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COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAI'I

PETITION TO AMEND INTERIM INSTREAM FLOW STANDARDS FOR HONOPOU, HUELO (PUOLUA), HANEHOI, WAIKAMOI, ALO, WAHINEPEE, PUOHOKAMOA, HAIPUAENA, PUNALAU/KOLEA, HONOMANU, NUAAILUA, PIINAAU, PALAUHULU, 'ŌHI'A (WAIANU), WAIOKAMILO, KUALANI, WAILUANUI, WEST WAILUAIKI, EAST WAILUAIKI, KOPILIULA, PUAKAA, WAIOHUE, PAAKEA, WAIAAKA, KAPAULA, HANAWI and MAKAPIPI STREAMS	CASE NO. CCH-MA13-01 PETITIONERS' RESPONSIVE BRIEF; CERTIFICATE OF SERVICE

PETITIONERS' RESPONSIVE BRIEF

I. INTRODUCTION

Hawaiian Commercial & Sugar Company ("HC&S") and the County of Maui Department of Water Supply ("County") improperly prioritize their water needs over the explicit mandates of the Hawai`i Constitution and public trust doctrine.

As explained in Petitioners Nā Moku Aupuni O Ko`olau Hui, Lurlyn Scott, and Sanford Kekahuna's (hereinafter, collectively, "Nā Moku's") opening brief, the Hawai`i Constitution and the public trust doctrine establishes that the State's first duty is to protect fresh water resources (surface and ground), which are part of the public trust res. *See* Haw. Const. Art. XI, §7; *In Re Water Use Permit Applications,* 94 Hawai`i 97, 113, 9 P.3d 409, 425 (2000) *("Waiāhole I").*

That duty is "**the precondition** to all subsequent considerations" that could irrevocably harm or endanger the purity and flow of our waters, which are held in trust by the state for the benefit of its people. *Id.* (emphases added).

II. LEGAL FRAMEWORK

The *Waiāhole I* court clearly established that the Commission on Water Resource Management's ("the Commission's" or "CWRM's") critical role as "the primary guardian of public rights under the trust" proscribes that it shall:

> take the initiative in considering, protecting, and advancing public rights in the resource at every stage of the planning and decisionmaking process. Specifically, **the public trust compels the state duly to consider the cumulative impact of existing and proposed diversions on trust purposes** and to implement reasonable measures to mitigate this impact, including the use of alternative sources. The trust also requires planning and decisionmaking from a global, long-term perspective. In sum, **the state may compromise public rights in the resource pursuant only to a decision made with a level of openness, diligence, and foresight commensurate with the high priority these rights command** under the laws of our state.

Id. at 143, 9 P.3d at 456 (brackets and citations omitted) (emphases added). Moreover, the CWRM's public trust duties supersede those duties outlined by the Water Code or administrative rules and demand that it protect public trust uses and Native Hawaiian rights as the law commands. *See id.* at 138, 9 P.3d at 450.

Pursuant to Hawai`i Revised Statutes (HRS) §174C-71, the CWRM must "establish and administer a statewide instream use protection program." This program envisions establishing "[permanent] instream flow standards on a stream-by-stream basis whenever necessary to protect the public interest in the waters of the state," HRS §174C-71(1), interim instream flow standards ("IIFS"), *see* HRS §174C-71(2), and "an instream flow program to protect, enhance, and reestablish, where practicable, beneficial instream uses of water." HRS §174C-71(4).[1] These instream flow standards constitute the "primary mechanism by which the Commission is to discharge its duty to protect and promote the entire range of public trust purposes dependent upon instream flows." *Waiāhole I,* 94 Hawai`i at 147-48, 9 P.3d at 459-60.

The fatal flaw of HC&S and the County's analyses is that both presume HRS §174C-71(2) requires the CWRM, in establishing IIFSs, to weigh the importance of noninstream uses and instream values, including the economic impact of restricting those uses, completely

[1] *See also* HRS §174C-5(3) (1993); HRS §174C-31(i)(1) (requiring the Commission to establish, within each hydrologic unit, "an instream use and protection program for the surface watercourses in the area"); *Waiāhole I,* 94 Hawai`i at 147-48, 9 P.3d at 459-60.

divorced from the public trust values and purposes protected under the State Constitution, Water Code, and administrative rules. *See* HC&S' Opening Brief ("HC&S") at 33-37; County's Opening Brief ("County") at 6-8. The legal framework for amending IIFSs, however, refutes that assumption by affirming the primacy of protecting instream uses and the public trust res: "[A]lthough interim stream standards are merely stopgap measures, they must still protect instream values to the extent practicable. . . . Notwithstanding their temporary effect, therefore, interim standards must still provide meaningful protection of instream uses." *In the Matter of Water Use Permit Applications*, 105 Hawai`i 1, 11, 93 P.3d 643, 653 (2004) ("*Waiāhole II*") (internal quotations omitted).

As Nā Moku laid bare in its opening brief and supporting declarations, its constitutionally and statutorily protected traditional and customary practices and subsistence lifestyle are suffering under current stream conditions. Contrary to the misconception propagated by HC&S and the County, a valid IIFS will permit diversions of only those **surplus** quantities that exceed the water volume necessary to protect Nā Moku's needs as well as the resources on which it depends. This means adequate provision for taro growing, fishing, and gathering from streams, which themselves depend on annual, mauka to makai streamflow connectivity at levels sufficient to protect the resource and support a thriving biota. *See* HRS §174C-71; *see also infra* Sections III.A and D. Such provisions promote public trust purposes and must be satisfied ***before*** the weighing of instream and offstream values in the manner urged by HC&S and the County.

The Hawai`i Supreme Court has explicitly held that offstream diverters like Alexander & Baldwin ("A&B")/East Maui Irrigation ("EMI")/HC&S and the County "must still demonstrate their actual needs and, within the constraints of available knowledge, the propriety of draining water from public streams to satisfy those needs." *Waiāhole II*, 105 Hawai`i at 15-16, 93 P.3d at 657-58 (citing *Waiāhole I,* 94 Hawai`i at 162, 9 P.3d at 474). As the *Waiāhole I* Court declared: "At a very minimum, applicants must prove their own actual water needs. The Code's "reasonable-beneficial use" standard allows use only "in such a quantity as is necessary for economic and efficient utilization." 94 Hawai`i at 161, 9 P.3d at 473. Hence, any stream diverter must produce evidence that a specific volume of water is provident for its offstream use and being utilized in a manner and for a purpose that constitutes a reasonable-beneficial use.

The Code's definition of "reasonable-beneficial use" is based on the Model Water Code. *Id.* at 160, 9 P.3d at 472 (noting that the standard was intended to combine the "best features" of

"reasonable use" under riparian law and "beneficial use" under prior appropriation law). Citing to the Model Water Code, the *Waiāhole I* Court explained:

> A standard of "reasonable beneficial use" which incorporates the "best features of both reasonable use and beneficial use" would thus be a standard which required an examination of the purpose of the use, its economic value, its value to society *including consideration of possible harm to society through harm to the water body, and a balancing of any harm caused by the use against methods currently available to reduce or eliminate that harm.*
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> Frank E. Maloney, *Florida's "Reasonable Beneficial" Water Use Standard: Have East and West Met?*, 31 U. Fla. L. Rev. 253, 274 (1979) (emphasis added); *see also* Model Water Code, *supra*, §202 commentary at 179 (clarifying that, under the "consistent with the public interest" standard, **"a proposed use, otherwise valid, which would have an unreasonably harmful effect on fish or wildlife might well be rejected as being inconsistent with the express statement of public interest in [the model provision for *HRS § 174C-3(c)*]"**). We thus confirm and emphasize that the "reasonable-beneficial use" standard and the related criterion of "consistent with the public interest" demand examination of the proposed use not only standing alone, but also in relation to other public and private uses and the particular water source in question. Hence, permit applicants requesting water diverted from streams must duly take into account the public interest in instream flows. *Cf. Shokal v. Dunn*, 109 Idaho 330, 707 P.2d 441, 450 (Idaho 1985) ("The burden of proof in all cases as to where the public interest lies . . . rests with the applicant . . . .").

Id. at 160-61, 9 P.3d at 472-73 (emphasis added).

As the reasonable-beneficial use standard makes plain, HC&S and the County cannot ignore "consideration of possible harm to society through harm to the water body," *i.e.*, to the 27 East Maui streams at issue and the coastal ecosystem supported thereby. *Id.* In addition, for the CWRM to properly "balanc[e] any harm caused by the [offstream] use against methods currently available to reduce or eliminate that harm," HC&S and the County must identify the alternatives to depleting East Maui resources, and the reason each alternative is practicable or not, in light of the value of the use and any resulting harm to the resource and the public interest.[2] *Id.; see also Waiāhole II,* 105 Hawai`i at 17, 93 P.3d at 659. A proper alternative-analysis determines "whether the alternative is available and capable of being utilized after considering cost,

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[2] As the *Waiāhole II* Court concluded:

> [I]nasmuch as the Water Commission entered no FOFs or COLs as to whether Campbell Estate satisfied its burden of establishing that no practicable alternatives existed, we remand the matter for further proceedings relating thereto. If the Water Commission enters findings that Campbell Estate satisfied its burden, the Water Commission must clearly articulate the alternatives presented by Campbell Estate and its analysis of those alternatives in determining whether each alternative is practicable, together with proper citations to the record.
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> 105 Hawai`i at 17, 93 P.3d at 659.

technology, and logistics in light of the overall water planning process." *Waiāhole II,* 105 Hawai`i at 19, 93 P.3d at 661. The objective here is "to avoid or minimize the impact on existing uses of preserving, enhancing, or restoring instream values [by] . . . consider[ing] physical solutions, including water exchanges, modifications of project operations, changes in points of diversion, changes in time and rate of diversion, uses of water from alternative sources, or any other solution[.]" *See* HRS §174C-71(1)(E).

HC&S largely ignores this framework by reporting only on how gains and reductions in its East Maui surface water supply impacts its bottom-line, with little regard for the diversions' consequent resource and societal impacts and the available methods capable of reducing or eliminating harmful impacts. *See infra* Section III.B.1. HC&S' proffered "minimum need" is an artifice improperly inflated to perpetuate the status quo of subsidies and guaranteed access to cheap water no matter the public values at stake. In addition, its shallow alternatives-analysis begs more questions than it answers, with inconsistencies intended to confound and obscure its failure to provide any meaningful data or analyses. *See infra* Section III.B.2. The County evaluates, albeit incompletely, the costs to employ alternative sources of water, but largely ignores the harm that arises from dewatering the 27 streams and foisted upon East Maui community residents and their cultural practices. In doing so, the County turns a blind eye to how its present and proposed uses harm the larger public interest. *See infra* Section III.C. Moreover, both HC&S and the County fail to supply evidence of a proper cumulative impacts assessment of EMI's diversion. *See infra* Section III.D.

III. ARGUMENT

A. HC&S's Support for CWRM's Regional and Seasonal Restoration Approaches is Unfounded.

HC&S' contention that the CWRM fulfilled its trust duties in setting the interim IFS in 2010 by "taking a regional approach to flow restoration and making seasonal adjustments to the IIFS," HC&S at 50, is untenable. The public trust doctrine, which protects the resource itself as well as the Native Hawaiian traditional and customary practices which rely on the resource, prescribes a higher level of scrutiny for private commercial uses and imposes a burden on those seeking uses which impact public trust resources to **justify** their uses in light of the purposes protected by the trust. *See Waiāhole I*, 94 Hawai`i at 142, 160, 9 P.3d at 454, 472; *In re Water Use Permit Application Filed by Kukui*, 116 Hawai`i 481, 508, 174 P.3d 320, 347 (2007); *In Re Wai`ola O Moloka`i Inc.*, 103 Hawai`i 401, 429, 83 P.3d 664, 692 (2004).

HC&S relies heavily on the SWCA White Paper authored by John Ford, Steven Carothers, and Robert A. Kinzie (June 2009) for its argument that the CWRM's approach to setting IIFS levels in 2008 and 2010, *i.e.*, on a regional and seasonal basis, was appropriate and should not be disturbed. *See* Exhibit C-66. In essence, the SCWA concludes that native stream species are not at risk of "endangerment and/or extinction" and that diversions in East Maui "do not preclude suitable habitat conditions for sustaining populations of the amphidromous species." *Id.* at 27. The study acknowledges, however, that "[t]here is ample anecdotal evidence to indicate that decades ago many of [the nine amphidromous] species were more abundant than they are today." *Id.* at 2. It also notes that "USGS was not tasked with an evaluation of the current status of the target species within the stream **so this important information is still unknown**." *Id.* at 4 (emphasis added). Based on information now available, however, it is clear that the CWRM cannot disregard a stream-by-stream approach to restoration in favor of a regional approach without making necessary findings, and that the seasonal approach should be rejected.

1. The CWRM's Regional Approach to Restoration Was Premature and Failed to Consider Water Necessary to Restore all 27 Streams.

Throughout the IIFS proceedings, beginning in 2001 and up through the 2010 CWRM decision, the CWRM, the Division of Aquatic Resources ("DAR"), and HC&S presumed that restoration of the 27 subject streams to even their minimum habitat levels (H90) would constitute too great of an impact to *offstream* users to warrant even an inquiry into the specific water requirements. Contrary to those presumptions, the Water Code does not expressly permit this type of regional approach. Even if it did, at the very minimum, CWRM must know how much water is necessary to restore all subject streams to their minimum flows **prior to** adopting a regional approach to stream restoration. It must follow the science supporting the protection and restoration of the public trust resource; it must not elevate private commercial and financial reasons above this priority.

HRS §174C-71(2)(F) provides that "[i]nterim instream flow standards **may be adopted on a stream-by-stream basis or may consist of a general instream flow standard applicable to <u>all</u> streams within a specified area**." (Emphasis added). There is no *regional* approach in the Code. The CWRM's adoption of a rule setting all IIFS levels at their status quo as of October 8, 1988 is an example of a *general* instream flow standard. In this instance, a general standard could be to set the IIFS levels for all streams at minimum habitat levels (Hmin) or 64 percent of base flows and 90 percent habitat restoration as proposed in 2010. *See* Nā Moku Opening Brief

at 16, n. 19. The CWRM's "regional" approach, supported by HC&S, is not at all a "general instream flow standard applicable to all streams"; it is simply the handpicking of select streams for restoration in order to minimize impacts on the *diverter* -- an approach not provided for by the Water Code nor permitted under the public trust doctrine.

Even assuming the Code authorized the practice of cherry picking streams to restore, the agency scientists concede that maximum restoration, *i.e.*, the return of all water to East Maui streams, would be the best situation for stream species. In 2009, DAR admitted that the return of 100% of the diverted water "would be the most desirable IIFS for protection and management of native stream animals." Letter from D. Polhemus to CWRM (12/15/09) at 1. Glenn Higashi of DAR reiterates this point in his current testimony, stating "[i]f streamflow could be fully restored the maximum benefit would be realized." Testimony of Glenn Robert Higashi ¶14. Higashi also reiterates the agency's position as to the *minimum* flows necessary, stating that, "DAR is very adamant about the Hmin flow rates, which should be 64-percent of natural median base flow and is necessary to provide enough water in the stream for the animals." Higashi Testimony ¶24.

HC&S' Ford study states that, "Gingerich and Wolff (2005) found that aquatic habitat values in East Maui streams today average 58 to 60 percent of natural, undiverted conditions. What this essentially means is that the withdrawal system has been taking, on average, for well over a century, approximately **40 percent** of the base stream flow." Exhibit C-66 at 4. Accepting Ford's conclusions as true, for argument sake, would mean that 60 percent of the streams' base flow remains in the streams under diverted conditions. Using DAR's recommendations, themselves based on USGS data that minimum habitat levels require 64 percent of base flow in the stream, in conjunction with Ford's analysis, would mean that **to restore East Maui streams to Hmin levels would require adding only 4 percent more water to present levels.**

Taking into consideration that restoration of the streams may differ based on their varying reaches and natural characteristics, it still follows that restoration of all 27 streams on a stream-by-stream basis to minimum habitat levels may require far less water than anticipated or presumed. The CWRM must consider the range of restoration amounts -- restoration of all streams to full baseflow, or some streams fully (for taro cultivation) and some streams minimally (for habitat), or all streams to Hmin levels -- before accepting the presumption that some combination of full and minimal restoration cannot be achieved or even that minimum restoration in all streams is impossible. Indeed, based on Nā Moku's estimates, the amount required to restore all 27 streams to DAR's Hmin levels may require less water than the amount

EMI/HC&S' system loses each year. *See* Nā Moku Opening Brief at 13, n. 16; Written Testimony of Stephen B. Gingerich, attachment at 1-3.[3]

2. The Seasonal Approach to Restoration Must be Rejected

HC&S contends that, in addition to the regional approach, the seasonal restoration approach is reasonable and should be continued. The DAR scientists are clear in recommending that the seasonal approach should be rejected as a restoration measure because the science has repudiated it as one.

The seasonal approach to restoration was first proposed in 2010 by the CWRM staff. CWRM Submittal (5/25/10) at 11. CWRM staff compared the annual and seasonal approaches and determined that the annual approach "would result in greater stream habitat restoration for building a healthy stream animal population, improving overall stream health, and **increasing opportunities for traditional gathering.**" CWRM Submittal (5/15/10) at 16-17 (emphasis added). There is simply no disputing what DAR's scientific data now bears out: after an evaluation of the seasonal approach implemented by the CWRM, the DAR now concludes that, "the application of very low summer flows is **not supported as a suitable instream flow approach for restoration of native stream animals**," Higashi Testimony ¶31 (emphasis added). To be clear, DAR has now changed its initial recommendation from 2010 to concur with CWRM that "there should be a **constant annual flow (equal to the winter flow standard) year round to make a difference in habitat, connectivity and biota.**" *Id.* at ¶32 (emphasis added). DAR further recommends monitoring releases over a longer period of time "to document whether or not improvement to the animal population occurs." *Id.* The present lack of long-term information or certainty that restored flows benefit stream species and habitat, should not be used to justify lower restoration amounts. Rather, any information gaps call for the application of the precautionary principle to ensure the protection of public trust resources. *See Waiahole I*, 94 Hawai`i at 154, 9 P.3d at 466 ("Where scientific evidence is preliminary and not yet conclusive regarding the management of freshwater resources...it is prudent to adopt "precautionary principles" in protecting the resource.").

In its support for both the regional and seasonal approaches, HC&S fails to account for the diversions' cumulative impact on Nā Moku's ability to engage in traditional and customary gathering practices in and around the subject streams and throughout the Honopou, Wailuanui,

[3] Nā Moku estimated the amount to restore the subject streams to 64% natural median flow levels using the values provided for in the USGS summary table and compared them to the values for the median base flow remaining in the stream under diverted conditions.

and Ke'anae ahupua`a. *See infra* Section III.D. In other words, although the nine subject species may have healthy metapopulations, those populations may not be adequate to support ongoing and future gathering practices. The CWRM must adopt an approach that inverts its prior priorities in order to consider first the impacts of the continued diversions to instream and public trust uses before accommodating offstream diverters.

B. HC&S' Actual Water Needs Are Unclear.

Because CWRM must issue "reasonably clear findings" on the actual water needs of stream diverters in its findings of fact, *Waiāhole I*, 94 Hawai`i at 157, 9 P.3d at 469, it is imperative for the offstream diverter to make clear what its actual water needs are -- at a very minimum, the discrete quantity necessary for its offstream use -- and why it cannot do with less. *See id.* at 161, 9 P.3d at 473.

Here, HC&S mischaracterizes its own data and misleads the Commission. First, it defines the discrete quantity necessary to meet its minimum needs not in terms of the "amount of water required just to keep the cane plant alive" but "the amount of water needed to sustain a viable sugar plantation at HC&S." HC&S at 13. That is the wrong yardstick. HC&S' own data contradicts itself and demonstrates that while its yields may depend on the amount of water applied to its sugarcane, the volatile fluctuations in sugar prices are the be-all and end-all of its economic vitality. Second, HC&S provides incomplete water needs data; it does not request a specific quantity of water necessary to sustain its sugar crop. Third, by improperly disregarding reasonable alternatives to exploiting East Maui surface water, HC&S has failed to establish that the water it seeks constitutes a reasonable-beneficial use of the trust resource. *See Waiāhole I*, 94 Hawai`i at 160-61, 9 P.3d at 472-73; *Waiāhole II,* 105 Hawai`i at 17, 93 P.3d at 659.

1. Economic Factors Cloud HC&S Alleged Actual Water Needs.

HC&S' attempt to define its "minimum need" as enough water to ensure economic viability involves a certain amount of hubris. First, HC&S incorrectly assumes that it is the Commission's job to ensure that HC&S remains competitive in the business world even if harm is visited on the public trust res and protected instream uses. However, the *Waiāhole II* Court expressly rejected imposing a water user's financial situation on the CWRM, which "is not obliged to ensure that any particular user enjoy a subsidy or guaranteed access to less expensive water sources when alternatives are available and public values are at stake." *Id.* at 19, 93 P.3d at 661. The wisdom in relieving the Commission of that burden reveals itself when diverters like HC&S attempt to muddle the Water Code's reasonable-beneficial standard with economic forces

that have nothing to do with water and which operate beyond anyone's control. HC&S at 22; *see infra* Section III.B.1. Second, HC&S fails to address its "**actual needs** and, within the constraints of available knowledge, the propriety of draining water from public streams to satisfy those needs." *Waiāhole II*, 105 Hawai`i at 15-16, 93 P.3d at 657-58 (emphasis added).

HC&S readily admits that its profit-loss performance is intrinsically linked to sugar prices, which have been "trending downward since 2012," *id.* at 21, as well as improved agronomic practices. *Id.* at 20. HC&S explains that their operating loss of $3.8 million in the first three quarters of 2014 (and a decrease in operating profit of $18.1 million compared to the first nine months of 2013) were "primarily due to lower sugar prices and increased cost per ton." *Id.* at 19. HC&S also admittedly "benefited from a highly providential spike in raw sugar prices extending from the last quarter of 2009 through the first quarter of 2012." *Id.* at 20-21. In fact, "[d]ue to the **increase in sugar revenues from higher** total production and **unit pricing**, coupled with the lowering of unit costs attributable to higher production, the agribusiness segment of A&B experienced a return to profitability from 2010 to 2012." *Id.* at 21 (emphases added). Thus, HC&S enjoyed **increased profitability and productivity in spite of reductions** to their surface water supplies resulting from IIFS amendments in the preceding years. *See id.* at 18-19. Relatedly, improved agronomic practices implemented by HC&S "to cope with the reduced water deliveries resulting from the amended IIFS determinations" improved yields in 2010 and 2011. *Id.* at 20. In other words, HC&S employed greater efficiencies to grow more with less water since the 2008 IIFS amendments. *See infra* at 14.

Ultimately, "[p]roduction improvements accounted for about half of the increase in revenues" in recent years "with sugar prices accounting for the other half." *Id.* CWRM's IIFS decisions neither impeded nor aided the financial windfall that resulted from the spike in sugar prices between 2009 and 2012; the global markets were responsible for that good fortune. But it does appear that the CWRM's IIFS determinations led HC&S to optimize its "economic and efficient utilization" of a reduced surface water supply, which fostered improved agronomic practices and increased profit margins, all the while supporting public trust purposes. Ironically, HC&S' own data teaches us that the resulting impacts of less surface water are not as cut and dry or as financially catastrophic as HC&S claims.

HC&S' equating of minimum need with economic viability is similarly suspect given: (1) its concession as to "the slim profit margins that can be made producing commodity sugar" and its admitted "considerable challenge of transitioning away from its heavy reliance upon the

commodity sugar business in which it remains subject to fluctuations in global sugar prices **over which it has no control**," *id.* at 22 (emphasis added); *see also id.* at 40 ("One of the strategies HC&S has employed has been to diversify by producing specialty food-grade raw sugars, which yield higher margins than commodity sugar[and] exploring further expansion of its energy related operations."); *see also* Exhibit C-45, Appendix IV; as well as (2) its inclusion of "system losses that occur in the transportation and storage of the East Maui water delivered into HC&S' irrigation ditches and 36 reservoirs" as part of its calculation of needs. HC&S at 14-15. It is contrary to the public trust principles for the Commission to accommodate HC&S' surface water needs, at the expense of East Maui water resources serving Nā Moku and other East Maui residents, in order to keep HC&S afloat in an industry in which it has lost its competitive edge, while failing to account for its unnecessary and irresponsible system losses.[4] In fact, such actions discourage HC&S from implementing measures to improve its system inefficiencies and agronomic practices.

2. HC&S Provides Insufficient Data To Justify Its Actual Water Needs.

HC&S uses smoke and mirrors to advocate for the water it *wants* rather than properly providing an evidentiary basis for its surface water *needs*. It provides a sweeping generalization of its "minimum needs" as "the amount of water needed to sustain a viable sugar plantation at HC&S," HC&S at 13, claiming that "the greater the amount of water applied, the higher the yield." *See id.* HC&S further qualifies that, although "there is a certain amount of water required just to keep the cane plant alive, water application at that rate would provide such low yields that HC&S could not remain economically viable." *Id.* at 13-14. HC&S' own data on the impacts that IIFS water reductions have had on its business operations (*i.e.*, the genesis of improved agribusiness practices and water use efficiencies) belies its financial doomsday narrative. Moreover, the CWRM's obligation is to protect the public trust; it is not the

[4] As the *Nā Wai `Ehā* Court recognized, "the water code indicates that a diverter's system losses **may factor into the Commission's estimations of noninstream uses** when it sets an IIFS." 128 Hawai`i at 257, 287 P.3d at 158 (holding that the Commission did not err in considering losses) (emphasis added). The Court further noted that "[t]he value of diverting water, only to lose the water due to avoidable or unreasonable circumstances, is unlikely to outweigh the value of retaining the water for instream uses." *Id* (emphasis added). In other words, including system losses in an IIFS analysis is not meant to reward a diverter where such losses could be avoided.

Given the explicit mandates of the public trust doctrine and the demonstrated immediate needs of Nā Moku and the East Maui community, the CWRM should not consider system losses as part of HC&S' actual water **need**, *see Waiāhole II,* 105 Hawai`i at 15-16, 93 P.3d at 657-58, and it is disingenuous for HC&S to characterize it as such. The public trust doctrine prescribes a higher level of scrutiny for private commercial uses and imposes a burden on those seeking uses which impact public trust resources and instream values to **justify** their uses in light of the purposes protected by the trust. *See Waiāhole I*, 94 Hawai`i at 142, 160, 9 P.3d at 454, 472; *In re Kukui*, 116 Hawai`i at 508, 174 P.3d at 347; *In Re Wai`ola*, 103 Hawai`i at 429, 83 P.3d at 692. No such justification is provided here. Thus, weighing HC&S' system losses with the importance of instream values offends the public trust.

Commission's kuleana to ensure that HC&S makes a profit, especially when other factors -- most significantly, the sale price of sugar -- affect the profit margin more than the crop's water needs do. It is precisely the amount of water required to grow the sugar crop, and not the promise of a subsidy or guaranteed access to cheap water, that determines the propriety of draining water from East Maui streams when alternatives or mitigation is available and public values are at stake. *See Waiāhole II,* 105 Hawai`i at 19, 93 P.3d at 661.

Here, although HC&S describes a general calculation of water needs, *see* Decl. of Rick W. Volner ("Volner Decl.") ¶¶ 58-60; Exhibit C-71, Appendix G; Exhibit C-73; Exhibit C-74,[5] it admits that "[r]ainfall data is not separately included in the calculation of water availability because of the complexity in translating rainfall data into the amount of water that becomes physically available for plant use." HC&S at 15; *see Nā Wai `Ehā*, 128 Hawai`i at 254, 287 P.3d at 155. Significantly, aside from its inclusion of Exhibit C-73 (regarding HC&S equation to determine daily evapotranspiration) and Exhibit C-74 (table entitled "Monthly Water Needs and Availability" which "utilizes long-term data sets to develop historical averages, by month, for both demand and supply," HC&S at 14), HC&S does not provide the requisite data (*e.g.*, average daily evapotranspiration values or water model application specific to these facts) to compute an optimal irrigation requirement. Such a computation would be based not on world sugar prices or the certainty of a sugar subsidy, but on actual field conditions (*e.g.*, cultivated vs. uncultivated fields), rainfall data, evapotranspiration or pan evaporation data, soil data, and the like to determine the amount of water required to grow the sugar crop. *See Nā Wai `Ehā*, 128 Hawai`i at 254-256, 287 P.3d at 155-57 (upholding the CWRM's scientific considerations in setting the IIFS and criticizing the CWRM for including uncultivated fields in its calculations). Instead, HC&S simply looks to the CWRM's IIFS values of 2008 and 2010 to meet its indeterminate water needs and urges that all three values should be left undisturbed. *See* HC&S at 1, 42-49.

HC&S also fails to provide enough specific data to know whether the water used or needed for each field under the current IIFS is in fact a reasonable-beneficial use of such water.

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[5] According to HC&S, its water needs

> were calculated for each month of the year "starting with the average evapotranspiration needs of the plant during that month (as determined by measurements from 12 meteorological stations throughout the 30,000 acres irrigated with EMI ditch water, which provide real time data). Included in the calculation of needs is water needed to account for effective application of water through the drip system and other irrigation practices, such as the flushing of salts and other minerals from the soil, system losses that occur in the transportation of the East Maui Water delivered into HC&S' irrigation ditches and 36 HC&S reservoirs, and water needed for milling and power plant operations.

HC&S at 14-15; Volner Decl. ¶ 58-60; Exhibit C-71, Appendix G at 1-2. *See also infra* Section III.B.

*See Nā Wai `Ehā*, 128 Hawai`i at 255-56, 287 P.3d at 156-57. More specifically, it does not identify which fields are in production and which fields lie fallow during the year to accurately compute each field's water needs. All that can be gleaned from HC&S' other evidence, which focuses on available water sources and HC&S' historic use, is that the Commission is without enough information to assess HC&S' *actual needs* and to determine whether those needs and their resulting harm on East Maui's public trust resources and instream values nonetheless constitutes a reasonable-beneficial use.

For example, Exhibit C-35, an HC&S field map color coded to illustrate the various water sources *available* to each field, says nothing about why 14 of the 15 brackish water wells available to irrigate 17,200 of HC&S' 30,000 acres are not being used in lieu of East Maui surface water. The HC&S field map depicts in blue and green "the approximately 30,000 acres of the plantation that can be serviced by surface water from the EMI ditch system but not from West Maui." Declaration of Garret Hew ("Hew Decl.") ¶25. According to HC&S, of the 30,000 acres, 12,784.6 acres[6] cannot be irrigated using brackish water wells and reportedly[7] relies solely on EMI ditch water. *See* Exhibit C-71 at Appendix D-2; Hew Decl. ¶26. That leaves about 17,200 acres which can be served by an alternative water source -- specifically 14 of HC&S' 15 brackish water wells. *See id.* However, it is unclear how many of the 17,200 acres are presently in cultivation and serviced by EMI surface water or, frankly, whether surface water irrigation and its consequent impacts on the public trust res and instream values can be avoided or minimized by using the 14 brackish water wells instead -- alternative considerations which HC&S neglected. *See Waiāhole II,* 105 Hawai`i at 19, 93 P.3d at 661.

Exhibits C-36 through C-50 illustrate the service area of HC&S' 15 brackish water wells, most of which are located within the 17,200 acres which can be served by two sources: the EMI ditch system or wells.[8] However, HC&S leaves ambiguous exactly how often and to what extent these wells may be utilized exclusively or to complement EMI ditch system irrigation. HC&S' uncertain reliance on well water alternatives is complicated by inconsistencies in A&B's water reporting. According to A&B's own Form 10(k) report to shareholders in 2007, which was further corroborated by Lee Jakeway's 2005 sworn testimony, EMI surface water is the

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[6] Nā Moku reserves its objection to the accuracy of the acreage HC&S reportedly claims can only be irrigated with surface water provided by EMI. As Maui Tomorrow's economist Dick Mayer points out, HC&S claimed that only 5,000 acres of its plantation were being irrigated with EMI surface water in its Form 10(k) report to shareholders in 2007. *See* Decl. of Richard "Dick" Mayer ("Mayer Decl.") ¶¶24-25.

[7] Exhibit C-49, however, depicts the service area of Well 18, which appears to cover a substantial portion of this nearly 12,800 acres of supposed "EMI ditch system only" area. *Compare* Exhibit C-49 *with* Exhibit C-35.

[8] Well 7 only partially services this area. *Compare* Exhibit C-41 *with* Exhibit C-35.

exclusive source of irrigation for only 5,000 acres of its 30,000-acre plantation. Exhibit A-153 ¶3; *see also* Mayer Decl. ¶¶24-25; Exhibit E-32 (Instream Flow Standard Assessment Report). If true, then groundwater from HC&S' wells could potentially irrigate an additional 12,000 acres, thereby avoiding the diversion of an amount of stream water equivalent to meet that demand and its consequent impact on instream values.

HC&S' water **use** evidence[9] is irrelevant and provides no insight on the amount of water its sugar crop actually **needs** to grow. Water *use* is not necessarily the same as water *need*, which is the minimum requirement to satisfy the reasonable-beneficial standard and to answer the standard's single most important inquiry: what is the quantity necessary for economic and efficient utilization of the diverted resource otherwise reserved for public trust purposes? *See Waiāhole I,* 94 Hawai`i at 161-62, 9 P.3d at 473-74; *Waiāhole II*, 105 Hawai`i at 15-16, 93 P.3d at 657-58; HRS § 174C-3. The Commission cannot assess the propriety of draining water from public streams to satisfy an unknown. *See Waiāhole II*, 105 Hawai`i at 15-16, 93 P.3d at 657-58.

What is known is that back in 2008, the CWRM Staff determined HC&S' optimal irrigation requirement to be between 1,400 to 6,000 gallons per acre per day ("gad"). CWRM Staff Submittal (9/24/08) at 9.[10] At that time, HC&S admitted using 5,064 gad for winter months and 10,128 gad for summer months, thereby exceeding the values deemed "necessary for economic and efficient utilization"[11] by more than a factor of 3 in the winter months (1,400 vs. 5,064 gad) and by nearly 69% (6,000 vs. 10,128 gad) in the summer months. *See id.* at 8-9. HC&S now attempts to minimize its improvident use of the resource by discrediting the CWRM Staff's earlier finding of actual need and rehashing the same fiction: that values formulated primarily to keep its sugar crop alive are of insufficient quantity to keep its agribusiness economically viable and, therefore, too low to capture its "minimum need." *See* HC&S at 13-14.

Amongst the panoply of general information submitted for consideration, HC&S fails to meet its burden and supply the Commission with the following key facts:

(1) EMI's average delivery of water to HC&S in mgd units[12];

(2) the number of acres in cultivation each year since 1986[13];

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[9] HC&S' Exhibit C-32 provides a summary of **total** monthly water **use** from December 2007 through August 2014. Exhibit C-34 depicts a summary of total monthly and annual EMI ditch deliveries from 1925 through August 2014.

[10] CWRM Staff employed the Irrigation Water Requirement Estimation Decision Support System (IWREDSS) model to calculate HC&S' optimal irrigation requirement.

[11] *See* HRS § 174C-3; *Waiāhole I,* 94 Hawai`i at 161, 9 P.3d at 473.

[12] At various times, HC&S has reported average delivery values that appear to be inconsistent and self-serving. Hew Decl. ¶30 (reporting an average delivery of 165 mgd historically and a reduction in the average delivery to 126 mgd between 2004 through 2013 without supporting data).

(3) of the acres identified in (2), which specific fields are in cultivation and which fields lie fallow during any period for each year since 1986;

(4) the per acre yield for each field identified in (3) for each year since 1986;

(5) the amount of water applied to each field identified in (3) for each year since 1986;

(6) the sources of irrigation water (*i.e.*, surface, well, etc.) available to irrigate each of the fields identified in (3) and the corresponding amount of water which could be made available from each source; and

(7) the cost to supply water from the non-surface water sources identified in (6) to each field identified in (3).

Without such information, the Commission cannot determine the optimal irrigation requirement or the specific amount of water needed per acre to achieve maximum yields on acreage actually in use. The lack of pertinent data likewise prevents the Commission from assessing the practicability of using alternative water sources. *See Nā Wai `Ehā*, 128 Hawai`i at 254, 287 P.3d at 155. The Commission must possess such data to consider and analyze HC&S' actual water needs "with a level of openness, diligence, and foresight required when authorizing the diversion of our public trust res." *Id.* at 256, 287 P.3d at 157 (internal quotations omitted). By failing to provide this information, however, HC&S removed the Commission's ability to assess whether HC&S' noninstream use is "reasonable-beneficial" -- a precondition for authorizing continued diversions. Indeed, "a lack of information from the applicant is exactly the reason an agency is empowered to deny a proposed use of a public trust resource." *Kauai Springs, Inc. v. Planning Comm'n of the Cty of Kaua`i,* 133 Hawai`i 141, 174, 324 P.3d 951, 984 (2014).

3. HC&S' Alleged Water "Needs" Disregards Alternative Water Sources.

As discussed earlier, to support any offstream use of the surface water at issue, the Commission must enter findings, that clearly and explicitly demonstrate that HC&S satisfied its burden, by articulating the alternatives presented and its basis for determining whether each alternative is practicable.[14] *See Waiāhole II,* 105 Hawai`i at 17, 93 P.3d at 659; *see also Nā Wai*

[13] On June 30, 1986 is the expiration date of the Honomanu license, the most recent lease term of all of A&B/EMI's East Maui license areas. *See* Hew Decl. ¶9; Exhibit C-6 at 6.

[14] As the *Waiāhole II* Court concluded:

*`Ehā,* 128 Hawai`i at 262, 287 P.3d at 163. As also explained *supra*, this analysis must precede any ultimate balancing of interests the CWRM must perform to allocate water between instream and offstream uses.

In this instance, both the County and HC&S have suggested three types of alternative water sources -- *i.e.*, enhanced surface water storage (dams and reservoirs), groundwater wells, and conservation (or reduction of system losses). HC&S must establish that these alternative water sources are not available and capable of being utilized. This showing also requires HC&S to account for the unidentified amounts of excessive water used on its plantation and for any unexplained system losses, including losses stemming from EMI's water collection system.[15] Thus, the difference between the amount of water diverted and captured by EMI's ditch system and the amount of water HC&S actually needs, including unreasonable system losses, could serve as an alternative to the amount of water presently being diverted.[16]

As the Hawai`i Supreme Court has made abundantly clear, HC&S has the burden to establish that no practicable alternatives exist; "besides advocating the social and economic utility of their proposed uses, [would-be diverters] must also demonstrate the absence of practicable mitigating measures, including the use of alternative water sources." *Waiāhole II*, 105 Hawai`i at 15, 93 P.3d at 658 (noting that "such a 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."). In turn, the CWRM has the complementary obligation to enter findings that HC&S met its burden by "clearly articulat[ing] the alternatives presented" as well as "its analysis of those alternatives in determining whether each alternative is practicable." *Id.* at 17, 93 P.3d at 659.

> [I]nasmuch as the Water Commission entered no FOFs or COLs as to whether Campbell Estate satisfied its burden of establishing that no practicable alternatives existed, we remand the matter for further proceedings relating thereto. If the Water Commission enters findings that Campbell Estate satisfied its burden, the Water Commission must clearly articulate the alternatives presented by Campbell Estate and its analysis of those alternatives in determining whether each alternative is practicable, together with proper citations to the record.

105 Hawai`i at 17, 93 P.3d at 659.

[15] In response to the CWRM's 2010 request for the amount of water lost from the EMI System due to system inefficiencies, HC&S was "unable to identify a source citing typical standards for water loss in open ditch irrigation systems," Exhibit C-71, Appendix B at 1, and claimed would be too costly to properly measure the volume of water it loses. *Id.* at 1-2. Apparently, HC&S' best estimate of its own system losses was based on a figure related to *municipal water systems*, "closed pipe systems[that] typically experience between 10-15% of unaccounted water loss." *Id.* at 1.

[16] The County's existing uses are subject to this same limitation. However, as discussed in more detail *infra*, the County has an additional hurdle to overcome -- to provide evidence that ***future*** water provisions for the over 1,800 pending water meter requests in Upcountry Maui must come from diverted East Maui stream water.

Despite the obvious alternatives to diverting East Maui water, HC&S has not yet identified these water sources with the kind of specificity required to examine the practicability of each water source. One notable omission concerns the economics and efficiencies of the water diverted for plant operations and for hydropower generation. HC&S only vaguely references these uses, never once disclosing how these amounts could be reduced to mitigate harm to East Maui resources and instream values. Volner Decl. ¶58. Without HC&S' thorough assessment of each alternative, the CWRM cannot make a decision displaying "a level of openness, diligence, and foresight commensurate with the high priority these rights command under the laws of our state." *Nā Wai `Eha*, 128 Hawai`i at 262, 287 P.3d at 163 (citing *Wai`ola*, 103 Hawai`i at 422, 83 P.3d at 685). But the Commission cannot simply bury its head in the sand, or refuse to act, or worse -- facilitate the depletion of the resource. Indeed, "[w]hen such critical information is missing, the CWRM must 'take the initiative' to obtain the information it needs." *Id.* (concluding that (1) the Commission erred in adopting HC&S' testimony without any assessment of the evidence that contradicted HC&S' arguments and, (2) on remand, it must revisit its analysis of Well No. 7 as an alternative source to diverting Nā Wai `Eha water). Thus, it is not only in the CWRM's best interest to hold HC&S to its burden, but it is also the Commission's kuleana under Hawai`i law to ensure that HC&S does not shirk its responsibility to demonstrate the absence of alternative water sources.

C. The County's Offstream Uses Must Yield To Public Trust Purposes Mandated By The State Constitution And Water Code.

1. The County Overstates the Uses Protected Under the Public Trust.

Nā Moku does not dispute that the State recognizes "domestic water use as a purpose of the state water resources trust" to include individual and household uses "such as drinking, bathing, heating, cooking, noncommercial gardening and sanitation." *Id.* at 7-8; *see also Waiāhole I,* 94 Hawai`i at 137, 9 P.3d at 449; HRS §174C-2. Nor does Nā Moku dispute that the Water Code requires "adequate provision" for "waters of the State for municipal uses [and] public water supply." HRS §174C-3(c)[17]; *see* County at 7. The County, however, improperly

[17] HRS §174C-3(c) provides, in part:

> The state water code shall be liberally interpreted to obtain maximum beneficial use of the waters of the State for purposes such as domestic uses, aquaculture uses, irrigation and other agricultural uses, power development, and commercial and industrial uses. However, adequate provision shall be made for the protection of traditional and customary Hawaiian rights, the protection and procreation of fish and wildlife, the maintenance of proper ecological balance and scenic beauty, and the preservation and enhancement of

expands the reach of the public trust by erroneously asserting, without qualification, that "the CWRM must accommodate" its noninstream **municipal uses** because they are "consistent with public trust responsibilities and meet the reasonable and beneficial requirements of the State Water Code." *See id.* at 9.

The County should not be allowed to improperly bootstrap statutorily-recognized "municipal uses" to the discrete category of "domestic uses" which enjoy constitutional protections distinctly reserved for public trust purposes. The County misstates and fundamentally alters well-settled law by erroneously characterizing its municipal offstream diversions (including the water EMI diverts and sells to the County) as a "public trust use or purpose." Only the State Water Code, not the public trust doctrine, expressly delineates "adequate provision" for "the preservation and enhancement of waters of the State for municipal uses" specifically. *Waiāhole I,* 94 Hawai`i at 145, 9 P.3d at 457. Domestic uses, on the other hand, enjoy constitutional protections reserved for a discrete number of "public trust uses" more limited than those embraced under the Water Code, namely: (1) "traditionally preserved public rights of navigation, commerce, and fishing"; (2) "a wide range of recreational uses, including bathing, swimming, boating, and scenic viewing"; (3) the distinct public interest in resource protection "with its numerous derivative public uses, benefits, and values"; and (4) "domestic water use." *Id.* at 136-37, 9 P.3d at 448-49. The distinction between municipal and domestic uses is significant considering that the public trust doctrine, which springs from the State Constitution, **supersedes** any contrary policy declarations set forth in the Water Code or administrative rules. *See id.* at 138, 9 P.3d at 450. Hence, while the County's present and proposed municipal uses may very well be consistent with the public interest of the State, they shall not override or subrogate any of the public trust purposes explicitly enunciated by the Supreme Court.

Even domestic uses, however, may not "materially diminish the supply of water or render useless its application by others" possessing superior rights. *See Peck v. Bailey*, 8 Haw. 658, 662 (1867); *see also Carter v. Territory*, 24 Haw. 47, 66 (1971) (recognizing the distinction between "natural" and "artificial" uses and affirming, "we have no doubt that such is the law in [Hawai'i]"). As the Restatement explicitly provides:

> **The preference for domestic use does not extend to withdrawals by a municipality,** water company or public district **that supplies the domestic needs of inhabitants of a city or other service area**. These large public and commercial users receive no

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waters of the State for municipal uses, public recreation, public water supply, agriculture, and navigation. Such objectives are declared to be in the public interest.

preference and are subject to liability if the taking of their supplies unreasonably causes harm to other reasonable use of riparians.

Id. §850A cmt. c (emphases added).

Thus, when the *Waiāhole I* court recognized "domestic water use as a purpose of the state water resources trust," the Court indicated no intent to overturn or expand the long-standing definition of domestic use to include large-scale municipal stream diversions as a protected public trust purpose. To the contrary, the Supreme Court cautioned that "[i]n acknowledging the general public's need for water, however, we do not lose sight of the [public] trust's 'original intent,'" explicitly identified as "the specific objective of preserving the rights of native tenants during the transition to a western system of private property." *Id.* at 137, 9 P.3d at 449.

Indeed, that objective is consistent with the express "constitutional mandate . . . to continue to uphold the exercise of Native Hawaiian and traditional and customary rights as a public trust purpose." *Id.* Thus, to hold or construe that the CWRM must accommodate all of the County's municipal uses (including non-riparian domestic uses for that matter) to the detriment of those objectives for which the public trust was intended[18] would contradict the clear import of the priorities heralded by the Constitution and betray that which the Supreme Court was careful not to lose sight of.[19]

The above proscription includes "future water needs" projections for noninstream municipal and/or domestic water uses which similarly threaten to injure or displace existing constitutionally-protected instream uses. Indeed, such noninstream uses shall be accommodated **only** to the extent practicable, **only** for those confirmed "reasonable and beneficial" uses, and **only if** no harm comes to the resource or the instream, downstream users of same. *See id.* at 150, 9 P.3d at 462. As a party receiving its water supply from streams flowing on distant East Maui lands, the County is a mere appropriator of any available surplus and enjoys water rights only insofar as subordinate to the appurtenant rights and existing correlative and riparian uses within the East Maui watershed. *Id.* at 178-79, 9 P.3d at 490-91.

Notwithstanding the foregoing, Nā Moku reiterates that it has never contested A&B/ EMI's delivery of an amount of water sufficient to meet the County's **actual and reasonable**

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[18] These objectives include the preservation of Native Hawaiian traditional and customary rights on the one hand and the State's first duty to protect fresh water resources (surface and ground) on the other.

[19] The CWRM should not unprecedentedly expand public trust purposes to include "modes of use which ordinarily involve the taking of small quantities, and but little interference with the stream, such as drinking and other household purposes," A. Tarlock, Law of Water Rights & Resources § 3:59 at 3-103 to -104 (2010 rev ed.), to include the piping of water in large quantities for distribution and sale "to consumers for any purpose whatever for which it may be used." *Pernell v. City of Henderson*, 16 S.E.2d 449, 451 (N.C.1941) (distinguishing municipal uses from domestic ones).

water needs, because as it stands, A&B/EMI's current delivery of up to **8.2 mgd**[20] of its diverted East Maui water to serve the County's Upcountry domestic consumers, farmers, and ranchers constitutes less than **one-tenth** the amount HC&S' system loses daily (conservatively calculated at 23-31 MGD).[21] By reducing this level of system loss through enhanced efficiencies, an annual IIFS restoring minimum habitat levels (Hmin) in each of the 27 diverted streams could still easily accommodate the County's present water requirements as well as the farming requirements of lo`i complexes situated in the historic taro-growing areas of Honopou, Hanehoi, and Keanae-Wailuanui.

In other words, if EMI's and HC&S' system inefficiencies are better managed, the CWRM is likely able to satisfy the County's current (and future) water needs while simultaneously upholding the rights and priorities heralded under the public trust doctrine and the State Water Code. *See* Nā Moku's Opening Brief at 13, n.16. Hence, EMI and HC&S' improvident noninstream use - which exceeds the economic and efficient use of the water volume required to grow its sugar crop - is harming not only the resource of origin and other important instream values, but exacerbating the County's supply challenges. Remedy this and the County may have the solution to its future water needs concerns.

2. The County Has Failed To Properly Examine Whether Its Proposed Future Uses And Water Provisions For Upcountry Is A Reasonable-Beneficial Use.

The County contends that "the current demand, future demand reflected by the priority [wait] list, and projected growth . . . is projected to rise to somewhere between 13.3 MGD and 17.05 MGD by 2030" which amounts to a "4.2 and 7.95 MGD" increase. County at 11. It relies on the analyses of two consulting firms to establish the negative economic impacts of restricting offstream uses on the County to deliver water provisions to the Upcountry Service Area, the cost of which is already disproportionately higher than other areas of the island. *Id.* at 12. The County acknowledges that the "costs for pumping" to these higher elevations areas "are significant" when compared to the use of diverted East Maui surface water because pumping to multiple,

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[20] The County readily admits that its "current agreements with EMI in which [it] receives 12 MGD during normal flow periods and a minimum of 8.2 MGD has allowed [the County] to meet the demands of the Upcountry Service Area and the myriad families, businesses, schools, churches and farms that it serves." County at 9. In fact, "[a]n internal review by DWS [County of Maui, Department of Water Supply] has determined the current demands of the Upcountry Service are being met" and has been satisfied by the minimum delivery of 8.2 MGD of East Maui surface water. *Id.* at 8-10.

[21] *See supra* Section III.B. In addition, EMI estimates a 10-15% system loss in its water diversion and collection system, which would amount to an additional 16.6-25 MGD. *See* Exhibit C-71 at B-1.

high elevation areas is an energy intensive and expensive undertaking. *Id.* at 10. However, neither the County nor its consultants considers whether further developing these uses is truly reasonable or beneficial in light of the cumulative costs -- not only the financial costs passed off to customers, but also the deleterious costs to East Maui's streams and the residents who, for generations, ably stewarded the resources within their watershed to sustain their constitutionally-protected traditional and subsistence lifestyles. *See Waiāhole I*, 94 Hawai`i at 143, 9 P.3d at 456 (holding that the public trust doctrine "requires planning and decisionmaking from a global, long-term perspective").

The legal standard for "reasonable-beneficial" use demands examination of the County's **future** Upcountry uses "not only standing alone, but also in relation to other public and private uses and the particular water source in question." *See id.*; *see also Waiāhole II,* 105 Hawai`i at 11, 93 P.3d at 653 ("[I]nterim standards must still provide meaningful protection of instream uses."). The County's conclusion that its proposed use in Upcountry Maui is "both reasonable and beneficial" simply because it is "consistent with state and county land use plans," County at 9, ignores the fact that a "proposed use, otherwise valid, which would have an unreasonably harmful effect on fish or wildlife might well be rejected as being inconsistent with the express statement of public interest" articulated in the Code. *Waiāhole I*, 94 Hawai`i at 161, 9 P.3d at 473 (citing HRS §174C-3(c)). Neither the microeconomic analysis conducted by Craig Lekven, P.E., nor the macroeconomic analysis of Paul Brewbaker, satisfies the reasonable-beneficial standard. Both of those analyses -- which focused on Upcountry impacts exclusively -- failed to consider, let alone examine, the impact of reduced surface water supplies on the East Maui water source or on the protected public trust uses on which county residents of East Maui rely. And both failed to demonstrate "the propriety of draining water from public [East Maui] streams to satisfy [the County's future Upcountry] needs." *Waiāhole II*, 105 Hawai`i at 15-16, 93 P.3d at 657-58. In the absence of analyses that consider the impact on East Maui resources as part of a broader evaluation of effects on the public interest, the CWRM is in no position to confirm that the County's future needs projection constitutes "reasonable-beneficial" offstream uses. *See id.*

In these times of scarcity and competition, the County's first consideration must be whether its stated purpose -- to intensify uses and to take on new or additional services to foster development in the Upcountry Service Area -- is prudent. Indeed, back in 1993, Upcountry Maui's scarce water supply prompted the County to limit new developments and declare a moratorium on issuing new water meters to avoid interrupting or decreasing the level of service

to existing customers. *See* Exhibit B-16 at 3. The County provides no clear basis for green lighting development and lifting the moratorium now, more than 20 years later, in the face of increased competition for potentially decreasing surface water supplies and lacking a satisfactory solution for its 20-year old supply-demand problem. No offstream diverter, including the County, should ever expect "a subsidy or guaranteed access to less expensive water sources when alternatives are available and public values are at stake." *Waiāhole II,* 105 Hawai`i at 19, 93 P.3d at 661. The CWRM should not accede to future surface water demands, which are the product of unsound planning, simply because available alternatives -- combinations of which could satisfy future needs -- are more expensive than the status quo. *See* Exhibit B-16 at 10-12. Increased costs alone, without regard for the larger public interest, do not prove the absence of practicable alternatives; as a matter of fact, they can be evidence of why a proposed land use is an inefficient and imprudent utilization of municipal resources. *Waiāhole II*, 105 Hawai`i at 15, 93 P.3d at 658 (holding that a proper alternative analysis determines "whether the alternative is available and capable of being utilized after considering cost, technology, and logistics in light of the overall water planning process.").

The Upcountry Service Area already is admittedly the County's "most expensive service area, due to the high elevations of the communities served" and delivery of higher-cost groundwater. Exhibit B-16 at 10-12. Even now, with adequate surface water supply, it costs three times more to provide water to Upcountry than in the Central District. *See* County at 10-14, n.8. As it stands, if all current Upcounty water demands (including 100% of the 1,852 applicants presently on the County's water meter priority waiting list) were satisfied, then demand would exceed surface water supplies and/or be cost-prohibitive for 50%[22] of the pending applicants. Given the inescapable reality of scarce water resources, which is exacerbated by HC&S' excessive use, "no one, be it the [County] or any other potential user, can expect to demand water in such quantities and from such resources as it sees fit." *Waiāhole I*, 94 Hawai`i at 187, 9 P.3d at 499.

Supporting the CWRM's then-management of the future water needs associated with the City and County of Honolulu Planning Department and Board of Water Supply's (collectively, "the City's") proposed land use planning and zoning in *Waiāhole I*, the Supreme Court

[22] By the County's own estimation, of the 1,852 applicants presently on the County's water meter priority waiting list, approximately 50% or 906 will decline meters because of the capital costs which they alone must bear to connect their land to the upcountry water system. *See* County at 10; Exhibits B-16 at 11; Exhibit B-17.

> reject[ed] the City's suggestion that the Commission will illegally 'restrict' the City's land use planning authority unless it accedes to any and all of the City's water demands. Such an expansive view of the counties' powers runs headlong into the express constitutional and statutory designation of the Commission as the final authority over matters of water use planning and regulation. *See* Haw. Const. art. I, § 7; HRS § 174C-7(a).

Id. at 188, 9 P.3d at 500. Given this prior ruling, it is inane for the County to resurrect an approach soundly rejected 15 years ago in similar IIFS proceedings for Windward O`ahu streams. There, the City and County of Honolulu attempted to assert its land use planning authority without regard for the CWRM's water resource management powers. The Court refuted that approach in favor of the CWRM's water use planning and regulation powers.

> In this instance, as in *Waiāhole I*,
>
> the existing water supply is already insufficient to accommodate the land uses planned and zoned by the [County]. Thus, whether the [County] accepts it or not, **this shortfall will compel the Commission to prioritize among proposed uses in making ultimate choices among them.** Indeed, the [County] itself must, as a matter of sound planning policy, actively develop integrated water use plans addressing the contingencies arising from the limitations in supply, *see, e.g.*, HRS §174C-31(d). **Such a process, if properly undertaken, will necessarily entail prioritizing among competing uses.**

Id. (emphases added). Hence, when future growth gives rise to foreseeable water shortages, the CWRM is empowered to prioritize amongst competing water uses to resolve conflicts.

The County acknowledges the physical limitations of servicing all pending and future water demands in Upcountry Maui. Yet, it fails to duly consider an integrated water use and development plan (WUDP). *See* HRS §174C-31(f). Moreover, it ignores both the known effects of continued stream diversion and water source protection measures, including practicable alternatives, to focus exclusively on the need to accommodate future growth requiring even more water. The County also fails to explain why a more aggressive program to conserve water, as highlighted in the WUDP, has not been implemented. *See* Exhibit A-155 at 18 (recommending that "[f]or the Upcountry District system DSM conservation programs cost less than new supply resources"). The County's preferred demand-driven management approach is contrary to the integrated water use and land use planning contemplated under the Code. *See* HRS §174C-31(a) (establishing the components of the Hawai`i Water Resources and Protection Plan, including county WUDPs, to guide CWRM's water management decisions). Without an approved updated WUDP in place, Maui County is urging the compromise of a precious public trust resource

without adequate forethought. *See Waiāhole II,* 105 Hawai`i at 658, 93 P.3d at 16; *see also* Exhibit A-155 at 9.

Curiously, although the County fails to provide the CWRM with information to assist it in prioritizing amongst competing uses, *see Waiāhole I*, 91 Hawai`i at 188, 9 P.3d at 500, the latest Review Draft of the *Maui County Water Use and Development Plan* reveals a suggested hierarchy of uses in Upcountry Maui in light of prevailing law -- (1) public emergency uses, (2) public trust uses (*i.e.*, traditional and customary practices and domestic uses), (3) reasonable/beneficial uses (*i.e.*, essential and non-essential municipal uses), followed by (4) non-reasonable/non-beneficial uses (*i.e.*, system losses and excessive use). *See* Exhibit A-155 at 119. If those priorities were indeed followed, then the County would have presented a completely different and vastly improved approach to planning for future Upcountry water use and conservation. *Id.* at 109 (concluding that "[i]t is also clear that ***the availability of water currently diverted from East Maui streams for municipal and agricultural purposes will be reduced*** as amendments are made to the incumbent Interim Instream Flow Standards for these streams") (emphasis added).

Indeed, as the CWRM aptly recognized in *Wai`āhole I*:

> As competition for water resources increases, the analysis of both the public interest and of reasonableness must become both more rigorous and affirmative. The counties will be required to articulate their land use priorities with greater specificity. For example, even at the present time, there is more land zoned for various uses than available water to supply those proposed uses. Thus, **it is not sufficient to merely conclude that a particular parcel of land is properly zoned and that the use is "beneficial."** That minimal conclusion may be inadequate to resolve situations in which competitive demand exceeds supply. Further analysis of public interest criteria relevant to water (e.g., conservation, alternative uses, comparative public costs and benefits) will be needed.

Id. at 187, 9 P.3d at 499 (emphasis added).

In this instance, the County insists on intensifying use and development in the Upcountry Maui area with known, quantified and monetized supply challenges. But for use of East Maui surface water, as in *Waiāhole I,* demand for current and future residences exceeds the water supply that can support them. In addition, there are known harms to continued depletion of stream flows in East Maui streams, which the public trust mandates be meaningfully protected. As such, the CWRM must demand that the County be "rigorous and affirmative" in its protection of the public interest in instream flows, public trust purposes, and all of the parameters of a stream protection program -- even if it means subordinating an otherwise valid

use because its harmful effects on the public interest, the water body, and existing instream uses are inconsistent with the State Constitution and policy declarations set forth in the Water Code.

Ultimately, the County's economic analysis between surface and alternative water sources is premature, as it is based on the *current* cost of surface water from East Maui. As Nā Moku has argued repeatedly before the BLNR, that cost is based on heavily subsidized rents HC&S pays to the State to divert the surface water (amounting to less than 1/5 of a cent per 1,000 gallons). Thus, until the BLNR determines the cost to divert East Maui surface water as part of a proper permitting process, the County's proffered analysis of economic impacts caused by water reductions is premature and likely overstated. Relatedly, the County admits that it "does not make any profit in providing the water to the public" and that "water rates are strictly scrutinized by the Maui County Council during budget session." County at 8. Having admitted that it is not in the business of profiting from its water deliveries, its contention that "eliminating or decreasing [its] access to East Maui surface water would have negative economic impacts to the [DWS]" is without merit. *Id.* at 9.

3. The County's Alleged Water "Needs" Dismisses Alternative Water Sources Without Any Rigorous Analysis.

Although the County identifies potential alternative sources for surface water now used in Upcounty Maui, it fails to provide a sufficient factual basis for the CWRM to determine their practicability. *See Waiāhole II*, 105 Hawai`i at 15, 93 P.3d at 658. For example, the County currently maintains two reservoirs for its Olinda and Piholo water treatment plants with the capacity to store just 23 days' worth of backup to meet average water demand[23] with no reservoir to back up a failure at its Kamole plant.[24] *See* Exhibit B-16 at 6. It admits that, (1) "[d]uring times of drought the WTPs may not be able to operate at their production capacities due to lack of source water," *id.*, (2) "there is currently insufficient groundwater production capacity available to replace surface water capacity," *id.*, and (3) "groundwater sources can only supply a portion of the current 7.9 mgd average demand." *Id.* at 9. Despite the insufficient infrastructure, the County only raises the possibility of constructing two 100-300 MG reservoirs to balance out the need for water during drier days for its water treatment plants at Olinda and Piholo. *Id.* at 13. In view of the major benefits that enhanced raw water storage would bring to a

[23] This calculation ignores periodic peak water demands exceeding the average daily demand of 7.9 MGD, by up to 3.7 MGD (for a total of 11.6 MGD). *See* Exhibit B-16 at 11.

[24] The County concedes that the industry standard for water system reliability is "to ensure sufficient water supply to its customers even if elements of the water supply system are offline for maintenance purposes." Exhibit B-16 at 3.

water system already vulnerable to the attendant risks and costs associated with existing surface water sources[25] and the mandates set forth by the Hawai`i Supreme Court, the County cannot afford to be so dismissive of alternatives.

D. Neither HC&S nor the County Account for the Cumulative Impacts of Diminished Stream Flow on Nā Moku's Traditional and Customary Practices.

"[T]he public trust compels the state duly to consider the cumulative impact of existing and proposed diversions on trust purposes and to implement reasonable measures to mitigate this impact, including using alternative resources." *Waiahole I,* 94 Hawai`i at 143, 9 P.3d at 455. Yet HC&S' and the County's demands for water omit any information or argument on how the CWRM, in amending any IIFS, can ignore or account for the cumulative impact of existing and proposed diversions on trust purposes, given the public trust resource over which the Commission is the primary guardian. *See Waiāhole I,* 94 Hawai`i at 143, 9 P.3d at 456.

The official agency record on the cumulative impact of continued diversions on affected streams is unequivocal and damning. As the historic timeline of the EMI ditch system reveals, EMI has progressively taken more water from East Maui for decades. Between 1923 and the present, for example, EMI boosted Wailoa Ditch's capacity by 35 MGD (160 to 195 MGD). *See* Honopou IIFS Assessment Report (March 2008) at 81. The improved efficiency and capacity of EMI's ditch system has worked to exact an ecological toll on East Maui resources. This in turn directly impacts constitutionally-protected public trust purposes, *i.e.*, taro growing, coastal fishing and gathering, which are dependent on streams flowing in greater abundance.

For example, the decreasing stream flow in Honopou over the decades has impacted multiple generations' ability to grow taro[26] and to exercise their traditional and customary practices. *See* CWRM Staff Submittal (9/24/08) at 10; Exhibit A-152 at 3-4; Decl.of Lurlyn Scott ("Scott Decl."), Exhibit A-147; Decl. of Sanford Kekahuna ¶¶17-20. The cumulative effects of these EMI diversions have also been replicated in Ke`anae and Wailuanui. *See* Nā Moku Opening Brief at 9-13. Declarants like Ed Wendt, for example, whose `ohana lived in Wailuanui Valley for generations, witnessed similar cumulative impacts over the past decades and a

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[25] The County concedes from its Upcountry Water System Optimization Study, "the 95th percentile daily demand is 0.6 mgd greater than the reliable production capacity[.]" Exhibit B-16 at 11. Accordingly, "[t]here is insufficient water supply to issue water meters to all properties that have applied for Upcountry water service." *Id.*

[26] Even after the CWRM's September 25, 2008 amendments to the IIFS of Honopou Streams, temperature readings for irrigation water outlets from the Honopou lo`i exceeded the maximum threshold level (77°F/25°C) and above which "pythium rot begins to accelerate unacceptably." *See* Decl. of Paul Reppun ("Reppun Decl.") ¶5. Ideally, irrigation water temperatures measure "well below" this threshold maximum. *Id.* at 7. *See also* Decl. of Alan T. Murakami ¶¶7-10.

corresponding deterioration of their ability to continue cultural traditions, farm taro, gather from streams, and fish. *See* Decl. of Edward Wendt ("Ed Wendt Decl.") ¶¶5, 14-20.

Under the public trust doctrine, the CWRM can no longer ignore the cumulative effects of dewatering East Maui streams.

IV. CONCLUSION

In every instance -- from the science, to HC&S and the County's usage, to HC&S and the County's water needs -- there are gaps in available data that require the Commission to invoke the precautionary principle to amend the 27 IIFSs to protect the resource and entire range of public trust purposes. HC&S and the County fail to demonstrate their respective needs in accordance with the law and the specific mandates of the public trust doctrine. They mischaracterize their actual water needs such that the Commission is unable to assess whether their use is "reasonable-beneficial" -- a precondition for authorizing continued diversions, *see Waiāhole I*, 94 Hawai`i at 161, 9 P.3d at 473 -- "with a level of openness, diligence, and foresight required when authorizing the diversion of our public trust res." *Nā Wai `Ehā*, 128 Hawai`i at 256, 287 P.3d at 157 (internal quotations omitted). As the Hawai`i Supreme Court has made clear, such a deficiency of relevant information "is exactly the reason an agency is empowered to deny a proposed use of a public trust resource." *Kauai Springs,* 133 Hawai`i at 174, 324 P.3d at 984.

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