

93 P.3d 643
105 Haw. 1

In the Matter of WATER USE PERMIT APPLICATIONS, Petitions for Interim Instream Flow Standard Amendments, and Petitions for Water Reservations for the Waiāhole Ditch Combined Contested Case Hearing.

No. 24873.

Supreme Court of Hawai`i.

June 21, 2004.

[93 P.3d 646] [105 Haw. 2]

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MOON, C.J., LEVINSON, NAKAYAMA, and DUFFY, JJ. and ACOBA, J., Concurring Separately.

Opinion of the Court by NAKAYAMA, J.

Appellant Hakipu'u `Ohana and Ka Lahui Hawai'i [hereinafter, collectively, the "Windward Parties"]¹ and appellant Hawaii's Thousand Friends (HTF) appeal the Commission on Water Resource Management's [hereinafter, the "Water Commission"] legal framework, findings of fact, and decision and order [hereinafter, the "D & O II"], filed on December 28, 2001, that disposed of seven issues this court remanded in *In re Use Permit Applications (Waiāhole I)*, 94 Hawai'i 97, 9 P.3d 409 (2000). On appeal, the appellants argue that the Water Commission erred by: (1) setting an Interim Instream Flow Standard (IIFS) that was arbitrary and not based on the best information available; (2) approving the transfer of Campbell Estate's well permit to the City and County of Honolulu Planning Department and Board of Water Supply [hereinafter, collectively, "BWS"]; (3) issuing the Estate of James Campbell (Campbell Estate) and Pu'u Makakilo, Inc. (PMI) water use permits; and (4) granting Agribusiness Development Corporation (ADC) a water use permit for "systems losses." In addition, HTF separately argues that the Water Commission erred by issuing leeward farmers water use permits

for 2,500 gallons per acre per day (gad) of water. After careful consideration of all arguments and for the reasons fully explained below, we affirm in part and vacate in part the Water Commission's decision and remand for further proceedings.

I. BACKGROUND

A. General Background

Because the facts of this case are fully set forth in *Waiāhole I*, we reiterate only the basic background for the purposes of our discussion on remand. Briefly, the Waiāhole Ditch system, built in significant part between 1913 and 1916, collects fresh surface water and dike-impounded ground water from windward O'ahu and delivers it to leeward O'ahu. *Waiāhole I*, 94 Hawai'i at 111, 9 P.3d at 423. For many years, the ditch diversions, along with ground water pumped from the Pearl Harbor aquifer, irrigated O'ahu Sugar Company's sugar plantation. *Id.* These diversions, however, reduced the water flow in Waiāhole, Waikāne, Waianu, and Kahana streams, thereby affecting the streams' natural environment and nearby human communities. *Id.*

B. Procedural Background

1. The Water Commission's D & O I

Following the designation of windward O'ahu's five aquifer systems as ground water management areas in 1992, the existing users of Waiāhole Ditch water were required to apply for water use permits. *Id.* In June 1993, the former operator of the ditch system, the Waiāhole Irrigation Company,² filed a combined permit application for the existing users of the Waiāhole Ditch water. *Id.* In August 1993, large amounts of ditch water became available when O'ahu Sugar Company announced the end of its sugar operations. *Id.* Various parties filed applications for existing water use permits, applications for new water use permits, petitions to restore water to streams by amending the IIFS, and petitions for reservations of water. *Id.* at 111-12, 9 P.3d at 423-24. In 1995, the Water Commission admitted a

total of twenty-five parties, including the Windward Parties and

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HTF, *6 and commenced a combined contested case hearing for all applications and petitions. *Id.* at 113, 9 P.3d at 425.

On December 24, 1997, the Water Commission issued its final findings of fact, conclusions of law, and decision and order [hereinafter, the "D & O I"]. *Id.* Of the 27 million gallons per day (mgd) of water flowing through the Waiāhole Ditch system, the Water Commission assigned 14.03 mgd to permitted leeward agricultural and nonagricultural uses and "system losses" and released 12.97 mgd into windward streams. *Id.* at 118, 9 P.3d at 430. However, 6.97 mgd of the 12.97 mgd released into the windward streams remained available for leeward offstream uses as a "proposed agricultural reserve" or "non-permitted ground water buffer."³ *Id.* The Water Commission also mandated that any permitted water use that was not actually used would remain in the streams "to avoid unlawful waste." *Id.* An appeal to this court followed. *Id.* "At the time of the appeal, various leeward parties still retained, but were not using, well permits to pump approximately 53 mgd of leeward ground water." *Id.* at 111, 9 P.3d at 423.

2. Waiāhole I

In *Waiāhole I*, this court vacated the Water Commission's D & O I in part and remanded the following issues for further findings and conclusions:

- 1) the designation of an interim instream flow standard for windward streams based on the best information available, as well as the specific apportionment of any flows allocated or otherwise released to the windward streams;

2) the merits of the petition to amend the interim standard for Waikāne Stream;

3) the actual need for 2,500 gallons per acre per day over all acres in diversified agriculture;

4) the actual needs of Field Nos. 146 and 166 (ICI Seeds) and Field Nos. 115, 116, 145, 161 (Gentry and Cozzens);

5) the practicability of Campbell Estate and PMI using alternative ground water sources;

6) practicable measures to mitigate the impact of variable offstream demand on the streams; and

7) the merits of the permit application for ditch "system losses."

Id. at 189, 9 P.3d at 501 (internal citations and formatting omitted). This court affirmed "all other aspects of the Commission's decision not otherwise addressed...." *Id.* at 190, 9 P.3d at 502.

3. EP-15/16 Water Use Permit Transfer

Meanwhile, on July 12, 2000, Campbell Estate and BWS entered into an agreement to transfer Campbell Estate's 12.154 mgd water use permit for the EP-15/16 facility to BWS.⁴ The agreement stated, *inter alia*, that BWS "shall only withdraw water out of EP 15/16 to the extent allowed under the Permit." In a letter dated August 8, 2000, BWS notified the Water Commission of the transfer and informed the Water Commission that it intended to change the use of the water from agricultural to urban.⁵ The August 8, 2000 letter also stated that the water from EP-15/16 would satisfy various projects, including providing 11.87 mgd to Campbell Estate. On November 3, 2000, the Water Commission informed BWS that it had transferred the water use permit and that the change in water use could be done administratively. The Water Commission then issued a ground-water use

permit in EP-15/16 for 12.154 mgd of water designated as municipal.

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On December 22, 2000, the Windward Parties filed a petition for a writ of mandamus to this court requesting that this court direct the Water Commission to vacate its approval of the transfer and modification of the EP-15/16 water use permit. In its answering brief, the Water Commission conceded that the matter could be properly put before the *Waiāhole I* remanded case hearing. On April 25, 2001, this court denied the Windward Parties petition for writ of mandamus without prejudice to raising the issue in the *Waiāhole I* remanded case hearing.

4. The Water Commission's D & O II

On remand, the Water Commission determined that "there was sufficient evidence in the existing record to set an interim instream flow standard without further hearings...." D & O II at 7. On April 4, 2001, the Water Commission heard arguments regarding the remaining issues on remand. On August 1, 2001, the Water Commission issued its proposed legal framework, findings of fact, and decision and order (proposed decision and order). Several parties filed written exceptions to, and the Water Commission held oral arguments on, the proposed decision and order.

On December 28, 2001, the Water Commission issued its 158 page D & O II and concluded, *inter alia*, that:

1) 8.7 mgd shall be released into Waiāhole stream, 3.5 mgd shall be released into Waianu stream, and 3.5 mgd shall be released into Waikāne stream;

2) IIFSs must be met before the ditch operator may allocate water to any of the leeward offstream permitted uses, and any water not used shall be

released into the windward streams, of which 0.9 mgd shall be released into Waikāne stream and any remainder into Waiāhole stream;

3) "2,500 gad for acres under cultivation or planned to be under cultivation is a reasonable water duty for leeward diversified agriculture" and the diversified agriculture water use permits are conditioned "on a showing of actual use, not to exceed 2,500 gad, within four years of this Decision and Order[;]"

4) Campbell Estate and PMI have no practicable alternative sources of water; and

5) "ADC should be able to function with a system-loss use permit of 2.00 mgd."

D & O II at 134-39. In addition, the Water Commission found that the Windward Parties had a full and fair opportunity to present the issue of Campbell Estate's transfer of its EP-15/16 water use permit to BWS and, based on the evidence, did present this issue in the context of the *Waiāhole I* remanded case hearing. The Water Commission then concluded that Campbell Estate's transfer of its EP-15/16 water use permit to BWS was legal. The Windward Parties and HTF timely appealed.

II. STANDARDS OF REVIEW

A. Judicial Review of the Water Commission's Decision

"Trial de novo is not allowed on review of commission actions under" Hawai'i Revised Statutes (HRS) chapter 174C. HRS § 174C-12 (1993). This court's review of the Water Commission's D & O II is governed by HRS chapter 91, which provides in relevant part that:

Upon review of the record the court may affirm the decision of the agency or remand the case with instructions

for further proceedings; or it may reverse or modify the decision and order if the substantial rights of the petitioners may have been prejudiced because the administrative findings, conclusions, decisions, or orders are:

(1) In violation of constitutional or statutory provisions; or

(2) In excess of the statutory authority or jurisdiction of the agency; or

(3) Made upon unlawful procedure; or

(4) Affected by other error of law; or

(5) Clearly erroneous in view of the reliable, probative, and substantial evidence on the whole record; or

(6) Arbitrary, or capricious, or characterized by abuse of discretion or clearly unwarranted exercise of discretion.

HRS §§ 174C-12 and 91-14(g) (1993). "[U]nder HRS § 91-14(g), conclusions of law

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[(COL)] are reviewable under subsections (1), (2), and (4); questions regarding procedural defects under subsection (3); findings of fact [(FOF)] under subsection (5); and an agency's exercise of discretion under subsection (6)." *In re Hawaiian Elec. Co.*, 81 Hawai'i 459, 465, 918 P.2d 561, 567 (1996) (citing *Outdoor Circle v. Harold K.L. Castle Trust Estate*, 4 Haw.App. 633, 638, 675 P.2d 784, 789 (1983)).

As such, the Water Commission's COLs are freely reviewable under the right/wrong standard "to determine if [its] decision was in violation of constitutional or statutory provisions, in excess of statutory authority or jurisdiction of agency, or

affected by other error of law." *Waiāhole I*, 94 Hawai'i at 119, 9 P.3d at 431 (citations omitted). The Water Commission's FOFs are reviewed under the clearly erroneous standard "to determine if the [Water Commission's] decision was clearly erroneous in view of reliable, probative, and substantial evidence on the whole record." *Id.* (citations omitted). A FOF is clearly erroneous when "(1) the record lacks substantial evidence to support the finding or determination, or (2) despite substantial evidence to support the finding or determination, the appellate court is left with the definite and firm conviction that a mistake has been made." *Id.* (citation omitted). Substantial evidence is defined as "credible evidence which is of sufficient quality and probative value to enable a person of reasonable caution to support a conclusion." *Id.* (citation and quotation marks omitted).

We review the Water Commission's action "pursuant to the deferential abuse of discretion standard." *Paul's Electrical Service, Inc. v. Befitel*, 104 Hawai'i 419, 91 P.3d at 501-02 (2004) (holding that "[i]f the legislature has granted the agency discretion over a particular matter, then we review the agency's action pursuant to the deferential abuse of discretion standard []bearing in mind that the legislature determines the boundaries of that discretion"). However, because water is a public trust resource and the public trust is a state constitutional doctrine, this court recognizes certain qualifications to the standard of review regarding the Water Commission's decisions. *Waiāhole I*, 94 Hawai'i at 143, 9 P.3d at 455. "As with other state constitutional guarantees, the ultimate authority to interpret and defend the public trust in Hawai'i rests with the courts of this state." *Id.* (citation omitted).

This is not to say that this court will supplant its judgment for that of the legislature or agency. However, it does mean that this court will take a "close look" at the action to determine if it complies with the public trust doctrine and it will not act merely as a rubber stamp for agency or legislative action.

Id. at 144, 9 P.3d at 456 (citations omitted) (emphasis in original). As such, "the [Water Commission] 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 455.

B. Interpretation of the State Water Code

In construing statutes, this court has recognized that

our foremost obligation is to ascertain and give effect to the intention of the legislature, which is to be obtained primarily from the language contained in the statute itself. And we must read statutory language in the context of the entire statute and construe it in a manner consistent with its purpose.

When there is doubt, doubleness of meaning, or indistinctiveness or uncertainty of an expression used in a statute, an ambiguity exists....

In construing an ambiguous statute, the meaning of the ambiguous words, phrases, and sentences may be compared, in order to ascertain their true meaning. Moreover, the courts may resort to extrinsic aids in determining legislative intent. One avenue is the use of legislative history as an interpretive tool. This court may also consider the reason and spirit of the law, and the cause which induced the legislature to enact it ... to discover its true meaning.

Laws in *pari materia*, or upon the same subject matter, shall be construed with

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reference to each other. What is clear in one statute may be called upon in aid to explain what is doubtful in another.

Id. at 144, 9 P.3d at 456 (citations, quotation marks, brackets, and formatting omitted) (ellipses in the original).

If the legislature has unambiguously spoken, the inquiry ends.

When the legislative intent is less than clear, however, this court will observe the well established rule of statutory construction that, where an administrative agency is charged with the responsibility of carrying out the mandate of a statute which contains words of broad and indefinite meaning, courts accord persuasive weight to administrative construction and follow the same, unless the construction is palpably erroneous.

Id. (citations and quotation marks omitted). "The rule of judicial deference, however, does not apply when the agency's reading of the statute contravenes the legislature's manifest purpose. Consequently, we have not hesitated to reject an incorrect or unreasonable statutory construction advanced by the agency entrusted with the statute's implementation." *Id.* at 145, 9 P.3d at 457 (citations omitted).

III. DISCUSSION

A. The IIFS for Windward Streams

In *Waiāhole I*, this court vacated the Water Commission's designation of IIFSs and held that "the Commission shall, with utmost haste and purpose, work towards establishing permanent instream flow standards for windward streams. In the meantime, the Commission shall designate an

interim standard based on the best information presently available." *Id.* at 156, 9 P.3d at 468.

In its D & O II, the Water Commission devoted a considerable number of pages to explain the process it used to set the IIFS. To summarize, the Water Commission first determined two sets of possible pre-ditch stream flows, one based on stream measurements taken in 1911 and the other based on a stream's current base flow plus the ditch's current flow. The possible stream flows were as follows:

1911 Data Base Flow Plus Stream (mgd) Ditch Flow (mgd) Waiāhole 14.4 19.2⁶ Waianu 7.8 Waikāne 6.0 6.7 Kahana 21.0 14.4 D & O II at 106.

Second, the Water Commission determined that if it established the IIFS at one-half of the possible pre-ditch stream flows, the results would be as follows:

1911 Data Base Flow Plus Stream (mgd) Ditch Flow (mgd) Waiāhole 7.2 9.6 Waianu 3.9 Waikāne 3.0 3.4 Kahana 10.5 7.2

D & O II at 107. The Water Commission used the "half approach" based on its finding that,

[a]ccording to one Hawaiian historian, "no ditch was permitted to divert more than half the flow from a stream." (Handy, E.S.C. and Handy, E.G., "Native planters in Old Hawaii: Their Life, Lore, and Environment," 1972, at 58, cited in Kame'eleihiwa, Binder 6A, written direct testimony, reference listed at page 15; Kame'eleihiwa, Tr., 4/3/96, at 14, lines 4-7).

D & O II at 67 (emphasis added). However, the Water Commission also found that

[i]t is unclear ... whether the limit of half the flow from a stream referred to the original flow of the stream or to the flow where the diversion was taking place. Nor is it clear how it

was determined how much of the stream's flow was being diverted.

D & O II at 67. The Water Commission then attempted to prevent any limitation on diversions by stating:

On the other hand, Watson found that: "In certain areas including Koloa on Kauai and Waimea on Oahu, it is well known that old Hawaiian irrigated taro areas of the 1840s were developed up to, and perhaps somewhat beyond, the available water supply."

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Exhibit N-207, at 150). Therefore, while historically noted, it does not appear that it was a uniform rule that no more than 1/2 of stream flow should be used offstream.

D & O II at 67. In reaching its decision, the Water Commission concluded as follows:

One Hawaiian approach to diversion of stream waters, which has been cited earlier, appears to limit diversions to no more than one-half of a stream's flow, although much more has been diverted on occasion. As historically noted and earlier cited, there have been diversions limited to half the flow from a stream or place of diversion, and examples of other diversions taking up to or perhaps somewhat beyond the available water supply. However, it does not appear that there was any specific, quantified amount of water that should remain in the stream or be taken for offstream use. Considering the specific facts of this case, not establishing a standard or generalized policy for future decisions, and in accordance with the precautionary principle, a

reasonable and practicable approach would be to restore Waiāhole, Waianu, Waikane, and Kahana Streams to one-half their pre-Ditch base flow levels which would also exceed their 1960 levels where testimony established the presence of aquatic biota at a higher level than today. The Commission believes that the IIFSs set at such a level would protect aquatic biota in the streams.

D & O II at 104-105 (emphasis added). Although the Water Commission determined that setting the IIFS at one-half pre-ditch flows would exceed the levels of the 1960s, the Water Commission made no specific finding as to each stream's flow during the 1960s.⁷

Third, the Water Commission calculated the ditch flow that must be added to the stream to reach one-half of the possible pre-ditch flows by subtracting the current base flow from the possible pre-ditch flow. The added flow would be as follows:

1911 Data	Base Flow	Plus Stream	(mgd)	Ditch Flow	(mgd)	
Waiāhole	3.3	5.2	Waianu	3.4	Waikane	1.6
2.0	Kahana	0	0	D & O II at 108.		

Fourth, the Water Commission decided to use the higher of the preceding values. Thus, 6.7 mgd would be added to Waiāhole and Waianu streams (3.3 for Waiāhole and 3.4 for Waianu) based on the 1911 data and 2.0 mgd would be added to Waikane stream based on the base flow plus ditch flow data. Because Kahana stream's base flow of 11.2 mgd exceeded one-half of the estimated pre-ditch flow at 10.5 mgd, water would not be added.

Finally, after considering appurtenant rights, riparian uses, and existing uses, the Water Commission added 1.1 mgd to Waiāhole and Waianu streams and .10 mgd to Waikane stream. Thus, the final IIFS was as follows:

Waiāhole Stream: 4.8 mgd added to a current base flow of 3.9 mgd totaling 8.7 mgd. Waianu Stream: 3.0 mgd added to a current base flow of 0.5 mgd

totaling 3.5 mgd Waikāne Stream: 2.1 mgd added to a current base flow of 1.4 mgd totaling 3.5 mgd Kahana Stream: 11.2 mgd D & O II at 112, 117.

1. *The Half Approach*

On appeal, the appellants collectively argue that the IIFS for the windward streams, as set by the Water Commission, was arbitrary and capricious, and not based on the best information available. Specifically, the appellants contend that the Water Commission erred by relying on the "half approach." Conversely, the Water Commission asserts that "[t]he practice of not diverting more than half of a stream's flow fit the specific facts of the present case, and ... provided a

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reasonable and practicable approach to restore Waiahole, Waianu, Waikane, and Kahana streams to one half their pre-ditch flow levels." We agree with the appellants.

We have recognized that agency decisions are afforded deference. *Paul's Electrical Service, Inc.*, 104 Hawai'i 412, 417, 91 P.3d 494, 499 (2004). However, the foregoing deference "presupposes that the agency has grounded its decision in reasonably clear FOFs and COLs." *In re Wai'ola O Moloka'i, Inc.*, 103 Hawai'i 401, 432, 83 P.3d 664, 695 (2004).

"[T]he agency must make its findings reasonably clear. The parties and the court should not be left to guess, with respect to any material question of fact, or to any group of minor matters that may have cumulative significance, the precise finding of the agency." *In re Kauai Elec. Div. of Citizens Utilities Co.*, 60 Haw. 166, 183, 590 P.2d 524, 537 (1978) (quoting *In re Terminal Transportation, Inc.*, 54 Haw. 134, 139, 504 P.2d 1214, 1217 (1972)). See also *Kilauea Neighborhood Ass'n v. Land Use Comm'n*, 7 Haw.App. 227, 230, 751 P.2d 1031, 1034 (1988) ("An

agency's findings must be sufficient to allow the reviewing court to track the steps by which the agency reached its decision."); *Rife v. Akiba*, 81 Hawai'i 84, 87-88, 912 P.2d 581, 584-85 (App.1996) (reviewing the numerous practical reasons for requiring adequate findings and conclusions). Clarity in the agency's decision is all the more essential "in a case such as this where the agency performs as a public trustee and is duty bound to demonstrate that it has properly exercised the discretion vested in it by the constitution and the statute." *Save Ourselves[, Inc. v. Louisiana Environmental Control Comm'n]*, 452 So.2d [1152,] 1159-60 [(La.1984)].

Waiāhole I, 94 Hawai'i at 157-58, 9 P.3d at 469-70. Moreover, "[a]lthough interim stream standards are merely stopgap measures, they must still protect instream values to the extent practicable." *Id.* at 155, 9 P.3d at 467; see also HRS § 174C-71(2)(A) (calling for petitions to "adopt an interim instream flow standard for streams in order to protect the public interest"). "Notwithstanding their temporary effect, therefore, interim standards must still provide meaningful protection of instream uses." *Waiāhole I*, 94 Hawai'i at 151, 9 P.3d at 463.

In calculating the IIFS, the Water Commission halved the possible pre-ditch flow based on its finding that "[a]ccording to one Hawaiian historian, 'no ditch was permitted to divert more than half the flow from a stream.'" D & O II at 67 (citing Handy, E.S.C. and Handy, E.G., "Native planters in Old Hawaii: Their Life, Lore, and Environment, 1972," at 58, cited in Kame'eleihiwa, Binder 6A, written direct testimony, reference listed at page 15; Kame'eleihiwa, Tr., 4/3/96, at 14, lines 4-7). By using this statement to justify having the instream flow, the Water Commission apparently interpreted this statement to mean that half of a stream flow is sufficient to protect instream values. This assumption appears to be arbitrary and speculative.

In addition, the "half approach" lacks vital information, as evinced by the Water Commission's own finding that "[i]t is unclear ... whether the limit of half the flow from a stream referred to the original flow of the stream or to the flow where the diversion was taking place. Nor is it clear how it was determined how much of the stream's flow was being diverted." The Water Commission further found that "while historically noted, it does not appear that it was a uniform rule that no more than 1/2 of stream flow should be used offstream." As such, the Water Commission's decision to halve the possible stream flow, based solely on a quotation stating that "no ditch was permitted to divert more than half the flow from a stream," left unanswered the question whether instream values would be protected to the extent practicable. We, therefore, hold that the Water Commission's reliance on this approach was erroneous.

2. 1960 Testimonials

The appellants further argue that the Water Commission erred by relying on the "1960 testimonials" and disregarding the

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testimony of three aquatic biologists.⁸ The Water Commission contends that the IIFS flow levels established under the half approach "exceed the 1960s flows, where testimony established that presence of aquatic biota at a higher level than today." Because the Water Commission failed to make findings of each stream's flow during the 1960s, the Water Commission's conclusion was unsupported by the record's findings.

It is well-settled that "[a]n appellate court will not pass upon issues dependent upon credibility of witnesses and the weight of the evidence; this is the province of the trial judge." *Amfac, Inc. v. Waikiki Beachcomber Inv. Co.*, 74 Haw. 85, 117, 839 P.2d 10, 28 (1992) (citations and internal quotation marks omitted) (brackets in original); *see also State v. Eastman*, 81 Hawai'i 131, 139, 913 P.2d 57, 65 (1996) ("It is for the trial judge as fact-finder to assess the credibility of witnesses and to resolve all

questions of fact.... As the trier of fact, the judge may draw all reasonable and legitimate inferences and deductions from the evidence, and the findings of the trial court will not be disturbed unless clearly erroneous."). Thus, it is the province of the Water Commission to assess the credibility of witnesses, and the Water Commission's findings will not be disturbed unless clearly erroneous.

In the instant case, the Water Commission deemed credible the testimony that the flow in the 1960s was adequate to support the stream's ecosystem and native Hawaiian customs and practices. We do not regard this assessment as clearly erroneous. The Water Commission, however, failed to make findings of each stream's flow during the 1960s. Without such information, the Water Commission failed to support its conclusion that the current IIFS flow is more than the flow in the 1960s. We therefore remand this issue for further proceedings.

If, on remand, the Water Commission is able to support its conclusion with findings quantifying the windward streams' flows during the 1960s, then the 1960s testimonials would be sufficient to set the IIFS at the levels established in the D & O II, inasmuch as: (1) more water would be added to the streams than that which adequately supported the streams' ecosystem in the 1960s, *see* D & O II at 104; (2) the increase in stream flow over the 1960s stream flow would be beneficial in light of the Water Commission's finding that increasing a stream's flow results in stream habitat improvement, *see* D & O II at 104; and (3) appurtenant rights, riparian uses, and existing uses would be accounted for by further increases in stream flow, *see* D & O II at 112.⁹ The foregoing would then adequately establish that instream values would be protected to the extent practicable for interim purposes. We take this opportunity, however, to remind the Water Commission that seventeen years have passed since the Water Code was enacted requiring the Water Commission to set permanent instream flow standards by investigating the streams. HRS § 174C-71. In addition, four years have passed since this court held that "the Commission shall, with utmost haste and purpose, work towards establishing

permanent instream flow standards for windward streams." *Waiāhole I*, 94 Hawai'i at 156, 9 P.3d at 468. The fact that an IIFS is before this court evinces that this mandate has not yet been completed as of the Water Commission's D & O II.

3. 2.2 mgd of Unpermitted Water

In *Waiāhole I*, this court held that

pursuant to its duties as trustee, and in the interest of precaution, the Commission should consider providing reasonable "margins of safety" for instream trust purposes when establishing instream flow standards. The Commission, however,

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should not concern itself with allocations to a "buffer" at the outset. Rather, the Commission should incorporate any allowances for scientific uncertainty into its initial determination of the minimum standard. Any flows in excess of this standard shall remain in the stream until permitted and actually needed for offstream use, in keeping with the policy against waste and in recognition that the standard merely states an absolute minimum required under any circumstances. These unallocated flows, however, will not constitute a distinct category or quantity, but will fluctuate according to variations in supply and demand.

Id. On remand, it appears that 2.2 mgd were not allocated. The Windward Parties argue that by failing to include the unpermitted 2.2 mgd in the IIFS, the Water Commission fails to protect instream values to the extent practicable. Although nothing in the record indicates that the Water Commission created a separate and distinct category by not including 2.2 mgd of unpermitted

water in the IIFS, the Water Commission, nonetheless, failed to make any findings regarding the 2.2 mgd, leaving this court without a means to decide the issue. Thus, we remand this issue for FOFs and COLs on the subject.

B. Transfer of the EP-15/16 Water Use Permit

1. *The Windward Parties and HTF have standing to appeal issues beyond the setting of the IIFS.*

As a threshold matter, Campbell Estate asserts that the Windward Parties and HTF "may not even have standing to appeal" other issues, *i.e.*, Campbell Estate's transfer of the EP-15/16 permit and the 2,500 gad, once the Water Commission set the IIFS. Specifically, Campbell Estate argues that the Windward Parties and HTF are not aggrieved parties on issues beyond the setting of the IIFS. This argument is without merit.

The Water Code provides that "[j]udicial review of rules and orders of the commission under this chapter shall be governed by chapter 91." HRS § 174C-12. In a contested case hearing, "[o]pportunities shall be afforded *all parties* to present evidence and argument on *all issues* involved." HRS § 91-9(c) (emphases added). "Any person aggrieved by a final decision and order in a contested case ... is entitled to judicial review thereof under this chapter..." HRS § 91-14. A person aggrieved is a person whose interests were injured. *Public Access Shoreline Hawaii v. Hawai'i County Planning Comm'n*, 79 Hawai'i 425, 434, 903 P.2d 1246, 1255 (1995). However, "where the interests at stake are in the realm of environmental concerns, we have not been inclined to foreclose challenges to administrative determinations through restrictive applications of standing requirements." *Ka Pa'akai O Ka'aina v. Land Use Comm'n, State of Hawai'i*, 94 Hawai'i 31, 42, 7 P.3d 1068, 1079 (2000) (citations, brackets, and quotations marks omitted).

In the contested case hearings, the Windward Parties and HTF were granted standing and were permitted to participate in all aspects of the case.

Campbell Estate does not challenge the Water Commission's decision to grant standing or allow participation as error. Contrary to Campbell Estate's contention, the Windward Parties' and HTF's standing does not cease upon the establishment of an IIFS, inasmuch as all issues presented before the Water Commission and this court ultimately affect the amount of water released into the windward streams. As such, we hold that the Windward Parties' and HTF's standing continues, as it did in the contested case hearing, beyond the setting of the IIFS.

In the alternative, Campbell Estate argues that the Windward Parties failed to exhaust their administrative remedies because they failed to offer any evidence at the hearing on remand. In its D & O II, the Water Commission found that "the windward parties had full and fair opportunity to present these issues and did present these issues in the context of this contested case hearing based on the evidence presented." D & O II at 130. Campbell Estate does not expressly challenge the Water Commission's finding. *See Okada Trucking Co. v. Bd. of Water Supply*, 97 Hawai'i 450, 458, 40 P.3d 73, 81 (2002) ("Findings of fact, however, that are

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not challenged on appeal are binding on the appellate court."); *Amfac, Inc. v. Waikiki Beachcomber Inv. Co.*, 74 Haw. 85, 135, 839 P.2d 10, 35 (1992) ("Alleged error in findings of fact not expressly challenged on appeal will be disregarded in the absence of plain error."). Moreover, a perusal of the record indicates that the Windward Parties addressed the issue in their opening statement and the record contains sufficient evidence for this court to review it. As such, Campbell Estate's argument is without merit.¹⁰

2. The transfer of Campbell Estate's permit to BWS complied with the plain language of the law.

The Windward Parties argue that Campbell Estate's transfer of its EP-15/16 water use permit was invalid because the transfer involved a change in water use.¹¹ The Windward Parties further argue

that this transfer was an attempt by Campbell Estate to rid itself of alternative water sources during the remanded hearings. Because Campbell Estate and BWS complied with the plain language of the Water Code, this court cannot hold that the transfer of the EP-15/16 water use permit was invalid.

HRS § 174C-59 (Supp.2000) provides:

A permit may be transferred, in whole or in part, from the permittee to another, if:

1. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
2. The commission is informed of the transfer within ninety days.

Failure to inform the commission of the transfer invalidates the transfer and constitutes a ground for revocation of the permit. A transfer which involves a change in any condition of the permit, including a change in use covered in section 174C-57, is also invalid and constitutes a ground for revocation.

HRS § 174C-59 (Supp.2000). Thus, a permittee may transfer its permit to another if the conditions of the permit remain the same and the Water Commission is informed within ninety days. Failure to inform the Water Commission invalidates the transfer, which presupposes validity at the time of the transfer.

On July 12, 2000, Campbell Estate and BWS entered into an agreement to transfer Campbell Estate's water use permit for 12.154 mgd to BWS. The agreement stated that BWS "shall only withdraw water out of EP 15/16 to the extent allowed under the Permit...." The agreement does not involve any changes to the permit. On August 8, 2000, BWS informed the Water Commission of the July 12, 2000 transfer. Because the conditions

of the permit remained unchanged upon transfer and the parties notified the Water Commission of the transfer, the parties complied with the plain language of HRS § 174C-59 and, thus, the transfer was valid. At that point, BWS, as a county agency, was free to modify the use of the permitted water, pursuant to HRS § 174C-57(c) (1993),¹²

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without adhering to the statutory modification process.

A concern developed, however, because BWS notified the Water Commission of its intent to change the water use from agricultural to urban in the same August 8, 2000 letter notifying the Water Commission of the transfer. BWS further stated that it planned to supply Campbell Estate with 11.87 mgd. Thus, according to the August 8, 2000 letter, Campbell Estate, with the cooperation of BWS, essentially managed to change 11.87 mgd of its previously permitted 12.154 mgd water use from agricultural to municipal without complying with the modification process as set forth in HRS § 174C-57. Although this raises serious concerns about the propriety of the transfer, Campbell Estate and BWS complied with the plain language of HRS §§ 174C-57 and 174C-59. Thus, because the language of these statutes is unambiguous, this court has no choice but to affirm the transfer.¹³ We leave it to the legislature to amend the language if it did not intend this result.

The Windward Parties also argue that the transfer was an attempt by Campbell Estate to rid itself of possible alternative water sources to be considered during the remanded hearings. Although the Windward Parties raise a valid point, as discussed *infra* in section III.C.1., the absence of a permit alone will not render an alternative water source impracticable. Thus, Campbell Estate would still be required to establish that EP-15/16 is impracticable as an alternative water source.

C. Practicable Alternatives

"Under the public trust [doctrine] and the Code, permit applicants have the burden of

justifying their proposed uses in light of protected public rights in the resource." *Waiāhole I*, 94 Hawai'i at 160, 9 P.3d at 472. The Water Code requires, *inter alia*, that the applicant prove that the proposed use of water is a "reasonable-beneficial use" and is "consistent with public interest." HRS §§ 174C-49(a)(2) and (4) (1993). "Reasonable-beneficial use" is defined as "the use of water in such a quantity as is *necessary* for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and public interest." HRS § 174C-3 (1993) (emphasis added).

Furthermore, besides advocating the social and economic utility of their proposed uses, permit applicants must also *demonstrate the absence of practicable mitigating measures, including the use of alternative water sources*. 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.

Waiāhole I, 94 Hawai'i at 161, 9 P.3d at 473 (citation omitted) (emphasis added). In addition, "applicants must still demonstrate their actual needs and, within the constraints of available knowledge, the propriety of draining

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water from public streams to satisfy those needs." *Id.* at 162, 9 P.3d at 474.

The Water Commission, on the other hand, is duty-bound to place the burden on the applicant to justify the proposed water use in light of the trust purposes and "weigh competing public and private water uses on a case-by-case basis[.]" requiring a higher level of scrutiny for private commercial water usage. *Id.* at 142, 9 P.3d at 454. Moreover, as discussed *supra* in section III.A.1., the Water Commission's findings must reasonably explain

and justify its conclusions and rulings. *Id.* at 157-58, 9 P.3d at 469-70. Finally,

the Commission must not relegate itself to the role of a mere "umpire passively calling balls and strikes for adversaries appearing before it," but instead must 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 using alternative resources.... *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 455 (citations omitted) (emphasis added). In light of the foregoing, this court must take a "close look" at the Water Commission's action to determine if it complies with the Water Code and the public trust doctrine.

1. Campbell Estate failed to meet its threshold burden of establishing the absence of practicable alternatives.

In *Waiāhole I*, this court vacated Campbell Estate's water use permit and held that, "[i]n neglecting to address the practicability of using pumped ground water as an alternative to stream diversion, the Commission failed to establish an adequate basis for the allocations granted to Campbell Estate." *Id.* at 165, 9 P.3d at 477. On remand, the Water Commission found that Campbell Estate had no practicable alternatives and issued Campbell Estate a water use permit for 4.74 mgd.

On appeal, the appellants argue that Campbell Estate failed to meet its burden of establishing that no practicable alternative sources of water existed. In its answering briefs, Campbell Estate does not assert that it met its burden. Instead, Campbell Estate merely proffers that the Water Commission adequately considered alternatives. We agree with the appellants.

In the instant case, the Water Commission entered no FOFs or COLs as to whether Campbell Estate met its burden. Instead, the Water Commission found, based on the testimony of Bert Hatton (Hatton), a Campbell Estate witness, that "until the Supreme Court issued its decision in August 2000, Campbell Estate was assured of Waiahole Ditch water, so they did not conduct a systematic study of alternative water sources. During the past 6 months, there have been some informal and very general discussions about possible scenarios if Ditch water were no longer available." D & O II at 93. "Informal" and "very general discussions" are insufficient to satisfy Campbell Estate's burden.

The Water Commission's analysis should have ceased when Campbell Estate failed to meet its burden of establishing that no practicable alternative water sources existed. The Water Commission, however, considered scenarios developed by Belt Collins Hawaii for the original contested case hearings and concluded that these scenarios did not provide practicable alternative water sources because they were inapplicable to Campbell Estate and PMI. The Water Commission stated:

The Belt Collins Hawaii scenario in which 1,665 acres of Campbell Estate lands below 520 feet elevation and PMI would be served by ground water at a base cost of \$0.58+ per 1,000 gallons, assumed that the water would come from EP-15/16. Campbell Estate no longer has this well, which was transferred to the Board of Water Supply....

The two scenarios in which the rest of Campbell Estate lands would be provided

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with ground water used the WP-2 pumps and the WP-30 booster pumps, which are on sites that were owned by Oahu Sugar Co. and which Campbell Estate does not and has never owned.

Thus, the scenarios developed by Belt Collins Hawaii do not provide practical alternative ground-water sources for either Campbell Estate or PMI, because the assumptions in those scenarios are not applicable.

D & O II at 125-26. Basically, the Water Commission determined that, because the land was not owned by Campbell Estate and Campbell Estate transferred its water use permit, these scenarios were not practical. However, even assuming that the Water Commission properly considered these scenarios, these reasons alone do not render an alternative impracticable. The Water Commission itself conceded that these scenarios were limited because "[t]hey did not include land and easement purchases, delivery to individual fields, taxes and return investments." D & O II at 125.

Accordingly, inasmuch 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.

2. PMI met its threshold burden of establishing the absence of practicable alternatives.

In *Waiāhole I*, this court vacated PMI's water use permit and held that the Water Commission's granting "of PMI's requested allocation without any reasoned discussion of the practicability of using ground water stands at odds with the Commission's own analysis and decision concerning nonagricultural uses."¹⁴ *Waiāhole I*, 94 Hawai'i at 171, 9 P.3d at 483. On remand, the Water Commission found that PMI had no practicable alternatives and issued PMI a water use permit for .75 mgd.

On appeal, the appellants collectively argue that PMI failed to meet its burden of demonstrating the absence of practicable mitigating measures. The Windward Parties separately argue that PMI made no serious attempt to prove that it could not afford to use an alternative water source.¹⁵ The appellants further argue that the record lacks any evidence that the BWS standard of 160 ppm exists, and if it does exist, the standard does not make an alternative impracticable because such a standard would be contrary to HRS § 174C-4(b) (1993). These arguments are without merit.

First, PMI met its burden of establishing the absence of practicable alternative water sources.¹⁶ In its FOFs, the Water Commission found that PMI considered three

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ground-water alternatives.¹⁷ PMI concluded that these alternatives were not practicable based on the chloride levels of alternatives one and three, the sustainable yield of alternative two, costs of desalinating, construction, and operation, and the availability of leases and easements.

Agreeing with PMI, the Water Commission concluded that "PMI's property [was] subject to the Board of Water Supply's standard for irrigation water applied over drinking water aquifers which

is 160 ppm." The Water Commission further concluded that

PMI considered three ground-water alternatives. Ewa Caprock water has chlorides in the 900 to 1,100 ppm range. Desalinating the water to below 200 ppm would cost \$6,000,000, with operating costs of \$3.00 per 1,000 gallons, exclusive of land and easement acquisitions. An on-site basal well in the Ewa-Kunia aquifer would have 1998 construction costs estimated at \$900,000 and operating costs of \$0.18 per 1,000 gallons and is economically feasible, but the property has deed restrictions prohibiting an on-site well and there is little likelihood of obtaining an allocation for a basal well in the Ewa-Kunia aquifer. A basal well in the Waipahu-Waiawa aquifer, using EP-5,6, owned by Campbell Estate would not be acceptable because of the chloride content of 180 ppm vs. the standard of 160 ppm. Other factors affecting this alternative are available pumping capacity, a long-term pumping agreement, the ease of obtaining an allocation in the Waipahu-Waiawa aquifer, and the ease and cost of obtaining an easement from the Farrington Highway delivery point, under the H-1 Freeway to the golf course property. These factors make the alternative of using Waipahu-Waiawa water not practicable for use by PMI.

There is essentially no balance remaining in the Ewa-Kunia Water Management Area....

D & O II at 126. Based on the foregoing, PMI adduced sufficient evidence, in the form of written and oral testimony, to meet its burden of establishing the absence of practicable

alternatives. Moreover, the Water Commission analyzed each alternative and explained why they were impracticable. Thus, to the extent that the Water Commission's decision compromises instream values, the Water Commission did so "with a level of openness, diligence, and foresight commensurate with the high priority these rights command under the laws of our state." *Waiāhole I*, 94 Hawai'i at 143, 9 P.3d at 455.

[93 P.3d 661] [105 Haw. 19]

Next, contrary to the Windward Parties' argument, PMI's failure to proffer evidence regarding its financial condition does not affect whether it met its burden of proof, inasmuch as it conceded that two of the three alternatives were economically feasible.¹⁸ PMI found, however, one alternative not economically feasible at \$3.00 per 1,000 gallons, which appears to be higher than the county rate schedules of 60 cents to \$2.47 per 1,000 gallons as cited in *Waiāhole I. Id.* at 165, 9 P.3d at 477. Regardless of PMI's financial situation, the Water Commission "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.* As such, in the instant case, PMI's ability to afford \$3.00 per 1,000 gallons, alone, would not render the alternative practicable, just as PMI's inability to afford \$3.00 per 1,000 gallons, alone, would not render the alternative impracticable. The Water Commission found that "an alternative source is practicable if it is available and capable of being utilized after taking into consideration cost, existing technology, and logistics in light of the overall water planning process." D & O II at 124-25. Thus, the Water Commission, according to its own standard, must determine whether the alternative is available and capable of being utilized after considering cost, technology, and logistics. Based on its D & O II, the Water Commission did as much.

Finally, the record supports a 160 ppm limit for irrigating fields over drinking water aquifers. Reference to a 160 ppm limitation appears in

Hatton's written testimony, which the Water Commission apparently found credible. *See Amfac*, 74 Haw. at 117, 839 P.2d at 28 (noting that "an appellate court will not pass upon issues dependent upon credibility of witnesses and the weight of the evidence, this is the province of the trial judge"). The Water Commission then applied this 160 ppm limitation to determine whether PMI's alternatives were practicable. Because the record supports the Water Commission's finding that the 160 ppm limit applied to PMI's property, the Water Commission did not err by using this limit as a factor in determining whether an alternative source of water is practicable.

Moreover, such a limit, as applied in the instant case by the Water Commission, is not contrary to HRS § 174C-4(b), which provides in relevant part that "[n]o state or county government agency may enforce any statute, rule or order affecting the waters of the State controlled under the provisions of this chapter, whether enacted or promulgated before or after July 1, 1987, inconsistent with the provisions of this chapter." HRS § 174C-4(b) (1993). The Windward Parties contend that this statute "gives the Commission, rather than the BWS, the authority to decide how and where water is used." In the instant case, the Water Commission, and not BWS, applied the 160 ppm limitation of chloride in water used to irrigate fields over drinking aquifers as a factor in determining whether practicable alternative sources existed for PMI. As such, HRS § 174C-4(b) was not violated.

In sum, PMI met its threshold burden of establishing the absence of practicable alternative water sources, HRS § 174C-4(b) was not violated, and the Water Commission, at first glance, appears to have clearly addressed PMI's alternatives. The Water Commission's analysis, however, later falters.

3. The Water Commission erred by grounding its decision on the effect reduced flows would have on the ditch's economic viability and on the theory that public trust resources may not be prioritized.

In its D & O II, the Water Commission stated:

Finally, if Campbell Estate (and PMI) is required to use alternative sources, reduced flows in the Waiahole Ditch would accelerate the deterioration of system components and increase maintenance requirements,

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and the continued operational viability of the Ditch would be at risk because of the large proportion of total Ditch flows that go to Campbell Estate's lessees.

The Commission concludes that the physical impact on the Ditch and the economic impact on the continued operational viability of the Ditch if Campbell Estate is required to use ground-water sources make such an alternative to use of Waiahole Ditch water not practicable.

....

The Commission concludes that, if water from the Waipahu-Waiawa Management Area of the Pearl Harbor aquifer were to replace Ditch water for Campbell Estate and PMI, *water from windward public trust resources* that are available for non-trust purposes after measures have been taken to enhance those windward public trust resources, *would be given priority over a leeward public trust resource.*

D & O II at 127-28 (emphases added). The appellants collectively argue that the Water Commission erred by basing its decision that no practicable alternatives existed on these grounds. Conversely, the Water Commission claims that it did not have to rely on these conclusions in finding that no practicable alternatives existed and, thus,

these conclusions can be viewed as dicta. We agree with the appellants.

First, the Water Commission cannot, during an appeal, claim that its conclusions are null or had no effect on its decision because the Water Commission is duty-bound to articulate its analysis with reasonable clarity. *Waiāhole I*, 94 Hawai'i at 164, 9 P.3d at 476. Second, the Water Commission cannot render all alternatives impracticable because reduced flows "would accelerate the deterioration of system components and increase maintenance requirements, and the continued operational viability of the Ditch would be at risk...." D & O II at 127. The Water Commission did not make any finding as to the water flow required to maintain the ditch's economic and operational viability. The Water Commission, however, found that "[t]he Waiāhole system was designed to carry flows in excess of 40 mgd." D & O II at 96. Thus, it is conceivable that any water flow below 40 mgd could affect the economic and operational viability of the ditch. As such, the burden of establishing the absence of practicable alternatives, pursuant to the reasonable-beneficial requirement of HRS § 174C-49(a)(2), would be rendered non-existent if the ditch flow falls below 40 mgd, inasmuch as all alternatives, based on the Water Commission's reasoning, would be predetermined impracticable. *See Coon v. City & County of Honolulu*, 98 Hawai'i 233, 250, 47 P.3d 348, 365 (2002) (noting that "[o]ur rules of statutory construction require[] us to reject an interpretation of [a] statute ... that renders any part of the statutory language a nullity") (quoting *Potter v. Hawai'i Newspaper Agency*, 89 Hawai'i 411, 423-24, 974 P.2d 51, 63-64 (1999) (citations omitted) (brackets in original)). At such a point where the Water Commission is approving water use applications to divert windward stream water, of which there is no alternative source, for the purpose of maintaining ditch flow, the Water Commission should, instead, consider whether the ditch is necessary at all. Finally, the Water Commission's reasoning, that public trust *resources* may not be prioritized because public trust *uses* may not be prioritized, is illogical. Considering whether alternative water resources are practicable innately requires

prioritizing among public trust resources. As such, by failing to prioritize among public trust resources, the Water Commission failed to fulfill its duty, under the Water Code and the public trust doctrine, of considering whether practicable alternatives exist. *See Waiāhole I*, 94 Hawai'i at 161, 9 P.3d at 473 ("[P]ermit applicants must also demonstrate the absence of practicable mitigating measures, including the use of alternative water sources. Such a requirement is intrinsic to the public trust, the statutory instream use protection scheme, and the definition of 'reasonable-beneficial' use....").

Accordingly, the Water Commission erred by basing its decision that Campbell Estate and PMI had no practical alternative water sources (1) on the effect reduced water flows will have on the economic viability of the Ditch and (2) on the theory that public trust resources may not be prioritized.

[93 P.3d 663] [105 Haw. 21]

Moreover, even if the Water Commission did not rely on these factors in reaching its decision, the Water Commission failed to articulate as such in its analysis with reasonable clarity. Thus, this court has no choice but to vacate Campbell Estate's and PMI's water use permit and remand for further proceedings consistent with this opinion.

D. Diversified Agriculture

1. Allotting 2,500 gallons of water per cultivated acre in diversified agriculture per day was not clearly erroneous.

On appeal, HTF argues that "2,500 gad for each and every acre in diversified agriculture, including fallow acres not being irrigated, results in an allocation approximately double what the leeward farmers actually need." The Water Commission does not address this issue in its answering brief. After reviewing the Water Commission's analysis on remand, we hold that the Water Commission's allocation of 2,500 gad per *cultivated* acre for diversified agriculture was not clearly erroneous.

In *Waiāhole I*, this court noted that the uncertainty of water needs for diversified agriculture "appears to stem largely from the embryonic state of diversified agricultural operations." *Id.* at 162, 9 P.3d at 474. Notwithstanding this uncertainty, this court held that permit applicants must still justify "their proposed uses insofar as circumstances allow. At the very minimum, applicants must prove their own actual water needs." *Id.* at 161, 9 P.3d at 473. Restated, "permit applicants must ... demonstrate their actual needs and, within the constraints of available knowledge, the propriety of draining water from public streams to satisfy those needs." *Id.* at 162, 9 P.3d at 474. This court also held that the Water Commission "must articulate its factual analysis with reasonable clarity...." *Id.* at 164, 9 P.3d at 476. This court then vacated the Water Commission's adoption of the 2,500 gpd figure for diversified agriculture because the Water Commission failed to address and explain contradictions in the record regarding the Water Commission's assignment of "2,500 gallons per day to as much as two or three times the acreage actually planted, resulting in a per-acre duty apparently approaching that of sugar...." *Id.* at 163, 9 P.3d at 475.

On remand, the Water Commission addressed this court's concerns. The Water Commission first clarified the terms "arable," "cultivated," and "planted" as follows:

Arable land is land that is able to be cultivated but not necessarily in cultivation. *Cultivated* land goes through the cycle of being plowed, planted, harvested, plowed under and left to rest (either with or without cover crop), then plowed and planted, etc. *Planted* means when the plants are actually present. So you may be planted three or four months a year, but you're in cultivation continuously throughout the year.

D & O II at 74. In analyzing the difference between applying gallons of water per acre per day

to planted acres and cultivated acres, the Water Commission noted that "the evidence that farming practices involved rotation among fields made it difficult to specify what a particular acreage's water needs were. Thus, the Water Commission decided an average water use of acreage under *cultivation* was the most appropriate method to use." D & O II at 77-78 n. 59.

The Water Commission next noted the testimony of two leeward farmers, Larry Jefts (Jefts) and Alec Sou (Sou):

At the original hearing, Jefts testified on what he believed were the water needs per acre of cultivated land, making further distinctions of the water needs while crops were growing (e.g., planted) and while the land was between crop cycles:

Generally, I would say we need an average of about 3,500 gallons per acre per day. Much water is used while the crops are growing. The first day of planting can perhaps use a peak of as much as 54,000 gallons per acre. From the second day through the day of harvest, the usage may be as much as 10,000 gallons per acre per day. For example, this amount might be used during the 75-90 day crop cycle for watermelons, bell peppers and tomatoes. The amount of water used varies depending

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on the crop cycle, the weather, and other factors. In between crop cycles, somewhat less water is needed for remaining uses such as cover crop[.]"

....

Sou made a clear distinction on water demand between cultivated and planted acreage, stating that he

had a water demand for cultivated land of 1,800 to 54,000 gad, a comfortable zone for him to pursue his farming plans being an average of 3,500 gad. This is an average on land over a period of years, considering fallow land, etc. In contrast, average water usage is about 7,500 gad while plants are in the ground and being irrigated.

D & O II at 75-76 (citation, emphases, quotation marks, and parenthetical omitted). The Water Commission then considered the following evidence regarding current water uses and expected water needs:

Sou testified that he can live with the 2,500 gad until full build out indicates more is needed. His annual average use on the lands he has leased from Robinson Estate has decreased from 1,346 gad in 1998, to 1,455 gad in 1999, and to 1,204 gad in 2000.... [H]is subtenants have averaged water use from 1,579 gad to 2,662 gad....

Jefts now averages 1,000 to 1,300 gad for about 1.1 crop cycles on all arable acres that he leases from Campbell Estate, and averages 1,380 gad for about one crop cycle on all arable acres he leases from Robinson Estate. He plans to increase to 1.9 crop cycles per year, based on 2,500 gad as the limiting factor in increasing productivity....

....

... The Commission concludes that the uncertainties to leeward farmers' build-out plans from the events listed above reasonably affected their capacities to carry out the plans they originally espoused in the original 1995-1996 hearings.

D & O II at 120-21. Based on the foregoing, the Water Commission concluded that "2,500 gad for acres under *cultivation* or planned to be under *cultivation* is a reasonable water duty for leeward diversified agriculture." D & O II at 136 (emphases added).

It is the Water Commission's daunting task to synthesize the evidence and reach a conclusion while balancing various interests and accounting for the public trust. In the instant case, the Water Commission considered testimony that each planted acre, depending on the crop, require anywhere between 1,800 to 54,000 gallons of water per day, and averaging 7,500 gallons per day. In diversified agriculture, farmers plant only one-third to one-half of their cultivated acres at any given time. In addition, because rotating the fields in diversified agriculture makes it difficult to specify the water need for a particular acre, the Water Commission decided to consider average water use for cultivated acres. Based on the evidence presented, the Water Commission concluded that 2,500 gallons of water per cultivated acre per day was sufficient for diversified agriculture. Inasmuch as the Water Commission articulated its reasoning with sufficient clarity in its D & O II, we cannot say that the Water Commission's decision was clearly erroneous. The Water Commission's allocation of 2,500 gallons of water per cultivated acre per day appears to be based on the best information currently available.

In reaching our conclusion, we carefully considered HTF's argument that the Water Commission's allocation of water exceeds the amount actually used by the farmers in the past. Although past water use is a good indication of actual water needs, it is not the only means of determining actual water needs. An applicant must be able to present evidence of, and the Water Commission may consider, projected water needs that are real and supported by evidence. Moreover, any uncertainty in issuing permits for future actual water needs was properly offset by the Water Commission's condition that the applicant show actual use of the permitted amount within four years of the D & O II and the Water Commission's

mandate that any unused permitted water must be released into windward streams.

Accordingly, this court affirms the Water Commission's allocation of 2,500 gallons of water per *cultivated* acre in diversified agriculture per day. However, the Water Commission must keep in mind that nine years

[93 P.3d 665] [105 Haw. 23]

have passed since the first contested case hearings and diversified agriculture is no longer in its embryonic stage. As such, this holding does not condone a blanket application of 2,500 gad to all future allotments of water for diversified agriculture. Instead, the Water Commission must continue making decisions based on the best information available.

2. Allotting 2,500 gad for all 267 acres in Field Nos. 115, 116, and 145 was clearly erroneous.

HTF next argues that Jefts failed to demonstrate an actual water need for 2,500 gad for every acre leased. After reviewing the record, we hold that the Water Commission clearly erred by allotting 2,500 gad to all 267 acres of land in Field Nos. 115, 116, and 145.

In *Waiāhole I*, this court vacated Campbell Estate's allotment of "1.19 mgd for Field Nos. 115, 116, 145, and 161, consisting of 145 total acres multiplied by 2,500 gad" because basic information regarding current and projected use were not included in the Water Commission's FOFs in the D & O I.¹⁹ *Waiāhole I*, 94 Hawai'i at 164, 9 P.3d at 476.

On remand, the Water Commission entered the following findings:

In order to convert the land to diversified farming operations, Jefts had to knock down the ratoon cane, till the fields compacted after sugar planting, and adjust the pH component in the soil. The effort to

adjust the pH level may take several years, and he hoped that, in three to four years, things will begin....

....

By the time of the remanded hearings, Jefts had concluded that the optimum crop mix for him in Kunia was about 1.9 crop cycles per year.

....

On his Campbell Estate leases, Jeft currently averages between 1,000 to 1,300 gad for about 1.1 crop cycles on all of the arable acres that he leases. At his projected optimum crop mix of 1.9 crop cycles per year, 1,000 to 1,300 gad should nearly double but not exceed 2,500 gad.[] His projection to 1.9 crop cycles per year is based on 2,500 gad as a limiting factor in increasing productivity.

Based on all of his Robinson leases, approximately 1,093 tillable (arable) acres, his average gallons per acre per day has increased as follows: 792 gad in 1998; 936 gad in 1999; and 1,380 gad in 2000. Jefts now has all 1,093 tillable (arable) acres in cultivation, averaging about one crop cycle per year....

Jefts's build out plans are event driven. These events are primarily the events that reduce the risk profile that give him the confidence that he can run a successful farming operation....

....

Gentry and Cozzens did not exercise its option to purchase Fields 115, 116, and 145 by the expiration date of November 1999, and in February

2000, these fields were leased to Jefts for diversified agriculture....

Jefts had begun to clear the land and put in the infrastructure to get water on the former Gentry lands, and had completed 188 acres (of the 267 acres) at the time of the remanded hearing.

D & O II at 82-84, 88.

As such, according to the D & O II, Jefts is currently using 1,000 to 1,300 gad at 1.1 crop cycle on the land leased from Campbell Estate. In 2000, he averaged 1,380 gad at one crop cycle on the land leased from Robinson Estate. Jefts testified that he intends to increase to 1.9 crop cycles as limited by the 2,500 gad allotment. Moreover, Jefts has consistently increased productivity and water use each year on the lands leased from Robinson Estate. Based on these factors, Jefts has established an actual water need of 2,500 gallons of water per cultivated acre per day. As such, this court affirms the Water Commission's

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allotment of 2,500 gallons of water per cultivated acre per day to Jefts.

However, the D & O II is devoid of any finding that Jefts adduced evidence establishing an actual need to water all 267 acres of land in Field Nos. 115, 116, and 145. The D & O II merely states that "[a]t the time of the remanded hearings, Jefts had completed clearing the land and putting in the irrigation infrastructure for 188 of the 267 acres." D & O II at 137. Jefts testified on remand that "[a]bout 188 acres, referred to as the Gentry option area, has been in our possession for a little over a year, was brought into cultivation the middle of last year. Planting began late last year, and we're now finishing the first planted cycle on that property." Thus, the record evinces that Jefts cultivated or planned to cultivate only 188 acres of land in Field Nos. 115, 116, and 145. In his written testimony, Jefts was asked, "Are arable acres synonymous with acres being cultivated?" Jefts

responded, "For the lands that I lease from Campbell Estate, currently, no, but very soon, yes. Before I can begin cultivating any piece of land, I need to clear it and put in infrastructure, including the infrastructure to get water there. I recently did that with 188 acres of the Gentry option lands." Although this statement implies that Jefts intends to convert all arable lands leased from Campbell Estate into cultivated lands, the Water Commission failed to make any finding that all 267 acres of land in Field Nos. 115, 116, and 145 were arable and, thus, to be cultivated.

In summary, Jefts presented sufficient evidence of, and the Water Commission made reasonably clear findings that, Jefts's actual water need is 2,500 gallons per cultivated acre per day and that Jefts had cultivated or planned to cultivate 188 acres of land in Field Nos. 115, 116, and 145. However, because the Water Commission failed to enter any finding that Jefts adduced sufficient evidence to establish that he planned to cultivate all 267 acres of land in Field Nos. 115, 116, and 145, we vacate the Water Commission's allotment of 2,500 gads for 267 acres and remand for further proceedings consistent with this opinion. Any allotment awarded by the Water Commission to Jefts on remand is subject to Campbell Estate meeting its burden of proving, and the Water Commission finding, that no practicable alternative sources of water exist.

3. Allotting 2,500 gad for 229 acres in Field Nos. 146 and 166 was clearly erroneous.

Finally, HTF argues that Garst Seeds, formerly ICI Seeds, failed to establish an actual water need for 2,500 gad. Although the Water Commission did not err by allotting 1,800 gad for 115 acres of land in Field Nos. 146 and 166, the Water Commission clearly erred by allotting 2,500 gad for 229 acres of land.

In *Waiāhole I*, this court held that the Water Commission's year round allocation of 2,500 gad for the 344 acres of land in Field Nos. 146 and 166 had no basis in the record and was clearly erroneous. *Waiāhole I*, 94 Hawai'i at 164, 9 P.3d at

476. This court then vacated the allocation of water and remanded for further proceedings. *Id.*

On remand, the Water Commission found that Garst was using approximately 600 gad over 344 acres.²⁰ Due to the mono-type crop

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operation using spatial isolation, two-thirds of its acres are idle at any given time. Thus, Garst's actual water need was approximately 1,800 per planted acre.²¹ Because Garst adduced sufficient evidence of, and the Water Commission clearly articulated findings that, Garst's actual water need is 1,800 gallons per planted acre and 115 acres (approximately one-third of the total acres) are planted, this court affirms the Water Commission's allocation to that extent.

However, the Water Commission failed to make adequate findings that clearly articulate Garst's actual water need of 2,500 gad for the remaining 229 acres (approximately two-thirds of the total acres). The Water Commission justifies this award by finding that "Garst Seed is in negotiations to better utilize the isolation acres for its mono-type crops: 1) with USDA on conservation type crops to be used on the idle ground; 2) with HARC to plant on the isolation acres; and 3) with Jefts to do a land 'swap', whereby Jefts would plant on some of Garst Seed's land and Garst would plant an equal amount of acreage on Jefts's lands." D & O II at 123. The Water Commission, however, failed to make findings on the acres to be used, the crops to be planted, and the water needed as to each group. Paul Stuart, a Campbell Estate witness and a Garst Seed employee, first testified that the crops developed with the USDA would be cover crops that require "minimal maintenance" and "minimal water." These crops would be grass-like and "very drought tolerant." Stuart testified next that the collaboration with HARC was "in the discussion stages" and "[t]here's no firm commitment there." Stuart did not state the amount of acres to be used if the negotiations are successful. Finally, although Stuart testified that the land swap with Jefts is "in effect

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right now," Stuart did not testify as to the amount of acreage swapped. Absent basic information on current acres used or projected acres needed, the Water Commission clearly erred by allocating 2,500 gad for 229 acres. As such, we vacate this allocation and remand for further proceedings. Again, any decision by the Water Commission regarding an allocation to Garst is subject to Campbell Estate's establishing, and the Water Commission finding, that no practicable alternatives exist.

E. ADC's water use permit.

The appellants argue that, because ADC failed to meet its burden of establishing that its water use was reasonable-beneficial pursuant to HRS § 174C-49(a), the Water Commission erred by issuing ADC a permit. The Water Commission simply proffers that it complied with this court's directive in *Waiāhole I*. ADC argues that, because it was granted a permit, it is presumed that ADC established that its uses were consistent with state and county general plans and land use designations. ADC further argues that "[a]t some point, the cost of obtaining a more efficient system will outweigh the cost of the water that is lost from the system" and that "[i]t does not serve the public interest to expend this amount of money to recapture a small amount of water."²² Absent reasonably clear findings that ADC met its burden pursuant to HRS § 174C-49(a), this court cannot affirm the Water Commission's decision to issue ADC a water use permit for systems losses.

In *Waiāhole I*, this court held that the Water Commission must consider the ditch system operator's application, "as it would any other proposed 'use,' pursuant to the permitting process," and determine whether issuing a permit is appropriate.²³ *Waiāhole I*, 94 Hawai'i at 173, 9 P.3d at 485. The permitting process requires that

the applicant shall establish that the proposed use of water:

- (1) Can be accommodated with the available water source;
- (2) Is a reasonable-beneficial use as defined in section 174C-3;
- (3) Will not interfere with any existing legal use of water;
- (4) Is consistent with public interest;
- (5) Is consistent with state and county general plans and land use designations;
- (6) Is consistent with county land use plans and policies; and
- (7) Will not interfere with the rights of the department of Hawaiian home lands as provided in section 221 of the Hawaiian Homes Commission Act.

HRS § 174C-49(a). "The commission shall determine, after a hearing, if required, whether the conditions set forth in section 174C-49(a) have been established[.]" HRS § 174C-53 (1993). In establishing reasonable-beneficial use, the applicant must show actual need and the absence of practicable mitigating measures, such as system repairs. *Waiahole I*, 94 Hawai'i at 161, 9 P.3d at 473.

On remand, the Water Commission explained the reasons for system losses and the mitigating measures that ADC performed or planned to perform. The Water Commission then stated that "[o]perational losses are a normal component of any water delivery system, and thus the Commission finds it appropriate

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to issue a use permit to the ADC for operational losses suffered in delivering water to its clients in leeward O"ahu." D & O II at 132.

This court agrees with the Water Commission that some losses are unavoidable, *e.g.*, losses due

to evaporation. The Water Commission, however, made no findings that ADC met its burden pursuant to HRS § 174C-49(a). In fact, the Water Commission's findings lead this court to believe that ADC did not meet its burden. The Water Commission determined that 1.5 mgd of the 2.0 mgd requested in ADC's application were probably due to leakage and seepage. The Water Commission further found that ADC "has not yet addressed the feasibility and costs of lining the remaining unlined portion of the ditch and/or the two reservoirs." D & O II at 132. Without addressing the feasibility of repairing the leaks that cause the 1.5 mgd loss, it is unclear how the Water Commission could determine that a 1.5 mgd loss complied with HRS § 174C-49(a).

Accordingly, we vacate ADC's water use permit and remand for further proceedings consistent with this opinion. We again leave it to the Water Commission to determine whether issuing a permit for systems losses is appropriate. If the Water Commission answers in the affirmative, it must make findings that demonstrate whether ADC has met its burden pursuant to the permitting process. If the Water Commission answers in the negative, it must somehow account for system losses. In any event, the Water Commission's decision must include provisions that encourage system repairs and limit losses.

IV. CONCLUSION

We acknowledge the considerable time and attention devoted to this case by the Water Commission and the parties involved. We must stress, however, the importance of reasonably clear findings and conclusions so that this court can engage in informed review. Without such, this court has no choice but to vacate and remand issues for further proceedings. Thus, for the reasons stated in this opinion, we vacate in part the Water Commission's decision and remand for further findings and conclusions regarding: (1) the designation of an IIFS for windward streams; (2) the 2.2 mgd of unpermitted water; (3) the practicability of Campbell Estate and PMI using alternative ground water sources; (4) the actual

needs of Field Nos. 115, 116, and 145 (Jefts); (5) the actual needs of 229 acres in Field Nos. 146 and 166 (Garst Seeds); and (6) ADC's permit for systems losses.

Concurring Opinion by ACOBA, J.

I agree with the result reached in this case. I also concur that an agency's findings and conclusions must be reasonably clear. Majority opinion at 10, 11, 93 P.3d at 652, 653; *see Igawa v. Koa House Restaurant*, 97 Hawai'i 402, 412, 38 P.3d 570, 580 (2001) (Acoba, J., concurring) ("Findings and conclusions by an administrative agency must be reasonably clear to enable the parties and the court to ascertain the basis of the agency's decision."); *Nakamura v. State*, 98 Hawai'i 263, 47 P.3d 730, (2002) (Acoba, J., concurring and dissenting) ("An agency's finding must be sufficient to allow the reviewing court to track the steps by which the agency reached its decision." (Quoting *Kilauea Neighborhood Ass'n v. Land Use Comm'n*, 7 Haw.App. 227, 230, 751 P.2d 1031, 1034 (1988))). "The purpose behind findings is to assure reasoned decision making by the agency and enable judicial review of agency decisions." *Id.* (Acoba, J., concurring and dissenting) (quoting *In re Application of Hawaii Elec. Light Co.*, 60 Haw. 625, 642, 594 P.2d 612, 623 (1979)).

With all due respect, I do not agree, however, that after the adoption of HRS § 91-14(g),²⁴ we "review the Water Commission's

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action pursuant to the *deferential* abuse of discretion standard." Majority opinion at 8, 93 P.3d at 650 (quoting *Paul's Elec. Serv., Inc. v. Befitel*, 104 Hawai'i 412, 419-420, 91 P.3d 494, 501-502 (2004)) (emphasis added). It is not clear how a "deferential" abuse of discretion standard differs from the "abuse of discretion" standard as listed in HRS § 91-14(g). *See* majority opinion at 10-11, 93 P.3d at 652-653. Similarly, it is not apparent how affording "deference" adds anything more to the fact that the agency must make clear

findings of fact and conclusions of law. *See* majority opinion at 10-11, 93 P.3d at 652-653.

The fact that such deference is not listed in HRS § 91-14(g) is not accidental. *See Paul's Elec. Serv., Inc.*, 104 Hawai'i 412, 422, 91 P.3d 494, 504 (Acoba, J., concurring).

The grounds set forth in HRS § 91-14(g) establish the authority of the appellate courts to remand, reverse, or modify an agency decision "if the substantial rights of the petitioners may have been prejudiced[.]" *This authority proceeds from specific standards referable to agency action.* For example, judicial intervention is permitted if the agency exceeded statutory authority, engaged in "unlawful procedure," committed "error of law," was "clearly erroneous" in view of the substantial evidence, or was "arbitrary and capricious." HRS § 91-14(g).

Id. (emphasis added).

In light of these grounds, there is little gain in applying a "deferential abuse of discretion standard" to agency decisions, *see* majority opinion at 8, 93 P.3d at 650, in terms other than that expressly defined and stated in HRS § 91-14(g). *See Paul's Elec. Serv., Inc.*, 104 Hawai'i 412, 422, 91 P.3d 494, 504. "The 'deference' to be given agency decisions already inheres in the specific enumerated grounds." *Id.*

Notes:

1. Although Waiāhole-Waikane Community Association, Hakipu'u 'Ohana, and Ka Lahui Hawai'i filed a joint notice of appeal, only Hakipu'u

‘Ohana and Ka Lahui Hawai‘i filed a joint opening brief. The record does not indicate why Waiāhole-Waikāne Community Association did not take part in the joint opening brief.

It should also be noted that Kamehameha Schools Bernice Pauahi Bishop Estate (KSBE) filed a notice of appeal and an opening brief. However, on August 13, 2002, KSBE stipulated to dismiss its appeal and, thus, its appeal will not be addressed in this opinion.

2. In July 1999, ADC acquired the operations of the Waiāhole Ditch system from the Waiāhole Irrigation Company.

3. In its D & O II, the Water Commission notes that, although it inadvertently used the word "buffer" in a COL in its D & O I, it did not intend that "nonpermitted ground-water buffer" be a formal and distinct category of allocation.

4. Although the D & O II indicated that the transfer occurred on July 17, 2000, the agreement between Campbell Estate and BWS was dated July 12, 2000.

5. BWS's August 8, 2000 letter to the Water Commission also stated that "EP 15/16 has in the past and still remains capable of yielding an average of 20 MGD of water meeting potable salinity standards." It is unclear, however, whether this was a request to increase the amount of water permitted to be withdrawn from EP-15/16, inasmuch as its proposed allocations of water exceeded 12.154 mgd.

6. In determining the estimated stream flow using the base flow plus ditch flow data, the Water Commission combined Waiāhole and Waiānu streams because "[a]ttempting to separate the watershed contribution to Waiāhole Stream from the contribution to Waianu Stream based on the available evidence would result in an anomalous situation." D & O II at 107 n. 102.

7. Although the Water Commission refers to a 10 mgd flow measurement taken from Waiāhole stream during 1965 while discussing the contradiction in testimony regarding the extension

of the Uwau tunnel, it is unclear whether the measurement itself was a finding of fact by the Water Commission. D & O II at 34. If so, this measurement does not support the Water Commission's conclusion that the 8.7 mgd allocated to Waiāhole stream is more than in the 1960s. In any event, the Water Commission "must make its findings reasonably clear" because this court "should not be left to guess, with respect to any material question of fact...." *Waiahole I*, 94 Hawai‘i at 157-58, 9 P.3d at 469-70.

8. Contrary to the appellants' contention that the Water Commission erred by disregarding the testimony of three aquatic biologists, the Water Commission need not rely on such testimony if sufficient evidence exists in the record to support its conclusion.

9. We agree with the Water Commission's analysis that a minimalist approach to restoring stream flows by adding the approximately 2.8 mgd to Waiāhole and Waianu streams that was removed by the Uwau Tunnel extension in 1964 is insufficient in light of the Water Commission's duties and in the interest of precaution.

10. In addition, the Water Commission and Campbell Estate argue that the transfer issue is a mixed question of law and fact and reviewable under the clearly erroneous standard. However, because it entails the application of statutory law to undisputed facts, it is a question of law subject to *de novo* review.

11. Although only the Windward Parties argue that Campbell Estate's transfer of EP-15/16 permit to BWS was invalid, HTF appears to join in the Windward Parties' argument by urging in its opening brief that, "[a]s argued in Waiāhole-Waikane Community Association, Hakipuu Ohana and Ka Lahui Hawaii's Petition for Writ of Mandamus to the Commission on Water Resource Management, and in the Windward Parties Opening Brief herein, Campbell Estate's transfer of the EP 15/16 permits to BWS is invalid pursuant to Haw.Rev.Stat. § 174C-59."

12. HRS § 174C-57 provides:

(a) A permittee may seek modification of any term of a permit. A permittee who seeks to change the use of water subject to the permit, whether or not such change in use is of a material nature, or to change the place of use of the water or to use a greater quantity of water than allowed under the permit or to make any change in respect to the water which may have a material effect upon any person or upon the water resource, shall make application pursuant to section 174C-51 in respect to such a change. Modification of one aspect or condition of a permit may be conditioned on the permittee's acceptance of changes in other aspects of the permit.

(b) All permit modification applications shall be treated as initial permit applications and be subject to sections 174C-51 to 174C-56; except that if the proposed modification involves an increase in the quantity of water not exceeding an average amount per month to be established by rule, the commission, at its discretion, may approve the proposed modification without a hearing provided that the permittee establishes that:

(1) A change in conditions has resulted in the water allowed under the permit becoming inadequate for the permittee's needs; or

(2) The proposed modification would result in a more efficient utilization of water than is possible under the existing permit.

(c) *County agencies are exempt from the requirements of this section* except where the modification involves a change in the quantity of water to be used or where the new use would adversely affect the quality of the water or quantity of use of another permittee.

(Emphasis added.)

13. In its D & O II, the Water Commission states that

[i]t is the Commission's conclusion that, even if the transfer of the water use permit for EP 15/16 from the Campbell Estate to BWS were to be ultimately reversed by the Hawai'i Supreme Court, the physical and economic impacts on the

continued operational viability of the Ditch if Campbell Estate is required to use ground-water sources as an alternative to Ditch water make the ground-water alternative impracticable.

D & O II at 127 n. 144. The Water Commission's view is misguided because, as discussed *infra* in section III.C.3, the ditch's operational viability will not render all alternative sources of water impracticable.

14. The Water Commission required PMI, as a nonagricultural water user, to use alternative sources of water when available, "observing that the use of diverted stream water for golf course irrigation in an arid region would not be reasonable-beneficial if alternatives were available." *Waiāhole I*, 94 Hawai'i at 171, 9 P.3d at 483.

15. The Windward Parties requested that this court take judicial notice of the minutes of ADC's Board of Directors April 22, 2002 meeting. In fact, throughout the appeal, the Windward Parties state that this court may take judicial notice that: (1) "rainfall at the back of Waiāhole valley historically averages at least 160 inches per year[;]" (2) "Waiāhole stream today is too shallow to float a boat[;]" (3) "the polyethylene with which the redwood pipes are being replaced does not need to be kept wet and is highly resistant to deterioration[;]" and (4) Kamehameha Schools' water use application was withdrawn. Because the preceding information is either unnecessary to our decision or inappropriate for judicial notice, this court declines to take judicial notice. *See State v. Moses*, 102 Hawai'i 449, 455, 77 P.3d 940, 946 (2003) (quoting 9 John Henry Wigmore, *Evidence in Trials at Common Law* § 2571, at 732 (Chadbourn rev. 1981)) ("A court should take judicial notice only in very limited circumstances....").

16. PMI asserts that, according to *Waiāhole I*, it was not required to adduce any evidence. However, as discussed *supra*, the Water Code and *Waiāhole I* clearly place the burden on the applicant to justify its proposed use.

17. In its D & O II, the Water Commission found as follows:

A source contemplated in the original golf course plans was the Ewa Caprock aquifer. The application was rejected because the chlorides were in the 900 to 1,100 ppm range and would be used over a potable aquifer. Estimates of desalinating the water to below 200 ppm were \$6,000,000, exclusive of land and easement acquisition, with estimated operating costs of \$3.00 per 1,000 gallons, which was not considered economically feasible. In addition, the original arrangements for the plant site lease and easements to the golf course were not available to PMI at the time it purchased the property in foreclosure.

The second alternative was an on-site basal well in the Ewa-Kunia aquifer, with 1998 construction costs estimated at \$900,000 and operating costs of \$0.18 per 1,000 gallons. This was considered economically feasible, but the property has deed restrictions prohibiting an on-site well, and the likelihood of obtaining an allocation for a basal well in the Ewa-Kunia aquifer is remote. The current sustainable yield is 16 mgd, the existing allocations total 14.5 mgd, applications are pending for an additional 3.1 mgd, and the milestone yield for the aquifer is 14 mgd.

The third alternative was a basal well in the Waipahu-Waiawa aquifer, using EP-5,6 (owned by Campbell Estate and with a marginally acceptable chloride content of 180 ppm). Estimated construction costs were \$3,000,000 and estimated operating costs were \$0.39 per 1,000 gallons to a delivery point at Farrington Highway, exclusive of the pumping and delivery charge by the well operator to move the water from the well to Farrington Highway. PMI considered this alternative marginally feasible. Other factors affecting practicability were the chloride level of the water, available pumping capacity, a long-term pumping agreement, the ease of obtaining an allocation in the Waipahu-Waiawa aquifer, and the ease and cost of obtaining an easement from the Farrington Highway delivery point, under the H-1 Freeway to the golf course property. With the

marginally feasible economics and difficulty in obtaining supply agreements and easements, PMI did not consider this a practicable alternative.

D & O II at 94-95.

18. PMI argues that the Windward Parties waived this issue because they failed to question PMI's witness regarding this subject. However, because the Water Commission considered economic feasibility in its determination that PMI had no practicable alternatives, the Windward Parties were not prohibited from including it in their argument.

19. In *Waiahole I*, this court noted that the land in Field Nos. 115, 116, 145, and 161 totaled 145 acres. *Waiahole I*, 94 Hawai'i at 164, 9 P.3d at 476. In the D & O II, the Water Commission allotted water for 267 acres of land in Field Nos. 115, 116, and 145. The D & O II does not explain this discrepancy.

20. The Water Commission found as follows: At the remanded hearings, Stuart, testifying for Garst Seed Company, formerly ICI Seeds, stated that usage had gone up from 80-100 acres in the winter cycle to 100-115 acres, and the summer cycle had gone up from 30 acres to 35-50 acres. The winter cycle runs from October through the end of March and the summer cycle runs from mid-April to early August. Each of those cycles has about four to four-and-a-half month crop. For the period July '99 through June 2000, average water use was 595 gallons per acre per day for the total farm.[]

As a research station, one of their purposes is to provide isolation for their crops, and since the operation is basically a mono-type crop, they use spatial isolation, which is why approximately two-thirds[] of their acres are idle at any given time. They also use mechanical and timing isolation as well to ensure purity of crop and prevent mixing of pollen. They are also working with their neighbors, Jefts and Hawaiian Agricultural Research Center, to try to utilize the idle acres between their crops to make them more productive, looking at different cropping rotations using Jefts' and the Research Center's crops, and working with USDA on

conservation-type crops to be used on the idle acres. Garst Seeds is trying to come up with cover crops that would require minimal maintenance, minimal water, and provide a good cover on that ground to cut down on erosion and things of that nature. They are also working with HARC on the possibility of putting some of their crops on Garst Seeds' open lands, and with Jefts to swap land (for example, if Jefts were to use 40 acres of Garst's acres, he would allow Garst to use 40 acres of his fallow land).

D & O II at 86-87.

21. The Water Commission then determined that:

Fields 146 and 166, leased from Campbell Estate to Garst Seed Company (formerly "ICI Seeds"), averaged 1,643 gad per planted acre at the time of the original hearings, with approximately one-third planted at any one time, the remaining acreage used for spatial isolation of the mono-type crops. At the remanded hearings, average water use was 595 gad per acre for the total farm, somewhat higher than previously (i.e., about 1,800 versus 1,643 gad per planted acre), attributed to increased crop acreage in both the winter and summer crop cycles, as well as to lower rainfall during the winter months.

Campbell Estate argues that the allocation of water for Fields 146 and 166 should be based on a generic water duty for diversified agriculture....

The Commission does not agree with Campbell Estate. The record shows that the water requirements of the specialty planting by Garst Seed is significantly different from that of diversified agriculture, and indeed, even from the water requirements of HARC's research plantings. For Garst Seed, planting about one-third of its cultivated acres at any one time, the water requirement over all cultivated acres is approximately 600 gad. For diversified agriculture, planting about one-third of its cultivated acres at any one time, the water requirement over all cultivated acres is approximately 1,000 to 1,300 gad for 1.1 crop cycles, increasing to 2,500 gad for 1.9 crop cycles....

However, Garst Seed Company is also exploring ways to utilize the idle acres between its crops (isolation of seed crops can be accomplished not only with unplanted acres but also with other crops in the isolation acres). Garst Seed is in negotiations to better utilize the isolation acres for its mono-type crops: 1) with USDA on conservation type crops to be used on the idle ground; 2) with HARC to plant on the isolation acres; and 3) with Jefts to do a land "swap", whereby Jefts would plant on some of Garst Seed's land and Garst would plant an equal amount of acreage on Jefts lands.

Estimating the water requirements of these plans for Garst Seeds' isolation acres would be difficult. Diversified agriculture, cover crops, and HARC's crop mix have very different water requirements. However, these are reasonable and beneficial uses of water, and therefore the Commission revises its award to Campbell Estate for Fields 146 and 166 as follows: 1) 1,800 gad for 115 (approximately one-third of the acres), [] or 0.21 mgd; and 2) 2,500 gad [] for 229 acres (approximately two-thirds of the acres), or 0.57 mgd, for a total of 0.78 mgd for 344 acres. The Commission will condition this water use permit on a showing of actual use, not to exceed 0.78 mgd, within four years of the date of this Decision and Order.

D & O II at 122-23.

22. ADC also argues that the Windward Parties failed to comply with HRAP Rule 28(b)(4)(C) which provides that each point of error shall include, "when the point involves a finding or conclusion of the court or agency, a quotation of the finding or conclusion urged as error[.]" Even if this claim were accurate, we would reach the merits of ADC's permit for systems losses, inasmuch as HTF also raises this issue and ADC does not challenge any violation of HRAP Rule 28(b)(4)(C) with respect to HTF. In addition, this court "at its option, may notice a plain error not presented." HRAP Rule 28(b)(4).

23. This court express[ed] no opinion on this issue at this time, but merely decide[d] that the Commission must scrutinize such an allocation as

it would any other proposed "use," pursuant to the permitting process. On remand, the Commission shall consider the permit application for 2.0 mgd to cover system losses and determine whether this request is appropriate given the still uncertain public interest in instream flows, and based on actual need and any practicable mitigating measures, including repairs to the ditch.

Waiāhole I, 94 Hawai'i at 173, 9 P.3d at 485.

24. HRS § 91-14 entitled "Judicial Review of Contested Cases," provides in relevant part that:

(g) Upon review of the record the court may affirm the decision of the agency or remand the case with instructions for further proceedings; or it may reverse or modify the decision and order if the substantial rights of the petitioners may have been prejudiced because the administrative findings, conclusions, decisions, or orders are:

(1) *In violation of constitutional or statutory provisions*; or

(2) *In excess of the statutory authority or jurisdiction of the agency*; or

(3) *Made upon unlawful procedure*; or

(4) *Affected by other error of law*; or

(5) *Clearly erroneous in view of the reliable, probative, and substantial evidence on the whole record*; or

(6) *Arbitrary, or capricious, or characterized by abuse of discretion or clearly unwarranted exercise of discretion*.

(Emphases added.)
