HUI O NA WAI EHA

JON M. VAN DYKE, ESQ.
(jvandyke@hawaii.edu)
2515 Dole Street
Honolulu, HI 96822

Attorney for COUNTY OF MAUI DEPARTMENT OF WATER SUPPLY

JANE E. LOVELL, ESQ.
(jane.lovell@co.mau.hi.us)
BRIAN T. MOTO, ESQ.
Department of the Corporation Counsel
County of Maui
200 South High Street
Wailuku, HI 96793

Attorneys for COUNTY OF MAUI
DEPARTMENT OF WATER SUPPLY

DATED: Honolulu, Hawai`i, May 11, 2009.

PAMELA W. BUNN
RONALD N. W. KIM
Attorneys for OFFICE OF HAWAIIAN AFFAIRS