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RESOURCE MANAGEMENT  
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COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

Surface Water Use Applications, )  
Integration of Appurtenant Rights )  
and Amendments to the Interim Instream )  
Flow Standards, Nā Wai `Ehā Surface )  
Water Management Areas of Waihe`e )  
River, Waiehu Stream, Wailuku River )  
(previously known as `Īao Stream) )  
and Waikapū Stream, Maui )

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Case Number CCH-MA 15-01

HEARINGS OFFICER'S

PROPOSED FINDINGS OF FACT,

CONCLUSIONS OF LAW, AND DECISION & ORDER

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Figure 1: WWC Irrigation System and Location of SWUPAs

Table 1: SWUPAs and Corresponding Findings of Fact and Conclusions of Law

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Table 3: SWUPAs and Appurtenant Rights

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Attachment 1: Standard Stream Channel Alteration Permit and Stream Diversion Works Permit  
Conditions

1 **Commission on Water Resource Management**

2  
3 **FINDINGS OF FACT, CONCLUSIONS OF**  
4 **LAW, AND DECISION AND ORDER**

5  
6 This Contested Case Hearing (*hereinafter*, "CCH") addresses:

- 7 1) the Petition to revisit and further amend the Interim Instream Flow Standards  
8 (*hereinafter* "IIFS") of the four rivers and streams of Nā Wai `Ehā, because of the  
9 January 6, 2016 announcement by Alexander & Baldwin, Inc. ("A&B") that it would  
10 close Hawaiian Commercial & Sugar Company (*hereinafter*, "HC&S") by the end of the  
11 year and transition to diversified agriculture ("Hui o Nā Wai `Ehā's and Maui Tomorrow  
12 Foundation, Inc.'s Petition to Amend Upward the Interim Instream Flow Standards for  
13 Waihe`e River, North and South Waiehu Streams, Wailuku River,<sup>1</sup> and Waikapū Stream  
14 and Their Tributaries; and Motion to Consolidate or Consider in Parallel with Case No.  
15 CCH-MA 15-01," March 9, 2016 [*hereinafter*, "Hui/MTF's March 2016 Petition and  
16 Motion"], Exhibit B.);
- 17 2) the final determination and quantification of the appurtenant rights of the parcels  
18 of land previously granted provisional recognition ("Nā Wai `Ehā Provisional Order on  
19 Claims That Particular Parcels Have Appurtenant Rights," CCH MA 13-02: Provisional  
20 Recognition of Appurtenant Rights, Nā Wai `Ehā Surface Water Management Area,  
21 Waihe`e, Waiehu, `Īao, Waikapū Streams, Maui, Hawai`i, December 31, 2014  
22 [*hereinafter*, "CCH MA 13-02: December 2014 Provisional Appurtenant Rights"]); and
- 23 3) the surface Water Use Permit Applications (*hereinafter*, "WUPA") for existing  
24 and/or new uses, which are required for noninstream uses because of the designation of  
25 Nā Wai `Ehā as a Surface Water Management Area.

26 The Hearings Officer makes the following Findings of Fact (*hereinafter*, "FOF"),  
27 Conclusions of Law (*hereinafter*, "COL"), and Decision and Order (*hereinafter*, "D&O"), based

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<sup>1</sup> In 2015, the Hawai`i Board on Geographic Names ("HBGN") and the U.S. Board on Geographic Names approved Hui o Nā Wai `Ehā's request to officially reinstate the name "Wailuku River" to the portion of `Īao Stream beginning with its confluence with Kīnihāpai Stream, which is within the `Īao Valley State Monument, and flowing to the ocean. (Hui/MTF's March 2016 Petition and Motion.)



1 on the records maintained by the Commission on Water Resource Management (*hereinafter*,  
2 "Commission") and the witness testimonies and exhibits presented and accepted into evidence.<sup>2</sup>

3 If any statement denominated a FOF is more properly considered a COL, then it should  
4 be treated as a COL; and conversely, if any statement denominated a COL is more properly  
5 considered a FOF, then it should be treated as a FOF.

6 FOF that have been proposed by the parties but not incorporated in this D&O have been  
7 excluded because they may be duplicative, not relevant, not material, taken out of context,  
8 contrary (in whole or in part) to the found facts, an opinion (in whole or in part), contradicted by  
9 other evidence, or contrary to law. Proposed FOF that have been incorporated may have  
10 modifications or corrections that do not substantially alter the meaning of the original proposed  
11 findings.

## 13 I. FINDINGS OF FACT

### 15 A. Chronology

17 1. On July 21, 2003, the `Īao Aquifer System Area was designated a Ground Water  
18 Management Area. Ground water in the `Īao Aquifer System includes basal, caprock, and high-  
19 level dike sources. (*Īao Ground Water Management Area High-Level Source Water-Use Permit*  
20 *Applications and Petition to Amend Interim Instream Flow Standards of Waihe`e River and*  
21 *Waiehu, `Īao, and Waikapū Streams Contested Case Hearing (CCH-MA06-01), June 10, 2010*  
22 [*hereinafter*, "CCH-MA06-01, June 2010"], FOF 2.)

23 2. On June 25, 2004, Hui o Nā Wai `Ehā and Maui Tomorrow Foundation, Inc. (*hereinafter*,  
24 "Hui/MTF"), through Earthjustice, filed a "Petition to Amend the Interim Instream Flow  
25 Standards for Waihe`e, North & South Waiehu, `Īao, and Waikapū Streams and Their  
26 Tributaries." (CCH-MA06-01, June 2010, FOF 3.)

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<sup>2</sup> References to the record are enclosed in parentheses, followed by a party's proposed FOF, if accepted. "Exh." refers to exhibits accompanying written or oral testimony, followed by the exhibit number. Written testimony is referred to as follows: name of the witness, the date of the written testimony ("WT"), and the page and line numbers, or paragraph, of that testimony. Oral testimony is referred to as follows: name of the witness, the date of the transcript ("Tr."), and the page and line numbers.

- 1 3. The groundwater WUPAs for caprock sources were approved by the Commission on  
2 October 25, 2005. (CCH-MA06-01, June 2010, FOF 15.)
- 3 4. Seven WUPAs for basal sources from the Maui Department of Water Supply  
4 (*hereinafter*, "MDWS") and a new-use application from the Living Waters Land Foundation  
5 were approved by the Commission on February 15, 2006. (CCH-MA06-01, June 2010, FOF 15.)
- 6 5. Kehalani Mauka filed a competing application for the remaining MDWS basal source  
7 WUPA, which was decided through a CCH for which the Commission issued its order on  
8 January 31, 2007. (CCH-MA06-01, June 2010, FOF 14.)
- 9 6. On February 15, 2006, the Commission initiated a CCH for the `Īao high-level WUPAs  
10 and specified that the June 2004 petition to amend the IIFS of the Nā Wai `Ehā streams be  
11 included in the CCH.<sup>3</sup> (CCH-MA06-01, June 2010, FOF 18.)
- 12 7. The CCH's evidentiary hearing was held on Maui over 23 days, commencing on  
13 December 3, 2007, and concluding on March 4, 2008, with one additional day of hearings on  
14 October 14, 2008, after motions to reopen the evidence and to supplement the record were  
15 granted. (CCH-MA06-01, June 2010, FOF 25, 28-30.)
- 16 8. In response to a December 6, 2006 petition by Hui/MTF, on March 13, 2008, the  
17 Commission designated the four streams of Nā Wai `Ehā as a surface Water Management Area.  
18 The effective date of designation was April 30, 2008, and applications for existing-use permits  
19 had to be filed within a period of one year from the effective date of designation, or no later than  
20 April 30, 2009. (Hui/MTF's March 2016 Petition and Motion; CCH-MA06-01, June 2010, FOF  
21 26.)
- 22 9. On June 10, 2010, the Commission issued its Decision and Order on the `Īao high-level  
23 WUPAs and the petition to amend the Nā Wai `Ehā IIFS. (CCH-MA06-01, June 2010.)
- 24 10. MDWS was awarded permits for its existing use of 1.042 mgd for the Kepaniwai Well  
25 (Well N. 5332-05) and 1.359 mgd for the `Īao Tunnel (Well No. 5332-02). (CCH-MA06-01,  
26 June 2010, p. 195.)
- 27 11. HC&S was awarded a permit for 0.1 mgd for the `Īao Tunnel (Well No. 5330-02). (CCH-  
28 MA06-01, June 2010, p. 195.)
- 29 12. Wailuku Water Company's (*hereinafter*, "WWC") WUPA for its portion of the `Īao  
30 Tunnel (Well No. 5332-02) that it shares with MDWS was not complete and not included in the

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<sup>3</sup> The high-level, diked groundwaters have a direct connection to the streams.

1 CCH. During the CCH, WWC attempted to amend its WUPA to cover the amount in excess of  
2 that used by MDWS, or 0.227 mgd, but the Commission ruled that WWC would have to file a  
3 new-use WUPA for that amount. (CCH-MA06-01, June 2010, p. 196.)

4 13. WWC's WUPAs for three other tunnels were denied, because they discharged into  
5 Wailuku River upstream of all diversions, and whatever amounts they discharged were  
6 incorporated into the IIFS for Wailuku River. Even if WWC were able to quantify the amounts  
7 discharged by the three tunnels, they were not being used by WWC as separate and distinct  
8 sources of water from WWC's surface water diversions of Wailuku River and did not qualify for  
9 water-use permits from the high-level, diked ground waters. (CCH-MA06-01, June 2010, p.  
10 196.)

11 14. On the petitions to amend the IIFS, the Commission:

12 a. returned 10 mgd to Waihe`e River,  
13 b. returned 1.6 mgd to North Waiehu Stream and 0.9 mgd to South Waiehu Stream,  
14 with an estimated flow of 0.6 mgd at the mouth after reducing for estimated losses of 1.9  
15 mgd.  
16 c. returned no water to Wailuku River, and  
17 d. returned no water to Waikapū Stream. (CCH-MA06-01, June 2010, pp. 185-187.)

18 15. On appeal, the WUPAs (*supra*, FOF 10-13) were not contested, but on August 15, 2012,  
19 the Hawai`i Supreme Court remanded the Commission's June 10, 2010 decision for further  
20 proceedings on:

21 a. Findings of Fact and Conclusions of Law regarding the effect of the amended  
22 IIFS on and customary native Hawaiian practices in Nā Wai `Ehā, and regarding the  
23 feasibility of protecting any affected practices;  
24 b. an incomplete analysis of instream uses, as it focused on amphidromous  
25 species and did not fully consider other instream uses to which witnesses testified  
26 at the hearings;  
27 c. the Commission's consideration of alternative water sources, and its calculation of  
28 diverting parties' acreage and reasonable system losses. (*In re `Īao Ground Water*  
29 *Management Area High-Level Surface Water Use Permit Applications and Petition to*  
30 *Amend Interim Instream Flow Standards of Waihe`e River and Waiehu, `Īao, and*

1           *Waikapū Contested Case Hearing* (hereinafter, "*Nā Wai `Ehā*"), 128 Haw. 228, 287 P.3d  
2           129 (2012).)

3   16.   Shortly before the remanded CCH was to begin on March 10, 2014, the parties agreed to  
4   the Commission's chairperson's request that the parties engage in mediation, which took place  
5   from March 10-14, 2014, and which resulted in an agreement that the Hearings Officer  
6   recommended the Commission approve and adopt, which it did on April 17, 2014.  
7   ("Commission on Water Resource Management Order Adopting: 1)Hearings Officer's  
8   Recommendation on the Mediated Agreement Between the Parties; and 2) Stipulation Re  
9   Mediator's Report of Joint Proposed Findings of Fact, Conclusions of Law, Decision and Order,"  
10   April 17, 2014 [*hereinafter*, "2014 Mediated Agreement"].)

11   17.   In the 2014 Mediated Agreement:

12       a.    The IIFS for Waihe`e River remained at 10 mgd per CCH-MA06-01, June 2010.

13       b.    Waiehu Stream:

14           i.       The IIFS for North Waiehu Stream was modified to reflect the  
15           inactivation of the North Waiehu Ditch after the Commission's 2010  
16           Decision and Order. The new IIFS for North Waiehu Stream would be 1.0  
17           mgd just above the Waihe`e Ditch, reflecting the estimated 0.6 mgd in  
18           infiltration losses between the old and new IIFS locations of 1.6 mgd and  
19           1.0 mgd, respectively. WWC would also provide water to the kuleanas  
20           previously provided water from the North Waiehu Ditch, continue to serve  
21           the Waiehu kuleana users from the Waihe`e Ditch, and modify the  
22           inactivated North Waiehu diversion located just above the Waihe`e Ditch  
23           to facilitate passage of native stream species.

24           ii.      The 0.9 mgd for South Waiehu Stream below the Spreckels Ditch  
25           was replaced with a stipulation that HC&S's South Waiehu diversion  
26           provide 0.25 mgd to the kuleana intake during low-flow periods, with the  
27           remainder returned to the streams.

28           iii.     The Agreement did not address what would happen to stream flow  
29           at the mouth with the elimination of the 0.9 mgd for South Waiehu  
30           Stream.

1 c. A new IIFS for Wailuku River was set at 10 mgd, just below the diversion  
2 operated by WWC above the `Īao-Waikapū and the Īao-Maniania Ditches, provided that:  
3 1) when average flow for any day falls below 10 mgd, 3.4 mgd may continue to be  
4 diverted to accommodate MDWS's 3.2 mgd for its water treatment plant and 0.2 mgd for  
5 kuleana users served exclusively by the `Īao-Waikapū Ditch; and 2) an IIFS of 5 mgd  
6 was established at or near the mouth; and

7 d. a new IIFS for Waikapū Stream was set at 2.9 mgd just below the South Waikapū  
8 Ditch.

9 (2014 Mediated Agreement, Exhibit 1, pp. 22-23, 25-28.)

10 18. The 2014 Mediated Agreement also stated that any factual finding on water-use  
11 requirements, alternative water sources, or system losses of a party to the proceeding or of a  
12 person who may apply for a water-use permit was made without prejudice to the rights of the  
13 parties and of the Commission to revisit those issues in connection with any proceeding  
14 involving a WUPA for water diverted from any of the Nā Wai `Ehā streams, inasmuch as the  
15 burden of proof with respect to such issues in a WUPA proceeding will be upon the applicant  
16 rather than upon the Commission, who has the burden in an IIFS proceeding. (2014 Mediated  
17 Agreement, Exhibit 1, pp. 18-19.)

18 19. On December 31, 2014, the Commission issued its "Nā Wai `Ehā Provisional Order on  
19 Claims That Particular Parcels Have Appurtenant Rights," which provisionally ruled whether  
20 particular parcels have valid claims for appurtenant rights, subject to the rights of land owners to  
21 file or submit additional information at a later time. (CCH MA 13-02: December 2014  
22 Provisional Appurtenant Rights ("Provisional Order").)

23 20. On September 27, 2011, the Commission had approved a two-step process for  
24 determining appurtenant rights in the Nā Wai `Ehā Surface Water Management Areas, with a  
25 February 6, 2012 deadline for applications to be filed. The first step would be to determine  
26 whether there is an appurtenant water right associated with the parcel of land on which the water  
27 is being used or proposed to be used (*supra*, FOF 19), and the second step would be to quantify  
28 the amount of water associated with that parcel. The quantity determination would be done as  
29 part of the surface WUPA process, which is the subject of this CCH. ("Appurtenant Rights  
30 Determination in Nā Wai `Ehā Surface Water Management Areas [Waih`e, Waiehu, `Īao and  
31 Waikapū Streams] by the Commission on Water Resource Management," October 26, 2011,

1 published in the Honolulu Star Advertiser and the Maui News issues of November 1 and 8,  
2 2011.)

3 21. A hearing schedule for this CCH was established on November 5, 2015, and later  
4 amended to have documents due beginning March 18, 2016, with the start of the CCH on July  
5 11, 2016. (Minute Orders 3, 4.)

6 22. On January 6, 2016, Alexander & Baldwin, Inc. ("A&B") announced it would close  
7 HC&S by the end of the year and transition to diversified agriculture. (Hui/MTF's 2016 Petition  
8 and Motion, Exhibit B.)

9 23. On March 9, 2016, Hui/MTF petitioned to amend upward the IIFS and to consolidate or  
10 consider it in parallel with the current CCH. (Hui/MTF's 2016 Petition and Motion.)

11 24. On July 7, 2016, the Commission accepted Hui/MTF's petition and ordered that it be  
12 consolidated with the CCH in a manner to be determined by the Hearings Officer. ("Order  
13 Accepting Hui o Nā Wai `Ehā's and Maui Tomorrow Foundation, Inc.'s Petition to Amend  
14 Upward the Interim Instream Flow Standards for Waihe`e River, North and South Waiehu  
15 Streams, Wailuku River, and Waikapū Stream and Their Tributaries and Granting Motion to  
16 Consolidate or Conduct in Parallel with Case No. CCH-MA 15-01 Filed on March 9, 2016," July  
17 7, 2016.)

18 25. On July 25, 2016, HC&S notified the Hearings Officer and the parties that it would no  
19 longer be pursuing a permit for the `Īao-Waikapū Fields, because it had decided not to continue  
20 leasing the land from Waikapu Properties, LLC, which would continue to pursue the WUPA in  
21 place of HC&S. ("Hawaii Commercial and Sugar Company's Notice Regarding SWUPA 2206,"  
22 July 25, 2016.)<sup>4</sup>

23 26. Between July 11, 2016, and October 14, 2016, eleven days of hearings were held on  
24 Maui.

25 27. After two extensions, on February 17, 2017, the parties submitted their Proposed FOF,  
26 COL, and D&O to the Hearings Officer. (Minute Orders 10, 11.)

27 28. On November 1, 2017, the Hearings Officer submitted his Proposed FOF, COL, and  
28 D&O to the Commission and the parties. (Minute Order 12.)

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<sup>4</sup> On February 3, 2017, HC&S informed the Hearings Officer and the Parties that throughout the contested case proceedings it had mistakenly referred to its application for its Waihe`e-Hopoi fields as SWUPA 2205, and its application for its `Īao-Waikapū fields as SWUPA 2206, and that it had inadvertently switched these numbers. SWUPA 2205 refers to the `Īao-Waikapū fields, and SWUPA 2206 refers to the Waihe`e-Hopoi fields.

1           **B.     The Nā Wai `Ehā Rivers and Streams**

2  
3   29.    Nā Wai `Ehā, or “the four great waters of Maui,” refers to the Waihe`e River, North and  
4   South Waiehu Stream, Wailuku River, and Waikapū Stream. (CCH-MA06-01, June 2010, FOF  
5   80.)<sup>5</sup>

6   30.    The Waihe`e River is the northern-most of the four waters. Flowing in a long, deep,  
7   narrow valley, it drains the northeast slopes of the West Maui Mountains. Running a distance of  
8   about 26,585 feet, its watershed covers an area of about 4,500 acres. It is the principal source of  
9   water in the Nā Wai `Ehā area. (CCH-MA06-01, June 2010, FOF 81.)

10   31.    Waiehu Stream is formed by the confluence of the North and South Waiehu Streams.  
11   Running a distance of about 23,700 feet, its watershed covers an area of about 6,600 acres.  
12   (CCH-MA06-01, June 2010, FOF 82.)

13   32.    Wailuku River is the second largest in Nā Wai `Ehā. Draining a large amphitheater-  
14   headed valley, it runs for a distance of about 38,000 feet. Its watershed covers an area of about  
15   14,500 acres. A significant portion of its lower reaches was channelized and the stream bed and  
16   banks hardened with concrete by the United States Army Corps of Engineers for flood control  
17   and drainage. (CCH-MA06-01, June 2010, FOF 83.)

18   33.    Waikapū Stream is the southern-most stream. The longest of the four streams, it is about  
19   63,500 feet in length, with a watershed (Waikapū Valley) that covers about 9,000 acres. (CCH-  
20   MA06-01, June 2010, FOF 84.)

21   34.    There are three types of ground water systems in the Nā Wai `Ehā area: (1) dike  
22   impounded; (2) the basal freshwater lens; and (3) perched. (CCH-MA06-01, June 2010, FOF  
23   85.)

24   35.    Dike-impounded ground waters occur at high elevations; basal freshwater lenses and  
25   perched waters occur at lower elevations closer to the coast. (CCH-MA06-01, June 2010, FOF  
26   86.)

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<sup>5</sup> Many of the FOF in this contested case, CCH-MA 15-01, have been adopted in whole or in part from FOF of the preceding June 2010 contested case(CCH-MA06-01) and the 2014 mediated agreement that was reached on remand of CCH-MA06-01 in 2012 from the Hawai`i Supreme Court (*supra*, FOF 9-18). When such preceding FOF have been adopted, reference to the original sources have been deleted but can be found at the referenced FOF. For example, this FOF 29 is referenced to CCH-MA06-01, June 2010, FOF 80, whose reference was identified as “(Exh. E-53, p. 4, Exh. C-2, p. 1; OKI WDT 9/14/07, ¶ 5.) WWC FOF 31.”

- 1 36. Gaining reaches of streams are those in which ground water contributes to the streamflow  
2 by a breaching of the ground water system by the stream. (CCH-MA06-01, June 2010, FOF 87.)
- 3 37. Losing reaches of streams are where the channel bottoms are above the water table and  
4 an unsaturated zone exists between the stream and water table. (CCH-MA06-01, June 2010, FOF  
5 88.)
- 6 38. In the upper reaches of the Nā Wai `Ehā area, the stream channels intersect the dike-  
7 impounded ground waters, which results in a contribution of ground water to the stream, making  
8 the streams gaining in the upper reaches. (CCH-MA06-01, June 2010, FOF 89.)
- 9 39. In the lower reaches of the Nā Wai `Ehā area, the stream channels overlies the basal  
10 freshwater lenses, allowing stream waters to migrate from the stream bed to the basal lenses,  
11 making the streams losing in the lower reaches. (CCH-MA06-01, June 2010, FOF 90.)
- 12 40. At the mouths of the streams in the Nā Wai `Ehā area, some of the stream channels  
13 intersect the basal freshwater lenses, making those streams gaining in those areas. (CCH-MA06-  
14 01, June 2010, FOF 91.)
- 15 41. The Nā Wai `Ehā streams are generally gaining streams above the existing diversions  
16 (described *infra*) and losing streams below the diversions. (CCH-MA06-01, June 2010, FOF 92.)
- 17 42. The loss rate in a stream is expected to increase as flow increases because: 1) the  
18 potential streambed area through which infiltration of water can occur increases with flow; and  
19 2) the increased water level in the stream creates a large vertical hydraulic gradient, which  
20 controls the rate of subsurface flow. In addition, loss rates change as a function of the  
21 permeability of the streambed sediments, which may vary over different stream reaches. (CCH-  
22 MA06-01, June 2010, FOF 93.)
- 23 43. A United States Geological Survey (*hereinafter*, "USGS") study of stream flows in  
24 Hawai`i concluded that flows had decreased significantly over a 90-year period. (CCH-MA06-  
25 01, June 2010, FOF 94.)
- 26 44. While USGS has not observed any significant trends in median flows in the Waihe`e  
27 River over the period, 1984 to 2005, USGS data also show that average (or mean) monthly total  
28 stream flows for the Waihe`e and Wailuku Rivers for the three 8-year periods 1984-1991, 1992-  
29 1999, and 2000-2007, decreased by about 25 percent and 10 percent, respectively. For Waihe`e  
30 River, the monthly flows averaged 1639.1 mgd, 1436.0 mgd, and 1236.6 mgd, respectively, for  
31 these eight-year periods. These monthly averages translate into daily averages of 54.64 mgd for



1 1984-1991, 47.87 mgd for 1992-1999, and 41.22 mgd in 2000-2007. (CCH-MA06-01, June  
2 2010, FOF 95.) (See FOF 46, *infra*, for a description of median flow.)

3

## 4 **1. Stream Flows**

5

6 45. One of the most useful ways to summarize stream-flow data is through the use of flow-  
7 duration curves. A flow-duration curve shows the percentage of time that specified stream flows  
8 were equaled or exceeded during a given period of record. (CCH-MA06-01, June 2010, FOF 96.)

9 46. The Q<sub>50</sub> flow, or median flow, is the flow that is equaled or exceeded 50 percent of the  
10 time and is reflective of typical flow conditions. For example, a Q<sub>50</sub> of 25 mgd means that the  
11 flow of the specified stream was 25 mgd or more for half of the measurements of stream flow  
12 and less than 25 mgd for the other half of the measurements during the specified period of time;  
13 e.g., “the Q<sub>50</sub> for stream X was 25 mgd for the period 1985-2000.” (CCH-MA06-01, June 2010,  
14 FOF 97.)

15 47. Stream flow consists of: (1) ground water discharge, or base flow, where the stream  
16 intersects the water table; (2) direct runoff, or overland flow and subsurface storm flow (or  
17 interflow) that rapidly returns infiltrated water to the stream following a period of rainfall; (3)  
18 water returned from stream bank storage; (4) rain that falls directly on streams; and (5) any  
19 additional water, including excess irrigation water, discharged to the stream by humans. (CCH-  
20 MA06-01, June 2010, FOF 98.)

21 48. Because ground water levels vary over time, base flow also varies: base flow is higher  
22 during periods when the ground water level is high; lower during periods when the ground water  
23 level is low; and may cease if the ground water level is lowered below the water level in the  
24 stream. (CCH-MA06-01, June 2010, FOF 99.)

25 49. Although measurement of flow in a stream on any given day will reflect the total flow in  
26 the stream, separating base flow from total flow is helpful to indicate the ground water  
27 contribution to a stream. (CCH-MA06-01, June 2010, FOF 100.)

28 50. For stream flows where more than ground water discharge is contributing to stream flow,  
29 USGS uses a computerized base-flow separation method: 1) to estimate the percent of total flow  
30 that comes from ground water discharge as total flow varies; and 2) averages these variations to

1 estimate mean base flow. USGS has concluded that mean base flow of perennial streams in  
2 Hawai`i generally is between the  $Q_{60}$  to  $Q_{80}$  flows. (CCH-MA06-01, June 2010, FOF 101.)

3 51. Thus, USGS has concluded that in general, the  $Q_{70}$  discharge could be an appropriate  
4 estimate of mean base flow for Hawai`i streams. (CCH-MA06-01, June 2010, FOF 102.)

5 52. In dry periods, the USGS model assumes that the base and total flow are the same. In  
6 wetter periods, the model uses criteria designed to take away the rain, runoff, and seepage  
7 components of stream flow to try to estimate the average base flow at all times when the stream  
8 is flowing. Although it has been tested against some form of data, ultimately there is no solid  
9 way of validating the model and its results. (CCH-MA06-01, June 2010, FOF 103.)

10 53. The  $Q_{90}$  flow is commonly used to characterize low flows in a stream. In Hawai`i,  $Q_{90}$   
11 flows may range from near zero for ephemeral streams in areas that receive little rainfall, to tens  
12 of cubic feet per second in areas that receive significant rainfall or ground water discharge. The  
13  $Q_{100}$  flow represents the lowest flow recorded in the stream, which is most likely all from ground  
14 water discharge. (CCH-MA06-01, June 2010, FOF 104.)

15 54. USGS does not calculate base flow for water management purposes; instead, base flows  
16 are calculated for other purposes, such as extracting the direct runoff components of total stream  
17 flow for estimating water budgets (underestimating base flow results in overestimating direct  
18 runoff), identifying the raw component of rainfall when estimating recharge, and surveying how  
19 conditions such as base flow may have changed over time. (CCH-MA06-01, June 2010, FOF  
20 105.)

21

## 22 **2. Waihe`e River**

23

24 55. Waihe`e River and its main diversions are shown in Figure 1.

25 56. In the period of climate years 1984-2005 (a climate year begins on April 1 and is  
26 designated by the calendar year in which it begins) at USGS stream-gaging station 16614000 on  
27 Waihe`e River near an altitude of about 605 feet upstream of all diversions, the minimum daily  
28 mean flow ( $Q_{100}$ ) was 14 mgd (this minimum flow occurred on only 6 days over 22 years, an  
29 average of about 0.3 days per year). The  $Q_{90}$  flow was 24 mgd; the  $Q_{70}$  flow was 29 mgd; and the  
30  $Q_{50}$  flow was 34 mgd. (CCH-MA06-01, June 2010, FOF 107.)

1 57. The two main diversions are Waihe`e Ditch near an altitude of about 600 feet, and  
2 Spreckels Ditch, near an altitude of about 400 feet and about 0.6 miles downstream from the  
3 Waihe`e Ditch. (CCH-MA06-01, June 2010, FOF 108.)

4 58. Estimated stream flow losses in Waihe`e River downstream of the Spreckels Ditch may  
5 range from 2.1 to at least 5.9 mgd. Although actual losses may vary as a function of streamflow,  
6 because data are limited, a constant loss of 4 mgd is assumed by USGS. (CCH-MA06-01, June  
7 2010, FOF 109.)

8 59. Water also returns to the river in the form of return flows and leakage from ditches at  
9 several locations downstream of the diversions. In some places, the return flows enter the river in  
10 well-defined channels, whereas in other places the return flows enter as diffuse flows. (CCH-  
11 MA06-01, June 2010, FOF 110.)

12 60. Waihe`e and Spreckels Ditches are capable of diverting all of the dry-weather flow  
13 available at the intakes. However, stream flow immediately downstream of the intakes may exist  
14 because of leakage through or subsurface flow beneath the dams at these sites. Estimated dry-  
15 weather flow immediately downstream of the Waihe`e and Spreckels Ditch intakes commonly is  
16 on the order of about 0.1 mgd, but the stream may not have continuous surface flow from mauka  
17 to makai. (CCH-MA06-01, June 2010, FOF 111.)

### 18 19 **3. North and South Waiehu Streams** 20

21 61. North Waiehu Stream is shown in Figure 1.

22 62. Low-flow characteristics for North Waiehu Stream during the 1984-2005 climate years  
23 were estimated using record-extension techniques and available historical data during 1911-1917  
24 from discontinued USGS gaging stations 16608000, 16609000, and 16609500. The minimum  
25 discharge ( $Q_{100}$ ) measured at gaging station 16608000 at an altitude of 880 feet was 1.6 mgd  
26 during March 1915. The estimated  $Q_{90}$  discharge ranges from 1.4 to 2.7 mgd for 1984-2005; the  
27 estimated  $Q_{70}$  discharge ranges from 2.3 to 2.7 mgd; and the estimated  $Q_{50}$  discharge ranges from  
28 3.1 to 3.6 mgd. (CCH-MA06-01, June 2010, FOF 113.)

29 63. Water was diverted by the North Waiehu Ditch near an altitude of about 860 feet, but has  
30 since been abandoned. (CCH-MA06-01, June 2010, FOF 114.)

1 64. USGS estimates that the stream loses 1.3 mgd between the North Waiehu Ditch and the  
2 confluence of North and South Waiehu Streams. (Oki, WDT 9/14/07, ¶ 60.) (CCH-MA06-01,  
3 June 2010, FOF 115.)

4 65. The North Waiehu Ditch generally diverted most of the water available at the diversion  
5 structure, but leakage from the North Waiehu Ditch sometimes returned to the stream. (CCH-  
6 MA06-01, June 2010, FOF 116.)

7 66. South Waiehu Stream and its main diversion at the Spreckels Ditch are also shown in  
8 Figure 1.

9 67. Low-flow characteristics for South Waiehu Stream for the 1984-2005 climate years were  
10 estimated using record-extension techniques and available historical data during 1911-1917 from  
11 discontinued USGS gaging station 16610000. The minimum discharge ( $Q_{100}$ ) measured at gaging  
12 station 16610000 at an altitude of 870 feet was 1.5 mgd during July 1913. Near gaging station  
13 16610000 at an altitude of 870 feet, the estimated  $Q_{90}$  discharge ranges from 1.3 to 2.0 mgd for  
14 1984-2005; the estimated  $Q_{70}$  discharge ranges from 1.9 to 2.8 mgd; and the estimated  $Q_{50}$   
15 discharge ranges from 2.4 to 4.2 mgd. (CCH-MA06-01, June 2010, FOF 119.)

16 68. Water is currently diverted from South Waiehu Stream by the Spreckels Ditch and two  
17 kuleana ditches farther upstream. The main diversion is the Spreckels Ditch, near an altitude of  
18 about 270 feet and about 1000 feet upstream from the confluence of North and South Waiehu  
19 Streams. (CCH-MA06-01, June 2010, FOF 120.)

20 69. No information is available on estimated losses in South Waiehu Stream, but USGS  
21 estimates that the loss in Waiehu Stream itself, between the confluence of North and South  
22 Waiehu Streams and the mouth, is 0.6 mgd. (CCH-MA06-01, June 2010, FOF 121.)

23 70. Return flows and leakage from the kuleana ditches have been observed entering South  
24 Waiehu Stream. In addition, overflow or releases from the Waihe`e and Spreckels Ditches may  
25 sometimes enter South Waiehu Stream. (CCH-MA06-01, June 2010, FOF 122.)

26 71. Spreckels Ditch is commonly capable of diverting all of the flow of South Waiehu  
27 Stream during dry-weather conditions, although stream flow immediately downstream of the  
28 intake may exist because of leakage through or subsurface flow beneath the dam at the intake.  
29 Waiehu Stream is commonly dry farther downstream near Lower Waiehu Beach Road, and  
30 therefore, Waiehu Stream does not flow continuously from mauka to makai. (CCH-MA06-01,  
31 June 2010, FOF 123.)

1 72. There is extensive channel erosion below the Spreckels Ditch on South Waiehu Stream,  
2 with a 12-foot drop in the elevation of the stream just below the diversion, and there is a vertical  
3 concrete apron located just below the highway culverts in lower Waiehu Stream. (CCH-MA06-  
4 01, June 2010, FOF 124.)

#### 6 4. Wailuku River

7  
8 73. Wailuku River and its main diversions are shown in Figure 1.

9 74. On the basis of 22 years of complete records (climate years 1984-2005) at USGS stream-  
10 gaging station 16604500 on Wailuku River near an altitude of about 780 feet and above all  
11 diversions, the minimum daily mean flow ( $Q_{100}$ ) was 7.1 mgd (the minimum flow occurred on 29  
12 days over 22 years, an average of about 1.3 days per year); the  $Q_{95}$  flow was 11 mgd; the  $Q_{90}$   
13 flow was 13 mgd; the  $Q_{70}$  flow was 18 mgd; and the  $Q_{50}$  flow was 25 mgd. (CCH-MA06-01,  
14 June 2010, FOF 126; 2014 Mediated Agreement, Exh. 1, p. 5.)

15 75. The two main diversions are `Īao-Waikapū and `Īao-Maniania Ditches near an altitude of  
16 about 780 feet (there is also a small privately owned pipe farther downstream), and the Spreckels  
17 Ditch, near an altitude of about 260 feet and about 2.4 miles downstream from the `Īao-Waikapū  
18 and `Īao-Maniania Ditches. (CCH-MA06-01, June 2010, FOF 127.)

19 76. The Wailuku River Flood Control Project starts about 2.5 miles above the mouth of  
20 Wailuku River and consists of a debris basin, a concrete channel that runs from the debris basin  
21 to just downstream of North Market Street, a 20-foot vertical drop, a broadened but unlined  
22 channel running to Waiehu Beach Road, and concrete wing walls running about one-half of the  
23 distance from the Waiehu Beach Road to the mouth of the stream. (CCH-MA06-01, June 2010,  
24 FOF 128.)

25 77. USGS estimates that Wailuku River loses 5.6 mgd in reaches that are not lined with  
26 concrete and that are downstream of the common intake of the `Īao-Waikapū and `Īao-Maniania  
27 Ditch diversions (which is at about 780 feet elevation), or 3.00 miles from about 595 feet  
28 elevation down to 35 feet elevation. (CCH-MA06-01, June 2010, FOF 129; 2014 Mediated  
29 Agreement, Exh. 1, p. 5.)

1 78. Water that overflows or leaks from the ditch systems or that is discharged through gates  
2 in the systems sometimes returns to Wailuku River downstream of the diversions. (CCH-MA06-  
3 01, June 2010, FOF 130.)

4 79. Before the 2014 restoration, in the absence of ditch return flows and runoff during and  
5 following periods of rainfall, Wailuku River remained dry in some reaches downstream of the  
6 main diversion intake for the `Īao-Maniania and `Īao-Waikapū Ditches and did not flow  
7 continuously from mauka to makai. (CCH-MA06-01, June 2010, FOF 131.)

8

## 9 **5. Waikapū Stream**

10

11 80. Waikapū Stream and its main diversions are shown in Figure 1.

12 81. On the basis of record extension techniques applied by USGS to the historical data from  
13 Waikapū Stream near gaging station 16650000 near an altitude of about 880 feet, the estimated  
14  $Q_{90}$  flow was from 3.3 mgd to 4.6 mgd during climate years 1984-2005; the estimated  $Q_{70}$  flow  
15 was 3.9 mgd to 5.2 mgd, and the estimated  $Q_{50}$  flow ranged from 4.8 mgd to 6.3 mgd. The  
16 lowest recorded flow was 3.3 mgd in October 1912. (CCH-MA06-01, June 2010, FOF 133.)

17 82. The record extension techniques applied to the historical data to estimate the natural flow  
18 near gaging station 16650000 combined 1910-1917 historical data from gaging station  
19 16650000, flows in the South Side Waikapū Ditch near an altitude of about 1,120 feet, and flows  
20 in the Everett Ditch near an altitude of about 900 feet. (Oki, WDT 9/14/07, ¶ 27.) While the  
21 Everett Ditch is no longer active, the South Side Waikapū Ditch is. The estimates of natural flow  
22 assume no gains, losses, or return flows between the South Side Waikapū Ditch diversion and  
23 station 16650000 during the period when the gaging stations were operated. Recent USGS  
24 seepage-run data from 2004 indicate no significant net gain or loss between the South Side  
25 Waikapū Ditch diversion and station 16650000. (Oki, WDT 9/14/07, ¶ 27.) Thus, the estimated  
26 natural flows just above the South Side Waikapū Ditch diversion should be the same as those  
27 estimated at station 16650000, while the actual flows at gaging station 16650000 for climate  
28 years 1984-2005 should be lower than the estimated natural flow for climate years 1984-2005 by  
29 an amount currently diverted at the South Side Waikapū Ditch. (CCH-MA06-01, June 2010,  
30 FOF 134.)

1 83. Active diversions on Waikapū Stream include the South Side Waikapū Ditch near an  
2 altitude of about 1,120 feet and an intake on the Waihe`e Ditch (elevation not specified). The  
3 Reservoir 6 Ditch (elevation not specified) has since been abandoned.

4 84. Numerous return flows have been observed in Waikapū Stream downstream of the  
5 diversions. (CCH-MA06-01, June 2010, FOF 136.)

6 85. Diversions in Waikapū Stream may not cause the stream to be dry immediately  
7 downstream of the diversions, although it is commonly dry downstream of all diversions because  
8 of infiltration losses into the streambed, and the stream did not flow continuously from mauka to  
9 makai. (CCH-MA06-01, June 2010, FOF 137.)

10

## 11 C. Withdrawals and Diversions

12

### 13 1. Tunnels

14

15 86. Twelve tunnels were known to be excavated in Nā Wai `Ehā between 1900 and 1926.  
16 Eight tunnels were excavated in Nā Wai `Ehā's dike complex and tap dike-impounded ground  
17 water. The other four tunnels were excavated beneath Wailuku River and Waiehu Stream and  
18 collect water from beneath the streams in the valley-floor alluvium. (CCH-MA06-01, June 2010,  
19 FOF 141-143.)

20 87. About nine mgd of dike-impounded ground water was developed by tunnels, although  
21 most of the water (7.5 mgd) may have discharged naturally to streams below the level of the  
22 tunnels had it not been intercepted by the tunnels. (CCH-MA06-01, June 2010, FOF 144.)

23 88. The tunnels that discharge directly into the streams are the Black Gorge Tunnel, `Īao  
24 Needle Tunnels No. 1 and No. 2, and Waikapū Tunnels No. 1 and No. 2. (CCH-MA06-01, June  
25 2010, FOF 145.)

26 89. Black Gorge Tunnel and `Īao Needle Tunnels No. 1 and No. 2 discharge into Wailuku  
27 River above all diversions (**See** Figure 3). Development of the `Īao Tunnel (MDWS/WWC's  
28 Well No. 5332-02, *supra*, FOF 12) caused the Black Gorge Tunnel to go dry. There is no  
29 information available to quantify the effects of `Īao Needle Tunnels No. 1 and No. 2 on Wailuku  
30 River's total flow. (Oki, WDT 9/14/07, ¶ 26.) WWC FOF 562. (CCH-MA06-01, June 2010, FOF  
31 148.)

- 1 90. Waikapū Tunnel No. 1 flows into a tributary that joins Waikapū Stream below the  
2 diversion for the South Side Waikapū Ditch (See Figure 4), but its estimated yield is less than  
3 0.01 mgd. (CCH-MA06-01, June 2010, FOF 146.)
- 4 91. Waikapū Tunnel No. 2 flows into Waikapū Stream above the South Side Waikapū Ditch  
5 (See Figure 4) and has an estimated yield of 1.0 mgd. (CCH-MA06-01, June 2010, FOF 147.)
- 6 92. Waihe`e North and Waihe`e South Tunnels (See Figure 1), built in 1909, may have  
7 contributed to the total flow of Waihe`e River for a period of time after their construction, but it  
8 is not likely that they presently contribute appreciably to the total flow. (CCH-MA06-01, June  
9 2010, FOF 149.)
- 10 93. The County of Maui and WWC built the `Īao Tunnel (Well No. 5332-02) in 1937.  
11 (CCH-MA06-01, June 2010, FOF 150.)
- 12 94. Water from the `Īao Tunnel is first directed to MDWS's water treatment plant, and the  
13 remainder enters the ditch at WWC's `Īao Stream diversion. (See Figure 3.) (CCH-MA06-01,  
14 June 2010, FOF 151.)
- 15 95. Under an agreement between WWC and MDWS, MDWS uses 1.074 mgd, with WWC  
16 having the use for the amounts over 1.074 mgd. MDWS pays WWC a delivery fee for any  
17 amounts in excess of 1.074 mgd. (CCH-MA06-01, June 2010, FOF 152.)
- 18 96. MDWS has a WUPA for 1.359 mgd, and WWC has been using between 0.25 to 0.35  
19 mgd (*supra*, FOF 10, 12).
- 20 97. HC&S has a separate `Īao Tunnel (Well No. 5330-02), for which it has a WUPA for 0.1  
21 mgd. (*supra*, FOF 11.)
- 22 98. HC&S's `Īao Tunnel discharges into the Spreckels Ditch between HC&S's intakes on  
23 South Waiehu Stream and Wailuku River. (CCH-MA06-01, June 2010, FOF 155.)

## 24 25 **2. Ditches** 26

- 27 99. The distribution system from the Nā Wai `Ehā rivers and streams included intakes,  
28 reservoirs, connectors, kuleana systems, and gauging stations. (CCH-MA06-01, June 2010,  
29 Figure 5.)
- 30 100. There are two primary and two secondary systems that distribute the waters diverted from  
31 the Nā Wai `Ehā rivers and streams. (CCH-MA06-01, June 2010, FOF 156.)



- 1 101. The primary distribution systems are the WWC ditch system and the HC&S  
2 reservoir/ditch system. (CCH-MA06-01, June 2010, FOF 157.)
- 3 102. The secondary distribution systems are the “kuleana” ditches/pipes that either have an  
4 intake directly in a stream or that receive waters from the primary systems, and the MDWS water  
5 treatment plants. (CCH-MA06-01, June 2010, FOF 158.)
- 6 103. Almost all of the kuleana distribution systems receive water by delivery from ditches or  
7 reservoirs that are a part of the primary distribution systems. (CCH-MA06-01, June 2010, FOF  
8 159.)
- 9 104. These distribution systems and the end users are called “kuleana” because they were not  
10 charged for water delivery. They may or may not have appurtenant or riparian rights. (CCH-  
11 MA06-01, June 2010, FOF 160.)

12

13 **a. The Primary Distribution Systems**

14

- 15 105. The primary distribution systems receive river and stream waters via seven active  
16 diversions, two on Waihe`e River, one on South Waiehu Stream, two on Wailuku River, and two  
17 on Waikapū Stream. (Figure 1.)
- 18 106. Historically, there were five additional diversions, one on Waihe`e River which is  
19 presently sealed (Field 1 intake), one on North Waiehu Stream which was recently abandoned,  
20 one on Wailuku River which no longer exists (Kama Ditch), and two on Waikapū Stream (the  
21 sealed Everett Ditch and the recently abandoned Reservoir 6 Intake). (CCH-MA06-01, June  
22 2010, FOF 162; Strauch, Tr., October 14, 2016, p. 95, l. 24 to p. 96, l. 8.)
- 23 107. In addition, there were three kuleana intakes directly on the streams, one each in South  
24 Waiehu Stream, Wailuku River, and Waikapū Stream. (CCH-MA06-01, June 2010, FOF 163.)
- 25 108. WWC and its predecessors used the system to divert water from the streams and deliver it  
26 to users for agricultural (crops and animals), industrial (commerce and stores), and domestic  
27 (camps, villages and towns) purposes. (CCH-MA06-01, June 2010, FOF 164.)
- 28 109. The WWC distribution system included 11 registered stream diversions, 2 major ditches,  
29 7 minor ditches, and 16 reservoirs. (CCH-MA06-01, June 2010, FOF 170.)
- 30 110. In addition to sharing in the cost and maintenance of the portions of the system operated  
31 by WWC, HC&S operates a diversion intake on South Waiehu Stream at the Spreckels Ditch, a

1 diversion intake on Wailuku River at the Spreckels Ditch, and the Spreckels Ditch from  
2 Reservoir 25 to its terminus at HC&S's Reservoir No. 73 (the "Waiale Reservoir"). (CCH-  
3 MA06-01, June 2010, FOF 171.)

4 111. WWC distributes water to three major user groups: agricultural, kuleana systems, and  
5 domestic. (CCH-MA06-01, June 2010, FOF 173.)

6 112. WWC's system is divided into northern and southern sections. (CCH-MA06-01, June  
7 2010, FOF 174.)

8 113. The northern sector of the system included the Waihe'e, Spreckels, North Waiehu (since  
9 abandoned), and 'Īao-Maniania ditches, which receive water from the Waihe'e River and  
10 Wailuku River. (CCH-MA06-01, June 2010, FOF 175.)

11 114. The southern section of the system included the South Waikapū, Reservoir No. 6 (since  
12 abandoned), and 'Īao-Waikapū Ditches, which divert water from Waikapū Stream and Wailuku  
13 River. (CCH-MA06-01, June 2010, FOF 176.)

14 115. There are two major ditches in the system: the Waihe'e and Spreckels Ditches. (CCH-  
15 MA06-01, June 2010, FOF 177.)

16

17 **i. Waihe'e Ditch**

18

19 116. The Waihe'e Ditch begins at the Waihe'e Ditch Diversion in Waihe'e River and  
20 terminates at Reservoir 9. (CCH-MA06-01, June 2010, FOF 178.)

21 117. The Waihe'e Ditch diversion on Waihe'e River is at approximately 620 feet elevation  
22 and consists of two concrete structures that direct stream flow over metal grates that drop water  
23 into the intake. (CCH-MA06-01, June 2010, FOF 179.)

24 118. The Waihe'e Ditch Intake has a design capacity of 60 mgd but was set to divert 40 mgd.  
25 (CCH-MA06-01, June 2010, FOF 180.)

26 119. There is an additional intake into the Waihe'e Ditch at Waikapū Stream. (CCH-MA06-  
27 01, June 2010, FOF 181.)

28 120. Water from the Waihe'e Ditch can be transferred to the Spreckels Ditch in two places: 1)  
29 a "drop" ditch in Waihe'e Valley located north of all reservoirs, which transfers approximately 6  
30 mgd into the Spreckels Ditch; and 2) through the Hopoi Chute located near Wailuku River,

1 which transfers water into the Spreckels Ditch at its terminus at Waiale Reservoir. (CCH-MA06-  
2 01, June 2010, FOF 182.)

3 121. Water can also be added to the Waihe`e Ditch from Wailuku River via the `Īao-Maniania  
4 and `Īao-Waikapu Ditches. (See *infra*.) (CCH-MA06-01, June 2010, FOF 183.)

5

6 **ii. Spreckels Ditch**

7

8 122. The Spreckels Ditch starts at its intake on Waihe`e River at 420 feet elevation  
9 (downstream from the Waihe`e Ditch intake), crosses North Waiehu Stream, South Waiehu  
10 Stream, and Wailuku River, and terminates at the point where the Hopoi chute drops water from  
11 the Waihe`e Ditch to HC&S's Waiale Reservoir. (CCH-MA06-01, June 2010, FOF 184.)

12 123. The Spreckels Ditch intake at Waihe`e River has a design capacity of 30 mgd, but the  
13 gate was typically set at 12 mgd. The intake is controlled by WWC. (CCH-MA06-01, June 2010,  
14 FOF 185.)

15 124. The Spreckels Ditch also has intakes at South Waiehu Stream and Wailuku River, which  
16 are controlled by HC&S. (CCH-MA06-01, June 2010, FOF 186.)

17 125. HC&S's intakes are not metered, but HC&S estimated that the intake on South Waiehu  
18 Stream ranged from a low of 2-3 mgd during dry periods to a maximum of 10-15 mgd during  
19 wet periods. There is also a kuleana intake via a pipe that takes water from the ditch that  
20 connects the diversion to Spreckels Ditch, which HC&S estimated takes approximately 0.25  
21 mgd. (CCH-MA06-01, June 2010, FOF 187.)

22 126. The intake on Wailuku River is also not metered, but HC&S estimated that the amount  
23 diverted ranged from a low of 3-4 mgd during dry periods to a high of about 20 mgd during wet  
24 periods. (CCH-MA06-01, June 2010, FOF 188.)

25 127. HC&S's `Īao Tunnel (Well No. 5330-02), for which it has a WUPA for 0.1 mgd (*supra*,  
26 FOF 11), enters the Spreckels Ditch between the intakes from South Waiehu Stream and  
27 Wailuku River. (CCH-MA06-01, June 2010, FOF 189.)

28 128. HC&S measures the aggregate water flow in the Spreckels Ditch at its Wailuku gauging  
29 station located downstream of the South Waiehu Diversion, the intake pipe from HC&S `Īao  
30 Tunnel, and the Wailuku River intake, none of which is separately gauged. In addition to these  
31 three sources, the gauged amount includes water diverted by WWC from Waihe`e River via two

1 ditches: 1) the Waihe`e Ditch via the drop ditch to Spreckels Ditch; and 2) the Spreckels Ditch,  
2 downstream from the Waihe`e Ditch diversion. (CCH-MA06-01, June 2010, FOF 190.)

3 129. As described under the Waihe`e Ditch, water can be transferred from the Waihe`e Ditch  
4 to the Spreckels Ditch through a drop ditch and the Hopoi Chute (*supra*, FOF 120).

5 130. WWC controls the Spreckels Ditch from its intake on Waihe`e River to HC&S`s intake at  
6 South Waiehu Stream, and HC&S controls the Ditch from South Waiehu Stream to its terminus  
7 at Waiale Reservoir (*supra*, FOF 110). (CCH-MA06-01, June 2010, FOF 192.)

8  
9 **iii. `Īao Ditch**

10  
11 131. The `Īao Ditch starts with an intake at Wailuku River, which has a capacity of 60 mgd,  
12 but a control gate in the Ditch after the intake was set to divert at most 20 mgd. (CCH-MA06-01,  
13 June 2010, FOF 195.)

14 132. The gate controls the amount of water that diverted north to the `Īao-Maniania Ditch or  
15 south to the `Īao-Waikapū Ditch. Any water beyond the gate settings for the `Īao-Maniania and  
16 the `Īao-Waikapū ditches was returned to Wailuku River about 1000 feet below the intake. The  
17 settings for this control gate varied according to needs, and were changed as often as weekly.  
18 HC&S gave WWC a weekly plan of their irrigation needs by day and reservoirs so that WWC  
19 could adjust the control gate accordingly. (CCH-MA06-01, June 2010, FOF 196.)

20 133. The `Īao-Maniania Ditch is an unlined ditch of about 2.07 miles in length. It has a rated  
21 capacity of 30 mgd, but its control gate was set to receive 2 mgd of flow from the main `Īao  
22 Ditch. The `Īao-Maniania Ditch can deliver water back north and deposit water back into the  
23 Waihe`e Ditch. (CCH-MA06-01, June 2010, FOF 197.)

24 134. The `Īao-Waikapū Ditch is approximately 70 to 80 percent lined and is 2.95 miles in  
25 length. It has a rated capacity of 30 mgd, but its control gate was set to receive 18 mgd of flow  
26 from the main `Īao Ditch. The `Īao-Waikapū ditch can send water south to service the Waikapū  
27 region and the area from `Īao Valley Road back to the south. Any water remaining in the `Īao-  
28 Waikapū Ditch was put into the Waihe`e Ditch downstream of the Hopoi Chute. (CCH-MA06-  
29 01, June 2010, FOF 198.)



1 142. After the installation of drip irrigation in the 1980s, users of the kuleana systems which  
2 received water through the WWC distribution system were expected to maintain their own  
3 systems. (CCH-MA06-01, June 2010, FOF 217.)

4 143. WWC's practice since that time has been and remains that it will maintain its ditches to  
5 the point of delivery of water into the kuleana ditch or pipe system. (CCH-MA06-01, June 2010,  
6 FOF 218.)

7 144. Maintenance of the kuleana ditches and pipes by the present users has been inconsistent,  
8 with some users maintaining limited portions of some of the systems and other systems receiving  
9 no maintenance from the users. (CCH-MA06-01, June 2010, FOF 219.)

10 145. Figure 1 identifies the kuleana ditch/pipe systems, most of which are connected to one of  
11 the primary distribution systems, and water diverted directly from the rivers and streams.

12  
13 **c. Monitoring**  
14

15 146. The primary intakes of the Waihe'e, Spreckels, 'Āo-Maniania, and 'Āo-Waikapū ditches  
16 had 24-hour gauging stations to measure the ditch flow. In addition, ditch flows at other stations  
17 along the ditches operated by WWC were read and recorded daily. (CCH-MA06-01, June 2010,  
18 FOF 204.)

19 147. The waters that enter the distribution system travel by gravity flow into reservoirs that in  
20 turn deliver the water into smaller ditches for end use. Because the flows of the streams vary  
21 daily, reservoirs were made a part of the system to allow for a more constant delivery of water to  
22 end users. WWC built and maintains 16 reservoirs that were designed to hold about 79 million  
23 gallons, but due to siltation, the reservoirs have a current capacity between 55 and 60 million  
24 gallons. Each reservoir has a water meter to measure the flow from the reservoir.(CCH-MA06-  
25 01, June 2010, FOF 205-207.)

26 148. The kuleana ditches/pipes that receive water through the WWC distribution system are  
27 metered. (CCH-MA06-01, June 2010, FOF 222-223, 226, Table 2.)

28 149. WWC does not measure water delivered to or collect data on individual users of the  
29 kuleana systems. (CCH-MA06-01, June 2010, FOF 228.)  
30  
31

1           **D.     Appurtenant Rights in Nā Wai `Ehā**

2  
3           **1.     Water Use on Kuleana Awards at the Time of the Māhele**

4  
5           **a.     Acres Irrigated at the Time of the Māhele**

6  
7   150.   Lilikalā Kame`eleihiwa was recognized as an expert in Native Hawaiian history and  
8   culture, and specifically on the Māhele and Māhele records. (Tr., 7/11/2016, p. 38, ll. 9-15.)

9   151.   The Māhele resulted in the recognition of three types of conveyances: 1) konohiki  
10   awards, life estates that could be converted to fee-simple if the konohiki paid a commutation of  
11   one-third of the value of the land or one-third of the land itself; 2) government grants, awarded  
12   mostly to foreigners based on oral land claims, which could be sold in fee-simple; and 3) kuleana  
13   awards (fee-simple). (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶¶ 8, 17.)

14   152.   Lands over which the King retained personal control became known as the crown lands.  
15   Some of these lands were given to the Hawaiian Kingdom Government, and these lands are  
16   known as government lands. Lands the konohiki paid as a commutation also became part of the  
17   government lands. (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶ 10.)

18   153.   Government lands could be sold in fee-simple, and there was no requirement that these  
19   lands be in cultivation. (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶ 16.)

20   154.   Lilikalā Kame`eleihiwa has not studied government grants at all. (Lilikalā Kame`eleihiwa  
21   Tr., 7/11/2016, p. 85, 1-4.)

22   155.   Kuleana lands were awards to hoā`āina (native tenants) for any lands located on crown,  
23   government or konohiki land which the hoā`āina had improved with a house lot and/or were  
24   actually cultivating. (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶ 11.)

25   156.   There were 14,000 kuleana claims made throughout the islands, and 8,400 that were  
26   actually awarded. Eight hundred, or about one-tenth, were awarded in Nā Wai `Ehā, which was  
27   the largest contiguous area of kalo cultivation in Hawai`i. (Lilikalā Kame`eleihiwa, Tr.,  
28   7/11/2016, p. 46, ll. 6-9, p. 65, ll. 11-16, and p. 103, ll. 8-15.)

29   157.   Hoā`āina were entitled only to the amount of land they were actually cultivating, and the  
30   amount of land that could be awarded for a house lot (“pāhale”) was limited to one-quarter of an  
31   acre. (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶¶ 13-14.)

1 158. “There is no way to determine the precise area of cultivation, and, accordingly, water use,  
2 based on Māhele documents. Most Māhele records, however, particularly those pertaining to  
3 kuleana, contain a description of the crops in cultivation on a specific `āpana (parcel). Knowing  
4 the purposes of key Māhele records associated with kuleana awards, as well as the parcel  
5 descriptors commonly utilized in these records, helps to identify what was being cultivated on  
6 the land in question, and to achieve reasonable estimates of the areas in cultivation.” (Lilikalā  
7 Kame`eleihiwa, WT, February 2, 2016, ¶¶ 21-22.)

8 159. Māhele records sometime provide the number of lo`i being cultivated on a kuleana or  
9 `āpana, but generally do not specify the size of the lo`i. Without knowing the size of the lo`i,  
10 which can vary among kuleana, it is Kame`eleihiwa’s opinion that the number of lo`i is not a  
11 useful guide for estimating the acres in cultivation, but it is useful to indicate the existence and  
12 general extent of wetland kalo cultivation within a kuleana or `āpana. (Lilikalā Kame`eleihiwa,  
13 WT, February 2, 2016, ¶ 27.)

14 160. Lilikalā Kame`eleihiwa developed the following rebuttal presumptions and guiding  
15 principles for kuleana awards. They have nothing to do with government grants. (Lilikalā  
16 Kame`eleihiwa, Tr., 7/11/2016, p. 84, ll. 9-25.)

17 161. Presumption #1:

18 If no pāhale (house lot) is mentioned in a kuleana award, the entire kuleana should be  
19 presumed to be in cultivation, because kuleana awards were restricted to lands hoā`āina were  
20 actually cultivating or living on at the time. (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶  
21 40.)

22 162. Presumption #2:

23 If a pāhale is referenced in the kuleana award, but no size of the pāhale is provided, the  
24 area for the pāhale should be presumed to be no more than one-quarter of an acre, based on the  
25 limit for house lots to one-quarter of an acre in the Kuleana Act. (Lilikalā Kame`eleihiwa, WT,  
26 February 2, 2016, ¶ 41.)

27 163. Presumption #3:



1           If the following descriptors are used to describe kuleana or an `āpana with a kuleana,  
2 without referencing any other crop or pāhale, the entire parcel should be presumed to be  
3 cultivated in lo`i kalo :<sup>6</sup>

4           a.     Kalo

5           b.     Loi

6           c.     Loi kalo

7           d.     Pauku kalo

8           e.     Pauku loi

9           f.     Moo kalo

10          g.     Poalima

11          h.     Loi aupuni

12          i.     Loi paahao

13          j.     Aina kalo (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶ 42.)

14   164.   Presumption #4:

15           All pō`alima (lands farmed by hoa`āina for the ali`i or konohiki) should be presumed to  
16 be cultivated in lo`i kalo.<sup>7</sup> (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶ 43.)

17   165.   Presumption #5:

18           Where Māhele records for a particular kuleana do not specify the crop being farmed on  
19 the land or the presence of a house lot, if the kuleana includes, abuts, or is near to a stream,  
20 `auwai, or other lands for which lo`i kalo documentation exists, such as a pō`alima, it should be  
21 presumed that wetland kalo was being cultivated on that kuleana. (Lilikalā Kame`eleihiwa, WT,  
22 February 2, 2016, ¶ 44.)

23   166.   Guiding principle #1:

24           Where Māhele records are ambiguous in describing the land use for an `āpana (i.e.,  
25 multiple uses are described without providing the location and size for each use [e.g., kula and

---

<sup>6</sup> The following terms are spelled the way in which they are usually recorded in the original documents, without modern-day diacritical marks.

<sup>7</sup> "That's the land that's being worked for the ali`i of the konohiki. Why would you want the lo`i kalo? Because that's the highest and best use of the land in lo`i kalo, and you can make ten to 15 times more food per acre...(I) f the ali`i had somebody working for them, and the konohiki had somebody working with them on a piece of land, why would they plant anything else except lo`i kalo?" (Lilikalā Kame`eleihiwa, Tr., July 11, 2016, p. 46, l. 25 to p. 47, l. 8.)

1 lo`i], or the land use description covers more than one `āpana), the land use for neighboring  
2 `āpana can serve as a guide. (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶ 45.)

3 167. Guiding principle #2:

4 In some instances, existing cultural land features can help to determine the location and  
5 size of the lo`i on a kuleana or `āpana. For example, remnants of lo`i walls and terraces still exist  
6 on some kuleana in Nā Wai `Ehā. These land features provide evidence of the location and size  
7 of lo`i, and, accordingly, an estimate of water use at the time of the Māhele. (Lilikalā  
8 Kame`eleihiwa, WT, February 2, 2016, ¶ 46.)

9 168. Guiding principle #3:

10 If the Māhele records for surrounding kuleana and the subject kuleana’s current land  
11 features are not helpful, there is likely no way to arrive at a reasonably accurate water use  
12 quantification for that parcel. In these instances, an equal distribution of land among the noted  
13 land uses may be the only justifiable compromise. For example, if the parcel is described as “loi  
14 and kula,” fifty percent of the land should be attributed to lo`i and the other fifty percent should  
15 be attributed to kula. (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶ 47.)

16 169. It cannot be automatically presumed that the land is in kalo cultivation if there is any  
17 mention of kalo in the Māhele records. One needs to go through the assumptions and principles  
18 before reaching any conclusion. (Lilikalā Kame`eleihiwa, Tr., 7/11/2016, p. 57, l. 4 – p. 58, l. 5.)

19 170. For the one-quarter acre assigned to a house lot, it is likely that the land was planted with  
20 such crops as sweet potatoes and bananas, because a quarter acre is big for a house. But it is hard  
21 to say that there would be some quantification of water. In the old days, generally you would  
22 wait for rain to fall from the sky. So Kame`eleihiwa cannot speak for water for the pāhale.  
23 (Lilikalā Kame`eleihiwa, Tr., 7/11/2016, p. 69, l. 2 – p. 70, l. 8.)

24 171. The term “kula” generally refers to unirrigated pasture or plains. The Māhele records for  
25 Nā Wai `Ehā, however, also use this term to refer to dryland agricultural crops. Use of this  
26 descriptor in Nā Wai `Ehā is sparse, compared to records for other regions throughout Hawai`i.  
27 (Lilikalā Kame`eleihiwa, WT, February 2, 2016, ¶¶ 36-37.)

28  
29  
30  
31

1                                   **b.       Use of Water for Kalo Lo`i at the Time of the Māhele**

2  
3   172.   Paul Reppun was recognized as an expert in the cultivation of kalo, specializing in the  
4   water needs of kalo, based on 42 years of growing taro and knowing all the major taro growing  
5   areas fairly well. (Tr., July 11, 2016, p. 107, ll. 8-22, p. 109, ll. 21-24.) He does not have any  
6   publications on taro cultivation other than his testimonies. (Paul Reppun, Tr., July 11, 2016, p.  
7   114, l. 25 to p. 115, l. 7.)

8   173.   As part of his testimony in this Contested Case, Reppun introduced Exhibit OHA-1, his  
9   September 9, 2007, testimony in a previous contested case (*supra*, FOF 6-9). In that 2007  
10   testimony, Reppun referred to a 1980 report on “Prehistoric Irrigation Hydrology of Pondfield  
11   Taro” and stated that “(t)he researchers used a different method to determine water use in ancient  
12   times: they analyzed the dimensions of the `auwai systems in Halawa Valley, on Moloka`i, and  
13   in the South Pacific. Based on the size and slope of the `auwai, they determined the amount of  
14   water it could safely carry. Their approach of correlating the acreage of taro land with the  
15   capacity of the `auwai led them to estimate that 85% to 90% of the `auwai flow was used as  
16   throughflow to cool the taro.” Reppun states that by their calculations and using 30,000 gad as  
17   the amount lost to consumption, the average inflow would be 30,000 gad divided by 15% to  
18   10%, or 300,000 gad to 200,000 gad, somewhat higher than what Reppun maintains is needed to  
19   grow taro today—100,000 gad to 300,000 gad (*infra*, FOF 178). (Exh. OHA-1, ¶¶ 37-38.)

20   174.   Reppun did not enter the 1980 report into evidence, so it is not clear which statements  
21   come from the report, and which are supplemental comments by Reppun. According to Reppun,  
22   the authors determined the amount of water the `auwai could safely carry based on the size and  
23   slope of the `auwai, and that by correlating the acreage of taro land with the capacity of the  
24   `auwai, they estimated that 85% to 90% of inflow exited as outflow. Reppun then speculates  
25   what the inflows would have been, based on assuming 30,000 gad in consumptive losses (*supra*,  
26   FOF 173).

27   175.   In stark contrast to his 2007 testimony, which Reppun introduced in the current contested  
28   case as his written testimony, Reppun stated in his oral testimony that “how much water taro  
29   needed at the time of the Māhele is almost an irrelevant question... We need more today than  
30   before to some degree.” (Paul Reppun, Tr., July 11, 2016, p. 113, ll. 6-22.)

1 176. “I think conditions for growing taro are different now than they were in ancient  
2 times...We have far more weeds than we used to have before. Even during my short period of  
3 time growing taro, we have had numerous different weeds come in, some of them really, really  
4 noxious weeds. I think ancient Hawaiians had a very benign set of weeds. So controlling the  
5 amount of water wasn’t as important, because when your lo`i go dry, that’s when weeds  
6 germinate. So now we have a situation where if we let lo`i go dry and those weeds germinate, we  
7 suffer enormously. We have had crops where we have to weed every couple of weeks.” (Paul  
8 Reppun, Tr., July 11, 2016, p. 110, ll. 7-22.)

9 177. “The other thing is our climate is changing...something like ten percent drop in  
10 precipitation, which adds up to an enormous quantity of water. So the water in streams is  
11 declining naturally. As the flow of the streams declines, the temperature goes up a little bit. So  
12 our needs for flowing water is little bit higher than it used to be...So it might be, as time goes on,  
13 we experience more severe effects of climate change, global warming, that kind of thing. Our  
14 streams decline further, water temperatures go up, air temperatures going to go up, soil  
15 temperatures going go up, and going to need to have more water to grow taro.” (Paul Reppun,  
16 Tr., July 11, 2016, p. 111, ll. 2-20.)

17

## 18 2. Current Water Needs for Kalo Lo`i

19

20 178. Reppun estimates that “wetland taro needs between 100,000 to 300,000 gallons per acre  
21 [per day] (gad) of ‘new’ water, which is water than can still serve the essential function of  
22 maintaining temperatures low enough to prevent crop failure due to rot and pests, and which has  
23 not been rendered useless for this cooling function by previous use in upstream lo`i. In the  
24 warmer months of the year, and under a normal production system using lo`i complexes without  
25 excess fallowed land, the higher figure should be used.” (Exh. OHA-1, ¶ 4.) The lower end  
26 would apply, for example, if a farmer had only two lo`i and kept one fallow. (Paul Reppun, Tr.,  
27 December 3, 2007, p. 114, l. 21 to p. 115, l. 9.) [Hui/MTF and OHA FOF B-45.]

28 179. Reppun bases his estimate “on my experience of my own lo`i, and also based on my  
29 experience with talking to numerous other farmers in other places and trying to get a sense of  
30 what amount of water they’re using. I have a pretty good sense of being able to look at water and  
31 tell you what the quantity is. So if I go to visit a farmer in Keanae, look at his water, look at (his)

1 taro crop, I've a pretty good idea if he's using more water or not. If I can get him to tell me if  
2 he's having trouble with rot, I can correlate that to what I know and what I learned from other  
3 farmers through quantity of water. So that's—I'm not doing this in a scientific way, but I'm  
4 applying all my experiences to it and that of all the farmers I run into. I'm always trying to refine  
5 that idea...So all these different things are feeding into my estimation of what taro needs.” (Paul  
6 Reppun, Tr., July 11, 2016, p. 134, l. 10 to p. 136, l.10.)

7 180. “I've seen farmers get away with less water than what I'm saying they need, but  
8 generally I can find that there's a reason for that. And it might be that they don't grow taro as  
9 intensively as a local farmer might. I think if a farmer doesn't grow taro, you know, plant taro on  
10 his land, he rests his field ideally. Some farmers can't afford (to) do that, and some of them think  
11 they can. Some of them think they have to be continuously planting because income is not high  
12 enough where they can afford to rest. It's my opinion that if you rest your fields, you can grow  
13 better taro, better income, better quality taro. But some farmers who sell to large poi factories are  
14 not particularly concerned about the quality of their taro, because they are not eating it, not  
15 making poi out of it themselves. The poi factory isn't complaining to them because of feedback  
16 to operation. I've been making poi for as long as I have been growing taro, I founded the first  
17 ever machine, and it takes us long time so for us. So for my brother and I as farmers, we are  
18 continuously being educated about the quality of our taro because we make poi out of it every  
19 other week or so. So if taro is not very good quality, our yield of poi is less. In other words, if we  
20 take 100 pounds of taro, make poi out of it(,) come(,) out 90 pounds of poi. And because our poi  
21 is thick, we don't add a lot of water to it, we have good yield of taro. If it comes out 60 pounds of  
22 poi, the taro is going to be loli, not very good quality. So all these different things are feeding  
23 into my estimation of what taro needs.” (Paul Reppun, Tr., July 11, 2016, p. 135, l. 1 to p. 136, l.  
24 10.)

25 181. “A complex of lo`i has taro at different phases. If you have a field that's fallow,  
26 obviously it requires no water. If you have a field just planted, it require(s) just a thin skin of  
27 water. If you have one that is in full vegetative state, might require not very much water, because  
28 very good leaf coverage and stays cool. If you have one that's maturing, shrinking down, then  
29 it's going to require a further increase in water again.” (Paul Reppun, Tr., July 11, 2016, p. 117,  
30 ll. 16-24.) “(T)he figure of 100,000 to 300,000 gad takes into account the various factors  
31 affecting water needs of taro. It incorporates both periods of less water use, and periods of peak

1 water use, when water availability can make or break a crop. A complex of lo`i at a good level of  
2 production in the summer would need a minimum close to 300,000 gad. If the complex were on  
3 the leeward side, it might need that year round.” (Exh. OHA-1, ¶ 25.)

4 182. Nā Wai `Ehā is on the windward side of Maui. (Exh. OHA-3, p. 43.)

5 183. Reppun is of the opinion that “(i)n Nā Wai `Ehā I would say any of the lo`i there on the  
6 lower half of the complex are going to need towards the high end of that figure, and then closer  
7 to the mountain, it’s going to need less.” (Paul Reppun, Tr., July 11, 2016, p. 136, l. 24 to p. 137,  
8 l. 3.)

9 184. A complex of lo`i has taro at different phases: fallow, just planted, full vegetative state,  
10 and maturing. (Paul Reppun, Tr., July 11, 2016, p. 117, ll. 16-24.)

11 185. “The water duty for taro must incorporate a range of amounts that recognize periods of  
12 less water use and also accommodates periods of peak demand, when the full amount of water is  
13 critical to ensure the success and survival of the crop.” (Exh. OHA-1, ¶ 13.)

14 186. “The period from planting to harvest spans an average of about 14 to 15 months.” (Exh.  
15 OHA-1, ¶ 15.)

16 187. In the initial planting stage, the lo`i are flooded and planted, then just enough water is  
17 applied to keep the soil covered, and about a month later the flow of water is started. (Paul  
18 Reppun, Tr., July 11, 2016, p. 149, ll. 6-12.)

19 188. Most taro farmers fertilize their crop usually once every one or two months for the first  
20 eight to ten months, depending on the variety of taro. With chemical fertilizers, the inflow of  
21 water is stopped, leaving the water about two inches deep to dissolve the fertilizer, then leaving  
22 the water to sit in the lo`i until it subsides into the soil. Then about a week later, the lo`i is  
23 flooded, and about another week later after the water has subsided into the soil, water is run  
24 through again. So for fertilizing, there might be a two-week period out of every month to two  
25 months during the eight to ten months when fertilizer is applied, where water would not be  
26 needed except for a one-time flooding. (Exh. OHA-1, ¶ 17; Paul Reppun, Tr., July 11, 2016, p.  
27 148, l. 11 to p. 149, l. 5.)

28 189. For the organic method, dry organic material, such as limu, sulphate of potash, and tree  
29 trimmings, is put in the soil and left to rot down. (Reppun did not state how long this would  
30 take.) Two to three weeks before planting, fish meat bonemeal is added, and no more fertilizing  
31 is done for the life of the crop. (Paul Reppun, Tr., July 11, 2106, p. 147, l. 8 to p. 149, l. 11.)

1 190. When your lo`i go dry, that's when weeds germinate...We have had crops where we have  
2 to weed every couple of weeks." (Paul Reppun, Tr., July 11, 2016, p. 110, ll. 16-21.) How long it  
3 takes to weed varies a lot. (Paul Reppun, Tr., July 11, 2016, p. 149, l. 24 to p. 150, l. 8.) When  
4 weeding is needed, the inflow and outflow of water are stopped to prevent muddy water to run  
5 out of the lo`i to minimize soil loss. (Exh. OHA-1, ¶ 19.)

6 191. Reppun states in his current testimony that "I have never observed it to be a general rule  
7 or assumption that no water is needed to flow into taro lo`i fifty percent of the time, or 'half the  
8 crop cycle.' Nor have I observed a common practice among taro farmers to allow water to flow  
9 through their lo`i only fifty percent of the time...(T)he typical practice of taro farmers is to shut  
10 the inflow to the lo`i only when applying fertilizer or performing tasks that would stir up mud  
11 and cause muddy water to run out of the lo`i. Although flow requirements of taro may vary  
12 depending on the stage in the crop cycle, weather, and other conditions, taro requires flowing  
13 water throughout the 14-15 month period from planting to harvest." (Paul Reppun, WT, February  
14 5, 2016, ¶ 5.)

15 192. However, in his testimony on the various stages of the crop cycle: a) the flow of water is  
16 started about a month after planting (*supra*, FOF 187); b) for fertilizing, there might be a two-  
17 week period out of every month to two months during the eight to ten months when fertilizer is  
18 applied, where water would not be needed except for a one-time flooding (*supra*, FOF 188)<sup>8</sup>; c)  
19 the time it takes to weed varies a lot, sometimes as frequently as every two weeks, but when  
20 weeding is needed, the inflow and outflow of water are stopped to prevent muddy water to run  
21 out of the lo`i to minimize soil loss (*supra*, FOF 190).

22 193. Thus, from Reppun's own testimony, flowing water is not required for a month after  
23 planting, for 2 to 5 months when fertilizing,<sup>9</sup> plus additional time when weeding is required  
24 (*supra*, FOF 192).

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<sup>8</sup> For organic fertilizing (*supra*, FOF 212), repeat fertilizing is not necessary, but a longer fallow period would be needed for the organic matter to decompose before planting can take place.

<sup>9</sup> From a minimum of two weeks every two months for eight months, or two weeks x 4 = 8 weeks, or two months; to a maximum of two weeks every month for ten months, or two weeks x 10 = 20 weeks, or five months.

1                                   **a.       Water Temperature and Taro Rot**

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3   194.   When water reaches 77<sup>0</sup>F, taro rot begins to accelerate and spread. In more recent years,  
4   apple snails have also become a problem, because they thrive in lo`i and feed on the taro. Cooler  
5   water helps to control the snails by slowing down their metabolism and reproductive cycle. (Exh.  
6   OHA-1, ¶¶ 5-6.)

7   195.   In Reppun’s opinion, 80<sup>0</sup>F is more critical. The rate of acceleration depends on the  
8   “farmer’s practices and the history of that field. If that field previously had a lot of rot in it, then  
9   rot is going to be more of a problem in subsequent crops. So if you have a field that has been  
10   really clean and hasn’t had a problem in the past, the chance of rot starting to accelerate at 77  
11   degrees is very small. It may start to accelerate at 82 degrees.” (Paul Reppun, Tr., July 11, 2016,  
12   p. 130, ll. 8-19.)

13   196.   “The farmers’ primary means of maintaining the necessary cool temperatures is in  
14   adequate ‘throughflow.’ Throughflow is water that flows through the lo`i and carries heat away.  
15   Throughflow is distinct from water that is ‘consumed.’ Consumed water is water that is lost to  
16   percolation through the soil...” (Exh. OHA-1, ¶ 7.)

17   197.   Reppun estimates that the difference between inflow and outflow, or losses from  
18   evaporation, seepage and transpiration, vary quite a bit but generally is in the neighborhood of  
19   ten percent and is generally higher than lower than ten percent (see also FOF 174, *supra*). (Paul  
20   Reppun, Tr., July 11, 2016, p. 122, l. 24 to p. 123, l. 8; p. 129, ll. 5-8.)

21   198.   “There are a number of practices that you can use (to) try and keep rot from becoming a  
22   problem. One is fallowing your field. One is growing something like grass or sorghum that has  
23   extensive root system(s) that actually uses cyanide (that) can help to kill organisms You can also  
24   change varieties of taro.” (Paul Reppun, Tr., July 11, 2016, p. 131, ll. 9-15.)

25   199.   Reppun doesn’t know how long water has to be at 77 or 80 degrees before rot begins, nor  
26   whether it has to be continuous or only intermittent, but if you encounter high temperatures,  
27   there’s a reason for it, and that reason tends to persist. If it persists over a period of time, you  
28   start to see soil temperatures go up, which will go well past the hottest part of the day and into  
29   the night. (Paul Reppun, Tr., July 11, 2016, p. 131, l. 16 to p. 132, l. 15.)



1                                   **b.       The 2007 USGS Survey**

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3   200.   Reppun participated in and included in his prepared testimony a 2007 United States  
4   Geological Survey (“USGS”) on “Water Use in Wetland Kalo Cultivation in Hawai`i,” which  
5   was a survey of water use over a two-month period (7/29/2006 – 9/22/2006). (Exh. OHA-3; Paul  
6   Reppun, Tr., July 11, 2016, p. 125, ll. 9-12.)

7   201.   The survey measured the amount of water that flowed in and out of lo`i complexes and  
8   the temperatures of the water, but it did not address crop yields nor the effects of water  
9   temperature on crop yields. (Reppun, Tr., July 11, 2016, p. 128, ll. 10-12.)

10   202.   To ensure that flow and temperature data collected at different lo`i complexes reflected  
11   similar irrigation conditions, only lo`i with crops near the harvesting stage, with continuous  
12   flooding of the mature crop, were selected for water-temperature data collection. Farmers  
13   generally allocate a greater amount of water to lo`i with crops at harvesting stage and less water  
14   to lo`i with crops at earlier stages to maximize the use of limited water resources. Data were  
15   collected during the dry season (June-October), when water requirements for cooling kalo  
16   approach upper limits (Exh. OHA-3, p. 1.), and were collected on commercial kalo farms,  
17   because commercial farmers “maximize their production by the very nature of being  
18   commercial.” (Paul Reppun, Tr., December 3, 2007, p. 128, ll. 20-23.) [Hui/MTF and OHA FOF  
19   B-50.]

20   203.   Flow measurements were taken only twice, at the beginning and at the end of the two-  
21   month study period and generally made during the warmest part of the day. Temperature  
22   measurements were made every fifteen minutes for the two-month period. (Exh. OHA-3, p. 1.)

23   204.   Seventeen windward and two leeward lo`i complexes were studied on Kaua`i, O`ahu,  
24   Maui, and Hawai`i. The average inflow value for the 17 windward lo`i complexes was 270,000  
25   gad, and the median inflow value was 150,000 gad. The average inflow value for five individual  
26   windward lo`i was 370,000 gad, and the median inflow value was 320,000 gad. (Exh. OHA-3, p.  
27   1.)

28   205.   A total of 62 flow measurements and 46 sets of temperature data were made across all  
29   sites. The Maui sites were reported to have taken flow measurements on July 29-31, 2006, when  
30   the temperature loggers were deployed, and September 21-22, 2006, when the temperature  
31   loggers were removed. (Exh. OHA-3, pp. 6, 43-47.)

1 206. A lo`i complex at Waihe`e was one of the complexes chosen on Maui. Flow  
2 measurements were reported for the Waihe`e lo`i complexes for 7/29/2006 and 9/22/2006, while  
3 temperature measurements were reported for the period 7/29/2006 -9/22/2006. (Exh. OHA-3, pp.  
4 43-45.)

5 207. The Waihe`e lo`i complex of 2.30 acres was considered to be two complexes, an upper  
6 complex of 1.54 acres with 33 lo`i, and a lower complex of 0.76 acres, with 23 lo`i. The water  
7 source is the Waihe`e River through an `auwai supplied by the Spreckel's Ditch. Water enters the  
8 upper portion through a single intake and exits through two `auwai into the lower portion, where  
9 it exits through a single outtake. (Exh. OHA-3, p. 43 and p.46, figure 23.)

10 208. On 7/29/2006, inflow from the `auwai into the upper complex of 1.54 acres was  
11 measured at 340,000 gallons, and on 9/22/2006, at 300,000 gallons, or 221,000 gad and 195,000  
12 gad, respectively.<sup>10</sup>

13 209. Combined inflow through the two `auwai from the upper to lower complexes were  
14 measured at 85,000 gallons on 7/29/2006, and at 125,000 gallons on 9/22/2006, or 112,000 gad  
15 and 164,000 gad, respectively for the lower 0.76 acres.<sup>11</sup> (Exh. OHA-3, p. 44, table 6.)

16 210. Therefore, for those two days, losses in the upper complex of 1.54 acres were 255,000  
17 gallons (340,000 – 85,000) or 166,000 gad, and 175,000 gallons (300,000 – 125,000), or 114,000  
18 gad, respectively. These losses represent 75 percent (166,000/221,000) and 58 percent  
19 (114,000/195,000) of inflows into the upper complex, respectively, far in excess of Reppun's  
20 estimate that losses are in the range of 10 percent (*supra*, FOF 197).

21 211. Because of such large losses in the upper complex, the lower 0.76-acre complex received  
22 only 112,000 gad and 164,000 gad, while the upper complex of 1.54 acres was receiving 221,000  
23 gad and 195,000 gad, respectively (*supra*, FOF 208-209).

24 212. No measurements were taken at the outlet from the lower complex, so losses in the lower  
25 complex are not known. (Exh. OHA-3, p. 44, table 6.)

26 213. Temperature measurements were taken on a continual 15-minute basis between  
27 7/29/2006 and 9/22/2006 in the `auwai feeding the upper complex, in one of the two outlets from

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<sup>10</sup> For unexplained reasons, the study reported this flow by dividing the inflow into the 1.54 acres by the combined 2.3 acres, which resulted in 150,000 gad and 130,000 gad, for the respective dates. (Exh. OHA-3, p. 44, table 6.) But as described next, lesser amounts of water reached the lower 0.76 acres because of significant leakage in the upper complex, and the study reported these amounts as reaching the lower complex of 0.76 acres.

<sup>11</sup> The study reported these numbers as 110,000 gad and 160,000 gad, but applying the flows as reported, the specific flows would be slightly more, or 112,000 gad and 164,000 gad, respectively. (Exh. OHA-3, p. 44, table 6.)

1 the upper to the lower complex, and in the outlet from the lower complex. (Exh. OHA-3, p. 45,  
2 table 7, and pp. 46-48, figures 23-25.)

3 214. In the `auwai feeding the upper complex, no readings exceeded 27<sup>0</sup>C (80.6<sup>0</sup>F),<sup>12</sup> with  
4 water temperatures ranging from 19.9 – 24.0<sup>0</sup>C (67.8<sup>0</sup>F – 75.2<sup>0</sup>F) and daily peak temperatures  
5 occurring between 10:15 and 18:45. (Exh. OHA-3, p. 45, table 7.)

6 215. In the `auwai from the upper to the lower complex, 25.4 percent of readings exceeded  
7 27<sup>0</sup>C, with temperatures ranging from 20.3 – 34.0<sup>0</sup>C (68.5<sup>0</sup>F – 93.2<sup>0</sup>F) and daily peak  
8 temperatures occurring between 11:30 and 16:15. (Exh. OHA-3, p. 45, table 7.)

9 216. In the `auwai exiting the lower complex, 27.0 percent of readings exceeded 27<sup>0</sup>C, with  
10 temperatures ranging from 20.0 – 35.5<sup>0</sup>C (68.0<sup>0</sup>F – 95.9<sup>0</sup>F) and daily peak temperatures  
11 occurring between 11:15 and 16:45. (Exh. OHA-3, p. 45, table 7.)

12 217. There were no daily readings where the temperature exceeded 27<sup>0</sup>C for 24 hours. For the  
13 outflow from the upper complex into the lower complex, there were no readings exceeding 27<sup>0</sup>C  
14 prior to about 10:00 and after about 19:00. For the outflow from the lower complex, there were  
15 no readings exceeding 27<sup>0</sup>C prior to between 9:00 and 10:00 and after about 22:00. (Exh. OHA-  
16 3, p. 48, figure 25.)

17 218. Because flow measurements were only taken twice during the two-month period—at the  
18 installation and removal of the temperature gauges—there is no information: a) to correlate  
19 inflow rates with outflow temperatures; and/or b) to conclude whether the loss rates in the upper  
20 complex of 58 and 75 percent (*supra*, FOF 210) were typical losses. Furthermore, no data were  
21 collected on outflow from the lower complex, so its loss rates, even for only the two  
22 measurement periods, are unknown.

23 219. Outflow temperatures are partially dependent on inflow temperatures, but the only inflow  
24 measurements were done in the `auwai immediately prior to the intake into the upper complex.  
25 No measurements were made in the Spreckel's Ditch, nor in Waihe`e River at the Spreckels  
26 Ditch, which would have provided information on the extent of warming of the water as it was  
27 conveyed from the River, through the Spreckel's Ditch, and through the `auwai. (Exh. OHA-3, p.  
28 45, table 7, and pp. 46-48, figures 23-25.)

29 220. Finally, 25.4 percent of the water entering the lower complex from the upper complex  
30 already exceeded 27<sup>0</sup>C, but this increased only to 27.0 percent after passing through the lower

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<sup>12</sup> Using the formula:  $F = 9/5C + 32$ .

1 complex, with maximum temperatures increasing from 93.2<sup>0</sup>F to 95.9<sup>0</sup>F (*supra*, FOF 215-216),  
2 even though the flow rate in the lower complex decreased significantly from the inflow into the  
3 upper complex, from 221,000 gad to 112,000 gad and 195,000 gad to 164,000 gad during the  
4 period of the two measurements (*supra*, FOF 208-209).

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6 **E. Instream Uses**

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8 221. “Instream use” means beneficial uses of stream water for significant purposes which are  
9 located in the stream and which are achieved by leaving the water in the stream. Instream uses  
10 include, but are not limited to:

- 11 a. Maintenance of fish and wildlife habitats;
- 12 b. Outdoor recreational activities;
- 13 c. Maintenance of ecosystems such as estuaries, wetlands, and stream  
14 vegetation;
- 15 d. Aesthetic values such as waterfalls and scenic waterways;
- 16 e. Navigation;
- 17 f. Instream hydropower generation;
- 18 g. Maintenance of water quality;
- 19 h. The conveyance of irrigation and domestic water supplies to downstream points  
20 of diversion; and
- 21 i. The protection of traditional and customary Hawaiian rights. (HRS § 174C-3.)

22 222. Out of the 376 perennial streams it identified in Hawai`i, the Commission has designated  
23 only 44 streams statewide as “Candidate Streams for Protection.” Each of the Nā Wai `Ehā  
24 streams earned this designation among only nine streams selected from the entire island of Maui.  
25 The Commission also designated the Nā Wai `Ehā streams as “Blue Ribbon Resources,”  
26 meaning that they featured the “few very best resources” in their respective resource areas.  
27 (CCH-MA06-01, June 2010, FOF 63.)

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29 **1. Maintenance of Fish and Wildlife Habitats**

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31 **a. Hawaiian Streams’ Amphidromous Fauna**

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223. The term “amphidromous” describes fishes that undergo regular, obligatory migration between freshwaters and the sea at some stage in their life cycle other than the breeding period. All native Hawaiian amphidromous species exhibit “freshwater amphidromy” where spawning takes place in fresh water, and the newly hatched larvae are swept into the sea by stream currents. While in the marine environment, the larvae undergo development as zooplankton before returning to fresh water to grow to maturity. An important ecological characteristic of the amphidromous fauna is the ability to move upstream, surmounting riffles and small falls, and for some species, even very high waterfalls. (CCH-MA06-01, June 2010, FOF 65.)

224. The life history of amphidromous stream macrofauna can be divided into three phases: 1) recruitment into the stream; 2) adult population biology and instream habitat use; and 3) reproductive output. All of these must be operative for a population in a particular stream to be considered successful. (CCH-MA06-01, June 2010, FOF 66.)

225. The native amphidromous fauna of Hawaiian streams consists of five species of goboid fishes: *Awaous guamensis* (‘o‘opu nākea), *Sicyopterus stimpsoni* (‘o‘opu nōpili), *Lentipes concolor* (‘o‘opu alamo‘o), *Stenogobius hawaiiensis* (‘o‘opu naniha), and the eleotrid *Eleotris sandwicensis* (‘o‘opu akupa). Native amphidromous invertebrates include two gastropods, *Neritina granosa* (hihiwai) and the estuarine *Neritina vespertina* (hapawai); and the decapods, *Atyoida bisulcata* (‘opae kala‘ole) and *Macrobrachium grandimanus* (‘opae ‘oeha‘a). (CCH-MA06-01, June 2010, FOF 64.)

226. The five native Hawaiian amphidromous species have no distinct breeding season. (CCH-MA06-01, June 2010, FOF 67.)

**b. Factors Affecting the Biological and Ecological Integrity of Hawaiian Streams’ Amphidromous Fauna**

227. An overriding factor impairing the biological and ecological integrity of diverted Central Maui streams, compared to their non-diverted counterparts, is the disruption of natural flow via large-scale offshore diversions. (CCH-MA06-01, June 2010, FOF 68.)

228. Diversions of streamflow harm stream life by degrading or destroying habitat, diminishing food availability, and disturbing species interactions and food web processes.

1 Particularly during low flow or drought conditions, the diversions exaggerate the negative impact  
2 of low flows and can eliminate most stream life and habitat below the diversions and leave the  
3 streams barren of recruitment. (CCH-MA06-01, June 2010, FOF 69.)

4 229. Stream diversions have been found to dampen the natural seasonal discharge cycle,  
5 exacerbate natural low flow conditions, and increase the likelihood of prolonged periods of  
6 extremely low flow. (CCH-MA06-01, June 2010, FOF 70.)

7 230. Diversions particularly compromise the life cycles of native amphidromous species in  
8 numerous ways that compound the negative impacts on their overall populations from mauka to  
9 makai. (CCH-MA06-01, June 2010, FOF 71.)

10 231. Diversions diminish larval drift by capturing eggs and larvae. (CCH-MA06-01, June  
11 2010, FOF 72.)

12 232. Diversions also impair flows necessary to transport larvae to the ocean. Any factor that  
13 hinders flow or increases retention time in a stream will delay the transport of larvae to the  
14 marine environment and negatively impact and possibly kill larvae. (CCH-MA06-01, June 2010,  
15 FOF 73.)

16 233. Terminal discharge at the stream mouth into the ocean of sufficient duration and volume  
17 is necessary to attract and accommodate upstream migration of post-larval fishes, mollusks, and  
18 crustaceans. (CCH-MA06-01, June 2010, FOF 74.)

19 234. There is a direct correlation between streamflow volume under non-freshet conditions  
20 and postlarval recruitment in Central Maui streams, such that increased streamflow correlates  
21 with increased recruitment at the stream mouth. (CCH-MA06-01, June 2010, FOF 75.)

22 235. At the hearings leading to the Commission’s June 2010 Decision and Order on the `Īao  
23 high-level WUPAs and the petition to amend the Nā Wai `Ehā IIFS (CCH-MA06-01, June 2010,  
24 *supra*, FOF 9), Hui/MTF’s expert witness maintained that “the amphidromous life cycle requires  
25 continuous flow to link biologically the mountains (mauka) to the ocean (makai).” (CCH-MA06-  
26 01, June 2010, FOF 76.)

27 236. On the other hand, HC&S’s expert witness stated that “(i)t has not been definitively  
28 established that the life cycle of native Hawaiian amphidromous species absolutely depends on  
29 continuous mauka to makai flow. There are naturally interrupted and intermittent streams in  
30 Hawai‘i that host amphidromous organisms. Statewide surveys conducted by the Division of  
31 Aquatic Resources (“DAR”) have found an abundance of ‘o‘opu alamo‘o and ‘opae in the upper

1 reaches of leeward streams that were assumed to be dry year round. Standing pools in the mid-  
2 reaches of such streams provide ecologically important habitat for native amphidromous species  
3 during baseflow and drought conditions.” (CCH-MA06-01, June 2010, FOF 77.)

4 237. HC&S’s expert witness distinguished between “ecological” and “physical” connectivity,  
5 believing that ecological connectivity in a stream is more important than physical connectivity  
6 for purposes of sustaining the biological integrity of the stream. He concluded that ecological  
7 connectivity exists if stream flows of sufficient volume and frequency allow the normal  
8 distribution of native amphidromous species within a given watershed, and that physical  
9 connectivity exists if there is uninterrupted flow of surface waters between the headwaters of a  
10 stream and its mouth. He therefore concluded that ecological connectivity could exist  
11 irrespective of whether there is physical connectivity. (CCH-MA06-01, June 2010, FOF 78.)

12 238. Thus, the volume and duration of stream flows needed to sustain the life cycle of  
13 amphidromous species were not known at the time of the evidentiary hearings of CCH-MA06-  
14 01, which were held between December 3, 2007 and March 4, 2008, with one additional day of  
15 hearings on October 14, 2008, (*supra*, FOF 7).

16 239. Nevertheless, in its 2010 D&O, the Commission was able to conclude that:

- 17 a. Waihe`e River had the highest restorative potential;
- 18 b. Waiehu Stream showed evidence of recruitment of amphidromous species, and  
19 that further recruitment could result if improvements were made to assist  
20 amphidromous species traverse the 12-foot drop in the elevation of the South  
21 Waiehu stream just below the diversion and the vertical concrete apron located  
22 just below the highway culverts in lower Waiehu Stream;
- 23 c. recruitment can occur through the channelized portion of Wailuku River and the  
24 20-foot vertical drop in the channelized area can be bypassed, but the  
25 reproductive (spawning) potential of the channelized, lower stretch is minimal;  
26 and
- 27 d. Waikapū Stream may not have flow continuously mauka to makai prior to the  
28 diversions of the stream because of extensive infiltration of streamflow into the  
29 lower reaches of the streambed, and even when there is streamflow during  
30 extensive periods of flooding, stream water does not travel via a continuous

1 channel through Kealia Pond and into the ocean, but fans out into a big delta.  
2 (CCH-MA06-01, June 2010, COL 214-217.)

3 240. In 2009, Bishop Museum and the Division of Aquatic Resources published a report that  
4 quantified Hawaiian streams' habitat for amphidromous species: Parham *et al.*, "The Use of  
5 Hawaiian Stream Habitat Evaluation Procedure to Provide Biological Resource Assessment in  
6 Support of Instream Flow Standards for East Maui Streams." Division of Aquatic Resources and  
7 Bishop Museum. Honolulu, HI., 2009, 104 p. (James Parham, WT, 02/14/2014, Exh. F-2, p. 2,  
8 2014 Mediated Agreement.)

9 241. The Habitat Evaluation Procedure accounts for local, network (up and downstream  
10 conditions), and watershed differences among sites and can be used for any Hawaiian stream. It  
11 provides an assessment of habitat suitability with respect to its location in a stream. (James  
12 Parham, WT, 02/14/2014, Exh. F-2, p. 99, 2014 Mediated Agreement.)

13 242. For the Nā Wai `Ehā rivers and streams, Waihe`e River and Wailuku River together  
14 make up 87.8% of the total naturally occurring habitat units for native amphidromous species  
15 within all Nā Wai `Ehā rivers and streams combined. Wailuku River has 49% of the total habitat  
16 units within Nā Wai `Ehā, and Waihe`e River has 37.8%. Waikapū Stream contains less than 1%  
17 of naturally occurring habitat units. (2014 Mediated Agreement, FOF 30.)

18 243. However, the presence of suitable characteristics at a site is not the only important  
19 variable when determining site occupancy. A site can only be occupied by a species if that  
20 species can reach that habitat. Both habitat and passage are needed to achieve suitable habitat.  
21 "Diversion can entrain animals as they pass up and downstream during their required  
22 migrations. Requiring the animal to successfully pass multiple diversions greatly decreases the  
23 probability that recruitment, growth, reproduction, and migration...are also successful. Water  
24 and suitable instream habitat must exist, but reducing the barriers and potential entrainment  
25 greatly enhances the reproductive productivity of the stream habitat." (James Parham, WT,  
26 02/14/2014, Exh. F-2, p. 99, 2014 Mediated Agreement.)

27 244. "Flow restoration at diversion locations is modeled with water returned to the stream  
28 passing the diversion and staying in the stream channel. Water flowing past the diversion in this  
29 way would provide an obvious wetted pathway with clear up and down queues for migrating  
30 animals. In contrast to this water return approach, some restoration efforts have passed a small  
31 amount of water over the diversion dam for "biological connectivity" (*supra*, FOF 190) while the



1 bulk of the water is released downstream through the diversion structure...This approach may  
2 work fine for downstream drifting larvae, but it is not clear if upstream moving animals can  
3 navigate the diversion structure to find a way upstream. While water over the dam does provide a  
4 wetted pathway, how easy it is for an animal to find this small pathway in comparison to the  
5 large diversion flow is unclear.” (James Parham, WT, 02/14/2014, Exh. F-2, p. 99, 2014  
6 Mediated Agreement.)

7  
8 **2. Maintenance of Ecosystems**

9  
10 **a. Estuarine and Nearshore Marine Ecosystems**

11  
12 245. Streams are a major source of nutrients and minerals to the tropical marine system, and  
13 biological communities use these organic resources in numerous ways, creating a natural  
14 functioning mauka to makai ecosystem. (Exh. A-220 (Lindstrom study) at 69; Benbow, WT,  
15 September 14, 2007, ¶ 14 (CCH-MA06-01, June 2010).) [Hui/MTF and OHA, FOFA-104.]

16 246. By limiting the natural transport of organic matter to the ocean, diversions impact the  
17 biological communities that depend on these resources, including crustaceans, cephalopods, and  
18 nearshore and pelagic fishes. (Benbow, WT, September 14, 2007, ¶ 14 (CCH-MA06-01, June  
19 2010).) [Hui/MTF and OHA, FOF A-107.]

20 247. Kama`āina and cultural practitioners in Nā Wai `Ehā provided cultural testimony  
21 reflecting the interconnection between the rivers/streams and nearshore marine habitats. (Sevilla,  
22 WT, September 14, 2007, ¶ 9, and Bailey, WT, September 14, 2007, ¶ 4 (CCH-MA06-01, June  
23 2010).) [Hui/MTF and OHA, FOF A-108.]

24  
25 **b. Wetland Ecosystems**

26  
27 248. Each of the four waters of Nā Wai `Ehā support coastal wetland ecosystems, which are  
28 recognized by the U.S. Fish and Wildlife Service. (Exh. A-78 (Hawai`i Stream Assessment) at  
29 182, 286 (CCH-MA06-01, June 2010).) [Hui/MTF and OHA, FOF A-116.]

30 249. A 2008 USGS report predicted that streamflow restoration would increase fresh  
31 groundwater levels across Nā Wai `Ehā, including in the coastal wetland area, by a range starting

1 from 0.1 to 0.5 feet and extending to more than 3 feet. (Exh. A-R2 (USGS Groundwater Report),  
2 at 69 (Figure 45), 63, 66 (CCH-MA06-01, June 2010).) [Hui/MTF and OHA, FOF A-117.]  
3 250. The `ili of Paukūkalo between Wailuku River and Waiehu Stream is historically and  
4 culturally renowned for its springs and wetlands, collectively known as Ka`ehu Wetlands.  
5 Paukūkalo community members, including `ohana with multi-generational ties to these lands,  
6 confirm that when Wailuku River and Waiehu Stream flow continuously to the ocean, the seeps  
7 and springs on their land “come alive” and are recharged with water. (Ivy, WT, September 14,  
8 2007, ¶ 8, March 2, 2008, ¶¶ 1, 9; Exh. A-54 at ii, 6; Kekona, WT, September 14, 2007, ¶¶ 3-4;  
9 Sevilla, WT, September 14, 2007, ¶¶ 2, 8 (CCH-MA06-01, June 2010).) [Hui/MTF and OHA,  
10 FOF A-119 to A-120.]

11 251. Waikapū Stream’s delta is at the Keālia Pond wetlands, which has been established as a  
12 National Wildlife Refuge to preserve, restore, and manage essential habitat for endangered  
13 waterbirds. The Commission has designated Waikapū Stream as a “Blue Ribbon” candidate for  
14 protection of its riparian resources, specifically based on its connection with the wetlands at  
15 Keālia Pond. (Exh. C-R12 (Keālia Pond Refuge conservation plan) at 1-1; Exh. A-78 (Hawai`i  
16 Stream Assessment) at 186, 272 (2014 Mediated Agreement).) [Hui/MTF and OHA, FOF A-127  
17 to A-128.]

### 18 **3. Recreational and Aesthetic Values**

19  
20 252. The Nā Wai `Ehā waters have supported recreational activities such as hiking, fishing,  
21 swimming, parks, scenic views, and nature study. (Exh. A-78 (Hawai`i Stream Assessment) at  
22 248, 252 (CCH-MA06-01, June 2010).) [Hui/MTF and OHA, FOF A-130.]

23 253. Community members have uniformly testified to the degraded aesthetic and recreational  
24 values of the rivers and streams in their historically diverted conditions. (Alueta, WT, September  
25 14, 2007, ¶ 9; Higashino, WT, September 14, 2007, ¶¶ 5-6; Pellegrino, WT, September 14, 2007,  
26 ¶ 28 (CCH-MA06-01, June 2010).) [Hui/MTF and OHA, FOF A-133.]

### 27 28 **4. Scientific Study and Education**

29

1 254. The scientific consensus is that long-term flow restoration is essential to support  
2 ecological studies. (Benbow, WT, September 14, 2007, ¶¶ 18-21. (CCH-MA06-01, June 2010).)  
3 [Hui/MTF and OHA, FOF A-136.]

4 255. Community members use or would like to use Nā Wai `Ehā streamflows as part of  
5 numerous community-based cultural education activities. These programs collectively serve  
6 thousands of visitors and students, but have been limited by the historical lack of flows.  
7 (Pellegrino, WT, September 14, 2007, ¶¶ 24-28; Alboro, WT, September 14, 2007, ¶¶ 4-6;  
8 Bailey, WT, September 14, 2007, ¶ 2; Sevilla, WT, September 14, 2007, ¶¶ 10-13; Fisher, WT,  
9 September 14, 2007, ¶ 18 (CCH-MA06-01, June 2010); Sevilla, WT, January 7, 2014, ¶ 7; Piko,  
10 WT, January 7, 2014, ¶¶ 1-4 (2014 Mediated Agreement).) [Hui/MTF and OHA, FOF A-137.]

## 11

## 12 **5. Water Quality**

## 13

14 256. Nā Wai `Ehā account for three of the ten streams on Maui that DOH has determined to be  
15 impaired. The designated uses of Nā Wai `Ehā streams include: “recreational purposes,”  
16 “support and propagation of aquatic life,” “scientific and educational purposes,” “protection of  
17 native breeding stock,” “aesthetic enjoyment,” and “other nondegrading uses.” (Penn, WT,  
18 September 14, 2007, pp. 23-24; Tr., December 6, 2007, at p. 222, l. 17 to p. 223, l. 1 (CCH-  
19 MA06-01, June 2010).) [Hui/MTF and OHA, FOF A-138 to A-139.]

20 257. There is a direct relationship between offstream diversions and water quality. Greater  
21 diversions mean greater impairment, including decreased stream assimilative capacity, increased  
22 pollutant concentrations, increased pollutant deposition, longer pollutant resident times, degraded  
23 stream habitat quality, and decreased stream biotic integrity. (Penn, WT, September 14, 2007, p.  
24 24 (CCH-MA06-01, June 2010).) [Hui/MTF and OHA, FOF A-140.]

25 258. Constant base flows are able to assimilate and transport pollutants in a fairly continuous  
26 manner. Reduced base flows have low assimilative capacity and allow pollutants to settle out and  
27 deposit. Storm flows deliver a massive pollutant load extremely rapidly, including the pollutants  
28 accumulated over time because of reduced flows. (Penn, Tr., December 16, 2007, p. 210, l. 19 to  
29 p. 211, l. 21. (CCH-MA06-01, June 2010).) [Hui/MTF and OHA, FOF A-141.]

1                                   **6.       Groundwater Aquifer Recharge**

2  
3   259.   In the lower reaches of Nā Wai `Ehā, the stream channels overlies the basal freshwater  
4   lenses, allowing stream waters to migrate from the stream bed down to the basal lenses. (Oki,  
5   WT, September 14, 2007, ¶ 12 (CCH-MA06-01, June 2010).) [Hui/MTF and OHA, FOF A-147.]

6   260.   Waihe`e River overlies the Waihe`e Aquifer, Wailuku River and Waiehu Stream overlies  
7   the `Īao Aquifer, and Waikapū Stream overlies the Waikapū Aquifer. All these surface and  
8   groundwater resources lie within the larger Wailuku Aquifer Sector. (Exh. B-13 (aquifer map);  
9   Exh. A-R2 (USGS Groundwater Report) at 31 (Figure 18), 2 (Figure 1) (CCH-MA06-01, June  
10   2010).) [Hui/MTF and OHA, FOF A-148.]

11   261.   The `Īao and Waihe`e Aquifers both supply public drinking water for the County of  
12   Maui. The `Īao Aquifer is central Maui’s principal drinking water source. The Waikapū Aquifer  
13   is also being contemplated for various prospective potable water wells. (Taylor, MDWS Dec.  
14   February 5, 2016, ¶ 8; Eng, MDWS Dec. September 14, 2007, ¶ 7; Exh. 2189 WCEIC-270  
15   (Nance Report), at 7-8.) [Hui/MTF and OHA, FOF A-149.]

16   262.   Downstream of the uppermost Nā Wai `Ehā diversions, USGS estimated the total amount  
17   of natural recharge under natural, undiverted low-flow conditions of 1.7 mgd from Waihe`e  
18   River, 2.9 mg from Waiehu Stream, 5.6 mgd from Wailuku River, and 4.3 mgd from Waikapū  
19   Stream. The diversions were capable of reducing this recharge by more than 89 percent for  
20   Waihe`e River, Wailuku River, and Waikapū Stream, and by more than 33 percent for Waiehu  
21   Stream. (Exh. AR-1 (USGS Streamflow Report), at iii-v (2014 Mediated Agreement).)  
22   [Hui/MTF and OHA, FOF A-150.]

23  
24                                   **7.       Needs of Downstream Users**

25  
26   263.   Amending the IIFS must consider the needs of present and future users downstream of  
27   present diversions. These users are addressed in the analysis, *infra*, of appurtenant rights and  
28   surface water-use permit applications that were filed in this contested case  
29  
30  
31

## 8. Protection of Traditional and Customary Native Hawaiian Rights

264. Due to the profusion of fresh-flowing water in ancient times, Nā Wai `Ehā supported one of the largest populations and was considered the most abundant area on Maui; it also figured centrally in Hawaiian history and culture in general. (CCH-MA06-01, June 2010, FOF 34.)

265. Nā Wai `Ehā's abundant water resources served as a base of political and economic power for the region in ancient times. (CCH-MA06-01, June 2010, FOF 48.)

266. Upper `Īao Valley contained the royal residences of chiefs in both life and the afterlife. In a secret underwater cave, Native Hawaiians hid the bones of "all the ruling chiefs who had mana and strength, and the kupua, and all those attached to the ruling chiefs who were famous for their marvelous achievements. There were several hundred in all who were buried there." Thus, the burial of sacred chiefs required a deep freshwater body to ensure the utmost protection of their bones. (CCH-MA06-01, June 2010, FOF 44.)

267. Nā Wai `Ehā is home to several important heiau. Of particular significance are Haleki`i and Pihana Heiau, located between Waiehu and `Īao Streams. These heiau were re-consecrated in 1776 as an offering before the famous battle between Hawai`i and Maui. It is said that Kalanikaukooluaole, a high chiefess and daughter of Kamehamehanui, bathed in the stream water near the heiau, before she entered the heiau. (CCH-MA06-01, June 2010, FOF 45.)

268. The presence of heiau (places of worship, temples) in a windward environment indicates large populations and agricultural pursuits. In Nā Wai `Ehā, there are a total of 36 documented heiau, which is the largest number of heiau among all Maui island communities and underscores the cultural, historical, and political importance of this region. (CCH-MA06-01, June 2010, FOF 46.)

269. Nā Wai `Ehā's water resources sustained "the second largest population on the island of Maui." "In 1831-32, 827 people resided in the Waihe`e ahupua`a, representing a very large population" that was surpassed only by the population in `Īao (or Wailuku). (CCH-MA06-01, June 2010, FOF 47.)

270. The waters of Nā Wai `Ehā were renowned for the traditional and customary practice of hiding the piko, or the naval cord of newborn babies. "[T]he spring Eleile contained an underwater cave where the people of the area would hide the piko (umbilical cords) of their babies after birth. . . . The location of where one buries or hides the piko is a traditional custom

1 that represents Native Hawaiian cultural beliefs about an individual’s connection to the land.”  
2 (CCH-MA06-01, June 2010, FOF 43.)

3 271. The abundance of water in Nā Wai `Ehā enabled extensive lo`i kalo (wetland kalo)  
4 complexes, including varieties favored for poi-making such as “throat-moistening lehua poi.”  
5 (CCH-MA06-01, June 2010, FOF 35.)

6 272. The four ahupua`a of Nā Wai `Ehā and their streams comprised the largest continuous  
7 area of wetland taro cultivation in the islands. (CCH-MA06-01, June 2010, FOF 36.)

8 273. `Īao Valley was known for its two famous `auwai called the Kama`auwai and  
9 Kalani`auwai, which fed many kuleana lands. (CCH-MA06-01, June 2010, FOF 37.)

10 274. Numerous springs feeding lo`i kalo existed in the district of Wailuku in ancient days.  
11 (CCH-MA06-01, June 2010, FOF 38.)

12 275. “All indications are that Waihe`e Valley was traditionally a rich, fertile valley supporting  
13 a substantial population. Hawaiians constructed extensive lo`i (irrigated taro terraces) and  
14 elaborate `auwai systems to provide water for the lo`i . . . Many lo`i can be seen today, although  
15 most are not in use.” (CCH-MA06-01, June 2010, FOF 39.)

16 276. In particular, cold, free-flowing water is essential for kalo cultivation, which in turn is  
17 integral to the well-being, sustenance, and cultural and religious practices of native Hawaiians  
18 and Hawaiians. Kalo cultivation provides not only a source of food, but also spiritual sustenance,  
19 promotes community awareness and a connection to the land, and supports physical fitness and  
20 mental well-being. (CCH-MA06-01, June 2010, FOF 60.)

21 277. In Hawaiian culture, “[o]ur ancestor was the kalo itself.” The first born child of Wākea  
22 (Sky father) and Ho`ohōkūkalani (daughter of Papa, the Earth mother) was stillborn. Shortly  
23 after being buried, his body reemerged from the ground in the form of a kalo plant, which Wākea  
24 named Hāloanakalaukapalili (long stem, trembling leaf). Their next child was a healthy boy  
25 whom they named Hāloa after his deceased older sibling. Hāloa grew to be a strong man and  
26 became the ancestor of all Hawaiians. The story of Hāloa acknowledges Native Hawaiians’  
27 familial relationship with kalo as an elder sibling, and the resulting cultural significance of  
28 cultivating kalo in a traditional manner. (CCH-MA06-01, June 2010, FOF 61-62.)

29 278. In the ahupua`a of `Īao, “the waters of the region provided for a diet which ‘consisted  
30 mainly of fish (napili and nakea), opae, hihi-wai (all obtained from `Īao Stream), and lehua (red)

1 taro which was grown in lo`i (irrigated terraces) lining the banks of the stream.” (CCH-MA06-  
2 01, June 2010, FOF 42.)

3 279. In addition to extensive agricultural production, traditional and customary practices  
4 thrived in Nā Wai `Ehā, including the gathering of upland resources, such as thatch and ti, and  
5 protein sources from the streams, including `o`opu, `ōpae, and hihiwai. (CCH-MA06-01, June  
6 2010, FOF 40.)

7 280. Cultural experts and community witnesses provided uncontroverted testimony regarding  
8 limitations on Native Hawaiians’ ability to exercise traditional and customary rights and  
9 practices in the greater Nā Wai `Ehā area due to the lack of freshwater flowing in Nā Wai `Ehā’s  
10 streams and into the nearshore marine waters. (CCH-MA06-01, June 2010, FOF 49.)

11 281. Despite significant challenges, some Native Hawaiian practitioners in Nā Wai `Ehā  
12 continue to exercise traditional and customary rights and practices, including “gathering stream  
13 life such as hihiwai, `ōpae, `o`opu, and limu for subsistence and medicinal purposes,” as well as  
14 “cultivating taro for religious and ceremonial uses, gathering materials for hula, lua (ancient  
15 Hawaiian martial arts), and art forms.” (CCH-MA06-01, June 2010, FOF 51.)

16 282. In Nā Wai `Ehā, it is a traditional Native Hawaiian practice for cultural practitioners to  
17 gather in the ahupua`a in which she lives; an ahupua`a in which she has ancestral ties, even if no  
18 family member then resides there; or an ahupua`a that “contains certain resources of value to her  
19 as a member of a Hawaiian cultural group such as traditional Hawaiian healers, who may use a  
20 specific area to gather lā`au lapa`au (native plants for medicine); hālau hula, whose chants and  
21 dances may honor deities associated with a specific natural resource area, and which may need to  
22 gather certain native plants from these areas; and fishermen, hunters, and gatherers who have  
23 accessed and used the ahupua`a for subsistence.” (CCH-MA06-01, June 2010, FOF 52.)

24 283. Kumu hula Akoni Akana gathers materials such as hau, palapalai, la`ī, and laua`e from  
25 Waihe`e and Waiehu for hula ceremonies and performances. “As part of the protocol for  
26 gathering these items, we always soak the leaves we gather in the stream flow nearby. This  
27 practice necessitates a flowing stream.” (CCH-MA06-01, June 2010, FOF 53.)

28 284. The spiritual practice of hi`uwai, also known as kapu kai, often occurred around the time  
29 of makahiki, when individuals “would go into the rivers or into the ocean in order to do a  
30 cleansing for the new year[.]” This type of cleansing, which required immersion in the water,  
31 was also conducted “before you start or end certain ceremonies[.]” For ceremonies dedicated to

1 Kāne, “having a hi`uwai in a stream magnifies the mana[.]” Hui/MTF FOF A-51. (CCH-MA06-  
2 01, June 2010, FOF 54.)

3 285. Other practitioners would like to expand the scope of their traditional and customary  
4 practices and plan to do so if water is returned to the streams. Many families seek to reestablish  
5 the tradition of growing kalo in Nā Wai `Ehā. (CCH-MA06-01, June 2010, FOF 55; 2014  
6 Mediated Agreement, Exhibit 1, FOF 39-40.)

7 286. “Nā Wai `Ehā continues to hold the potential to once again support enhanced traditional  
8 and customary rights and practices if sufficient water is restored.” Restoring streamflow to Nā  
9 Wai `Ehā “would enormously benefit” Native Hawaiians and other communities who seek to  
10 reconnect with their culture and live a self-sustaining lifestyle, and more people would be able to  
11 engage in traditional and customary practices with more water. (CCH-MA06-01, June 2010,  
12 FOF 57.)

13 287. “Restoration of mauka to makai flow to the streams is critical to the perpetuation and  
14 practice of Hawaiian culture in Nā Wai `Ehā.” “If we are not able to maintain our connection to  
15 the land and water and teach future generations our cultural traditions, we lose who we are as a  
16 people.” (CCH-MA06-01, June 2010, FOF 58.)

17 288. “The return of the waters of Nā Wai `Ehā to levels that can sustain the rights of native  
18 Hawaiians and Hawaiians to practice their culture will result in the betterment of the conditions  
19 of native Hawaiians and Hawaiians by restoring spiritual well-being and a state of ‘pono’  
20 (goodness, righteousness, balance) to the people and communities of Nā Wai `Ehā.” (CCH-  
21 MA06-01, June 2010, FOF 59.)

22

23 **F. Impact of the 2010 and 2014 Amendments to the IIFS**

24

25 289. Under its 2010 Decision and Order (*supra*, FOF 14), the Commission:

- 26 a. returned 10 mgd to Waihe`e River (with an estimated flow at the mouth of 6.5  
27 mgd due to infiltration losses),
- 28 b. returned 1.6 mgd to North Waiehu Stream and 0.9 mgd to South Waiehu Stream  
29 (with an estimated flow at the mouth of Waiehu Stream of 0.6 mgd because of  
30 infiltration losses),
- 31 c. returned no water to Wailuku River, and



- 1 d. returned no water to Waikapū Stream.
- 2 290. Under the 2014 Mediated Agreement (*supra*, FOF 17):
- 3 a. Waihe`e River:
- 4 i. Per CCH-MA06-01, June 2010, the IIFS remained at 10 mgd at both the
- 5 Waihe`e Ditch and the Spreckels Ditch intakes.
- 6 b. Waiehu Stream:
- 7 i. The IIFS for North Waiehu Stream was modified to reflect the inactivation
- 8 of the North Waiehu Ditch after the Commission's 2010 Decision and
- 9 Order. The IIFS of 1.6 mgd that had been measured just below the point
- 10 where the stream was being diverted by WWC into the now abandoned
- 11 Upper North Waiehu Ditch was replaced by a new IIFS of 1.0 mgd at a
- 12 lower location just below the existing North Waiehu diversion structure
- 13 located just above the Waihe`e Ditch. The new IIFS of 1.0 mgd was
- 14 intended to reflect the approximately 0.6 mgd of seepage loss in the
- 15 streambed between these two points. In connection with the relocation and
- 16 the amendment of the IIFS, WWC was to:
- 17 a. provide water to the kuleana property that previously was provided
- 18 water from the North Waiehu Ditch;
- 19 b. in consultation with Commission staff, modify the existing North
- 20 Waiehu diversion structure located just above the Waihe`e Ditch to
- 21 facilitate the upstream and downstream passage of native stream
- 22 species; and
- 23 c. continue to service the Waiehu kuleana users from the Waihe`e
- 24 Ditch.
- 25 ii. The IIFS of 0.9 mgd for South Waiehu Stream immediately below the
- 26 Spreckels Ditch Diversion was modified with the stipulation that the sluice
- 27 gate on HC&S's South Waiehu diversion structure be set to allow
- 28 sufficient water to enter the diversion ditch during low stream flows to
- 29 result in approximately 250,000 gpd to flow from the diversion ditch to
- 30 the kuleana intake, with the remainder of the low flows returned to the
- 31 stream.

1 c. Wailuku River:

2 i. A new IIFS was set at 10 mgd, just below the diversion operated by WWC  
3 above the `Īao-Waikapū and the Īao-Maniania Ditches, provided that:

4 a. when average daily flow measurements are between 15 mgd and  
5 10 mgd and has continued in that range for three consecutive days,  
6 the greater of one-third (1/3) of the river flow or 3.9 mgd may be  
7 diverted for noninstream use until the flow returns to 15 mgd or  
8 above;

9 b. when average flow for any day falls below 10 mgd, 3.4 mgd may  
10 continue to be diverted to accommodate MDWS's 3.2 mgd for its  
11 water treatment plant and 0.2 mgd for kuleana users served  
12 exclusively by the `Īao-Waikapū Ditch; and

13 c. in lieu of setting an IIFS at the Spreckels Ditch diversion, a new  
14 IIFS of 5 mgd was established at or near the mouth; HC&S could  
15 not divert water at the Spreckels Ditch except when the river flow  
16 is adequate to meet the IIFS of 5 mgd at the mouth.

17 d. Waikapū Stream:

18 i. A new IIFS was set at 2.9 mgd just below the South Waikapū  
19 Ditch (Reservoir 1) Diversion.

20 ii. At the Waihe`e Ditch Diversion, the status quo continued, which was that  
21 water remaining in Waikapū Stream at that point is diverted into Waihe`e  
22 Ditch except during periods of high flow, when most of the flow of  
23 Waikapū Stream passes or tops the diversion and flows toward Kealia  
24 Pond, and excess ditch flow is discharged into Waikapū Stream. The  
25 intent was that the frequency and amount of intermittent flows that pass  
26 this diversion during rainy periods would not be diminished by any change  
27 in the manner in which this diversion was being operated.

28 (2014 Mediated Agreement, Exh. 1, pp. 26-28.)

29 291. The improved flow conditions in Waihe`e River and Waiehu Stream under the 2010  
30 Decision and Order resulted in large increases in combined species habitat. Waiehu Stream  
31 gained over 3,500 combined species habitat units and went from 6.1% to 55.5% of natural

1 habitat units. Waihe`e River gained over 2,400 combined species habitat units and went from  
2 less than 1% to 11.1% of natural habitat units. (2014 Mediated Agreement, FOF 32.)

3 292. No further habitat studies have been conducted since the April 2014 Mediated Agreement  
4 which returned 10 mgd to Wailuku River and 2.9 mgd to Waikapū Stream. (Tr., October 14,  
5 2016, p. 78, l. 25 to p. 79, l. 3.)

6 293. Because the North Waiehu Diversion has been closed, WWC is no longer diverting water  
7 from North Waiehu Stream, so the passage upstream and downstream of native stream species is  
8 not affected. (Chumbley, Tr., 10/14/16, p. 131, l. 16 to p. 132, l. 11.)

9 294. As for providing water from the Waihe`e Ditch for kuleana property that were previously  
10 served from the North Waiehu Ditch, WWC has not developed an engineering plan to be able to  
11 determine if it can take water out of the Waihe`e Ditch at that point. (Chumbley, Tr., 10/14/16, p.  
12 132, l. 19 to p. 133, l. 16.)

13 295. Area residents have experienced observable changes attributable to the Commission  
14 orders restoring flows to the four rivers and streams.

15 296. For the earlier restorations of Waihe`e River and Waiehu Stream, Mr. Nakama, whose  
16 `ohana has been farming kalo for generations in Waihe`e and Waiehu, expressed thanks for the  
17 restoration of consistent flow and testified that, before his father passed away, “he would be  
18 overcome with joy at the sight and sound of water flowing,” and “to me, that was priceless.”  
19 (Nakama, Tr., September 19, 2016, p. 97, ll. 3-12.) [Hui/MTF and OHA, FOF A-135.]

20 297. On the north side of Waihe`e River near the mouth, the Poka `ohana kuleana lands  
21 contained spring flows and wetlands that supported kalo cultivation, but these quickly dried up  
22 when WWC and HC&S augmented their stream diversions. Paeloko, a sacred pond that is part of  
23 the freshwater cycle in Waihe`e and connected to the Kapoho Wetlands, was previously filled  
24 when the highway was expanded, but the wetlands have recently been returning and providing  
25 habitat for endangered native birds and a resource for cultural education. (Schwartz, WT,  
26 November 29, 2007, ¶¶ 1-7 (CCH-MA06-01, June 2010); Piko A`o, WT, January 7, 2014, ¶¶ 5-  
27 19 (2014 Mediated Agreement).) [Hui/MTF and OHA, FOF 126.]

28 298. When Wailuku River and Waiehu Stream flow continuously to the ocean, Paukūkalo  
29 community members, including `ohana with multi-generational ties to these lands, confirm that  
30 the springs and seeps on their lands “come alive” and are recharged with water. (Ivy, WT,  
31 September 14, 2007, ¶ 8; Kekona, WT, September 14, 2007, ¶¶ 3-4; Kekona, Tr., December 4,

1 2007, p. 211, ll. 2-7; Sevilla, WT, September 14, 2007, ¶ 8 (CCH-MA06-01, June 2010).)

2 [Hui/MTF and OHA, FOF A-120.]

3 299. Resident children have begun to swim in Wailuku River again. Mr. Ornellas, cultural  
4 descendant and long-time resident of `Īao Valley, testified that his “grandchildren learning how  
5 to swim right there in the river” is “the highlight of it all.” (Ornellas, Tr., July 18, 2016, p. 37, ll.  
6 1-5.) [Hui/MTF and OHA, FOF A-135.]

7 300. Long-time kama`aina community member Duke Sevilla reports that with the partial  
8 restoration of Wailuku River, the flow in the Waiola Spring on his `ohana’s land has increased  
9 and become more consistent, remaining saturated throughout the hot summer months. This  
10 confirms his lifetime experience and the broader community understanding of the correlation  
11 between the amount of water in the river and the amount of water in the springs. (Sevilla, WT,  
12 March 18, 2016, ¶¶ 13, 35; Exh. 2275 Sevilla-7 (before and after photographs of Waiola  
13 Spring).) [Hui/MTF and OHA, FOF A-123.]

14 301. For Waikapū Stream, Mr. Dodd, long-time resident of Waikapū, testified that when he  
15 was growing up, Keālia Pond “was mud flats,” but since water has been returned to Waikapū  
16 Stream, Keālia Pond has water, “(a)nd this has brought joy to my life. Water has returned to  
17 Kealia where it belongs.” (Dodd, Tr. July 28, 2016, p. 14, l. 19 to p. 15, l. 7.) [Hui/MTF and  
18 OHA, FOF A-135.]

19

20 **G. Noninstream Uses**

21

22 302. “Noninstream use” means the use of stream water that is diverted or removed from its  
23 stream channel and includes the use of stream water outside of the channel for domestic,  
24 agricultural, and industrial purposes. (HRS § 174C-3.)

25

26 **1. Irrigation Requirements**

27

28 **a. Kalo Lo`i**

29

30 303. Irrigation requirements for kalo lo`i are discussed in Section I.D.2, *supra*, FOF 178-220.

31



- 1 f. 1,445 gad: 1,950 gpd on 0.89 acre of apple bananas and 0.46 acre of fruits and  
2 vegetables. (SWUPA 2339-Yamaoka, p. 2, table 1, p. 3, table 2.)
- 3 g. 1,550 gad: 6,200 gpd on 4 acres of ornamental and nursery plants. (Exh. 2203-  
4 MTP-1.)
- 5 h. 2,217 gad: 33,261 gpd on 15 acres of various landscape plants, both in the  
6 ground and on nursery benches, for propagation of plant starts such as shrubs,  
7 groundcovers and trees. (SWUPA 2183, p. 2, table 1, p. 4, table 3.)
- 8 i. 2,058 gad: 82,332 gpd on 40 acres of row crops. (Exh. 2203-MTP-1.)
- 9 j. 2,400 gad: 36,000 gpd on 15 acres of landscaping. (Exh. 2203-MTP-1.)
- 10 k. 4,138 gad: 21,371 gpd for 4.2 acres of bitter melon, pasture, dryland taro, fruit  
11 trees, and landscaping. (SWUPA 2155, p. 2, table 1, p. 4, table 3; Suzuki, Tr., 7/18/16, p.  
12 148, ll. 15-24.)
- 13 l. 17,777 gad: 10,400 gpd for 0.585 acres—0.30 acre of vegetable truck crops,  
14 0.10 acre of fruit trees, and 0.185 acre of landscaping. (SWUPA 2156, p. 2, table 1, p. 4,  
15 table 3; Suzuki, Tr. 7/18/16, p. 151, ll. 1-7.)
- 16

17 **c. Household and Domestic Uses**

18

19 309. An “average typical residential customer” in Maui County uses 400 to 600 gpd of  
20 combined indoor and outdoor use, and as high as 1,500 to 2,000 gpd for irrigation of “lush  
21 tropical landscape treatment” in arid areas. (Eng, Tr., December 13, 2007, p. 191, l. 7 to p. 192, l.  
22 5; Tr., December 14, 2007, p. 4, l. 9 to p. 5, l. 17.) [Hui/MTF and OHA, FOF C-169.]

23 310. Maui County has accommodated agricultural development lots with 600 to 1,200 gpd, but  
24 limits further allocations so as not to provide excessive amounts of water to developments not  
25 engaged in bona fide agriculture. (CCH-MA06-01, June 2010, FOF 402.) [Hui/MTF and OHA  
26 FOF C-169.]

27 311. 2002 State of Hawai`i Water System Standard for Maui County domestic cultivation is  
28 3,000 gad. (See, e.g. SWUPA 2231 Attachment at 2; SWUPA 2294, at 2; SWUPA 2361N  
29 Addendum at 2.)

30

31

1                   **2.     Possible Alternative Water Sources Shared by Applicants**

2  
3 312. Many of the SWUPAs share the same possible alternatives to river/stream surface waters  
4 and have provided similar analyses on these possible alternatives. Rather than repeating these  
5 analyses for each SWUPA, they will be identified here and incorporated by reference in the  
6 SWUPAs. For some SWUPAs, their particular circumstances will be addressed individually.

7  
8                   **a.     Other Public Trust Water Resources**

9  
10                   **i.     Potable Water**

11  
12 313. MDWS’s Central Maui System has a total peak available source of 25.696 mgd, with  
13 average daily use of 20.5 mgd. By 2030, population growth for Central Maui is projected to  
14 increase demand by 7.7 mgd to 19.4 mgd, with a baseline of 13.6 mgd used for planning  
15 purposes.

16           a. Of the total average daily use of 20 mgd as of April 30, 2008, 0.21 mgd, or 1  
17 percent, was used for agriculture. Future use for agriculture is projected to remain at 1  
18 percent.

19 (Exhs. 2178-County-1, -2; 2178-County 11, table 4; 2178-County-12, p. 6.) [MDWS FOF 24-26,  
20 31-32.]

21 314. While the current system meets the needs of the Central Maui System, MDWS will need  
22 to develop new sources of water to meet future needs.

23           a. MDWS currently has a SWUPA in this CCH for new uses of 1.416 mgd to divert  
24 water from Wailuku River, in addition to its existing-use SWUPA for 1.784 mgd.

25           b. MDWS’s withdrawal of 4 mgd from the Waihe`e Aquifer and 2 mgd from the  
26 Kahului Aquifer are already at the limits established by the Commission, and USGS has  
27 indicated that new wells may not be as productive or cost-effective as hoped.

28           c. Eastward basal groundwater development, with a series of wells at elevation 1000  
29 feet, transmission pipelines, storage tanks, and booster pump stations, is restricted by a  
30 Consent Decree which was recently used to prevent MDWS from even developing test  
31 wells.

1 d. USGS had also previously indicated that the Waikapū Aquifer may be a possible  
2 source of new water, but the sustainable yield is only 2 mgd, and MDWS expected  
3 competition from private landowners for the available water. Waikapu Properties have  
4 five (5) wells, three shown to be potable and two in final testing for potability at the time  
5 of the CCH.

6 (Taylor, WT, 7/5/16, ¶¶ 30-31; Taylor, Tr., 7/19/16, p. 28, l. 3 to p. 29, l. 2, p. p. 41, ll. 18-23, p.  
7 42, ll. 3-16, p. 43, ll. 9-24; Exhs. 2178-County-9, p. 59 ¶¶ 371-373, -11, p. 6, table 12, -9. P. 59 ¶  
8 370, -12, pp. 30-43; Atherton, WT, 2/5/16, ¶ 27.) [MDWS, FOF 40-45.]

9 314. Besides MDWS, potable water wells have been developed by SWUPAs 2356, 2297N,  
10 3471N, and 3472N—Waikapu Properties, as mentioned above, and SWUPAs 2298/2299N—  
11 Varel, which will be addressed in their SWUPAs.

12  
13 **ii. Non-potable Water**

14  
15 315. For non-potable groundwater:

16 a. SWUPA 2206—HC&S has a groundwater well; and

17 b. SWUPAs 2356, 2297N, 3471N, and 3472N—Waikapu Properties has two wells  
18 in development that are not yet determined if they are potable or non-potable.

19 These sources will be addressed in each of the SWUPAs.

20  
21 **b. Recycled Water**

22  
23 316. MDWS’s Wailuku-Kahului Wastewater Reclamation Facility (“WWRF”) generates  
24 about 4 mgd of recycled wastewater, of which only 0.2 mgd is currently used on and near the  
25 WWRF. MDWS has developed estimates of demand and costs within its own system, in which  
26 R-1 treated wastewater would replace potable water currently being used for nonpotable  
27 purposes, thereby freeing up more potable water for potable uses. These uses within the MDWS  
28 system are limited, as agriculture and private irrigation represent only 2 percent of use.

29 a. The amount of water that could be replaced by treated water is an estimated  
30 maximum of 0.601 mgd and average annual demand of 0.38 mgd.



1 b. It would require significant capital expenses, including the expansion of existing  
2 treatment facilities, construction of storage tanks, and extended transmission lines. Costs  
3 would be \$37.60 million:

- 4 i. \$5.37 million to upgrade the WWRF from R-2 to R-1;
- 5 ii. \$25.94 million to deliver 0.191 mgd to the Maui Lani area;
- 6 iii. \$4.29 million to deliver 0.225 mgd to Kahului Airport and Kanaha Beach  
7 Park; and
- 8 iv. \$2.00 million to deliver 0.185 mgd to distribute from Queen Kahamanu  
9 Center to existing HC&S pipelines formerly used for pineapple cannery  
10 wastewater to what was HC&S's seed cane fields, Maui High School, Kahului  
11 Community College and Park, Kahului Elementary, and Hale Mahaolu.

12 Most of the large users in the Maui Lani area currently use brackish groundwater for  
13 irrigation, so only 0.191 mgd is projected to replace potable water at a cost of \$25.94  
14 million.

15 (Taylor, WT, 7/5/16, ¶ 26; Taylor, Tr., 7/19/16, p. 24, ll.1-20, p. 47, l. 14 to p. 48, l. 13; Exhs.  
16 2178-County-1, -2, -11, pp. 8-9, tables 8 and 10; ) [MDWS, FOF 31-32, 51-52.]

17 317. For uses outside the MDWS system:

18 a. Of a potential 4 mgd of R-1 water, MDWS is using 0.2 mgd and estimates  
19 increased use at 0.38 mgd average and 0.601 mgd maximum demand, *supra*. Therefore,  
20 potentially more than 3 mgd of R-1 water could be available to outside users. Moreover,  
21 MDWS would be able to cease disposing of the treated wastewater into injection wells.

- 22 i. At the time of the 2014 Mediated Agreement, it was estimated that  
23 approximately 2.95 mgd of R-2 treated water could potentially be available upon  
24 construction of improvements at an estimated capital cost of approximately \$16.9  
25 million and a definitive agreement reached between HC&S and the County of  
26 Maui, stating the terms and conditions under which the County would provide,  
27 and HC&S would accept, reclaimed wastewater, including allocations of the  
28 improvement costs, the quality and quantity of water to be delivered, and the  
29 water rate charged by the County. Even if agreement between HC&S and the  
30 County could be reached, the Commission had concluded in 2014 that completion  
31 of the necessary infrastructure would not occur until 2020 at the earliest.

1 (CCH-MA06-01, June 2010, COL 107; 2014 Mediated Agreement, FOF 55-57,  
2 COL 15.) [HC&S FOF 77.]

3 ii. Upgrading the water from R-2 to R-1 would make it available not only to  
4 MDWS's current users but also to other potential users. The cost and logistics of  
5 delivering R-1 water to other users would have to be estimated, as MDWS has for  
6 potential users within its system. Such costs would be expected to vary widely, as  
7 MDWS's estimates within its system ranged from \$2.00 million to \$25.94  
8 million, and the cost-effectiveness of delivery had no relationship to the amount  
9 delivered, as the \$2.00 million estimate was for delivering 1.85 mgd, while the  
10 \$25.94 million estimate was for delivering 1.91 mgd, *supra*.

11  
12 **c. Desalination**

13  
14 318. There are no desalination plants on Maui. The strategy for desalination of brackish  
15 groundwater to potable water would consist of development of a 5 mgd reverse osmosis  
16 desalination facility either in the Kahului aquifer or from deeper wells into the salt water below  
17 an aquifer. (Exhs. 2178-County-11, pp. 6-7, -12, pp 67-68; Lekven, Tr., 7/19/16, p. 44, ll. 5-8.)  
18 [MDWS FOF 46.]

19 319. Desalination would require both capital costs associated with building the desalination  
20 facility and operational costs associated with the high intensity energy needs of the desalination  
21 process. Brackish groundwater must be pumped up to the treatment plant, reverse osmosis would  
22 remove salt and other minerals to create potable water, and the residual brine liquid must be  
23 disposed via deep injection wells into salt water below the source of brackish groundwater or at  
24 least 1000 feet away if the source itself is seawater.

25 a. MDWS's evaluation concluded that desalination of brackish groundwater from  
26 the Kahului Aquifer was more cost-effective than using sea water as the source.

27 i. However, the desalination process is expensive, complex, and an energy-  
28 intensive way of meeting future needs. dependence on imported energy and  
29 uncertainty associated with future energy prices adds a significant implementation  
30 risk.

1           ii.       This option, which would use brackish water from the Kahului aquifer,  
2           does not address the current withdrawal of 2.00 mgd of potable water from the  
3           aquifer, and how the potability of that water might be affected by withdrawing an  
4           additional 5 mgd of brackish water.

5           (Taylor, Tr., 7/19/16, p. 44, ll. 5-11, p. 44, l. 21 to p. 45, l. 8; Exhs. 2178-County-11, pp.  
6           6-7, table 12, p. 12, -12, pp. 67-68.) [MDWS, FOF 46-49.]

7           b.       WCEIC’s consultant also examined desalination as a possible alternative.  
8           Desalination of groundwater onsite would require: a) a deep well to exclusively draw  
9           saline groundwater from beneath the `Īao basal groundwater lens at between 900 to 1100  
10          feet below sea level and a salt-water pump capacity of 1.75 mgd; b) a reverse osmosis  
11          plant; c) deep wells to dispose of the hypersaline concentrate from the reverse osmosis  
12          process, located at least 1000 feet away from the saltwater supply well and delivering the  
13          hypersaline concentrate between 1300 to 1500 feet below sea level, to avoid recirculation  
14          back to the saltwater supply well; and d) booster pumps at the plant, 6000 feet of 8-inch  
15          transmission pipeline, and a 200,000 gallon steel tank at the head of the irrigation  
16          delivery system. Costs were estimated at \$10.2 million, with operating costs estimated at  
17          \$12.05 per thousand gallons. The consultant did not examine where on WCEIC’s  
18          property such a facility might be sited.

19          (Exh. 2189-WCEIC-270, pp. 7-12.) [WCEIC, FOF 73-77.]

20  
21                   **3.       Appurtenant Rights and Surface Water-Use Permit**  
22                   **Applications**

23  
24          320.       The following SWUPAs are grouped by source; i.e., Waihe`e River, Waiehu Stream,  
25          Wailuku River, Waikapū Stream, and Multiple Sources. “Multiple Sources” in particular refers  
26          to the Waihe`e and Spreckels Ditches—which originate from the Waihe`e River—after their  
27          waters are commingled with water from Waiehu Stream, Wailuku River, and/or Waikapū  
28          Stream. For example, Waihe`e River would include diversions directly from the River, plus

1 diversions from the Waihe`e and Spreckels Ditches before they receive water from Wailuku  
2 River into the Waihe`e Ditch<sup>14</sup> and from South Waiehu Stream into the Spreckels Ditch.

3 321. SWUPAs are addressed in the order they appear in Figure 1.

4  
5 322. **SWUPA 2157—Wailuku Water Company**

6 a. On April 22, 2009, WWC filed an existing-use application for system losses equal  
7 to 7.34 percent of total diversions as measured from seven stream diversions: the  
8 Waihe`e and Spreckels Ditch diversions on Waihe`e River, the North Waiehu Ditch  
9 diversion on North Waiehu Stream, the Īao diversion on Wailuku River, and the South  
10 Waikapū Ditch, Waihe`e Ditch, and Reservoir 6 diversions on Waikapū Stream.

11 (SWUPA 2157, Table 1 Attachment.) [WWC, FOF 19.]

12 b. System losses had been determined by a study conducted in 1988, at which time  
13 losses were about 11.6% of total diversions. WWC had then repaired structures and  
14 ditches, resulting in a reduction of system losses to about 7.34% of total diversions.

15 (Chumbley, WT, 1/7/14, pp. 2-3 [2014 Mediated Agreement]; Chumbley, WT, 2/2/16, p.  
16 1; Chumbley, Tr., 7/22/16, p. 85, l. 25 to p. 86, l. 18.) [WWC, FOF 20-21.] [Hui/MTF  
17 and OHA, FOF C-262.]

18 c. After the Commission’s Decision and Order on CCH-MA06-01, June 2010,  
19 WWC conducted further repairs and modifications, including repairing ditch and intake  
20 structures, as well as closing reservoirs and the North Waiehu Ditch, and minimized  
21 “flow-through” losses from unused water reaching the end of the ditch system.

22 1. In 2010, WWC made repairs to the Spreckels Ditch at Field 25, the Īao-  
23 Waikapū Ditch near Kukahi Drive, the Waihe`e Ditch at South Waiehu Stream,  
24 and Reservoir 10.

25 2. In 2011, the intakes on South Waikapū Stream, the Waihe`e Ditch at Field  
26 8 were repaired, and the North Waiehu Stream diversion was shut down.

27 3. In 2012, WWC repaired structures at the Spreckels Ditch intake on  
28 Waihe`e River, the Waihe`e Ditch where water is dropped at the Hopoi Chute to

---

<sup>14</sup> The Waihe`e Ditch previously received water from North Waiehu Stream, but that diversion has since been abandoned, *supra*, FOF 136.

1 Spreckels Ditch, sealed the Reservoir 27 intake from Waihe`e Ditch, closed  
2 Reservoir 27, and made modifications to the intake and Reservoir 27 ditch.

3 4. In 2013, WWC repaired structures at the Waihe`e Ditch intake on Waihe`e  
4 River, the Waihe`e Ditch at Field 97, the Waihe`e Ditch at Maalaea, the Spreckels  
5 Ditch intake on the Waihe`e River, and the Reservoir 97 intake ditch.

6 5. Reservoirs 6, 8, 13, 14, and 29 were also closed.

7 (Chumbley, WT, 1/7/14, p. 2, l. 15 to p. 3, l. 22 [2014 Mediated Agreement].) [WWC,  
8 FOF 22-28.]

9 d. In its prehearing filings, WWC reduced its request for system losses from 7.34%  
10 to 4.97% of water diverted for delivery to authorized users. (WWC Opening Brief, pp. 1,  
11 7.) [Hui/MTF and OHA, FOF C-261.]

12 e. WWC's system losses of 4.97% are less than:

13 1. USDOA's Soil and Conservation Service's National Engineering  
14 Handbook, which indicates that a carefully managed, manually operated irrigation  
15 water delivery system should have losses of 10% or less.

16 2. The American Water Works Association's information and standards for  
17 potable water systems indicate that system losses for such a system should be  
18 10% or less.

19 3. MDWS's testimony that system losses for open distribution systems are  
20 typically 10 to 15%.

21 Chumbley, WT, 1/7/14, pp. 3-4; WWC Opening Brief, p. 5.) [WWC, FOF 29-30, 32-33.]

22 f. 4.97% equates to a system loss of 2.73 mgd. (2014 Mediated Agreement, FOF 62;  
23 WWC Opening Brief, p. 5.)

24 g. System losses could be reduced further by about 400,000 gpd if portions of the  
25 that are open were converted to a cement gunite-lined ditch, but at a cost in excess of \$5  
26 million. (Chumbley, Tr., p. 87, l. 15 to p. 88, l. 4.) [WWC, FOF 34.]

27  
28 **a. Waihe`e River**

29  
30 **i. Waihe`e River**

31

1 323. The following applicants divert water directly from Waihe`e River, below the Spreckels  
2 Ditch diversion, as shown in the lower right-hand corner of Figure 1.

3  
4 324. **SWUPA 2365N—Diannah Lai Goo**

5 a. Diannah Lai Goo filed a total of five SWUPAs for lands her `ohana owns mauka  
6 and makai in Waihe`e, which receive water directly from Waihe`e River and two kuleana  
7 `auwai—the “Waihe`e Valley North” and the “Waihe`e Valley South” `auwai: SWUPAs  
8 2231, 2232N, 2233, 2234N, and 2365N. Diannah’s daughter April Goo testified in  
9 support of all applications. (Goo, WT, January 11, 2016, ¶¶ 1-2.) [Hui/MTF and OHA,  
10 FOF B-62.]

11 b. The Goos seek a new-use water permit for two parcels that would receive water  
12 directly from the Waihe`e River: TMK Nos. (2) 3-2-004:008 (“Parcel 8”) and (2) 3-2-  
13 004:010 (“Parcel 10”). (Goo, WT, January 11, 2016, ¶ 1; SWUPA 2365N at 3,  
14 Addendum at 1.) [Hui/MTF and OHA, FOF B-63.]

15 c. The Goo `ohana requests recognition of appurtenant rights for Parcels 8 and 10 of  
16 315,000 gpd and a permit to grow kalo in the same amount, based on 1.05 acres and  
17 Reppun’s high estimate of 300,000 gad. (Goo, WT, January 11, 2016, ¶ 5; SWUPA  
18 2365N at 3, Addendum at 2.) [Hui/MTF and OHA, FOF B-64.]

19 d. The Goo `ohana’s maternal side has owned these lands since the time of the  
20 Māhele and still possesses the original deeds. (Goo, WT, January 11, 2016, ¶ 2.)

21 e. The Commission provisionally approved appurtenant rights for LCA 3507:2.  
22 (Provisional Order, Attachment C, Revised Exh. 7, p. 1.) [ Hui/MTF and OHA, FOF B-  
23 69.]

24 f. Parcels 8 and 10 make up the entirety of LCA 3507:2, confirmed by RP 4114.  
25 Parcel 8 is all of `āpana 2, mahele 1 and Parcel 10 is all of `āpana 3, mahele 2 of LCA  
26 3507. The foreign testimony supporting LCA 3507 states that `āpana 2 was a “section of  
27 lois.” The LCA map for `āpana 2 depicts a pō`alima separating mahele 1 and mahele 2,  
28 and an `auwai adjacent to both mahele is further evidence that both parcels were  
29 cultivated in lo`i kalo. (Goo, WT, January 11, 2016, ¶¶ 8-9, 11; Exh. 2365-Goo-1 to -2;  
30 SWUPA 2365N Addendum at 1.) [Hui/MTF and OHA, FOF B-68 to B-69.]

1 325. **SWUPA 3617N—Joshua Chavez**

2 a. Joshua Chavez filed a new-use SWUPA on July 26, 2012 for TMKs No. (2) 3-2-  
3 004:1 (“Parcel 1”) and No. (2) 3-2-004:21 (Parcel 21”), comprised of 21.89 acres and  
4 2.59 acres, respectively, which straddle Waihe`e River. (SWUPA 3617, p. 3, Table 2;  
5 Exh. 3617N-Chavez, p. 1.)

6 b. Chavez requested 300,000 gpd for lo`i kalo on 1.5 acres of Parcel 1 and 0.5 acres  
7 of Parcel 21, spread across an existing lo`i and four new lo`i in Parcel 1, and another new  
8 lo`i that straddled Parcels 1 and 21. (SWUPA 3617, p. 3, Table 2; Exh. 3617N-Chavez, p.  
9 1.)

10 c. Chavez also requested recognition of appurtenant rights and was provisionally  
11 approved by the Commission. (Provisional Order, Attachment C. Revised Exh. 7, p. 2.)

12 d. However, Chavez provided no further information on his permit request and  
13 quantification of his provisionally recognized appurtenant rights and did not participate in  
14 the contested case hearing.

15  
16 326. **SWUPA 3470N—John Varel (Emmanuel Lutheran Church)**

17 a. John Varel owns four properties in Waihe`e and Waiehu for which he is seeking  
18 permits, three of which he acquired after the SWUPAs were filed and is thus pursuing in  
19 place of the original applicants: SWUPAs 2262 and 2263N (Paleka), 2298 and 2299N  
20 (Varel), 2593N (Koolau Cattle Co.), and 3470N (Emmanuel Lutheran Church). (Varel,  
21 WT, September 12, 2016, ¶¶ 1, 3.) [Hui/MTF and OHA, FOF B-74.]

22 b. Emmanuel Lutheran Church of Maui filed SWUPA 3470N on February 3, 2012,  
23 for TMK No. (2) 3-2-004:005 (“Parcel 5”). (Varel, WT, September 12, 2016, ¶¶ 150,  
24 152, 168.) [Hui/MTF and OHA, FOF B-75 to B-76.]

25 c. Varel stated that the Emmanuel Lutheran Church incorrectly filed a new-use  
26 application and actually had an existing use, because lo`i kalo was being grown on the  
27 property prior to 2008, although at the time of designation the lo`i were being fallowed  
28 (with the `auwai still flowing on the property) according to best management practice.  
29 (Varel, WT, September 12, 2016, ¶ 149.) [Hui/MTF and OHA, FOF B-79.]

30 d. As submitted by the Church, SWUPA 3470N requested 6,000 gpd for 1 acre of  
31 taro using a “flood” irrigation system, which was based on a table of crop water

1 requirements which apparently was not referring to wetland kalo. Also requested was  
2 3,600 gpd for two dwellings, based on a figure of 1,800 gpd for domestic use for each  
3 dwelling. (SWUPA 3470N, at 2-3, Addendum at 1.) [Hui/MTF and OHA, FOF B-80.]

4 e. Varel requests recognition of appurtenant rights of 567,000 gpd for 1.89 acres and  
5 a permit for 300,000 gpd to irrigate 1.0 acres of lo`i kalo, both based on Reppun’s high  
6 estimate of 300,000 gad for taro lo`i. (Varel, WT, September 12, 2016, ¶¶ 158-159.)  
7 [Hui/MTF and OHA, FOF B-78.]

8 f. Varel claims that water to irrigate 1.0 acres was for the amount of land that was  
9 being cultivated before and after the time of designation in 2008. (Varel, WT, September  
10 12, 2016, ¶¶ 162-163.) [Hui/MTF and OHA, FOF B-81.]

11 g. The Commission recognized provisional appurtenant rights for Parcel 5.  
12 (Provisional Order, Attachment C, Revised Exh. 7, p. 2.) [Hui/MTF and OHA, FOF B-  
13 77.]

14 h. Parcel 5 is the entirety of LCA 11258, confirmed by RP 5348, and encircles a  
15 po`alima, which is not part of Parcel 5 and which Varel does not own. The LCA is  
16 described as “aina kalo.” This description, coupled with the presence of a pō`alima inside  
17 the kuleana and ancient lo`i walls, is additional evidence that Parcel 5 was cultivated  
18 exclusively in lo`i kalo. (Varel, WT, September 12, 2016, ¶¶ 153, 155-158; Exhs. 3470-  
19 Emmanuel-1 and -2.) [Hui/MTF and OHA, FOF B-77.]

20 i. Excluding the pō`alima, Parcel 5 is 1.89 acres. (Varel, WT, September 12, 2016, ¶  
21 157. [Hui/MTF and OHA, FOF B-78.]

22  
23 **327. SWUPA 2362N—Joseph Alueta**

24 a. Joseph Alueta filed a new-use SWUPA on April 23, 2009 for his 3.84-acre parcel  
25 TMK No. (2) 3-2-003:001 (“Parcel 1”). (Alueta, WT, January 17, 2016, ¶ 1; SWUPA  
26 2362N at 1, 3.) [Hui/MTF and OHA, FOF B-82.]

27 b. Alueta requests a permit for the amount of water necessary for hydroelectricity  
28 generation, 2.0 acres of lo`i kalo, and 0.5 acre of diversified agriculture. He plans to  
29 divert water from the Waihe`e River using a pipe, first to generate hydroelectricity before  
30 the water flows into his lo`i kalo. After flowing through the lo`i, some of the water will  
31 then be piped to his other diversified agriculture crops like betelnut, ma`o (Hawaiian



1 cotton), tobacco, sweet potato, fruit trees, and flowering trees, before flowing back to  
2 Waihe`e River. (Alueta, WT, January 17, 2016, ¶¶ 21-24.) [Hui/MTF and OHA, FOF B-  
3 88.]

4 c. Alueta requests 600,000 gpd for two acres of lo`i, using Reppun` s high estimate  
5 of 300,000 gad. He is not requesting the approximately 1,250 gpd that he estimates for  
6 his 0.5 acres of diversified agriculture, because it will be used after flowing through the  
7 lo`i kalo. (Alueta, WT, January 17, 2016, ¶¶ 22-23; Alueta, Tr., July 12, 2016, p. 17, ll.  
8 19-22.) [Hui/MTF and OHA, FOF B-89.]

9 d. Wailuku Sugar Company reserved the water rights when it sold the property in  
10 1979. Alueta bought the property on July 28, 2003. (SWUPA 2362N, Addendum at 1;  
11 Alueta, WT, January 17, 2016, ¶ 1.)

12 e. Alueta` s 3.84-acre parcel is comprised of a portion of LCA No. 7713:24, and the  
13 entirety of three kuleana parcels: LCA Nos. 2412, apana 3; 4405-P, apana 3, and 3770-B,  
14 apana 3. There are also ancient kalo lo`i on his land and an ancient `auwai that  
15 historically fed them. LCA No. 2412:3 was described as containing 4 lo`i kalo. LCA No.  
16 4405-P:3 was described as containing 8 lo`i kalo. LCA No. 3770-B:3 was described as  
17 containing 6 kalo lo`i. (Alueta, WT, January 17, 2016, ¶¶ 6, 13-15; SWUPA 2362N,  
18 Addendum at 1.)

19 f. The Commission recognized provisional appurtenant rights for Parcel 1 based on  
20 LCAs 2412:3 and 3770-B:3, but LCA 4405-P:3 was denied because of no mention of  
21 water use, and no documents were provided for LCA 7713:224. (Provisional Order,  
22 Attachment C, Revised Exh. 7, p. 1.)

23 g. Of Alueta` s 3.84-acre parcel, 0.1 acre is covered by LCA No. 2412:3, 0.24 acre is  
24 covered by LCA No. 4405-P:3, and 0.06 acre is covered by LCA No. 3770-B:3, for a  
25 total of 0.4 acre. (Alueta, WT, January 17, 2016, ¶ 17.)

26 h. Alueta requests appurtenant rights recognition of 120,000 gpd (0.4 acre x 300,000  
27 gad), based on Reppun` s highest estimate, if his appurtenant rights have not been  
28 extinguished. (Alueta, WT, January 17, 2016, ¶ 20.)

29  
30 **ii. Waihe`e Ditch**  
31

1 328. **SWUPA 2298/2299N—John Varel**

2 a. John Varel owns four properties in Waihe`e and Waiehu for which he is seeking  
3 permits, three of which he acquired after the SWUPAs were filed and is thus pursuing in  
4 place of the original applicants: SWUPAs 2262 and 2263N (Paleka), 2298 and 2299N  
5 (Varel), 2593N (Koolau Cattle Co.), and 3470N (Emmanuel Lutheran Church). (Varel,  
6 WT, September 12, 2016, ¶¶ 1, 3.) [Hui/MTF and OHA, FOF B-74.]

7 b. On April 29, 2009, Varel filed SWUPA 2298 for an estimating existing use of  
8 25,500 gpd and SWUPA 2299N for a new use of 1,474,500 gpd on TMK No. (2) 3-2-  
9 001:001 (“Parcel 1”). (**Id.**, ¶ 38.) [Hui/MTF and OHA, FOF B-144.]

10 c. Parcel 1 is 983.807 acres, of which 474 acres are designated Conservation lands,  
11 with Varel farming the remaining 509.807 acres, on which he lives and operates a  
12 commercial farm grossing about \$800,000 a year from macadamia nut and fruit trees and  
13 bananas and employing a minimum of 25 families consistently. (**Id.**, ¶ 35; Varel, Tr.,  
14 9/19/16, p. 134, ll. 1-11, p. 135, ll. 8-9.) [Hui/MTF and OHA, FOF B-146.]

15 d. After he purchased the property from Wailuku Agribusiness in 2002, he did not  
16 agree to the terms of the offer for sale water to irrigate the Parcel, so Wailuku  
17 Agribusiness cut all the irrigation lines, stripping any water available to the existing  
18 macnut trees sold to Varel. He lost over a thousand trees, and production was reduced by  
19 over two-thirds at its lowest point. (Varel, Tr., 9/19/16, p. 134, l. 17 to p. 135, l. 9.)

20 e. For the past 13 years, Varel has been getting all of his water from leaks in the  
21 Waihee Ditch System, gradually corralling and redirecting the leaks, installing a drip  
22 irrigation system, and allowing the excess water to flow back into the lower Spreckels  
23 Ditch. At their peak, each of the three major leaks was 1,000,000 gpd, but a few years  
24 ago, WWC attempted repairs, and Varel now receives approximately 72,000 gpd from  
25 each leak, for a total of approximately 216,000 gpd. Two of the leaks feed his nursery  
26 and fruit trees, and the remaining leak feeds a portion of his macadamia nut orchard,  
27 which has no other source of water. Varel estimated the 72,000 gpd from each leak by  
28 estimating that three 2-inch pipes run constantly off the leaks, a 2-inch pipe is 50 gallons  
29 per minute, and running 24 hours provides about 72,000 gpd per pipe. (**Id.**, ¶ 59; Varel,  
30 Tr., 9/19/16, p. 136, ll. 8-13, p. 171, l. 19 to p. 172, l. 1.) [Hui/MTF and OHA, FOF B-  
31 147.]

1 f. The existing use request of 25,500 gpd was for 5 acres of diversified agriculture  
2 and fruit trees at 2,500 gad, or 12,500 gpd; 2 acres of a nursery at 5,000 gad, or 10,000  
3 gpd, and 5 households at 600 gpd, or 3,000 gpd. (SWUPA 2298, p. 2, table 1, p. 3, table  
4 2.) [Hui/MTF and OHA, FOF B-146.]

5 g. The new use request was for 340 acres of existing macadamia trees at 4,400 gad,  
6 or 1,496,000 gpd (tabulated as 1,474,500 gpd in the SWUPA), based on the Water  
7 Commission's 1992 Hawai'i Water Plan, O'ahu Management Plan, standard of 4,400 gad  
8 for macadamia nuts. (SWUPA 2299N, p. 2, table 1, p. 3, table 2.) [Hui/MTF and OHA,  
9 FOF B-146.]

10 h. In his written testimony of September 12, 2016, Varel amended his existing-use  
11 SWUPA 2298 to include the estimated 1,496,000 gpd for the 340 acres of macadamia  
12 trees he was using from the leaks, stating that, on the advice of Commission staff, he had  
13 included that amount in new-use SWUPA 2299N, but that the narrative in SWUPA 2298  
14 had stated this use. The narrative in SWUPA 2298 states: "For the last five years, I have  
15 been getting all of my water from 2 major leaks in the Waihee ditch system. Each leak is  
16 at a minimum a million gallons a day and more consistently 2 million gallons a day, the  
17 flow fluctuates with the adjustment of the amount of water flowing through the Waiheee  
18 Ditch. There are no meters on these leaks and up until I acquired the property, the waters  
19 were running freely on my property. I have redirected much of the water to my fields and  
20 allowed excess water that I did not use in my fields, nursery, and diversified ag crops to  
21 flow back to the lower ditch (Spreckels). The water diversions have supplied all of the  
22 water for 550 acres of ag land since I have acquired the property 6 years ago. My existing  
23 needs for crops currently in production are: 1,474,500 gallons for 340 tree acres currently  
24 in macadamia nuts (4,400 gallons per acre per day) per the Water Commission's 1992  
25 Hawaii Water Plan, Oahu Water Management Plan." (**Id.**, ¶ 58; Varel, Tr., 9/19/16, pp.  
26 p.170, l. to p. 171, l. 7; SWUPA 2298, SWUPA-E Addendum, p. 1.) [Hui/MTF and  
27 OHA, FOF B-149.]

28 i. While his request for 2 acres of nursery remain unchanged, his request for 5 acres  
29 of diversified agriculture and fruit trees has increased to 15 acres, and households have  
30 increased from 5 households to 23 households. (**Id.**, ¶¶ 63-65.)

31 j. Varel now requests:

1. Existing use: 1,500,000 gpd, based on the Water Commission’s 1992 Hawai`i Water Plan, O`ahu Management Plan, standard of 4,400 gad for macadamia nuts.; and
2. New use: 57,300 gpd:
  - i. 37,500 gpd: 15 acres of diversified agriculture and fruit trees at Waiahole’s 2,500 gad for diversified agriculture;
  - ii. 10,000 gpd: 2 acres of nursery plants at the Commission’s 1992 Hawai`i Water Plan’s standard of 5,000 gad for foliage plants; and
  - iii. 13,800 gpd: 23 houses at 600 per household for Maui County single-family homes, stating that because his farm grosses more than \$800,000 a year, he would be eligible to construct 23 houses for workers, in addition to the two homes his family occupies (which would be a total of 25, not 23 houses).

(**Id.**, ¶¶ 60-68.) [Hui/MTF and OHA, FOF B-150.]

- k. With these changes, Varel’s existing-use and new-use requests should actually be:
  1. Existing uses: 1,521,500 gpd
    - i. 1,496,000 gpd for 340 acres of macadamia trees;
    - ii. 12,500 gpd for 5 acres of diversified agriculture and fruit trees;
    - iii. 10,000 gpd for 2 acres of nursery plants; and
    - iv. 3,000 gpd for 5 homes.
  2. New uses: 37,000 gpd
    - i. 25,000 gpd for an additional 10 acres of diversified agriculture and fruit trees;
    - ii. 12,000 gpd for an additional 20 homes.

- l. The deed to Parcel 1 contains a reservation of appurtenant rights when it was sold to Varel by Wailuku Agribusiness in 2002. (**Id.**, ¶ 34; Varel, Tr., 9/19/16, p. 13, ll. 11-12, p. 137, ll.10-11.) [Hui/MTF and OHA, FOF B-145.]

- m. Parcel 1 received provisional approval of appurtenant rights for one LCA by the Commission, which noted that: 1) LCA 780 referred to part under cultivation and remainder occupied by cattle; 2) LCA 4405-BB:1-4 referred to apana 1 as a house lot and apana 2 as 4 mo’o of kalo, but only a small portion of the LCA was in Parcel 1; 3) LCA

1 4405-EE:1 was not shown on the map; and 4) LCA 7713:24 had no reference to water  
2 use. (Provisional Order, Attachment C, Revised Exh. 7, p. 4.)

3 n. Varel states that Parcel 1 is composed of portions of LCA 780, confirmed by RP  
4 4551, LCA 7713:24, confirmed by RP 4475, and Government Grant 10562 to Wailuku  
5 Sugar Company. (**Id.**, ¶¶ 39-42.)

6 o. Parcel 1 contains approximately 133.88 acres of LCA 780, described as “partly  
7 under cultivation and the remainder occupied by cattle.” Varel assumes an equal division  
8 between pasture and lands in diversified agriculture, applies a feed and forage standard of  
9 7,700 gad for the amount of land in pasture land for cattle, and a diversified agriculture  
10 standard of 2,500 gad for the lands under cultivation, resulting in his claim that  
11 appurtenant rights would be 682,788 gpd for 133.88 acres of Parcel 1. (**Id.**, ¶¶ 46-48.)

12 p. Parcel 1 contains 833.517 acres of LCA 7713:24, for which Varel states that the  
13 land use at the time of the Māhele is difficult to determine because what was in  
14 cultivation is not described due to the vast expanse of the award. He states that there is  
15 extensive historic irrigation and cultivation of land in Parcel 1 but also that the majority  
16 of ancient lo`i and `auwai were destroyed when the land was transformed into  
17 commercial agriculture. Judging by the remaining rock walls and lo`i, he conservatively  
18 estimates that at least 15 acres of LCA 7713:24 within Parcel 1 were in lo`i kalo at the  
19 time of the Māhele, and therefore claims that appurtenant rights for these 15 acres would  
20 be 4,500,000 gpd (using Reppun’s high estimate of 300,000 gad). (**Id.**, ¶¶ 49-52.)

21 q. Parcel 1 contains 16.41 acres of Government Grant 10562, which was 40 acres in  
22 size and which consisted of 19.40 acres of sugar cane, 1.10 acres of pasture land, and  
23 19.50 acres of wasteland. Setting aside the small pasture land, Varel claimed half for  
24 sugar cane at 6,800 gad, or 55,794 gpd in appurtenant rights. (**Id.**, ¶¶ 53-55.)

25 r. In total, Varel requested recognition of appurtenant rights in the amount of  
26 5,238,582 gpd. (**Id.**, ¶¶ 38, 56.) [Hui/MTF and OHA, FOF B-144.]

27 s. However, expert opinion is that only kalo lo`i were irrigated at the time of the  
28 Māhele, and appurtenant rights accrue to the entire LCA, not just to the portion that was  
29 using water at the time of the Māhele, *supra*, FOF 153, 170-171.

30 t. Alternate sources:

31 1. Potable water:

1 i. Varel has a temporary groundwater permit for a well drilled down  
2 to 290 feet, limited to 3,000 gpd, pending resolution of this CCH. His  
3 permit application was contested by both WWC and the County of Maui.  
4 His SWUPAs are alternatives to his groundwater application. Everything  
5 on his property is solar-powered and he is off the grid completely, and it  
6 wouldn't cost him a whole lot more to pump. (SWUPA 2298, Addendum,  
7 p. 2; Varel, Tr., 9/19/16, p. 151, l. 24 to p. 154, l. 10; p. 167, l. 7 to p. 168,  
8 l. 1; p. 168, l. 16 to p. 169, l. 11.) [Hui/MTF and OHA, FOF B-151.]

9 ii. Varel has two domestic water meters: one is a mile and a half from  
10 their homes, and the other does not have adequate pressure to make it up  
11 to their homes. (SWUPA 2298, Addendum, p. 2.)

12 2. non-potable water:

13 i. Varel intends to recycle domestic effluent for use on their personal  
14 gardens but will not generate enough water to irrigate even 2 acres, much  
15 less 550 acres of agriculture. (SWUPA 2298, Addendum, p. 2.)

16 ii. The County is not providing any new water meters for agricultural  
17 use in Waihee. (SWUPA 2298, Addendum, p. 2.)  
18

19 329. The following SWUPAs are in Waiehu and were previously served by the now-closed  
20 North Waiehu Ditch and/or by a kuleana `auwai on the Waihe`e Ditch just below the North  
21 Waiehu intake, which is now in disrepair. With the closure of the North Waiehu Ditch, they were  
22 to be served by Waihe`e River water in the Waihe`e Ditch, which does not get additional water  
23 until the `Iao-Maniania Ditch with water from Wailuku River. WWC needs an engineering  
24 alteration to the Waihe`e Ditch and has not yet developed an engineering plan to be able to  
25 determine if it can take water out of Waihe`e Ditch at that point. (Chumbley, Tr., 10/14/16, p.  
26 132, l. 12 to p. 133, l. 16.)

27 330. In addition SWUPA 2342—Paul Higashino, who is listed under North Waiehu Stream,  
28 states that he accessed the same kuleana auwai. (Higashino, WT, 2/3/16, ¶ 19; Higashino, Tr.,  
29 7/28/16, p. 187, ll. 1-8.) Water from these sources also previously continued to reservoir 25 and  
30 to four other Waiehu properties, SWUPA 2144—Living Waters, SWUPA 2153—Hanusa,  
31 SWUPA 2348—Bailie, SWUPA 2182—Chang (Jung), and SWUPA 2593—Koolau Cattle Co.

1 These too are now served only by Waihe`e Stream from waters continuing down from Waihe`e  
2 Ditch (See Figure 1.)

3  
4 331. **SWUPA 2340—Rudy Fernandez**

5 a. On April 30, 2009, Rudy Fernandez filed an existing-use SWUPA for TMK No.  
6 (2\_ 3-2-018:006 (“Parcel 6”), a 2.1-acre property for which he claimed appurtenant rights  
7 and requested existing use of 125,000 gpd for 1 acre of bananas and 0.5 acre of  
8 vegetables. (SWUPA 2340, p. 1, p. 2, table 1, p. 4, table 3.)

9 b. The Commission had granted provisional approval. (Provisional Order,  
10 Attachment C, Revised Exh. 7, p. 17.)

11 c. Fernandez did not submit testimony nor participate in the CCH.

12  
13 332. **SWUPA 2305/2306N—Douglas Myers & Alex Buttaro**

14 a. On April 30, 2009, Douglas Myers and his lessee, Alex Buttaro, filed existing-  
15 and new-use SWUPAs for TMK No.(2) 3-2-018:005 (“Parcel 5”), a 0.585-acre property,  
16 for which they requested 1,200 gpd for 0.19 acre of domestic use for two households, and  
17 111,000 gpd for 0.37 acre of proposed kalo lo`i for subsistence purposes. (SWUPA 2305,  
18 p. 2, table 1, p. 4, table 3, Attachment A, p. 2; SWUPA 2306N, p. 2, table 1, p. 3, table 2.)

19 b. They stated that appurtenant rights were reserved but did not specify the date of  
20 the deed and were granted provisional approval without any notation of a reservation.  
21 (Provisional Order, Attachment C, Revised Exh. 7, p. 16.)

22 c. Myers and Buttaro did not submit written testimony or appear at the CCH.

23  
24 333. **SWUPA 2355—Fred Coffey**

25 a. On April 30, 2009, Fred Coffey filed an existing-use SWUPA for TMK No. (2) 3-  
26 2-018:003 (“Parcel 3”). (Coffey, WT, 2/8/16, ¶¶ 1-2.) [Hui/MTF and OHA, FOF B-861.]

27 b. Parcel 3 is 0.61 acres. It was slightly enlarged from 0.55 acre to 0.61 acre with the  
28 purchase of a remnant parcel of land containing an area of approximately 2,765 square  
29 feet, more or less, identified as TMK No. (2) 3-2-017:018. No appurtenant right is being  
30 claimed for this parcel. (*Id.*, ¶ 9; Exh. 2355-Coffey-3.)

1 c. The Commission had given provisional approval, with the notation that water  
2 rights were reserved. Coffey stated in his SWUPA that the deed transferring the property  
3 reserved the water rights, but at the hearing, he said: “No reservation for the water.  
4 Everything is entirely good to go, no problems that way.” The only reference to a  
5 reservation in his documents is a description of the property, with the standard notation:  
6 “Reservation in favor of the State of Hawaii of all mineral and metallic mines.” (SWUPA  
7 2235, Attachment, p. 1; Coffey, Tr., 7/13/16, p. 98, ll. 20-22; Exh. 2355-Coffey-2;  
8 Provisional Order, Attachment C, Revised Exh. 7, p. 17.) [Hui/MTF and OHA, FOF B-  
9 862.]

10 d. Parcel 3 is `āpana 2 of LCA 3275-L, confirmed by RP 3230, which was 1.2 acres  
11 and consisted of three `āpana. Coffey states that the leveled, entirely terraced area, the  
12 boundary lines of the LCA and his TMK, and kama`āina familiar with the area all suggest  
13 that all parts of the LCA and his TMK were using water at the time of the Māhele. Parcel  
14 3’s original 0.55 acre is `āpana 2, described as either a taro mo`o or 17 lo`i; `āpana 1 is  
15 described twice as a taro mo`o; and `āpana 3 is described as a kula, 18 lo`i, and 1 kula, or  
16 as a taro pasture. (**Id.**, ¶¶ 3-5; Exh. 2355-Coffey-1.)

17 e. Coffey’s documents include drawings from the time of the Māhele that show  
18 `āpana 1 and 2, but not `āpana 3. Those drawings show `āpana 1 with a small pō`alima  
19 within it, and about half the size of `āpana 2. (Exh. 2355-Coffey-1.)

20 f. However, in the documents accompanying his written testimony, Exh. 2355-  
21 Coffey-1 contains two pages of English translation following this drawing that describes  
22 `āpana 1 as 0.55 acre, and `āpana 2 as 2/10 acre. (Exh. 2355-Coffey-1 [attached to written  
23 testimony]. These descriptions must be inadvertently reversed, and `āpana 1 must be 0.2  
24 acre, not the 0.55 acre of `āpana 2. Therefore, of LCA3275-L’s 1.2 acres, `āpana 1 was  
25 0.2 acre, `āpana 2 was 0.55 acre, and `āpana 3 was 0.45 acre.

26 g. As `āpana 3 was variously described as a kula, 18 lo1i, and 1 kula, or as a taro  
27 pasture, half should be ascribed to kalo lo`i, supra, FOF 168, so appurtenant rights would  
28 accrue to 81 percent, or 0.975 acre of LCA 3275-L’s 1.2 acres.

29 h. Coffey claimed that all of the original 0.55 acre of Parcel 3 should have  
30 appurtenant rights, or 165,000 gpd (0.55 acre x 300,000 gad). (**Id.**, ¶ 8.)



1 i. However, his claim for Parcel 3 should be reduced to 0.446 acre (0.55 acre x  
2 0.81).

3 j. Coffey also requests a permit for 600 gpd for a yard and garden of a two-family  
4 household, having an existing-use of 640 gpd. (**Id.**, ¶¶ 10-11, 13,17.) [Hui/MTF and  
5 OHA, FOF B-861, B-863.]  
6

7 334. **SWUPA 2342—Paul Higashino**

8 a. Paul and Jennifer Higashino filed an existing-use SWUPA on April 30, 2009, for  
9 TMK No. (2) 3-2-016:017 (“Parcel 17”), a 5.75-acre parcel, for which they request  
10 recognition of appurtenant rights of 390,192 gpd and an existing-use permit for 692,700  
11 gpd. (Higashino, WT, 2/3/16, ¶ 1.) [Hui/MTF and OHA, FOF B-478.]

12 b. They purchased the land from Wailuku Agribusiness in 2000, and the deed  
13 reserved the appurtenant rights. Paul Higashino’s grandparents own the property next  
14 door and had leased the property he now owns since the 1960s to grow kalo. (**Id.**, ¶¶ 1-2.)  
15 [Hui/MTF and OHA, FOF B-482.]

16 c. The Commission granted provisional approval of appurtenant rights. (Provisional  
17 Order, Attachment C, Revised Exh. 7, p. 17.)

18 d. Their claim of appurtenant rights is based on their 5.75 acres containing the  
19 entirety of 5 LCAs and one pō`alima, which collectively comprise 1.889 acres:

20 i. LCA 3440, confirmed by RP 7779, comprising 0.375 acres and described  
21 as a section of kalo.

22 ii. LCA 5454:2, confirmed by RP 5147, comprising 0.259 acres and  
23 described as containing 31 lo`i.

24 iii. LCA 3275M, no RP provided, comprising 0.356 acres, with the foreign  
25 testimony describing only lo`i. In the Provisional Approval hearings, the LCA  
26 was 3275I, described as kalo and kula land. However, Higashino shows 3275M as  
27 within Parcel 17. (Exh. 2342-Higashino-1.)

28 iv. LCA 3274:1, confirmed by RP 5982, comprising 0.805 acres, described as  
29 taro pauka, pasture, and a house. In the Provisional Approval hearings, this LCA  
30 had been denied for lack of documentation. (Provisional Order, Attachment C,  
31 Revised Exh. 7, p. 17.)

1 v. LCA 3528:1 confirmed by RP 3229, comprising 0.064 acres and  
2 described as being cultivated in lauhala; and

3 vi. a pō`alima of 0.04 acres. There is no documentation other than its being  
4 drawn as sandwiched between two parts of LCA 3440. (Exh. 2342-Higashino-1.)

5 (*Id.*, ¶¶ 8-14.)

6 e. The Higashinos' claim of appurtenant rights for 390,192 gpd consists of:

7 i. 389,250 gpd for 1.2975 acres of kalo lo`i at 300,000 gad;

8 ii. 750 gpd for 0.25 acre of the houselot;

9 iii. 192 gpd for 0.064 acre of lauhala at 3,000 gad; and

10 iv. no claim for 0.2775 acre of pasture.

11 (*Id.*, ¶¶ 13, 18.)

12 f. The Higashinos' existing-use permit request of 692,700 gpd is comprised of:

13 i. 1,500 gpd for 0.5 acres of a non-commercial garden (principally bananas)  
14 at 3,000 gad; and

15 ii. 691,200 gpd for 2 acres of kalo lo`i (equivalent to 345,600 gad), measured  
16 by the 5-gallon bucket method.

17 (*Id.*, ¶¶ 20-23.)

18 g. Paul Higashino, who testified, stated that his wife did the measurements and he  
19 was not present, but he was sure it was several measurements done over a period of time.  
20 691,200 gpd is equivalent to taking only 0.6 seconds to fill a 5-gallon bucket, and Paul  
21 Higashino could not explain how the measurement was done nor how reliable the  
22 measurements were. (Higashino, Tr., 7/28/16, p. 186, l. 22 to p. 190, l. 2.)

23  
24 335. **SWUPAs 2290N/3905N—Murray & Carol Smith**

25 a. On January 22, 2014, Murray & Carol Smith filed a new-use SWUPA for TMK  
26 No. (2) 3-2-017:041 ("Parcel 41"), which they purchased in October 2013 and which was  
27 formerly part of TMK No. (2) 3-2-017:018 ("Parcel 18"), a 250-acre property for which  
28 Waiehu Aina, LLC (David Singer) had filed SWUPA 2290N on April 27, 2009.  
29 (SWUPA 3905N, Addendum, p. 1; SWUPA 2290N.) [Hui/MTF and OHA, FOF B-855.]

30 b. SWUPA 3905N partially amends SWUPA 2290N and only concerns Parcel 41.

1 (SWUPA 3905N, Addendum, p. 1; Smith, Tr., 9/19/16, p. 58, ll. 4-15, p. 60, ll.3-8.)

2 [Hui/MTF and OHA, FOF B-855.]

3 c. Parcel 41 is 2.75 acres, for which the Smiths in their new-use SWUPA of January  
4 2014 requested 247,350 gpd: 240,000 gpd for 0.8 acre of kalo lo'i, 6,600 gpd for 1.5  
5 acres of macadamia trees, and 750 gpd for 0.25 acre of domestic uses (the remaining 0.2  
6 acre was for a proposed dwelling and driveway). (SWUPA 3905N, p. 2, table 1; SWUPA  
7 2290N, Addendum, p. 3.)

8 d. On November 1, 2014, the Smiths leased the land to the Hafokas until October  
9 31, 2019. The Hafokas have planted nearly all of 1.84 acres in row crops: 70 percent  
10 dryland taro, 25 percent sweet potato, and 5 percent "other," with banana and papaya  
11 interspersed between. (SWUPA 2290N-Smith-18; Smith, WT, 2/5/16, p. 8<sup>15</sup>.) [Hui/MTF  
12 and OHA, FOF B-857.]

13 e. The Smiths now request 16,700 gpd:

14 1. 12,000 gpd for 1.84 acres of row crops.

15 2. 2,200 gpd for 0.5 acre of macadamia trees.

16 3. 1,500 gpd for domestic use on 0.42 acre.

17 (**Id.**; Exh. 2290-Smith-20.)

18 f. Prior to leasing to the Hafokas, the Smiths had installed a water line—  
19 approximately one-quarter of a mile long—to transport potable County water to their  
20 property. Hafoka uses the minimum of water to keep the crops watered but finds the cost  
21 prohibitive to water the crops the way they should be, and therefore Smith requests the  
22 16,700 gpd which he estimates would be sufficient. (**Id.**; Smith, Tr., 9/19/16, p. 48, l. 22  
23 to p. 49, l. 1.) [Hui/MTF and OHA, FOF B-857, B-859.]

24 g. The quitclaim deed that conveyed Parcel 18 (which included Parcel 41) to Waiehu  
25 Aina, LLC in 2000 reserved water rights to Wailuku Agriculture. (**Id.**, p.5; Exh. 2290N-  
26 Smith-03.) [Hui/MTF and OHA, FOF B-856.]

27 h. The Commission had granted provisional approval. (Provisional Order,  
28 Attachment C, Revised Exh. 7, p. 16.)

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<sup>15</sup> Smith's written testimony does not include page numbers, so these findings refer to the page number of the pdf file posted on the Commission's website.

1 i. Parcel 41 is the entirety of LCA 3431, confirmed by RP 6100, described as “kale  
2 and kula lands joined with a house lot in one piece,” and with 61 lo`i. The LCA is a long  
3 narrow piece of land, with a protrusion—the house lot—about one-fifth down from the  
4 upper end. The upper end is bordered by kula, and the lower, larger end is bordered by  
5 pō`alima on one side and pō`alima and kula on the bottom side. The upper section is  
6 about 0.71 acre, the house lot about 0.24 acre, and the bottom section about 1.8 acre. (**Id.**,  
7 pp. 6-7; Exhibit 2290N-Smith-7A.)

8 j. The Smiths request recognition of appurtenant rights of 540,000 gpd for 1.8 of  
9 Parcel 41’s 2.75 acres, based on Reppun’s high estimate of 300,000 gad. (**Id.**, p.7.)  
10 [Hui/MTF and OHA, FOF B-856.]  
11

12 336. **SWUPAs 2326/2327N—Lester Nakama (Ciacci)**

13 a. Mary Ciacci and Lester Nakama filed existing- and new-use SWUPAs for TMKs  
14 No. (2) 3-2-018:021 (“Parcel 21”) and No. (2) 3-2-018:044 (“Parcel 44”) on April 30,  
15 2009. Nakama subsequently purchased Parcel 21 from Ciacci and is no longer requesting  
16 water for Parcel 44, which he no longer owns. (Nakama, WT, 2/3/16, ¶¶ 114-115.)  
17 [Hui/MTF and OHA, FOF B-488.]

18 b. Parcel 21 is 1.101 acres and is the entirety of LCA 3448:2, confirmed by RP  
19 6124. Provisional approval of appurtenant rights had been granted. (**Id.**, ¶¶ 122-123;  
20 Provisional Order, Attachment C, Revised Exh. 7, p. 16.) [Hui/MTF and OHA, FOF B-  
21 490, B-491.]

22 c. LCA 3448 is described as “one piece of kalo and kula land.” Based on the  
23 presence of ancient rock walls, Nakama estimates that 1.0 acre of the 1.101 acres was in  
24 kalo cultivation. (**Id.**, ¶¶ 122-123.) [Hui/MTF and OHA, FOF B-491, B-492.]

25 d. Nakama requests appurtenant rights of 300,000 gpd (1.0 acre x 300,000 gad) and  
26 a permit for 330,000 gpd (1.1 acre x 300,000 gad), of which the existing use was 153,600  
27 gpd. (**Id.**, ¶¶ 118, 125.) [Hui/MTF and OHA, FOF B-489, B-492.]

28 e. Based on the 5-gallon bucket method and measuring at two intakes five times and  
29 averaging 4.5 and 3.75 seconds, respectively, Nakama estimates that he used 153,600 gpd  
30 to irrigate 1.1 acres (**Id.**, ¶ 127; SWUPA 2326, Attachment 1, p. 2.)

1 f. For the past six years, because North Waiehu `auwai has been in disrepair, Parcel  
2 21 has been totally dry. (Nakama, Tr., 9/19/16, p. 100, l. 15 to p. 101, l. 8, p. 115, ll. 12-  
3 22.)  
4

5 337. **SWUPAs 2288/2289N—Donnalee & David Singer**

6 a. On April 28, 2009, Donnalee and David Singer filed existing- and new-use  
7 SWUPAs for TMKs No. (2) 3-2-018:009 (“Parcel 9”), No. (2) 3-2-018:014 (“Parcel 14”),  
8 No. (2) 3-2-018:015 (“Parcel 15”), No. (2) 3-2-018:017 (“Parcel 17”), and No. (2) 3-2-  
9 018:034 (“Parcel 34”). (SWUPA 2288, p. 2, table 1, p. 4, table 3; SWUPA 2289N, p. 3,  
10 table 2.)

11 b. Because the existing use of water as of April 30, 2008 was severely limited to the  
12 kuleana lands used to cultivate taro, the Singers submitted both existing- and new-use  
13 applications for the same acreage that they had had in kalo lo`i, requesting one-fourth in  
14 their existing-use SWUPA 2288, and three-quarters in their new-use SWUPA 2289N.  
15 (unlabeled addendum at the end of SWUPA 2289N; SWUPA 2288, Attachment A, p. 3;  
16 SWUPA 2289N, Attachment A, p. 3.)

17 c. Parcel 9 is 1.47 acre, on which they have 1.20 acres of kalo lo`i. Parcel 14 is 0.35  
18 acre, all in kalo lo`i. Parcel 15 is 0.7- acre, all in kalo lo`i. Parcel 17 is 0.65 acre, all in  
19 kalo lo`i. Parcel 34 is 2.94 acre, of which 2.40 acre is kalo lo`i. (SWUPA 2288, p. 4,  
20 table 3; SWUPA 2289N, p. 3, table 2.)

21 d. The Singers requested 430,626 gpd under SWUPA 2288 and 1,291,874 under  
22 SWUPA 2289N, for a total of 1,727,000 gpd to 1,756,800 gpd for 5.30 acres of kalo lo`i,  
23 or 325,850 gad to 331,470 gad. (SWUPA 2288, p. 3, table 2; SWUPA 2289N, p.2, table  
24 1.)

25 e. The Singers had claimed appurtenant rights and been granted provisional  
26 recognition for all five parcels without any mention of any reservations. (Provisional  
27 Order, Attachment C, Revised Exh. 7, p. 16.)

28 f. The Singers did not submit written testimony nor participate in the CCH.  
29

30 338. **SWUPAs 2328/2329N—Lester Nakama**

1 a. Lester Nakama filed existing- and new-use SWUPAs for TMK No. (2) 3-2-  
2 018:015 (“Parcel 15”) on April 30, 2009, for which he requests recognition of  
3 appurtenant rights of 210,000 gpd and a permit for 210,000 gpd (based on Reppun’s high  
4 estimate for kalo lo`i of 300,000 gad), of which the existing use was 122,880 gpd  
5 (measured by the 5-gallon bucket method). (Nakama, WT, 2/3/16, ¶¶ 136, 139, 144-145.)  
6 [Hui/MTF and OHA, FOF B-496.]

7 b. For the past six years, because North Waiehu `auwai has been in disrepair, Parcel  
8 15 has been totally dry. (Nakama, Tr., 9/19/16, p. 100, l. 15 to p. 101, l. 8, p. 115, ll. 12-  
9 22.)

10 c. Parcel 15 is 0.7 acre, all of which Nakama claims was a pōalima at the time of the  
11 Māhele, stating that he has attached several documents, including the County tax map for  
12 TMK No. 3-2-018:015, which shows the word “poalima” in its center. He does not  
13 identify any LCA associated with Parcel 15. Moreover, in his testimony, Nakama  
14 submitted only one, not several, documents—a map that does not match his description,  
15 does not identify his TMK, and shows only various LCAs, none of which Nakama has  
16 identified as contained in Parcel 15. (*Id.*, ¶¶ 140-143; 2328-Nakama-1-p. 1.)

17 d. In contrast, in the original new-use SWUPA 2328, there is a TMK Map with  
18 Parcel 15 outlined and with the word “poalima” in it. It crosses four LCAs and is not  
19 identified with a separate LCA number. (SWUPA 2328, Exhibit 2A.)

20 e. The Commission had granted provisional recognition, with the notation that TMK  
21 No. 3-2-018:015 was a poalima. (Provisional Order, Attachment C, Revised Exh. 7, p.  
22 16.) [Hui/MTF and OHA, FOF B-498.]

23  
24 339. **SWUPAs 2330/2331N—Peter Lee & Lester Nakama**

25 a. Peter Lee and Lester Nakama filed existing- and new-use SWUPAs on April 30,  
26 2009, for TMK No. (2) 3-2-018:040 (“Parcel 40”), requesting recognition of appurtenant  
27 rights for 319,800 gpd and a permit for 319,800 gpd, based on Reppun’s high estimate of  
28 300,000 gad for kalo lo`i, with an existing use of 62,000 gpd, measured by the 5-gallon  
29 bucket method. (Nakama, WT, 2/3/16, ¶¶ 156, 159, 171, 174.) [Hui/MTF and OHA, FOF  
30 B-503, B-504, B-510, B-511.]

31 b. Parcel 40 is 2.132 acres and mainly comprised of three LCAs:

- 1 i. all but a sliver of LCA 11256, confirmed by RP 7248, described as “aina
- 2 kalo”;
- 3 ii. a portion of LCA 2475:4, confirmed by RP 6528, with “13 loi”; and
- 4 iii. a portion of the konohiki award to Lunalilo, LCA 8559:20:2 including a
- 5 pō`alima which falls within Parcel 40.

6 (**Id.**, ¶¶ 160, 164-166, Exh. 2330-Lee-1, -2, -3.) [Hui/MTF and OHA, FOF B-506.]

7 c. The Commission had provisionally approved appurtenant rights, based on LCAs  
8 11256, described as aina kalo, and 2475:3, described as containing 1 lo`i, and not  
9 2475:4, which Nakama describes as containing 13 lo`i. Only a small sliver of LCA  
10 3450.2 is contained in Parcel 40, for which no documentation was provided. LCA  
11 8559:20:2 was not mentioned in the Provisional Order. (Provisional Order, Attachment  
12 C, Revised Exh. 7, p. 16.) [Hui/MTF and OHA, FOF B-506.]

13 d. Nakama states that although the TMK map shows LCA 2475:3, the shape of the  
14 drawn parcel map matches `āpana 4. (**Id.**, ¶ 165.)

15 e. Nakama states that the presence of ancient lo`i walls on approximately half of  
16 Parcel 40, the exclusive references to kalo in LCAs 11256 and 2475:4, and the presence  
17 of a pō`alima within Parcel 40 support a finding that the remaining portion of Parcel 40  
18 falling under the Lunalilo grant was also lo`i land. (**Id.**, ¶¶ 164-166.) [Hui/MTF and  
19 OHA, FOF B-507.]

20 f. The overlay of LCAs 11256 and 2475:4 over the map of Parcel 40 is slightly  
21 larger than half of Parcel 40. (Exh. 2330-Lee-3-p. 1.)

22 g. He requests appurtenant rights to 1.066 acres, or half of Parcel 40’s 2.132 acres.  
23 (**Id.**, ¶ 168.)

24 h. His existing use of 62,000 gpd was used to irrigate 1.066 acres of kalo lo`i, and he  
25 requests 319,800, the same amount of his appurtenant rights request, to irrigate the same  
26 acreage. (**Id.**, ¶¶ 172-174.) [Hui/MTF and OHA, FOF B-510, B-511.]

27  
28 **iii. Spreckels Ditch**

29  
30 **a. North Waihe`e `Auwai**

1 340. The following SWUPAs receive water from the Spreckels Ditch via the North Waihe`e  
2 `Auwai. See Figure 1.

3  
4 341. **SWUPAs 2233/2234N—Diannah Goo**

5 a. Diannah Lai Goo filed for existing- and new-use SWUPAs on April 23, 2009 for  
6 TMK No. (2) 3-2-004:007 (“Parcel 7”). This is one of the mauka parcels the Goo `ohana  
7 owns; two other mauka parcels are addressed under SWUPA 2365N, and a number of  
8 makai parcels are addressed under SWUPAs 2231/2232N. (Goo, WT, 1/11/16, ¶ 1;  
9 SWUPA 2233 at 4; SWUPA 2234N at 3.) [Hui/MTF and OHA, FOF B-158.]

10 b. Parcel 7 is 0.724 acre, on which they estimate they were cultivating lo`i on 0.181  
11 acre on April 30, 2008. (Goo, WT, 1/11/16, ¶¶ 19, 34; SWUPA 2233 at 4; SWUPA  
12 2234N at 3.) [Hui/MTF and OHA, FOF B-163, B-166.]

13 c. They request recognition of appurtenant rights for all of Parcel 7, existing use for  
14 0.181 acre, and new use for the remainder of Parcel 7, or 0.543 acre. (**Id.**, ¶¶ 28, 34-35;  
15 SWUPA 2233 at 2; SWUPA 2234N, Addendum at 2.) [Hui/MTF and OHA, FOF B-163,  
16 B-166-167.]

17 d. Provisional recognition was denied without prejudice for Parcel 7. The Goos  
18 believe Parcel 7 was a pō`alima of LCA 7713:24 to Victoria Kamāmalu and state that  
19 there are ancient lo`i kalo terraces throughout the entire parcel, which they have used to  
20 grow kalo, and submitted photographs depicting these ancient lo`i kalo terraces. But  
21 provisional recognition had been denied, with the following notation on LCA 7713:24:  
22 “No ref. to water use. Per attorney, property is on bank of Waihee River. Applicant states  
23 preexisting loi terraces have been restored.” (Provisional Order, Attachment C, Revised  
24 Exh. 7, p. 5; Emoto & Ellis, WT, 11/25/15, ¶ 4; **Id.**, ¶¶ 17, Exh. 2233-Goo-1.)

25 e. The Goos requested appurtenant rights for Parcel 7’s 0.724 acres of 217,200 gpd,  
26 existing use for 0.181 acres of 54,300 gpd, and new use for the remaining 0.543 acre of  
27 162,900 gpd, all based on Reppun’s high estimate of 300,000 gad. (**Id.**, ¶¶ 28, 34-35;  
28 SWUPA 2233 at 2; SWUPA 2234N, Addendum at 2.) [Hui/MTF and OHA, FOF B-  
29 163,B-166-167.]

30  
31 342. **SWUPA 2227—Richard Emoto & Roy Ellis**



1 a. Richard Emoto and Roy Ellis filed existing-use SWUPA 2227 on April 23, 2009,  
2 for TMK Nos. (2) 3-2-004:011 (“Parcel 11”) and (2) 3-2-004:012 (“Parcel 12”), which  
3 Emoto owns and his business partner, Ellis, has lived on for over 20 years. (Emoto &  
4 Ellis, WT, 11/25/15, ¶ 1.)

5 b. Parcel 11 is 0.8 acres and is the entirety of LCA 4405P:1, confirmed by RPs 4120  
6 and 6149; and Parcel 12 is 0.045 acre and situated within Parcel 11 and is a pō`alima of  
7 the award to Victoria Kamāmalu, LCA 7713:24. (**Id.**, ¶¶ 4-9.) (Hui/MTF and OHA, FOF  
8 B-171-173.]

9 c. LCA 4405P labels `āpana 1 as “aina kalo,” and the foreign testimony supporting  
10 the award describes `āpana 1 as containing “20 patches.” Emoto and Ellis claim Parcel 12  
11 is a pō`alima. The Commission provisionally approved appurtenant rights for Parcel 11,  
12 but no documents were submitted for Parcel 12. (**Id.**, ¶¶ 4-9; Provisional Order,  
13 Attachment C, Revised Exh. 7, p. 5.) (Hui/MTF and OHA, FOF B-171-172.)

14 d. They request recognition of appurtenant rights for Parcels 11 and 12 in the  
15 amount of 253,500 gpd, based on Reppun’s high estimate (0.845 acre x 300,000 gad) and  
16 a permit for 432,000 gpd, which they claim was their current use as of April 30, 2008, to  
17 operate a water wheel that generates electricity. (**Id.**, ¶¶ 11-13; SWUPA 2227 Att. A at 1,  
18 Att. D (photos). ) [Hui/MTF and OHA, FOF B-173-174.]

19 e. However, the 432,000 gpd to operate the water wheel is not a measured use, but  
20 their estimate of the amount of water needed to generate enough electricity to power the  
21 home, supplemented with solar panels. They calculate this by stating that it would take  
22 300 gallons per minute (300 gallons per minute x 1440 minutes per day = 432,000 gpd).  
23 (**Id.**, ¶ 14.)

24 f. They state that 432,000 gpd “was the amount of water in use for these purposes  
25 on April 30, 2008,” but they also state that “(w)e are currently using water from an  
26 existing `auwai, although water is not available consistently and in sufficient amounts to  
27 support the existing uses on our system, including our own uses.” (**Id.**, ¶ 14; SWUPA  
28 2227, Att. A, p. 3.)

29 g. Water enters their land through a pipe that directs the flow through the water  
30 wheel. From there, some of the water is used for domestic purposes such as showering  
31 and washing dishes and clothes, and the rest flows through lo`i kalo through an open

1 ditch, and some water is taken by pipe and sprinkler system to water the lawn and non-  
2 commercial garden. *Id.*, ¶ 13; SWUPA 2227, Att. A, p. 2.)

3 h. Emoto and Ellis estimate that of the 432,000 gpd they claim is run through the  
4 water wheel, they use about 1,200 gpd for domestic uses (0.4 acres x 3,000 gad, based on  
5 2002 State of Hawai'i Water System Standard for Maui County of 3,000 gad per single  
6 family home), and return about 430,800 gpd to the `auwai, less a small amount that seeps  
7 into the kalo lo'i. (SWUPA 2227, Att. A, p. 2.)

8 i. They estimate that their existing use for 0.4 acres of kalo lo'i is 120,000 gpd,  
9 based on Reppun's high estimate (0.4 acre x 300,000 gad). (SWUPA 2227, Att. A, p. 2.)

10 j. However, they also state that approximately 430,800 gpd of the 432,000 gpd that  
11 runs through their water wheel enters the 0.4 acres of kalo lo'i before being returned to  
12 the `auwai.

13  
14 343. **SWUPAs 2228/2229N—Stanley Faustino & Kanealoha Lovato-Rodrigues**

15 a. Stanley Faustino filed SWUPAs for existing and new uses on April 23, 2009 for  
16 TMK No. (2) 3-2-004:013 ("Parcel 13") and later requested that his grandson be added to  
17 the SWUPAs. (Faustino, WT, 2/29/16, ¶1; SWUPA 2228 at 4; SWUPA 2229N at 3.)  
18 [Hui/MTF and OHA, FOF B-176.]

19 b. Faustino/Lovato-Rodrigues request recognition of 210,000 gpd of appurtenant  
20 rights and a permit for 201,000 gpd, of which 21,000 gpd was the existing use, all,  
21 including the existing use, based on Reppun's high estimate of 300,000 gpd. (Faustino,  
22 WT 2/29/16, ¶¶ 13-14; SWUPA 2228 at 2; SWUPA 2229N at 2, Att. A at 2.) [Hui/MTF  
23 and OHA, FOF B-177.]

24 c. Parcel 13 is the entirety of LCA 4405X, confirmed by RP 5319. LCA 4405X was  
25 described as "(o)ne taro parcel." The Commission granted provisional approval for Parcel  
26 13. (Faustino, WT, 2/29/16, ¶ 5; Exh. 2228—Faustino—2; Faustino, WT, 9/7/07, ¶ 1  
27 (MA06-01); Exh.A-33 (9/7/07) (Mao6-01); Provisional Order, Attachment C, Revised  
28 Exh. 7, p. 5.) [Hui/MTF and OHA, FOF B-181.]

29 d. Parcel 13 is 0.7 acre. They request appurtenant rights of 210,000 gpd, using  
30 Reppun's high estimate of 300,000 gad. (Faustino, WT, 2/29/16, ¶¶ 5, 10-11.) [Hui/MTF  
31 and OHA, FOF B-182.]

1 e. On April 8, 2008, the Faustinos were cultivating 0.07 acre in lo`i. They estimate  
2 water use as 21,000 gpd, using Reppun’s high estimate of 300,000 gad. (Faustino, WT,  
3 2/29/16, ¶ 13; SWUPA 2228 at 3-4, Att. A at 2, Exh. B.) [Hui/MTF and OHA, FOF B-  
4 184.]

5 f. They request an additional 180,000 gpd to restore an additional 0.6 acre, using  
6 Reppun’s high estimate, for a total of 201,000 gpd (0.67 acre x 300,000 gad). (Faustino,  
7 WT, 2/29/16, ¶ 14; SWUPA 2229N R 2-3, Att. A at 2.) [Hui/MTF and OHA, FOF B-  
8 185-186.]

9  
10 344. **SWUPAs 2269/2270N—Michael Rodrigues**

11 a. On April 23, 2009, Michael Rodrigues filed existing-use SWUPAs for TMKs No.  
12 (2) 3-2-004:015 (“Parcel 15”), No. (2) 3-2-004:016 (“Parcel 16”), and No. (2) 3-2-  
13 004:017 (“Parcel 17”), and a new-use SWUPA for Parcel 17. Michael Rodrigues testified  
14 for Parcels 15 and 17, and Miki`ala Pua`a-Freitas, testified on his behalf for Parcel 16 and  
15 also for SWUPA 2364N, filed by her father. (SWUPAs 2269/2270N; Rodrigues, WT,  
16 1/29/16, ¶ 1; Pua`a-Freitas, WT, 1/29/16, ¶ 1.)

17 b. Pua`a-Freitas’s grandpa was born in the 1920’s, and her great grandpa had started  
18 cultivating kalo on Parcel 16. (Pua`a-Freitas, Tr., 7/12/16, p. 49, ll. 4-21.)

19 c. Parcel 15 is 0.15 acre, Parcel 16 is 0.33 acre, and Parcel 17 is 1.25 acres, for  
20 which Rodrigues requests recognition of appurtenant rights of 519,000 gpd and a permit  
21 for 780,245 gpd, of which 474,000 gpd was the estimated existing use. (**Id.**, ¶ 3; Pua`a-  
22 Freitas, WT, 1/29/16, ¶¶ 1, 16-17, 29.)

23 d. Existing use of 474,000 gpd was estimated by the 5-gallon bucket method and  
24 consisted of all 0.15 acre of Parcel 15 for kalo lo`i, all 0.33 acre of Parcel 16 for kalo lo`i,  
25 and for Parcel 17’s 1.25 acres, 0.4 acre of kalo lo`i and 0.4 acre of diversified agriculture.  
26 (SWUPA 2269, p. 2, table 1, p. 4, table 3; Pua`a-Freitas, WT, 1/29/16, ¶ 29.)

27 e. By his 5-gallon bucket measurements, he was using 472,800 gpd on 0.88 acre of  
28 lo`i across Parcels 15, 16, and 17, or 537,273 gad, which he believes he needs to grow  
29 healthy kalo, and 1,200 gpd for diversified agriculture on 0.4 acre. (**Id.**, ¶¶ 16-18.)

30 f. The new-use request is for 400,000 gpd to run a water wheel to generate  
31 hydroelectricity, like his neighbor, Roy Ellis, which will include an estimated 214,910

1 gpd, equivalent to 537,273 gad, for an additional 0.4 acre of kalo lo`i on Parcel 17,  
2 because the 400,000 gpd would run through the 0.4 acre of new kalo lo`i. (**Id.**, ¶ 19;  
3 SWUPA 2270N, p. 2, table 1, Attachment, p. 2.)

4 g. Parcel 15’s 0.15 acre is wholly comprised of LCA 4405-R:2, confirmed by RP  
5 6459, refer to pō`alima as boundary and described as containing eight lo`i. The  
6 Commission had granted provisional recognition. (**Id.**, ¶¶ 4, 8; Provisional Order,  
7 Attachment C, Revised Exh. 7, p. 6.)

8 h. Pua`a-Freitas states that Parcel 16’s 0.33 acre is all of a pō`alima of LCA 7713:24  
9 to Victoria Kamamalu. The Commission had granted provisional recognition, but  
10 referenced LCA 4405-S, which wholly comprises Parcel 17, *infra*. (Pua`a-Freitas, WT,  
11 1/29/16, ¶¶ 6, 13; Provisional Order, Attachment C, Revised Exh. 7, p. 6.)

12 i. Parcel 17’s 1.25 acres is wholly comprised of LCA 4405-S, confirmed by RP  
13 2345, described as kalo, kula, and 3 pō`alima in it, of which Rodrigues states the majority  
14 must have been in kalo, based on the existence of ancient rock walls throughout much of  
15 the parcel. The Commission had granted provisional recognition. (**Id.**, ¶¶ 4, 9;  
16 Provisional Order, Attachment C, Revised Exh. 7, p. 6.)

17 j. Rodrigues claimed appurtenant rights for all of the three parcels, or 1.73 acres,  
18 for 519,000 gpd, using Reppun’s high estimate of 300,000 gad for kalo lo`i (1.73 acre x  
19 300,000 gad). . (**Id.**, ¶ 10; Pua`a-Freitas, WT, 1/29/16, ¶ 17.)

20 k. The acreage qualifying for appurtenant rights is 1.065 acres out of 1.73 acres:

- 21 1. Parcel 15: 0.15 acre.
- 22 2. Parcel 16: 0.00 acre
- 23 3. Parcel 17: 0.75 acre, or 60 percent of 1.25 acre, or a “majority” of  
24 unknown percentage.

25  
26 **345. SWUPAs 2309/2310N—Alfred Ayers & William Freitas**

27 a. On April 30, 2009, Alfred Ayers and his Lessee, Willaim Freitas, filed existing-  
28 and new-use SWUPAs for TMKs No. (2) 3-2-003:010 (“Parcel 10”) and No. (2) 3-2-  
29 003:011 (“Parcel 11”), claiming an existing use for an estimated 69,000 gpd for 0.23 acre  
30 of kalo lo`i, and a new use for an estimated 524,400 gpd for an additional 1.74 acres of  
31 kalo lo`i and 0.8 acre of two homes and their yards and gardens. They used Reppun’s

1 high estimate of 300,000 gpd for kalo lo`i and Maui County’s standard of 3,000 gad for  
2 domestic agriculture. (SWUPA 2309, p. 2, table 1, p. 4, table 3; SWUPA 2310N, p. 2,  
3 table 1, p. 3, table 2, Addendum, p. 2.)

4 b. Parcel 10 is 1.547 acres, for which existing use was on 0.11 acre and proposed  
5 new uses are on 1.26 acres. Parcel 11 is 2.5 acres, for which existing use was on 0.12  
6 acre, and proposed new uses are on 1.28 acres. (SWUPA 2309, p. 4, table 3; SWUPA  
7 2310N, p. 3, table 2.)

8 c. Ayers and Freitas had claimed appurtenant rights and were granted provisional  
9 approval for both parcels. Parcel 10 is derived from LCA 4405Q:3, confirmed by RP  
10 5331, and described as 6 lo`i kalo and a house lot or as 6 patches, pasture, and house.  
11 Parcel 11 is derived from LCA 4405R:1, confirmed by RP 6459, and described as Ili of  
12 Waipae with two pō`alima in it and a pō`alima as boundary. (SWUPA 2309, Addendum,  
13 pp. 13, 18; SWUPA-2310N, Addendum, pp. 15, 20; Provisional Order, Attachment C,  
14 Revised Exh. 7, p. 6.)

15 d. Ayers and Freitas did not submit written testimony and did not participate in the  
16 CCH.

17  
18 **346. SWUPA 2283—Lorin Pang**

19 a. Lorin Pang filed a SWUPA for existing use on April 24, 2009 for TMK No. (2) 3-  
20 2-003:016 (“Parcel 16”), consisting of 1.78 acres. (Pang, WT, 1/24/15, ¶¶ 1, 15.)

21 b. He requests an existing use of 10,800 gpd for 1.5 acres of a non-commercial  
22 garden and fruit trees, plus an additional 0.1 acre of fishponds. For the 1.5 acres, he  
23 pumps approximately 5,400 gpd using a 1800 gph pump for a total of three hours per day.  
24 He also pumps approximately 5,400 gpd using the same pump, for a total of three hours a  
25 day to maintain and flush his fishponds to prevent mosquito-breeding on the 0.1 acre.  
26 (*Id.*, ¶¶ 19-21.) [Hui/MTF and OHA, FOF 212.]

27 c. On the other hand, in his SWUPA 2283, Pang listed only 0.76 acre of fruit trees,  
28 and only 0.02 acre of fishponds:

- 29 1. mango: 0.25 acres;
- 30 2. avocado: 0.10 acres;
- 31 3. coconut: 0.3 acres;

- 1           4.     banana: 0.1 acre;
- 2           5.     watercress: 0.01 acre; and
- 3           6.     fishpond: 0.02 acre.

4 (SWUPA 2283—Lorin Pang, Table 1.)

5 d.     In SWUPA 2283, Pang also stated that he needed constant flow to aerate his  
6 ponds, in which he has opae, guppies, and swordtails. (SWUPA 2283—Lorrin Pang, p 5.)

7 e.     For the non-commercial garden and fruit trees, 5,400 gpd over 1.5 acres is 3,600  
8 gad, and over 0.76 acre, it is more than 7,100 gpd. For the fishponds, 5,400 gpd for 0.1  
9 acre of fishponds is 54,000 gad, and over 0.02 acre, it is 270,000 gpd.

10 f.     Pictures submitted with SWUPA 2283 show grass with scattered trees and several  
11 small molded plastic ponds. (SWUPA 2283.)

12 g.     Pang states that he believes his deed contains a reservation of appurtenant rights  
13 but did not state when that reservation might have taken place nor provide documentation  
14 of the reservation. (**Id.**, ¶ 2.) [Hui/MTF and OHA, FOF 211.]

15 h.     Pang provided no documents during the provisional recognition process.  
16 Nevertheless, he now provided documentation of appurtenant rights in the event a legal  
17 determination is made that his right was not extinguished, claiming that approximately  
18 1.42 of his 1.78 acres had appurtenant rights, or 426,000 gpd, using Reppun’s high  
19 estimate of 300,000 gad. (Provisional Order, Attachment C, Revised Exh. 7, p. 6; **Id.**, ¶¶  
20 4-14, 16-18.)

21 i.     Parcel 16 is comprised of: 1) the entirety of LCA 2412:1, confirmed by RP 6147;  
22 2) approximately one-half of two other LCAs, 4405P:2 & 4, confirmed by RP 6149, and  
23 4405Q:1 confirmed by RP 5331; and 3) portions of two pō`alima within LCA 7713:24 to  
24 Victoria Kamāmalu, confirmed by RP 4475. (**Id.**, ¶ 4.)

25 j.     LCA 2412:1 is described as consisting of eight lo`i. (**Id.**, ¶ 10; Exh. 2283-Pang-  
26 1.)

27 k.     LCA 4405P:2 is described as consisting of twenty lo`i and one kula, and  
28 LCA4405P:4 as consisting of three lo`i. (**Id.**, ¶ 11; Exh. 2283-Pang-2.)

29 l.     LCA 4405Q:1 is described as consisting of two pō`alima. (**Id.**, ¶ 13; Exh. 2283-  
30 Pang-3.)

1 m. A pō`alima of LCA 7713:24 to Victoria Kamāmalu is within Parcel 16. (**Id.**, ¶¶ 9,  
2 14; Exh. 2283-Pang-5.)

3 n. Pang claims that approximately 80 percent of Parcel 16's 1.78 acres, or 1.42  
4 acres, was in kalo lo`i at the time of the Māhele, based on the existence of ancient lo`i  
5 kalo walls, the slope of the land, and the existence of pō`alima on the property. (**Id.**, ¶  
6 16.)

7 o. Using Reppun's high estimate of 300,000 gad for kalo lo`i, Pang estimates his  
8 appurtenant rights at 426,000 gad (1.42 acres x 300,000 gad). (**Id.**, ¶¶ 17-18.)

9 p. On the OHA screen shot depicting the LCAs overlaid on Parcel 16, the  
10 approximate percentages of Parcel 16 are as follows: 1) LCA 2412:1: 10 percent ; 2)  
11 LCA 4405P:2 & 4: 30 percent ; 3) LCA 4405Q:1: 45 percent; and 4) two, not one,  
12 pō`alima of LCA 7713:24: 15 percent. (Exh. 2283-Pang-5.)

13 q. Therefore, the approximate acres of Parcel 16's 1.78 acres attributable to these  
14 LCAs are:

15 LCA 2412:1: 0.178 acres (0.10 x 1.78 acres)

16 LCA 4405P:2 & 4: 0.534 acres (0.30 x 1.78 acres)

17 LCA 4405Q:1: 0.801 acres (0.45 x 1.78 acres)

18 LCA 7713:24: 0.267 acres (0.15 x 1.78 acres)

19 r. The approximate acres in kalo lo`i at the Māhele are:

20 LCA 2412:1: 0.178 acres (described as containing 8 lo`i).

21 LCA 4405P:2 & 4: 0.481 acres (LCA 4405P:2 is described as consisting of  
22 twenty lo`i and one kula, and LCA4405P:4 as consisting of  
23 three lo`i. No apportionment between the two `āpana is  
24 provided, so it will be assumed that approximately 90  
25 percent of the two `āpana were in kalo lo`i).

26 LCA 4405:1: 0.801 acres (described as consisting of two pō`alima)

27 LCA 7713:24: 0.000 acres (no information on size or other contents)

28 Total: 1.46 acres

29 s. The estimate of 1.46 acres is close to Pang's estimate of 1.42 acres, so his  
30 estimate is accepted.

31

1 347. **SWUPAs 2254/2255N—David Lengkeek**

2 a. On April 23, 2009, David and Katherine Lengkeek filed for existing- and new-use  
3 SWUPAs for TMK No. (2) 3-2-003:019 (“Parcel 19”) for seepage from the North  
4 Waihe`e kuleana `auwai onto their 0.501-acre property. (SWUPA 2254, p. 4, table 3;  
5 Attachments p. 5; SWUPA 2255N, p. 3, table 2.)

6 b. They proposed to increase their existing 0.084-acre garden to 0.418 acre, with an  
7 estimated use of 1,254 gad, using Maui County’s standard of 3,000 gad (0.418 acre x  
8 3,000 gad). (SWUPA 2255N, Attachments, p. 5).

9 c. The Lengkeeks did not claim appurtenant rights nor provide documents during the  
10 provisional recognition process. (SWUPA 2254, p. 1; SWUPA 2255N, p. 1; Provisional  
11 Order, Attachment C, Revised Exh. 7, p. 6.)

12 d. The Lengkeeks provided no further information on their permit requests and did  
13 not participate in the contested hearing.

14  
15 348. **SWUPAs 2322/2323N—Robert Barrett (Aloha Poi)**

16 a. Robert Barrett and Lester Nakama filed existing- and new-use SWUPAs for TMK  
17 Nos. (2) 3-2-003:023 (“Parcel 23”) and (2) 3-2-003:024 (“Parcel 24”) on April 30, 2009,  
18 which Aloha Poi has leased from the Barrett `ohana since the 1940s. (Nakama, WT,  
19 2/3/16, ¶¶ 76, 78; SWUPA 2322 at 3-4 and Attachment 1 at 2; SWUPA 2323N at 2-3 and  
20 Attachment 1 at 2.) [Hui/MTF and OHA, FOF B-213, B-214.]

21 b. Parcel 23 is 0.045 acre, and Parcel 24 is 3.08 acres, for a total of 3.125 acres. (**Id.**,  
22 ¶100.) [Hui/MTF and OHA, FOF B-221.]

23 c. Using the bucket method, Nakama estimated that 72,000 gpd was the existing use  
24 to cultivate 1.045 acre of lo`i, which, because of insufficient water, was less than was  
25 historically cultivated over the entire 3.125 acres. (**Id.**, ¶¶ 104-105; SWUPA 2322  
26 Attachment 1 at 2; SWUPA 2323N Attachment 1 at 2.) [Hui/MTF and OHA, FOF B-  
27 222.]

28 d. Parcel 23 is the entirety of LCA 3701, `āpana 3, mahele 1, confirmed by RP 5983  
29 and referred to as `āpana 2 in the native testimony in support of the award. The native  
30 testimony states this land consisted of six lo`i kalo without reference any other uses. (**Id.**,  
31 ¶¶ 82, 90; Exh. 2322-Barrett-1.) [Hui/MTF and OHA, FOF B-218.]



1 e. Parcel 24 is comprised of several LCAs: the entirety of LCA 4277:1, confirmed  
2 by RP 5988; the entirety of LCA 4416:1.1, confirmed by RP 4112; a large portion of  
3 LCA 4405E, confirmed by RP 5274; and the entirety of LCA 4405F, confirmed by RP  
4 4089. Parcel 24 also contains six pō`alima of the konohiki award to Kamāmalu, LCA  
5 7713:24. The records supporting these four LCAs describe them as lo`i kalo lands,  
6 without referencing any other use. (*Id.*, ¶¶ 81, 83-87, 91-97; Exh. 2322-Barrett-2 to -7.)  
7 [Hui/MTF and OHA, FOF B-219 to B220.]

8 f. The Commission provisionally approved appurtenant rights for both Parcels, but  
9 for Parcel 24, LCA 4405P, confirmed by RP 6149, was referenced, not LCA 4405F,  
10 confirmed by RP 4089, and there was no reference to LCA 7713:24. (Provisional Order,  
11 Attachment C, Revised Exh. 7, pp. 6-7.)

12 g. Barrett and Nakama request appurtenant rights of 937,500 gpd (3.125 acres x  
13 300,000 gad), based on Reppun’s high estimate. (*Id.*, ¶¶ 100-102.) [Hui/MTF and OHA,  
14 FOF B221.]

15 h. However, approximately 10 percent of Parcel 24 is comprised of the six pō`alima  
16 of the konohiki award to Kamāmalu, LCA 7713:24, for which the total acreage and other  
17 uses are not described. (Exh. 2322-Barrett-7.)

18 i. Therefore the acreage for appurtenant rights should be reduced from 3.125 acres  
19 to 2.813 acres.

20 h. They also request 937,500 gpd to irrigate the entire 3.125 acres of lo`i (3.125  
21 acres x 300,000 gad), using Reppun’s high estimate. (*Id.*, ¶¶ 106-107.) [Hui/MTF and  
22 OHA, FOF B223.]

23  
24 349. **SWUPAs 2252/2253N—Crystal Koki**

25 a. Crystal and Clifford Koki filed existing- and new-use SWUPAs on April 23, 2009  
26 for TMK Nos. (2) 3-2-003:004 (“Parcel 4”), (2) 3-2-003:032 (“Parcel 32”), and (2) 3-2-  
27 003:037 (“Parcel 37”). (Koki, WT, 12/22/15, ¶ 1; SWUPA 2252 at 3-4; SWUPA 2253N  
28 at 2-3.) [Hui/MTF and OHA, FOF B-224.]

29 b. Parcel 4 is 0.5 acre, Parcel 32 is 0.16 acre, and Parcel 37 is 0.6 acre, for a total of  
30 1.26 acres. (*Id.*, ¶¶ 18-21; SWUPA 2252 at 4; SWUPA 2253N at 3.) [Hui/MTF and  
31 OHA, FOF B-233.]

1 c. The Kokis grow kalo on Parcel 32 (0.16 acres), attempt to grow kalo on Parcel 4  
2 (0.5 acre), and also use water for their yard, domestic plants, and fruit trees on  
3 approximately 0.46 (out of 0.6) acres of Parcel 37 and 0.0625 acre of Parcel 4. They have  
4 not measured all these uses, but estimate their domestic use at 1,568 gpd (0.46 acres +  
5 0.0625 acres x 3,000 gad), using the Maui County domestic cultivation standard. (*Id.*, ¶¶  
6 24-25; SWUPA 2252 at 3-4, Attachment 1 at 1-3; SWUPA 2253N, Attachment 1, at 1,  
7 3.) [Hui/MTF and OHA, FOF B-235, b-236.]

8 d. When there is sufficient and consistent water flow, the Koki `ohana intends to  
9 restore their lo`i cultivation to historic levels, or a total of 0.736 acres (all of Parcels 4  
10 and 32, and about 1/8 of Parcel 37.) They request an additional 220,800 gpd for this  
11 purpose, using Reppun’s high estimate (0.736 acre x 300,000 gad). (*Id.*, ¶¶ 26; SWUPA  
12 2253N at 3, Attachment 1, at 2.) [Hui/MTF and OHA, FOF B-237.]

13 e. Parcel 4 is comprised of a portion of LCA 4377:1, confirmed by RP 4105. The  
14 native testimony states that `āpana 1 was a “section of loi.” (*Id.*, ¶¶ 6, 9, 14; Exh. 2252-  
15 Koki-1.) [Hui/MTF and OHA, FOF B-229, B-230.]

16 f. Parcel 32 is comprised of a portion of LCA 4405E:1, confirmed by RP 5274. The  
17 native and foreign testimonies state that `āpana 1 was “moo kalo.” (*Id.*, ¶¶ 7, 10, 15; Exh.  
18 2252-Koki-2.) [Hui/MTF and OHA, FOF B-229, B-230.]

19 g. Parcel 37 is comprised of a portion of LCA 4377:1 (as does Parcel 4), as well as  
20 portions of LCAs 4426:1, confirmed by RP 4937, and LCA 425, confirmed by RP 3345.  
21 The foreign testimony for LCA 4426 states that `āpana 1 included “16 lois and one kula.”  
22 The foreign testimony for LCA 425 states that it consisted of “one piece on which his  
23 house is situated, and several kalo patches.” (*Id.*, ¶¶ 8, 11-12, 16-17; Exh. 2252-Koki-3, -  
24 4.) [Hui/MTF and OHA, FOF B-229, B-231, B-232.]

25 h. The Commission provisionally approved appurtenant rights for Parcels 4, 32, and  
26 37. For Parcel 37, only documents for LCA 4377:1 were submitted and not for LCAs  
27 4426:1 and 425. (Provisional Order, Attachment C, Revised Exh. 7, pp. 5-6.)  
28 [Hui/MTF and OHA, FOF B-230.]

29  
30 350. **SWUPA 2367N—Lawrence Koki**

1 a. On April 23, 2009, Lawrence Koki filed a new-use SWUPA for TMK No. (2) 3-  
2 2-003-030 (“Parcel 30”), for which he claimed appurtenant rights and requested 2,400  
3 gpd for domestic use on 0.8 acre of Parcel 30’s 0.93 acre. (SWUPA 2367N, p. 1, p. 2,  
4 table 1, p. 3, table 2.)

5 b. The Commission had granted provisional recognition, noting an auwai as  
6 boundary and a house lot and several kalo patches. (Provisional Order, Attachment C,  
7 Revised Exh. 7, p. 7.)

8 c. Koki did not submit testimony for nor participate in the CCH.

9  
10 351. **SWUPAs 2324/2325N—William La`a & Emmett & Renette Rodrigues**

11 a. William La`a and the Rodrigues filed SWUPAs for existing- and new-uses on  
12 April 30, 2009 for TMK No. (2) 3-2-003:002 (“Parcel 2”). They also maintain lo`i kalo  
13 on TMK No. (2) 3-2-003:003 (“Parcel 3”), which is completely enclosed by Parcel 2 and  
14 owned by the George Ezaki Trust. Although the Trust owns Parcel 3, the Rodrigues  
15 `ohana has always cultivated it along with their other lo`i in Parcel 2 and therefore claim  
16 appurtenant rights for Parcel 3 as well. (Rodrigues, WT, 11/17/15, ¶¶ 1, 6, 9; SWUPA  
17 2324 at 3-4; SWUPA 2325N at 2-3; Exhs. 2324-Laa-1, -3.) [Hui/MTF and OHA, FOF B-  
18 238, B-239.]

19 b. Parcel 2 is 2.053 acres. Parcel 3 is 0.107 acres. (**Id.**, ¶¶ 9-11.) [Hui/MTF and  
20 OHA, FOF B-243, B-244.]

21 c. Parcel 2 is a portion of LCA 4426:1, confirmed by RP 4937, the same LCA as  
22 discussed in SWUPAs 2252/2253N—Crystal Koki, described as containing “16 lois and  
23 one kula.” (**Id.**, ¶ 11; Exh. 2252-Koki-3.) [Hui/MTF and OHA, FOF B-243, B-244.]

24 d. Parcel 3 is a pō`alima of the konohiki award to Victoria Kamāmalu, LCA  
25 7713:24. (**Id.**, ¶¶ 9-10, 13.) [Hui/MTF and OHA, FOF B-244.]

26 e. The Commission provisionally approved appurtenant rights for LCA 4426:1,  
27 noting the pō`alima within the `āpana. (Provisional Order, Attachment C, Revised Exh. 7,  
28 p. 7.) [Hui/MTF and OHA, FOF B-245.]

29 f. The Rodrigues `ohana request recognition of appurtenant rights for Parcels 2 and  
30 3 in the amount of 524,100 gpd, based on Reppun’s high estimate of 300,000 gad for  
31 1.747 acres. The 1.747 acres include Parcel 3’s 0.107 acre plus their estimate that 1.64

1 acres of Parcel 2's 2.053 acres was in kalo at the time of the Māhele, based on ancient  
2 lo`i that they have restored. (**Id.**, ¶¶ 11-12.) [Hui/MTF and OHA, FOF B-242.]

3 g. The correct estimate is 1.848 acres, based on the percent of LCA 4426:1 that is  
4 estimated to have been in lo`i at the time of the Māhele. (**Id.**, ¶ 11;Exh. 2252-Koki-3.)  
5 [Hui/MTF and OHA, FOF B-243, B-244.]

6 h. Therefore, when based on Reppun's high estimate, the Rodrigues `ohana's  
7 appurtenant rights request should have been 586,500 gpd ( $1.848 + 0.107 = 1.955$  acre x  
8 300,000 gad = 586,500 gpd).

9 i. They also request a permit for 492,000 gpd to irrigate 1.64 acre of lo`i, based on  
10 Reppun's high estimate (1.64 acre x 300,000 gad). (**Id.**, ¶¶ 19-20; SWUPA 2325N at 2.)  
11 [Hui/MTF and OHA, FOF B-250.]

12 j. 54,000 gpd was their existing use for the 1.64 acres, based on the five-gallon  
13 bucket method. (**Id.**, ¶¶ 17, 21; SWUPA 2324, Attachment at 2; SWUPA 2325N,  
14 Attachment 1 at 2.) [Hui/MTF and OHA, FOF B-249.]

15  
16 352. **SWUPA 2364N—William Freitas**

17 a. On April 23, 2009, William Freitas filed a new-use SWUPA for TMK No. (2) 3-  
18 2-002:037 ("Parcel 37"). His daughter, Miki`ala Pua`a-Freitas, testified on his behalf and  
19 also for SWUPAs 2269/2270N, filed by her father and Michael Rodrigues. (SWUPA  
20 2364N; Pua`a-Freitas, WT, 1/29/16, ¶ 1.)

21 b. Parcel 37 is 0.775 acre, for which Freitas requests recognition of appurtenant  
22 rights for 232,500 gpd and a permit for 150,825 gpd for 0.5 acre of kalo lo`i and 0.275  
23 acre of fruits and vegetables and water for fowl, based on Reppun's high estimate of  
24 300,000 gad for kalo lo`i and Maui County standard for diversified agriculture of 3,000  
25 gad. (**Id.**, ¶¶ 14, 24-27.)

26 c. There is a small house of 500 square feet, but Pua`a-Freitas maximizes use over  
27 the rest of the land. (Tr., 7/12/16, p. 59, ll. 8-23.)

28 d. Freitas had applied for a new- instead of an existing-use permit, because of lack  
29 of sufficient water in 2008, even though their kuleana had used water from the `auwai for  
30 generations. In 2012, they restored kuleana water to Parcel 37 and have been using water

1 for six lo`i and their garden and fowl. They plan to restore 0.5 acre of kalo lo`i. (**Id.**, ¶¶  
2 21-23.)

3 e. Freitas has also established Kapuna Farms on Parcel 37, which produces honey  
4 for both their family’s consumption and for sale. (**Id.**, ¶ 38.)

5 f. Parcel 37 has been in the Freitas `ohana since the Māhele and had included all of  
6 LCA 4405EE:1, confirmed by RP 6207, although Parcel 37 now includes only a portion  
7 of the LCA. They have burials on the property. (**Id.**, ¶ 5; Pua`a-Freitas, Tr., 7/12/16, p.  
8 47, l. 24 to p. 48, l. 5.)

9 g. LCA 4405EE:1 was described as “a section of kalo and kula land.” Based on the  
10 terracing and slope of the land and the existence of ancient lo`i walls throughout, Pua`a-  
11 Freitas believes the kalo portion was on their land. ((**Id.**, ¶ 12; Pua`a-Freitas, Tr., 7/12/16,  
12 p. 50, l. 8 to p. 51, l. 23; Exh. 2364-Freitas-1-p. 4.)

13 h. The Commission had granted provisional approval, commenting that there were  
14 multiple references to pō`alima as boundary, that native testimony referred to 36 lo`i, one  
15 kula and one house lot, and that the native register referenced 13 pō`alima, patch pauku,  
16 and pasture. (Provisional Order, Attachment C, Revised Exh. 7, p. 7.)

17  
18 **b. South Waihe`e `Auwai**

19  
20 353. The following SWUPAs receive water from the Spreckels Ditch via the South Waihe`e  
21 `Auwai (See Figure 1).

22  
23 354. **SWUPA 2249—Kenneth Kahalekai**

24 a. Kenneth Kahalekai filed existing-use SWUPAs for five parcels, two of which are  
25 now cared for by Kau`i Kahalekai, who has a separate application under SWUPA 2312.  
26 The remaining three SWUPAs are for TMKs No. (2) 3-2-004:002 (“Parcel 2”), No. (2) 3-  
27 2-004:003 (“Parcel 3”), and No. (2) 3-2-029 (“Parcel 29”). (Kahalekai, WT, 12/14/15, ¶  
28 1; SWUPA 2249 at 4.) [Hui/MTF and OHA, FOF B-276.]

29 b. Kahalekai requests appurtenant rights for these three parcels for 785,100 gpd and  
30 a permit for 578,100 gpd. (Kahalekai, WT, 12/14/15, ¶¶ 3, 17

1 c. Parcel 2 is 0.957 acre and is comprised of the majority of LCA 3718, confirmed  
2 by RP 5452, and two pō`alima of the konohiki award to Kamāmalu, LCA 7713:24. Parcel  
3 3 is 1.44 acres and is comprised of all of LCA 4432:1, confirmed by RP 5361, and three  
4 pō`alima of LCA 7713:24. Parcel 29 is 0.44 acre and is comprised of a portion of LCA  
5 3718, and a portion of LCA 7713:24. Parcels 2 and 29 together comprise the entirety of  
6 LCA 3718. (Kahalekai, WT, 12/14/15, ¶ 4.) [Hui/MTF and OHA, FOF B-280.]

7 d. The Commission provisionally approved appurtenant rights for Parcel 2 based on  
8 LCA 3718, for Parcel 3 based on LCA 4432:1, and and for Parcel 29 based on LCAs  
9 3718 and 4440. Kahalekai's current information does not mention LCA 4440 and now  
10 identifies LCA 7713:24 for Parcels 2, 3, and 29. (Provisional Order, Attachment C,  
11 Revised Exh. 7, pp. 8-9.) [Hui/MTF and OHA, FOF B-281.]

12 e. LCA 3718 is described as containing 61 lo`i. LCA 4432:1 is described as  
13 containing 8 lo`i and 3 pō`alima. (Kahalekai, WT, 12/14/15, ¶¶ 8, 10.) [Hui/MTF and  
14 OHA, FOF B-283-284.]

15 f. Kahalekai estimates the amount of land cultivated in lo`i kalo at the time of the  
16 Māhele totaled 2.167 acres: all 0.957 acre of Parcel 2, all 1.44 acres of Parcel 3, and half,  
17 or 0.22 acre of Parcel 29. About half of Parcel 29 is comprised of the konohiki award  
18 7713:24, so without any description, Kahalekai attributed only half of Parcel 29 to kalo  
19 lo`i at the time of the Māhele. (Kahalekai, WT, 12/14/15, ¶¶ 8-9.) [Hui/MTF and OHA,  
20 FOF B-285.]

21 g. However, the pō`alima in Parcels 2 and 3 were also part of the konohiki award to  
22 Kamāmulu, LCA 7713:24. A hand-drawn map of LCA 3718 shows two pō`alima  
23 comprising about 10 percent of the size of LCA 3718, and a similar map of LCA 4432:1  
24 shows three pō`alima comprising less than 10 percent of the size of LCA 4432:1. (Exhs.  
25 2249-Kahalekai-1, -2.)

26 h. A similar analysis as provided by Kahalekai for Parcel 29 would reduce Parcel 2's  
27 0.957 acres to 0.861 acres ( $0.957 \times 0.9$ ), and Parcel 3's 1.44 acres to 1.296 acres ( $1.44 \times$   
28  $0.9$ ).

29 i. Therefore, the estimate of the amount of land cultivated in lo`i kalo at the time of  
30 the Māhele would be 2.377 acres ( $0.861 + 1.296 + 0.22$ ).

1 j. On April 30, 2008, Kahalekai claims to have been cultivating 1.92 acres of lo`i on  
2 Parcels 2 and 3 and water for domestic purposes on 0.7 acre. (Kahalekai, WT, 12/14/15, ¶  
3 17.) [Hui/MTF and OHA, FOF B-292-293.]

4 k. Kahalekai’s claim of 785,100 gpd and a permit for 578,100 gpd is based on  
5 Reppun’s high estimate of 300,000 gad for kalo lo`i and Maui County domestic  
6 cultivation of 3,000 gad. (Kahalekai, WT, 12/14/15, ¶ 17.) [Hui/MTF and OHA, FOF B-  
7 292-293.]

8  
9 355. **SWUPA 2312—Kau`i Kahalekai**

10 a. Kau`i Kahalekai testified in support of existing uses filed on April 23, 2009, for  
11 four parcels: TMKs No. (2) 3-2-005:023 (“Parcel 23”) and No.(2) 3-2-005:022 (“Parcel  
12 22”), as well as two parcels originally included in SWUPA 2249, TMKs No. (2) 3-2-  
13 004:019 (“Parcel 19”) and No. (2) 3-2-005:027 (“Parcel 27”). (Kahalekai, WT, 1/28/16, ¶  
14 1; SWUPA 2312; SWUPA 2249.) [Hui/MTF and OHA, FOF B-294.]

15 b. Parcel 19 is 1.17 acres and Parcel 23 is 1.1 acres, both of which have been  
16 cultivated by the Kahalekai`s `ohana for several generations.

17 1. Parcel 19 is comprised of all of LCA 3866:3, confirmed by RP 5330, and  
18 all of LCA 4303 and 4304:1, confirmed by RP 5358. LCA 3866:3 was partly in  
19 lo`i kalo and partly in kula. LCAs 4303 and 4304:1 were entirely in kalo. Based  
20 on the existence of ancient lo`i walls on Parcel 19, Kahalekai concluded that 1  
21 acre was cultivated in lo`i kalo and the remaining 0.17 acre was kula. The  
22 Commission provisionally approved appurtenant rights for LCA 4303.

23 2. Parcel 23 is wholly comprised of LCA 4405-HH: 1 & 2, confirmed by RP  
24 4119. Both were partly in lo`i kalo and partly in kula. Based on the ancient lo`i  
25 walls, Kahalekai estimates that 75%, or 0.825 acre, was in lo`i kalo and 0.275  
26 acre was in kula.

27 (Kahalekai, WT, 1/28/16, ¶¶ 4, 11, 13, 15; Exhs. 2312-Kahalekai-1 to 3.) [Hui/MTF and  
28 OHA, FOF B-298, B-300.]

29 c. Parcel 22 is 0.12 acre and Parcel 27 is 0.766 acre, both of which were pō`alima of  
30 the konohiki award to Kamāmalu, LCA 7713:24. (Kahalekai, WT, 1/28/16, ¶¶ 4, 14, 16;  
31 Exhs. 2312-Kahalekai-3, -5, -6, -7.) [Hui/MTF and OHA, FOF B-299, B-301.]

1 d. The Commission granted provisional recognition of appurtenant rights for Parcels  
2 19, 22, and 23 but not 27 because of illegible documents for LCA 7713:24. Parcel 19's  
3 approval was based on LCA 4303, with no mention of LCAs 4304:1 or 3866:3. Parcel  
4 22's approval was based on 4405HH:1 with no mention of 4405HH:2. Parcel 23's  
5 approval was based on LCA 4405HH:1. (Provisional Order, Attachment C, Revised Exh.  
6 7, pp. 9, 11.) [Hui/MTF and OHA, FOF B-299, B-300.]

7 e. She requests appurtenant rights of 812,835 gpd and an existing-use permit for  
8 832,800 gpd for the four parcels, both of which were not measured but estimates using  
9 Reppun's high estimate of 300,000 gad for kalo lo`i and Maui County's domestic  
10 cultivation standard of 3,000 gad.

11 1. The total acreage for which Kahalekai claims appurtenant rights is 2.705  
12 (should have been 2.711) acres for kalo lo`i and 0.445 acre for other diversified  
13 agriculture, resulting in her request for 812,835 gpd.

14 2. Her request of 832,800 gpd in existing use is comprised of 2.776 acres in  
15 lo`i kalo out of a total of 3.156 acres across her four parcels, using Reppun's high  
16 estimate (2.776 x 300,000 gad).

17 (Kahalekai, WT, 1/28/16, ¶¶ 3, 17-20, 22-23; SWUPA 2249 at 4; SWUPA 2312 at 4.)  
18 [Hui/MTF and OHA, FOF B-295, B-302, B-304.]

19 f. The 2.776 acres of existing use is comprised of:

- 20 1. All 1.17 acres of Parcel 19.
- 21 2. 0.076 of 0.12 acre of Parcel 22.
- 22 3. 0.77 of 1.11 acres of Parcel 23.
- 23 4. 0.76 of 0.766 acre of Parcel 27.

24 (SWUPA 2312: Attachments, p. 2, and Exhibit 2; Exhibit2312-Kahalekai-8.)  
25

26 356. **SWUPAs 2320/2321N—Ramsay Anakalea (Aloha Poi)**

27 a. Ramsay Anakalea filed for existing- and new-uses for TMK No. (2) 3-2-005:020  
28 ("Parcel 20"), which he leases to Aloha Poi, requesting appurtenant rights of 181,500 gpd  
29 and a permit for 150,000 gpd, of which 72,000 gpd was the existing use as of April 30,  
30 2008. (Nakama, WT, 2/3/16, ¶¶ 54, 56-57.) [Hui/MTF and OHA, FOF B-305, B-306.]



1 b. Parcel 20 is 1.2 acres and is the entirety of LCA 4405-V: 1 & 2, confirmed by RP  
2 4117. Some of the land was in kalo lo`i and some in `uala at the time of the Māhele.  
3 Based on the slope of the land and the existence of lo`i kalo walls, Nakama estimates half  
4 of the land was in lo`i kalo. The Commission provisionally recognized appurtenant rights.  
5 (*Id.*, ¶¶ 58, 61; Provisional Order, Attachment C, Revised Exh. 7, p. 12.) [Hui/MTF and  
6 OHA, FOF B-307.]

7 c. The 72,000 gpd of existing use is to irrigate 0.5 acres and was measured by the  
8 bucket method. The total permit request is based on using Reppun’s high estimate of  
9 300,000 gad for kalo lo`i (0.5 acre x 300,000 gad). The appurtenant rights recognition is  
10 based on Reppun for half of Parcel 20, or 0.6 acres (0.6 acres x 300,000 gad = 180,000  
11 gpd), and the water duty for diversified agriculture in *Waiāhole* for 0.6 acres (0.6 acre x  
12 2,500 gad = 1,500 gpd), for a total request of 181,500 gpd. (*Id.*, ¶¶ 66-67.) [Hui/MTF and  
13 OHA, FOF B-305, B-308, B-310.]  
14

15 **357. SWUPA 2406N—David & Anne Brown**

16 a. On June 10, 2009, David and Anne Brown filed a new-use SWUPA for TMK No.  
17 (2) 3-2-005:028, a 11.74-acre property, for which they requested 10,000 gad, or 112,740  
18 gpd for 9.0 acres of fruit trees and 2.274 acres of aquaculture. (SWUPA 2406N, p. 2,  
19 table 1, p. 3, table 2.)

20 b. They claimed appurtenant rights but provided no documents nor participated in  
21 the provisional approval process. (SWUPA 2406N, p. 1; Provisional Order, Attachment  
22 C, Revised Exh. 7, p. 14.)

23 c. The Browns did not submit any written testimony and did not participate in the  
24 CCH.  
25

26 **358. SWUPAs 2262/2263N—John Varel (Kalani & Tera Paleka)**

27 a. John Varel owns four properties in Waihe`e and Waiehu for which he is seeking  
28 permits, three of which he acquired after the SWUPAs were filed and is thus pursuing in  
29 place of the original applicants: SWUPAs 2262 and 2263N (Paleka), 2298 and 2299N  
30 (Varel), 2593N (Koolau Cattle Co.), and 3470N (Emmanuel Lutheran Church). Varel,  
31 WT, September 12, 2016, ¶¶ 1, 3.) [Hui/MTF and OHA, FOF B-74.]

1 b. The Palekas filed for existing- and new-uses for TMKs No. (2) 3-2-005:035  
2 (“Parcel 35”) and No. (2) 3-2-041 (“Parcel 41”), on April 23 2009, which were bought by  
3 the John and Angelia Varel Trust in 2011. (Varel, WT, 2/14/16, ¶ 2; SWUPA 2262 at 4;  
4 SWUPA 2263N at 3.) [Hui/MTF and OHA, FOF B-312.]

5 c. Parcel 35 is 0.26 acres, and parcel 41 is 0.13 acres. (SWUPA 2263N at 3).

6 d. Varel seeks appurtenant rights for 117,000 gpd and permits for 82,200 gpd, of  
7 which 61,851 gpd is the existing use as of April 30, 2008. (Varel, WT, 9/12/16, ¶ 8;  
8 SWUPA 2262 at 2.) [Hui/MTF and OHA, FOF B-312.]

9 e. The Commission had granted provisional approval for both parcels, noting a  
10 reservation by Wailuku Sugar Company for Parcel 35. (Provisional Order, Attachment C,  
11 Revised Exh. 7, p. 9.)

12 f. The deeds to both parcels contain reservations of appurtenant rights when they  
13 were sold by Wailuku Sugar Co. in 1963. (*Id.*, ¶ 7; SWUPA 2262, Addendum at 1.)  
14 [Hui/MTF and OHA, FOF B-313.]

15 g. The Palekas used the bucket method to estimate their existing use for their 0.074-  
16 acre lo`i at about 61,851 gpd, and applied the 600 gpd figure for a single-family home to  
17 estimate their domestic use for two homes on about 0.27 acre at 1,200 gpd. (*Id.*, ¶22;  
18 SWUPA 2262 at 4, Addendum at 2, Exhs. 3-8 (photos).) [Hui/MTF and OHA, FOF B-  
19 315.]

20 h. Varel plans to irrigate 0.16 acre of lo`i on Parcel 35’s 0.26 acres and 0.11 acre of  
21 lo`i on Parcel 41’s 0.13 acres, for which he requests 81,000 gpd, using Reppun’s high  
22 estimate (0.27 acre x 300,000 gad). He also uses kuleana water to irrigate two small non-  
23 commercial gardens on both parcels and requests 1,200 gpd, applying 600 gpd for a  
24 single-family home. (*Id.*, ¶¶ 23-26.) [Hui/MTF and OHA, FOF B-316, B-317.]

25  
26 **359. SWUPAs 2334/2335N—Burt Sakata & Peter Fritz**

27 a. On April 30, 2009, Sakata and Fritz filed:

28 1. an existing-use SWUPA for four parcels: TMKs No. (2) 3-2-005:011  
29 (“Parcel 11”), No. (2) 3-2-005:013 (“Parcel 13”), No. (2) 3-2-005:019 (“Parcel  
30 19”), and No. (2) 3-2-005:039 (“Parcel 39”); and

1           2.       a new-use SWUPA for three parcels: Parcel 13, TMK No. (2) 3-2-005:015  
2           ("Parcel 15"), and TMK No. (2) 3-2-005:017 ("Parcel 17").

3           (Sakata, WT, 1/15/16, ¶ 1; SWUPA 2334 at 4; SWUPA 2335N at 3.) [Hui/MTF and  
4           OHA, FOF B-318.]

5           b.       The deeds to Parcels 11, 15, 19 and 39 contain reservations of appurtenant rights  
6           in deeds dated 2001; Parcels 13 and 17 do not have reservations. (**Id.**, ¶ 3; Sakata, Tr.,  
7           7/13/16, p. 55, l. 21 to p. 56, l. 15.) [Hui/MTF and OHA, FOF B-320.]

8           c.       Sakata requests recognition of appurtenant rights for all six parcels in the amount  
9           of 2,543,100 gpd and permits for existing and new uses for 384,354 gpd, of which 4,254  
10          gpd was the existing use. (**Id.**, ¶ 5; SWUPA 2334 at 2; SWUPA 2335N, Attachment A.)  
11          [Hui/MTF and OHA, FOF B-319.]

12          d.       Parcel 11 is 0.07 acres; Parcel 13 is 0.61 acres, Parcel 15 is 0.03 acres, Parcel 17  
13          is 0.81 acres, Parcel 19 is 12.341 acres, and Parcel 39 is 0.11 acres, for a total of 13.971  
14          acres. (**Id.**, ¶¶ 6, 16, 23, 27, 30, 33.)

15          e.       Sakata requests recognition of appurtenant rights for 8.471 acres of kalo lo`i and  
16          three house lots, for a total of 2,543,100 gpd, based on Reppun's high estimate of  
17          300,000 gad (8.471 acres x 300,000 = 2, 541, 300) and Maui County standard for  
18          domestic use of 600 gpd (3 households x 600 gpd = 1,800 gpd), resulting in the  
19          2,543,100 gpd total (2,541,300 + 1,800 = 2,543,100 gpd). (**Id.**, ¶¶ 70-71.)

20          f.       Appurtenant rights of 8.471 acres of kalo lo`i and three house lots are based on:

21           1.       Parcel 11: is a pō`alima of LCA No. 7713:24 to Kamāmalu, confirmed by  
22           RP 4475. Thus, Sakata claims all 0.07 acres under appurtenant rights.

23           (**Id.**, ¶¶ 6-16.)

24           2.       Parcel 13: is the entirety of LCA No. 7686:1, confirmed by RP 6284.

25           Documents describe eleven lo`i kalo, some small kulas, and a house lot. Sakata  
26           concludes from the existence of rock walls and the high concentration of lo`i kalo  
27           in the area, that there were only small areas of dryland cultivation on the lo`i  
28           banks. He therefore estimates the amount of land in kalo as 0.36 acre (0.61 – 0.25  
29           houselot = 0.36 acre). (**Id.**, ¶¶ 27-29.)

1 3. Parcel 15: is part of a pō`alima of LCA No. 7713:24 to Kamāmalu,  
2 confirmed by RP 4475. Thus, Sakata claims all 0.03 acres under appurtenant  
3 rights. (**Id.**, ¶¶ 16-22.)

4 4. Parcel 17: is the entirety of LCA No. 3770-B:1, confirmed by RP 8066;  
5 the entirety of LCA No. 4444-B, confirmed by RP 8065; and the entirety of LCA  
6 4444:1, confirmed by RP 6380. Documents describe all three LCAs as only  
7 containing kalo lo`i. Thus, Sakata claims all 0.81 acres under appurtenant rights.  
8 (**Id.**, ¶¶ 30-32.)

9 5. Parcel 19: includes:

- 10 i. the entirety of LCAs 3434:1 & 2, 3515, 3886-B:1, 3997,  
11 4284:2, 4303 & 4304:2 & 3, 4304-B:1, 4405-FF:1, 4405-LL:1 &  
12 2, 4417:1, 4438-B:1.1 & 1.2, and 8365-B:2, with all described as  
13 being in kalo lo`i, except 4303 & 4304:2 & 3 as having a section of  
14 kalo and houselot, 4304-B:1 as having kalo and kula land, and  
15 8365-B:2 as consisting of kalo and kula land;
- 16 ii. a portion of LCAs 3510:1 and 4440, with 4440 described as  
17 a piece of kalo and kula land; and
- 18 iii. a portion of LCA No. 7713:24 and eight pō`alima of LCA  
19 No. 7713:24.

20 Sakata claims appurtenant rights for 7.091 acres for Parcel 19 after  
21 subtracting 5 acres for the land attributed to LCA No. 7713:24 and 0.25  
22 acres for the houselot from the total of 12.341 acres.

23 Sakata (**Id.**, ¶¶ 33-67.)

24 6. Parcel 39: is a pō`alima of LCA No. 7713:24 to Kamāmalu, confirmed by  
25 RP 4475. Thus, Sakata claims all 0.11 acres under appurtenant rights. (**Id.**, ¶¶ 23-  
26 26.)

27 g. The Commission had granted provisional recognition. However: 1) For Parcel  
28 15, which they now claim was part of LCA 7713:24 to Kamāmalu, the LCA identified  
29 then was 4405-V:1&2, for which no documentation had been provided; 2) for Parcel 17,  
30 only LCA 3770-B:1 had been identified and not the other two; 3) and for Parcel 19, LCA  
31 4303 had no documentation, LCA 4417:4, not 4417:1, had been identified, and LCAs

1 4304:2&3, 3510, and 4440 had not been identified.(Provisional Order, Attachment C,  
2 Revised Exh. 7, pp. 12-13.)

3 h. Sakata estimates his existing use was about 4,254 gpd for a non-commercial  
4 garden on about 1.218 acres on Parcels 11, 13, 19, and 39, using Maui County domestic  
5 cultivation standard of 3,000 gad (1.218 acres x 3,000 gad = 3,654 gpd). He then added  
6 600 gpd, base on Maui County single-family home use, to account for the water he uses  
7 outside his home on Parcel 13 for gardening, to arrive at 4,254 gpd. (**Id.**, ¶¶ 23-26.)  
8 [Hui/MTF and OHA, FOF B-326.]

9 i. Sakata requests 380,100 gpd to restore 1.267 acres of lo`i, using Reppun’s high  
10 estimate (1.267 acres x 300,000 gad). (**Id.**, ¶¶ 77-78.) [Hui/MTF and OHA, FOF B-329.]

11 j. He does not seek a separate allocation for his agricultural uses but intends to use  
12 some of the water that passes through his lo`i to irrigate 12 acres of macadamia trees.  
13 Using the diversified agriculture water duty in *Waiāhole*, he estimates that 30,000 gpd  
14 (12 acres x 2,500 gad) of his 380,100 request for lo`i would be used to irrigate his trees.  
15 (**Id.**, ¶ 79.) [Hui/MTF and OHA, FOF B-329.]

16  
17 360. **SWUPAs 2225/2226N—Michael Doherty**

18 a. On April 23, 2009, Michael Doherty filed existing- and new-use SWUPAs for  
19 TMKs No. (2) 3-2-005:006 (“Parcel 6”), No. (2) 3-2-005:007 (“Parcel 7”), and No. (2) 3-  
20 2-005:008 (“Parcel 8”). (Doherty, WT, 1/29/16, ¶ 1; SWUPA 2225 at 4; SWUPA 2226N  
21 at 3.) [Hui/MTF and OHA, FOF B-330.]

22 b. Doherty requests recognition of appurtenant rights for 470,850 gpd and a permit  
23 for 602,550 gpd, of which 302,250 gpd is the existing use. All of these amounts were not  
24 measured but calculated by using Reppun’s high estimate of 300,000 gad for kalo lo`i  
25 and Maui County domestic cultivation standard of 3,000 gad. (**Id.**, ¶¶ 4, 29-32; SWUPA  
26 2225 at 2, 4, 24, Addendum at 2; SWUPA 2226N at 3.) [Hui/MTF and OHA, FOF B-  
27 331, B-342-B-345.]

28 c. Parcel 6 is 0.07 acres, Parcel 7 is 2.825 acres, and Parcel 8 is 0.05 acres, for a total  
29 of 2.945 acres. Parcels 6 and 8 are located within Parcel 7 and were pō`alima of the  
30 konohiki award to Kamāmalu, LCA 7713:24. (**Id.**, ¶¶ 6, 17-18, 20; Exh. 2225-Doherty-2,  
31 -3.) [Hui/MTF and OHA, FOF B-339 - B-340.]

1 d. Doherty estimates the acreage of land in Parcel 7 that was in kalo lo`i at the time  
2 of the Māhele was 2.325 acres out of a total of 2.825 acres, arrived through the following  
3 analysis:

4 1. Parcel 7 is comprised of a portion of LCA 3775:3, confirmed by RP 5360;  
5 all of LCA 4295:1, confirmed by RP 5401; all of LCAs 3770 & 4424:1; and all of  
6 LCA 4405NN, confirmed by RP 5104.

7 2. LCA 3775:3 was a “moo of kalo,” which Doherty estimates at 1 acre,  
8 using the Kīpuka database’s area measurement tool.

9 3. LCA 4295:1 was a “section of taro with dryland with house.” Based on the  
10 existence of rock walls and other land features, the high concentration of lo`i in  
11 this area, and the common practice for pāhale at the time of the Māhele, Doherty  
12 estimates that the LCA was 0.25 acre for the pāhale, 0.25 acre for dryland  
13 cultivation, and 0.5 acre for lo`i kalo.

14 4. LCA 3770 & 4424:1 were “section of lois.”

15 5. LCA 4405NN contained nine lo`i, with no other description.

16 6. Subtracting the 0.5 acre for the pāhale and dryland cultivation from 2.825  
17 acres, the remainder is 2.325 acres.

18 (**Id.**, ¶¶ 5, 13-16; Exh. 2225-Doherty-1 to -4.) [Hui/MTF and OHA, FOF B-334-B-340.]

19 e. The Commission had provisionally approved appurtenant rights. Parcel 6 was  
20 described as derived from LCA 4295.1, confirmed by RP 5401 and not from 7713:24 to  
21 Kamāmalu; Parcel 8 was described as derived from LCA 3995:3, confirmed by RP 5360  
22 and not shown on the map, with applicant’s attorney describing it as a pō`alima but with  
23 no documentation; and Parcel 7 did not include LCA 4295:1, which was ascribed to  
24 Parcel 6, nor LCA 4424:1, and LCA 4405-NN was described as “2 pieces of kalo and  
25 kula lands,” and not nine lo`i. However, on the latter, the applicant provided a document  
26 of Native Testimony that stated that “I saw 1 piece of 9 lo`i inside...” (Provisional Order,  
27 Attachment C, Revised Exh. 7, p. 7; Exh. 2225-Doherty-4.) [Hui/MTF and OHA, FOF B-  
28 334.]

29 f. Adding Parcel 6’s 0.07 acre and Parcel 8’s 0.05 acre to 2.325 acres of Parcel 7,  
30 Doherty claims appurtenant rights for 2.445 acres of kalo lo`i.

1 g. He also claims appurtenant rights to 0.25 acre of a houselot (pāhale) and an  
2 additional 0.25 acre for dryland cultivation. (**Id.**, ¶ 21.)

3 h. Doherty claims existing uses of for one acre in lo`i cultivation, and 0.75 acre in  
4 domestic agriculture, using Reppun’s high estimate of 300,000 gad and the Maui County  
5 domestic agriculture standard of 3,000 gad, for a total of 302,250 gpd. (**Id.**, ¶¶ 29, 31;  
6 SWUPA 2225 at 4, Addendum at 2.) [Hui/MTF and OHA, FOF B-342.]

7 i. He also requests new uses for an additional acre of kalo lo`i, again based on  
8 Reppun’s 300,000 gad, and 0.1 acre of citrus trees, using Maui County domestic  
9 agriculture standard of 3,000 gad, for a total new use request of 300,300 gpd. (**Id.**, ¶¶ 30,  
10 32; SWUPA 2226N at 3.) [Hui/MTF and OHA, FOF B-343 – B-344.]

11  
12 361. **SWUPAs 2280/2281N—Thomas Texeira & Denise Texeira**

13 a. The Texeiras filed for existing- and new-use SWUPAs on April 23, 2009 for  
14 TMKs No. (2) 3-2-005:031 (“Parcel 31”) and No. (2) 3-2-005:032 (“Parcel 32”), seeking  
15 recognition of appurtenant rights of 98,100 gpd and a permit for 45,165 gpd, of which  
16 4,845 gpd was the existing use, using Reppun’s high estimate of 300,000 gad for kalo  
17 lo`i, a water duty for aquaculture of 36,000 gad, and Maui County’s domestic agriculture  
18 standard of 3,000 gad. (Texeira, WT, 1/29/16, ¶¶ 1, 3; SWUPA 2280 at 4; SWUPA  
19 2281N at 3; Texeira, Tr., 7/13/16, p. 70, l. 13 to p. 71, l. 15.) [Hui/MTF and OHA, FOF  
20 B-346 – B-347.]

21 b. The Commission had given provisional approval of appurtenant rights.  
22 (Provisional Order, Attachment C, Revised Exh. 7, p. 11.) [Hui/MTF and OHA, FOF B-  
23 352.]

24 c. Parcel 31 is 0.607 acre and all of LCA 4405U:2, confirmed by RP 5990, and a  
25 portiton of the konohiki award to Kamāmalu, LCA 7713:24.

26 i. LCA 4405U:2 is 0.27 acre, and described as consisting of 10 lo`i kalo,

27 ii. leaving the LCA 7713:24 portion at 0.337 acre.

28 (**Id.**, ¶¶ 4, 6; SWUPA 2280, p. 2, table 3; Exh. 2280-Teixeira-1.) [Hui/MTF and  
29 OHA, FOF B-350.]

30 d. The Texeiras state that Parcel 32 is 0.06 acres and all of LCA 3721:2, confirmed  
31 by RP 6439, and was in lo`i and dryland cultivation at the time of the Māhele. Ancient

1 rock walls still exist on approximately 95% of Parcel 32, or approximately 0.057 acres.  
2 However, there is a slight discrepancy with their existing-use application, which lists the  
3 acreage at 0.057, not 0.06 acre. (*Id.*, ¶¶ 4, 7-8, 10; Exh. 2280-Teixeira-2; SWUPA 2280, p.  
4 2, table 3.) [Hui/MTF and OHA, FOF B-351.]

5 e. The Teixeiras estimate that 0.327 acre was in lo`i kalo at the time of the Māhele:  
6 0.27 acre of Parcel 31’s 0.607 acre, plus 0.057 of Parcel 32. They did not include any  
7 acreage derived from LCA 7713:24 in Parcel 31. (*Id.*, ¶ 12.) [Hui/MTF and OHA, FOF B-  
8 353.]

9 f. The Teixeiras also had existing domestic uses on approximately 0.535 acre of  
10 their two parcels, and were also using water to maintain four koi ponds on about 0.09  
11 acre, but the koi died in early 2016 due to contamination of river water. (*Id.*, ¶¶ 14-16;  
12 Teixeira, Tr., 7/13/16, p. 70, l. 13 to p. 71, l. 2; SWUPA 2280 at 4, Addendum at 1-2.)  
13 [Hui/MTF and OHA, FOF B-355 – B-356.]

14 g. They intend to restore 0.15 acre of lo`i kalo (0.06 acre stated in the SWUPA plus  
15 0.09 acre previously in koi ponds.) (*Id.*, ¶ 16; Teixeira, Tr., 7/13/16, p. 70, l. 13 to p. 71, l.  
16 15, p. 72, l. 25 to p. 73, . 21; SWUPA 2281N at 3.) [Hui/MTF and OHA, FOF B-357.]  
17

18 **362. SWUPAs 2264/2265N—Piko Ao**

19 a. Piko A`o, LLC filed existing- and new-use SWUPAs for TMKs No. (2) 3-2-  
20 006:008 (“Parcel 8”) and No. (2) 3-2-006:019 (“Parcel 19”) on April 23, 2009. (Ishikawa,  
21 WT, 1/5/16, ¶ 1; SWUPA 2264 at 4; SWUPA 2265N at 3.) [Hui/MTF and OHA, FOF B-  
22 358.]

23 b. Piko A`o, or “center of learning,” operates a Hawaiian learning center on Parcels  
24 8 and 19, which they purchased from Wailuku Agribusiness in 2002. The deed contains a  
25 reservation of appurtenant rights. (*Id.*, ¶¶ 2, 4.) [Hui/MTF and OHA, FOF B-359, B-374.]

26 c. The Commission had given provisional approval of appurtenant rights.  
27 (Provisional Order, Attachment C, Revise Exh. 7, pp. 9-10.)

28 d. Piko A`o requests appurtenant rights for Parcels 8 and 19 of an estimated  
29 5,622,925 gpd and a permit for an estimated 1,451,675 gpd, of which 61,175 gpd was the  
30 estimated existing use. (*Id.*, ¶ 7; SWUPA 2264 at 2; SWUPA 2265N Attachment at 2.)  
31 [Hui/MTF and OHA, FOF B-361.]



- 1 e. Existing use consists of:
- 2 i. 0.17 acre of lo`i on Parcel 8, estimated at 51,000 gpd, using Reppun’s high
- 3 estimate (0.17 acre x 300,000 gad);
- 4 ii. 3.83 ares of diversified agriculture on Parcel 8, estimated at 9,575 gpd,
- 5 using the diversified agriculture irrigation amount of 2,500 gad in *Waiāhole*; and
- 6 iii. domestic use for dish- and hand-washing, using the Maui County single-
- 7 family home amount of 600 gpd.
- 8 (**Id.**, ¶¶ 63-65.) [Hui/MTF and OHA, FOF B-376 to B-378.]
- 9 f. Its new-use request consists of:
- 10 i. 4.61 acres of lo`i, estimated at 1,383,000 gpd using Reppun’s high
- 11 estimate (4.61 acres x 300,000 gad);
- 12 ii. 3 acres of diversified agriculture, estimated at 7,500 gpd (3 acres x 2,500
- 13 gad).
- 14 (**Id.**, ¶¶ 66-67.) [Hui/MTF and OHA, FOF B-379 to B-380.]
- 15 g. Parcel 8 is 32.42 acres, and Parcel 19 is 0.61 acres. (**Id.**, ¶¶ 50, 57.)
- 16 h. Parcel 19 consists of LCA 4405U:1, confirmed by RP 5990, and is described as
- 17 “21 loi.” (**Id.**, ¶¶ 9, 28, 48-49.)
- 18 i. Parcel 8 consists of a portion of the konohiki LCA No. 7713:24 to Kamāmalu,
- 19 confirmed by RP 4475, within which seventeen kuleana LCAs were awarded. Of Parcel
- 20 8’s 32.42 acres, 11.5 acres were estimated as comprising LCA 7713:24, with the rest
- 21 consisting of fourouselots (1.0 acre), 1.81 acre kula (dryland agriculture), and 18.11
- 22 kalo lo`i. (**Id.**, ¶¶ 8, 10-27, 30-47, 50-52.)
- 23 j. Piko A`o’s appurtenant rights request consists of:
- 24 i. 183,000 gpd for Parcel 19’s 0.61 acre (0.61 acre x 300,000 gad); and
- 25 ii. 5,439,925 gpd for Parcel 8’s 32.42 acres:
- 26 a. 5,433,000 gpd for 18.11 acres of kalo lo`i (18.11 acres x 300,000
- 27 gad);
- 28 b. 2,400 gpd for fourouselots (4 x 600 gpd);
- 29 c. 4,525 gpd for dryland crops (1.81 acres x 2,500 gad); and
- 30 d. none for 11.5 acres of the Kamāmalu konohiki LCA No. 7713:24.
- 31 (**Id.**, ¶¶ 52-60.)

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363. **SWUPAs 2316/2317N—Gordon Apo (Aloha Poi)**

a. Gordon Apo and Lester Nakama filed existing- and new-use SWUPAs for TMK Nos. (2) 3-2-006:010 (“Parcel 10”) and (2) 3-2-006:011 (“Parcel 11”) on April 30, 2009. Nakama has leased the land from the Apo`ohana, which also cultivates some kalo for their own use. (Nakama, WT, 2/3/16, ¶¶ 4, 7; SWUPA 2316 at 4; SWUPA 2317N at 3.) [Hui/MTF and OHA, FOF B-382.]

b. Parcel 10 is 1.34 acre, and Parcel 11 is 0.06 acre, for a combined total of 1.40 acre. (**Id.**, ¶ 16; SWUPA 2316 at 4.) [Hui/MTF and OHA, FOF B-388.]

c. Parcel 10 includes approximately one fourth of LCA 4063, confirmed by RP 3429, and the land was described as “apana kalo.” Parcel 11 is a small tract of land within Parcel 10 and was a pō`alima of the konohiki award to Kamāmalu, LCA 7713:24. (**Id.**, ¶¶ 9-10, 14-15; Exh. 2316-Apo-1; Exh. 2316-Apo-1-2; SWUPA 2316 at 4.) [Hui/MTF and OHA, FOF B-386, B-387.]

d. The Commission provisionally approved appurtenant rights for Parcels 10 and 11. (Provisional Order, Attachment C, Revised Exh. 7, pp. 11-12.) [Hui/MTF and OHA, FOF B-386.]

e. They request recognition of appurtenant rights for Parcels 10 and 11 for 420,000 gpd, and a permit for 219,000 gpd, of which 62,000 gpd is the existing use. The 62,000 gpd of existing use was measured by the bucket method for 0.73 acres, of which 0.67 acre was on Parcel 10 and 0.06 acre was on Parcel 11. The appurtenant right and permit requests were based on Reppun’s high estimates of 300,000 gad. (**Id.**, ¶¶ 2, 8, 13, 18-19, 21-22, 24; SWUPA 2316 at 2, 4 and Attachment 1 at 1-2; SWUPA 2317N Attachment 1 at 2.) [Hui/MTF and OHA, FOF B-383, B-388, B-389, B-390, B-391.]

364. **SWUPA 2187—Milla Puliatch**

a. On April 9, 2009, Milla Puliatch filed an existing-use SWUPA for TMK No. (2) 3-2-006:010 (“Parcel 10”), a 1.75-acre property with active kalo lo`i on 1.25 acres for 98 years, claiming an estimated existing use of 8,640 gpd. (SWUPA 2187, p. 2, table 1, p. 4, table 3, p.5.)

- 1 b. Puliatch had claimed appurtenant rights and had been granted provisional  
2 approval based on LCA 4063, confirmed by RP 3429, with the Native Register  
3 describing 28 lo`i and one house, the Foreign Testimony describing one large piece of  
4 kalo, and the Native Testimony describing 1 taro section with 8 pō`alima in it. (Exh.  
5 2187-Puliatch, Provisional Order, Exhibits, p. 60, Exh. 7.)  
6 c. Puliatch did not submit written testimony nor participate in the CCH.  
7

8 **365. SWUPAs 2221/2222N—Cordell Chang**

- 9 a. Cordell Chang filed SWUPAs for existing- and new-uses for TMK No. (2) 3-2-  
10 006:004 (“Parcel 4”). (Chang, WT, 1/30/16, ¶ 1; SWUPA 2221 at 4; SWUPA 2222N at  
11 3.) [Hui/MTF and OHA, FOF B-392.]  
12 b. Parcel 4 is 1.29 acres, of which Chang is farming 0.45 acres in bananas, tī leaf,  
13 `ulu, coconut, papaya, and other fruits and vegetables for his family, farmworkers,  
14 church, and the homeless, and some of which he sells. Applying the water duty in the  
15 **Waiāhole** case, he estimates his existing use as 1,125 gpd (0.45 acre x 2,500 gad). (**Id.**,  
16 ¶¶ 7-8, 12; SWUPA 2221 Attachments at 5 (map), 8-9 (photos).) [Hui/MTF and OHA,  
17 FOF B-399.]  
18 c. Chang requests an additional amount to grow 0.5 acre of lo`i kalo, which he  
19 estimates would require 150,000 gpd, using Reppun’s high estimate (0.5 acre x 300,000  
20 gad). (**Id.**, ¶ 13.) [Hui/MTF and OHA, FOF B-400.]  
21 d. Parcel 4 includes all of LCA 3805, confirmed by RP 5352. The native register  
22 states that the land included “forty two wetland taro patches, and a patch of pandanus  
23 (lauhala).” Ancient lo`i walls still exist on a majority of Parcel 4. Therefore, Chang  
24 estimates 1.25 acres of the 1.29 total acreage was cultivated in lo`i kalo, with the  
25 remainder cultivated in lauhala. (**Id.**, ¶¶ 5-8; Exh. 2221-Change-1.) [Hui/MTF and OHA,  
26 FOF B-396.]  
27 e. Chang estimates his appurtenant rights at 375,000 gpd (1.25 acres x 300,000 gad),  
28 using Reppun’s high estimate. (**Id.**, ¶ 10.) [Hui/MTF and OHA, FOF B-397.]  
29 f. The Commission had granted provisional recognition based on LCA 3805, noting  
30 lo`i kalo. (Provisional Order, Attachment C, Revised Exh. 7, p. 7.) [Hui/MTF and OHA,  
31 FOF B-396.]

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366. **SWUPAs 2313/2314N—Charlene & Jacob Kana**

a. The Kanas filed for existing- and new-use SWUPAs for TMKs No. (2) 3-2-006:001 (“Parcel 1”) and No. (2) 3-2-006:018 (“Parcel 18”) on April 30, 2009, requesting recognition of appurtenant rights for 471,000 gpd and permits for 345,999 gpd, of which 25,200 gpd was their claimed existing use, all of which were based on Reppun’s high estimate of 300,000 gad. (Kana, WT, 1/24/16, ¶¶ 2, 5, 15-17; SWUPA 2313 at 4; SWUPA 2314N at 3.) [Hui/MTF and OHA, FOF B-401-402.]

b. Parcel 1 is comprised of a portion of LCA 3963, confirmed by RP 6457; and Parcel 18 is comprised of a portion of LCA 3963, a portion of LCA 4296:1, confirmed by RP 5357, and four pō`alima of the konohiki award to Kamāmalu, LCA 7713:24. Together, Parcels 1 and 18 include the majority of LCA 3963, a portion of LCA 4296:1, and the four pō`alima. (Kana, WT, 1/24/16, ¶ 6.) [Hui/MTF and OHA, FOF B-405.]

c. The two LCAs are described as cultivated in numerous lo`i without referencing any other use. The maps for LCA 3963 depict the four pō`alima, which are part of Parcel 18. (Kana, WT, 1/24/16, ¶¶ 7-13; Exhs. 2313-Kana-1 to -4.) [Hui/MTF and OHA, FOF B-406.]

d. The Commission had granted provisional approval for Parcels 1 and 18, based on LCA 3963, but there was no mention of LCA 4296 and LCA 7713:24 for Parcel 18. (Provisional Order, Attachment C, Revised Exh. 7, p.11.) [Hui/MTF and OHA, FOF B-405.]

e. Parcel 1 is 0.315 acre and Parcel 18 is 1.251 acres, for a total of 1.57 acres. (Kana, WT, 1/24/16, ¶¶ 14-15.) [Hui/MTF and OHA, FOF B-407.]

f. The Kanas request appurtenant rights for all 1.57 acres, but approximately 10 percent of Parcel 18’s 1.251 acres is comprised of four pō`alima of the konohiki award to Kamāmalu, LCA 7713:24, for which there is no information on acreage or other contents. (Exh. 2313-Kana-4.)

g. The Kanas were cultivating 0.084 acre of lo`i as of April 30, 2008, reflecting a reduction in the amount they used to grow due to the lack of sufficient water. (Kana, WT, 1/24/16, ¶¶ 19-20; SWUPA 2314N, Attachments at 1, SWUPA 2313 at 4.) [Hui/MTF and OHA, FOF B-409-410.]

1 h. The Kanas intend to restore 1.06933 acres to lo`i cultivation, for a total of 1.153  
2 acres. (Kana, WT, 1/24/16, ¶ 20; SWUPA 2314N at 3, Attachments at 1.) [Hui/MTF and  
3 OHA, FOF B-411.]  
4

5 367. **SWUPA 2353—Hiolani Ranch**

6 a. On May 1, 2009, Hiolani Ranch filed an existing-use SWUPA for TMKs No. (2)  
7 3-2-007:001 (“Parcel 1”) and No. (2) 3-2-007:005 (“Parcel 5”). The request was for an  
8 estimated 108,000 gpd for macadamia nut trees: 29.0 acres on Parcel 1’s 39.96 acres, and  
9 all of Parcel 5’s 0.39 acres. (SWUPA 2353, p. 2, table 1, p. 4, table 3.)

10 b. Hiolani Ranch had requested recognition of appurtenant rights, and the  
11 Commission had granted provisional approval for 2 of 21 LCAs in Parcel 1, and no  
12 approval for one LCA in Parcel 5. (Provisional Order, Exhibits, pp. 66-67, Exh. 7.)

13 c. Hiolani Ranch did not submit written testimony nor participate in the CCH.  
14

15 368. **SWUPAs 2278/2279N—Noel & Katherine Texeira**

16 a. On April 23, 2009, Noel and Katherine Texeira filed existing- and new-use  
17 SWUPAs for TMK No. (2) 3-2-007:010, a 0.83-acre property for which they requested  
18 an existing use of an estimated 990 gpd for 0.33 acre of their yard and plants, and a new  
19 use of 1,050 gpd for 0.42 acre of grass for their goats. (SWUPA 2278, p. 2, table 1, p. 4,  
20 table 3, Addendum, p. 1-2; SWUPA 2279N, p. 2, table 1, p. 3, table 2, Addendum, p. 2.)

21 b. The Texeiras had claimed appurtenant rights and had been provisionally approved  
22 by the Commission for LCA 4389B:2, confirmed by RP 5404, described as pō`alima as  
23 boundary and 1 lo`i kalo, and for LCA 10550, confirmed by RP 5329, described as with  
24 multiple references to pō`alima as boundary, pauku kalo and 4 pō`alima, and “loi he 26.”  
25 (Exh. 2278-Teixeira; Exh. 2279N-Teixeira; Provisional Order, Attachment C, Revised  
26 Exh. 7, p. 11.)

27 c. The Texeiras did not submit testimony and did not participate in the CCH.  
28

29 369. **SWUPA 2294—Bryan Sarasin Sr.**

- 1 a. Bryan Sarasin Sr. filed for an existing-use SWUPA on April 29, 2009, for TMK  
2 No. (2) 3-2-007:016 (“Parcel 16”). (SWUPA 2294, at 3.) [Hui/MTF and OHA, FOF B-  
3 412.]
- 4 b. Parcel 16 is 0.99 acres and is the entirety of LCA 44050:1, for which they request  
5 recognition of appurtenant rights of 297,000 gpd, based on Reppun’s high estimate of  
6 300,000 gad, and a permit for 1,035,040 gpd. (SWUPA 2294 at 2-4, Addendum at 2;  
7 2294-Sarasin-1, -5,-7, -11.) [Hui/MTF and OHA, FOF B-413.]
- 8 c. LCA 44050:1: the native and foreign testimonies describe `āpana 1 as 42 lo`i with  
9 five pō`alima. (2294-Sarasin-1, -5, -7, -11; SWUPA 2294, at 4.) [Hui/MTF and OHA,  
10 FOF B-414.]
- 11 d. Provisional recognition was granted by the Commission, noting LCA 4005-o, but  
12 Sarasin later provided an explanation and documents that the correct LCA was 44050:1.  
13 (Provisional Order, Attachment C, Revised Exh. 7, p. 11; Exh. 2294-Sarasin-1, p. 1-2,  
14 Letter of September 28, 2015.)
- 15 e. The 1,035,040 gpd permit request consists of:
- 16 1. 1,031,040 gpd for 0.4 acres of aquaculture (catfish);
  - 17 2. 2,700 gpd for 0.009 acre of kalo lo`i;
  - 18 3. 1,000 gpd for 0.4 acre of their nursery; and
  - 19 4. 300 gpd for 0.1 acre of their non-commercial garden. (SWUPA 2294  
20 Addendum at 2; Exh. B pp. 6A&B; Sarasin, Tr., 7/13/16 at p. 17, l. 7 to p. 19, l. 23.)  
21 [Hui/MTF and OHA, FOF B-418.]
- 22 f. Aquaculture:
- 23 1. The 0.4 acres of aquaculture consist of four ponds of varying, unspecified  
24 sizes which do not cover the entire 0.4 acres.
  - 25 2. Ponds 1 and 2 are each fed by 4-inch pipes from the kuleana `auwai. Pond  
26 1 discharges into the kalo lo`i, along with additional water from the `auwai. Pond  
27 2 discharges into the Sarasins’ ditch, which then discharges back into the `auwai.  
28 Ponds 3 and 4 are each fed by 2-inch pipes with water from the lo`i that has  
29 received water primarily from pond 1, and each discharges into the ditch, which  
30 then discharges back into the `auwai.
  - 31 3. The estimate of 1,031,040 gpd for the 0.4 acres of aquaculture consists of:

- 1 a. Pond 1: 146,160 gpd;
  - 2 b. Pond 2: 439,200 gpd;
  - 3 c. Pond 3: 146,160 gpd; and
  - 4 d. Pond 4: 146,160 gpd.
- 5 4. These estimates are based on a chart of flows estimated by pipe size and  
6 length of the outflow from the pipe:
- 7 i. Pond 1's estimate is based on a 4-inch pipe and outflow length of  
8 15 inches;
  - 9 ii. Pond 2, on a 4-inch pipe and outflow length of 23 inches;
  - 10 iii. Pond 3, on a 2-inch pipe and outflow length of 29 inches; and
  - 11 iv. Pond 4, on a 2-inch pipe and outflow length of 29 inches.
- 12 5. The chart states that "(t)he accuracy of these methods will vary up to 10%.  
13 The pipes must be flowing full." However, photos provided by the Sarasins show:
- 14 i. the pipe for pond 1 had less than 4 inches—not 15 inches—of  
15 horizontal flow;
  - 16 ii. the pipe for pond 2 had about 2 to 4 inches—not 23 inches—of  
17 horizontal flow;
  - 18 iii. the pipe for pond 3 had about 6 inches—not 29 inches—of  
19 horizontal flow and the pipe was not full;
  - 20 iv. and the pipe for pond 4 had a splashy flow—not 29 inches—and  
21 the pipe was not full. (SWUPA 2294, Addendum at 2, Exh. pp. 1-7.)
- 22 6. The Sarasins also do not explain:
- 23 i. why the inflow into pond 2 is about 3 times the inflow into pond 1;
  - 24 ii. why the flows into ponds 3 and 4 are double the amount coming  
25 from pond 1; and
  - 26 iii. why they include the flows into ponds 3 and 4 in the total flow,  
27 when their flows come from pond 1.
- 28 g. In contrast to this estimate of existing use for their aquaculture operations, Sarasin  
29 states that "the delivery of our kuleana water has been unreliable, limiting our existing  
30 uses." (SWUPA 2294, Addendum, at 1.)

1 h. The Sarasins also state that they know what stocking densities for their current  
2 water supply maximizes efficiency, and to maintain heavily stocked fishponds requires a  
3 good flow of water to oxygenate, cool, and cleanse the ponds. (2294-Sarasin-10.)

4 [Hui/MTF and OHA, FOF B-416.]

5 i. However, even if their estimates were reasonable and accurate, they never  
6 correlate these flows—which are only estimates of flows from specified pipe sizes and  
7 the length of the exiting flow—with requirements for specified stocking densities for  
8 catfish.

9 j. The Sarasins’ existing-use estimate of 2,700 gpd for their 0.009 acre kalo lo`i is  
10 again not an actual measurement but based on Reppun’s high estimate (0.009 acre x  
11 300,000 gad). (SWUPA 2294, Addendum at 2.) [Hui/MTF and OHA, FOF B-418.]

12 k. Similarly, their existing-use estimate of 1,000 gpd for their nursery is based on the  
13 Commission’s *Waiahōle* duty for diversified agriculture (0.4 acre x 2,500 gad). (SWUPA  
14 2294, Addendum at 2.) [Hui/MTF and OHA, FOF B-418.]

15 l. Finally, their 300 gpd for their 0.1-acre home garden is based on the 2002 State of  
16 Hawai`i Water System Standard for Maui County domestic cultivation of 3,000 gad (0.1  
17 acre x 3000 gad). (SWUPA 2294, Addendum at 2.) [Hui/MTF and OHA, FOF B-418.]

18  
19 **370. SWUPA 2361N—Kathleen DeHart**

20 a. Kathleen DeHart filed for a new-use SWUPA on April 23, 2009 for TMK No. (2)  
21 3-2-011:004 (“Parcel 4”), on which she has lived since 1984 and which her family has  
22 owned since the Māhele. (De Hart, WT, 1/20/16, ¶ 1.) [Hui/MTF and OHA, FOF B-429.]

23 b. Parcel 4 is 0.5 acre and comprised of a portion of LCA 3887B, confirmed by RP  
24 6150. (De Hart, WT, 1/20/16, ¶ 9.) [Hui/MTF and OHA, FOF B-434.]

25 c. DeHart requests recognition of appurtenant rights for 150,000 gpd and a permit  
26 for 7,350 gpd—6,000 gpd for a 30 ft. x 30 ft. kalo lo`i and 1,350 gpd for 0.45 acre of her  
27 yard and garden, based on Reppun’s high estimate for kalo lo`i and Maui County  
28 domestic cultivation standards of 3,000 gad. (De Hart, WT, 1/20/16, ¶¶ 4, 14-16;  
29 SWUPA 2361N at 4, Addendum at 2.) [Hui/MTF and OHA, FOF B-430, B-436, B-437.]

30 d. DeHart states that the native register supporting LCA 3887B describes the land as  
31 containing 33 lo`i, one hala tree, and a pond. DeHart states that the high number of lo`i,



1 compared to a single hala tree, indicates this kuleana was lo`i land at the time of the  
2 Mahele. DeHart did not address the presence of a pond. (De Hart, WT, 1/20/16, ¶¶ 8-9;  
3 Exh. 2361-DeHart-1, p. 3.) [Hui/MTF and OHA, FOF B-433.]

4 e. The Commission had granted provisional recognition, noting for LCA 3887B the  
5 33 lo`i and also multiple references to pō`alima as survey boundaries but no mention of a  
6 pond or hala tree. (Provisional Order, Attachment C, Revised Exh. 7, p. 14.)

7 f. However, copies of the original documents submitted by DeHart have the “B” and  
8 “C” on LCAs 3887B and 3887C crossed out and reversed, making 3887B into 3887C and  
9 vice-versa. The English translation provided by DeHart refers to 3887C by Mahoe, which  
10 was 3887B before it was hand-corrected to 3887C. (Exh. 2361-DeHart-1, pp. 2-3.)

11 g. Clarification needs to be provided as to whether the LCA granted to Mahoe is the  
12 LCA from which DeHart’s Parcel 4 is derived.

13 g. DeHart arrived at the 0.45 acre for her yard and commercial garden by subtracting  
14 the square footage of her house (footage not specified) and her proposed lo`i (0.5 acre –  
15 0.05 acre = 0.45 acre). (De Hart, WT, 1/20/16, ¶ 16; SWUPA 2361N, Addendum at 2.)  
16 [Hui/MTF and OHA, FOF B-429.]

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18 371. **SWUPAs 2231/2232N—Diannah Goo**

19 a. On April 29, 2009, the Goos filed an existing-use SWUPA for six parcels and a  
20 new-use SWUPA for one of these parcels and another parcel. The existing-use SWUPA  
21 included TMK Nos. (2) 3-2-011:006 (“Parcel 6”), (2) 3-2-011:019 (“Parcel 19”), (2) 3-2-  
22 011:065 (“Parcel 65”), (2) 3-2-011:066 (“Parcel 66”), (2) 3-2-011:067 (“Parcel 67”), and  
23 (2) 3-2-011:079 (“Parcel 79”). The new-use SWUPA included Parcel 79 and TMK No.  
24 (2) 3-2-011:078 (“Parcel 78”). Parcels 78 and 79 are subdivisions of Parcels 66 and 67.  
25 (Goo, WT, 1/11/16, ¶ 1; SWUPA 2231 at 5; SWUPA 2232N at 3; Provisional Order,  
26 Exhibits, p. 61, Exh. 7.) [Hui/MTF and OHA, FOF B-419.]

27 b. Collectively, these parcels are referred to as the “makai parcels,” which have been  
28 in the Goo `ohana on Diannah Goo’s husband’s side for generations. SWUPAs for the  
29 “mauka parcels” have been filed under SWUPAs 2233/2234N and 2365N. (**Id.**)

30 [Hui/MTF and OHA, FOF B-419.]

1 c. Parcel 6 is 0.27 acre, Parcel 19 is 0.15 acre, Parcel 65 is 0.28 acre, Parcel 66 is  
2 0.22 acre, Parcel 67 is 0.07 acre, Parcel 78 is 0.23 acre, and Parcel 79 is 0.23 acre, for a  
3 total of 1.45 acres. (**Id.**, ¶¶ 24-25; SWUPA 2231 at 5; SWUPA 2232N at 3.) [Hui/MTF  
4 and OHA, FOF B-425.]

5 d. The Goo`ohana requests recognition of appurtenant rights to these makai parcels  
6 which they estimate at 435,000 gpd, and a permit for existing and future uses estimated at  
7 141,600 gpd, of which 3,600 gpd was the estimated existing use as of April 30, 2008 for  
8 six households. No actual measurements were taken, and estimates were based on  
9 Reppun's high estimate of 300,000 gad, and on 2002 State of Hawai'i Water System  
10 Standard for Maui County single-family homes of 600 gpd. (**Id.**, ¶¶ 7, 38-40; SWUPA  
11 2231 at 2; SWUPA 2232N, Attachment at 2.) [Hui/MTF and OHA, FOF B-420, B-427-  
12 428.]

13 e. All of these parcels derive from LCA 8366:1 and 2, confirmed by RP 5327. The  
14 Goos state that the foreign testimony supporting LCA 8366:1 and 2 describe each `āpana  
15 as a "section of kalo and kula land," and that `āpana 1 contained two pō`alima and `āpana  
16 2 contained five pō`alima. The Goos believe a majority of these `āpana were cultivated in  
17 wetland kalo at the time of the Māhele, given the existence of the seven pō`alima and the  
18 high concentration of lo`i kalo in the Waihe`e area generally. In addition, an `auwai runs  
19 across these parcels, furthering their conclusion that most of the LCA was in lo`i kalo, as  
20 opposed to kula. (**Id.**, ¶¶ 20, 23; Exh. 2231-Goo-1; SWUPA 2231 Exhs. B (map) and C  
21 (photos).) [Hui/MTF and OHA, FOF B-423, B-424.]

22 f. Documents provided under SWUPAs 2231/2232N contain descriptions of  
23 sections 1 and 2 as being "taro pauku and pasture," and section 2 as containing two  
24 pō`alima, not five, with no mention of pō`alima in section 1. But the petitioner stated that  
25 he had 22 lo`i and two kula for a total of 24 parcels. (SWUPA 2231, Attachment, p. 12-  
26 13.)

27 g. Provisional recognition was granted by the Commission. The commentary  
28 included: "LCA ref. to polima as boundary. NR ref. to 25 loi. NT refer to sections 1 and 2  
29 as taro pauku and pasture. FT ref. to sections of lois for Sections 1 and 2." (Provisional  
30 Order, Attachment C, Revised Exh. 7, pp. 7-8.) [Hui/MTF and OHA, FOF B-425.]

31

1 372. **SWUPA 2706N—Hawaiian Islands Land Trust**

2 a. Hawaiian Islands Land Trust (“HILT”), predecessor to Maui Coastal Land Trust  
3 (“MCLT”), stated that it filed a SWUPA for a new use on August 3, 2010, for the  
4 Waihe`e Coastal Dunes and Wetlands Refuge at TMK Nos. (2) 3-2-010:001 (“Parcel 1”) and  
5 (2) 3-2-010:002 (“Parcel 2”). (Fisher, WDT, February 3, 2016, ¶¶ 1, 4, 6.) [Hui/MTF  
6 and OHA, FOF B-90.]

7 b. However, SWUPA 2706N was filed only for Parcel 1, and Parcel 2 was first  
8 mentioned in HILT’s written testimony, dated February 3, 2016. (**Id.**, ¶ 1.)

9 c. Similarly, HILT offered documentation in the appurtenant rights provisional  
10 recognition process only for Parcel 1, for which, after supplementary documentation, its  
11 application was approved. (Provisional Order, Attachment C, Revised Exh. 7, pp. 1-2.)

12 d. During the contested case hearing, HILT sought quantification of appurtenant  
13 rights and water-use permits for both Parcel 1 and the newly identified Parcel 2. (Fisher,  
14 WDT, February 3, 2016.)

15 e. For Parcel 1, in the ili of Maka`aka on the mauka side, HILT currently has about  
16 one acre in kalo lo`i, using only about 30,000 gpd coming from a kuleana `auwai on the  
17 south side of Waihe`e River, receiving water from a pipe in the Spreckels Ditch between  
18 Waihe`e River and Waiehu Stream (See Figure 1). Its permit request is for 600,000 gpd  
19 for two acres.<sup>16</sup> (**Id.**, ¶ 60; Fisher, Tr., July 12, 2016, p. 102, ll. 7-12.)

20 f. Ancient Hawaiians founded Kapoho Village no later than 1464 C.E., and around  
21 this time, Native Hawaiians built an extensive loko kalo i`a system in and around the  
22 wetlands with an `auwai to supply this area with freshwater from Waihe`e River. A loko  
23 kalo i`a is a system that utilizes water flowing throughout taro patches in order to raise  
24 fish. Both the loko kalo i`a system and `auwai are registered as historic sites (State  
25 Inventory Site Nos. 2405 and 2464 respectively), highlighting their importance for native  
26 culture and practices. (**Id.**, ¶ 63.) [Hui/MTF and OHA, FOF B-102.]

27 g. The Waihe`e Refuge includes over 7,000 feet of marine shoreline, 103 acres of  
28 dune ecosystem, 27 acres of marsh wetlands, and more than 10 acres of riparian wetlands  
29 along Waihe`e River and Kalepa Gulch between Waiehu and Waihe`e. Important cultural  
30 resources are located throughout the Refuge, including the ancient sites of Kapoho

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<sup>16</sup> HILT filed on August 3, 2010, well past the existing-use deadline of April 30, 2009.

1 Village and several heiau. The Refuge features the seven-acre loko kalo i`a and `auwai  
2 connecting the loko kalo i`a to Waihe`e River. (Id., ¶ 2.) [Hui/MTF and OHA, FOF B-  
3 91.]

4 h. The loko kalo i`a was used for hundreds of years for fish and wetland taro  
5 production and rice cultivation in the early 20<sup>th</sup> century. The `auwai continued to run until  
6 the 1920s. (Id., ¶ 64.) [Hui/MTF and OHA, FOF B-103.]

7 i. The deed to the Refuge contains a reservation of water rights, with the exception  
8 of six kuleana within Parcel 1 and one kuleana that is the entirety of Parcel 2. All the  
9 deeds came from the same party, Wailuku Agribusiness (predecessor to WWC) in  
10 February 1988 to an intervening party, from which MCLT purchased them. The portions  
11 that were not reserved had clouded titles and could not be reserved. (Id., ¶¶ 7-8, 49;  
12 Fisher, WDT, February 3, 2016, p. 98 l. 17 to p. 99, l. 7.) [Hui/MTF and OHA FOF B-  
13 95.]

14 j. The six kuleana in Parcel 1, with the corresponding acreage in Parcel 1, were:

- 15 1. LCA 4296B:2, confirmed by RP 5357, was a fishpond (0.95 acres);
- 16 2. LCA 4389D:2.1 & 2.2, confirmed by RP 6752,
  - 17 i. 2.1 was a house lot (0.52 acres)
  - 18 ii. 2.2 was a fishpond (0.15 acres)
- 19 3. LCA 3886B:2 & 3, confirmed by RP 5991 were both houselots (0.34 acres  
20 and 0.55 acres);
- 21 4. LCA 4405B:2, confirmed by RP 2163, was a houselot (0.28 acres);
- 22 5. LCA 4405C:2, confirmed by RP 6145, consisted of 5 lo`i (0.2 acres); and
- 23 6. LCA 4405N:2, confirmed by RP 5260, was a fishpond (0.17 acres).

24 (Id., ¶¶ 8, 11-14, 25-26, 30, 34, 45-46; Exhs. 2706-HILT-2, -3, -9, -11, -13, -19.)  
25 [Hui/MTF and OHA FOF B-96, B-97.]

26 k. Collectively, the six kuleana totaled 2.98 acres and were comprised of:

- 27 1. 0.2 acre of kalo lo`i,
- 28 2. 1.27 acres of fishponds, and
- 29 3. 1.69 acres of houselots.

1 l. The original request under SWUPA 2706N was for wetland taro on 2 of 3 acres,  
2 or on the 2.98 acres which did not have water reservations, less than one-tenth of which  
3 was in kalo lo`i at the time of the Māhele. (SWUPA 2706N, August 3, 2010.)

4 m. HILT then sought appurtenant rights of 108,120 gpd:

5 1. Reppun’s 300,000 gad for 0.2 acre of kalo lo`i (or 60,000 gad);

6 2. State of Hawai`i Water System Standard for Maui County single-family  
7 homes of 600 gpd per household for each of the fourouselots (or 2400 gpd); and

8 3. the Commission’s 1992 Oahu Water Management Plan of 36,000 gad for  
9 1.27 acres of fishponds (44,720 gpd).<sup>17</sup> (Fisher, WDT, February 3, 2016, ¶ 57.)

10 [Hui/MTF and OHA FOF B-99.]

11 n. For the hearing, HILT offered documentation of appurtenant rights on the rest of  
12 the kuleana that comprised Parcel 1, the corresponding deeds of which had water  
13 reservations when titles passed in February 1988. A large portion of Parcel 1 is covered  
14 by LCA 7713:24 to Victoria Kamāmalu, but within it , many kuleana were awarded to  
15 maka`āinana. Including the six kuleana, Parcel 1’s kuleana awards totaled 15.49 acres  
16 and was comprised of:

17 1. 5.86 acres of kalo lo`i.

18 2. 6.28 acres of fishponds.

19 3. 0.2 acres of dryland crops.

20 4. 8ouselots.

21 (Fisher, WDT, February 3, 2016, ¶¶ 8-48, 56-57.)

22 o. HILT nows seeks recognition of appurtenant rights for 1,989,380 gpd, based on  
23 300,000 gad for the 5.86 acres of kalo lo`i; 36,000 gad for the 6.28 acres of fishponds;  
24 2,500 gad for the 0.2 acres of dryland crops; and 600 gpd for each of the 8ouselots.

25 (**Id.**, ¶ 56.)

26 p. The kuleana that is Parcel 2 is LCA 3775:1, confirmed by RP 5360, and was in  
27 “loi and lauhala” at the time of the Māhele. Based on the lo`i walls that still exist on  
28 Parcel 2, which is a total of 3.47 acres, Fisher estimates that about 3 acres was in lo`i kalo  
29 cultivation and 0.47 acres was used for lauhala. (**Id.**, ¶ 51.) [Hui/MTF and OHA, FOF B-  
30 98.]

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<sup>17</sup> The total should be 107,120 gpd, not 108,120 gpd.

1 q. HILT’s request for appurtenant rights for Parcel 2 is for 901,175 gpd, based on  
2 Reppun’s 300,000 gad for three acres of lo`i kalo and 2,500 gad—the water duty for  
3 diversified agriculture the Commission used in **Waiāhole I**—for 0.47 acres. (**Id.**, ¶ 58.)  
4 [Hui/MTF and OHA FOF B-99.]

5 r. HILT’s new-use permit request is for 2.7 mgd:

- 6 1. 600,000 gpd for Parcel 1 from the South Waihe`e kuleana `auwai, based  
7 on Reppun’s high estimate of requirements of 300,000 gad on two acres; and
- 8 2. 2.1 mgd for the seven-acre loko kalo i`a, with water from Waihe`e River,  
9 based on Reppun’s high estimate of requirements of 300,000 gad on seven acres,  
10 of which 3 acres is Parcel 2.

11 (**Id.**, ¶¶ 66-67; Fisher, Tr., July 12, 2016, p. 103, l. 24 to p. 104, l. 2.)

12  
13 **c. Field 4 `Auwai**

14  
15 373. The following SWUPAs receive water from the Spreckels Ditch via the Field 4 `Auwai  
16 (See Figure 1).

17  
18 374. **SWUPA 2185N—Na Mala O Waihee**

19 a. On April 15, 2009, Na Mala O Waihee Private Water Company, Inc. filed a new-  
20 use SWUPA for TMK (2) 3-2-013:008 (“Parcel 8”), a 25.86-acre property, for which it  
21 requested 29,570 gpd for use on all 25.86 acres for macadamia nut trees and truck crops,  
22 at a rate of 1,143.9 gad. (SWUPA 2185N, p.2, table 1, p. 3, table 2.)

23 b. Parcel 8 was subsequently subdivided into Parcels 13 and 62-67. (Provisional  
24 Order, Attachment C, Revised Exh. 7, pp. 2-3.)

25 c. The applicant did not claim appurtenant rights nor participate in the Provisional  
26 Approval process. (Provisional Order, Attachment C, Revised Exh. 7, pp. 2-3.)

27 d. Na Mala O Waihee did not submit written testimony nor participate in the CCH.  
28

29 375. **SWUPAs 2250/2251N—Alfred Kailiehu Jr. & Ina Kailiehu**

30 a. Alfred Kailiehu, Jr. filed SWUPAs for existing and new uses on April 23, 2009,  
31 for TMK No. (2) 3-2-007:017 (“Parcel 17”), which has been in the Kailiehu family from

1 about the Māhele. (Kaliehu, WT, 12/23/15, ¶ 1; SWUPA 2250 at 4; SWUPA 2251N at 3'  
2 Kaliehu, Tr., 7/12/16, p. 89, l. 16 to p. 90, l. 6.) [Hui/MTF and OHA, FOF B-438.]

3 b. Parcel 17 is 0.51 acre, for which they seek appurtenant rights of 153,000 gpd, and  
4 a permit for 76,425 gpd, of which 1,425 gpd is the existing use as of April 30, 2008,  
5 based on Reppun’s high estimate for kalo and Maui County single-family home use. (**Id.**,  
6 ¶¶ 4, 14.) [Hui/MTF and OHA, FOF B-439.]

7 c. Parcel 17 is a portion of LCA 3299B, confirmed by RP 6206. Native testimony  
8 supporting LCA 3299B states that it was “kalo and kula land, and 3 poalima loi within.”  
9 (**Id.**, ¶ 8; Exh. 2250-Kaliehu-1.) [Hui/MTF and OHA, FOF B-443.]

10 d. The Commission provisionally approved appurtenant rights, noting that there  
11 were “(m)ultiple references to poalima as survey boundary. NT refer to kalo and kula  
12 land.” (Provisional Order, Attachment C, Revised Exh. 7, p. 14.)

13 e. The Kailiehus believe that all of Parcel 17 was cultivated in lo`i kalo at the time  
14 of the Māhele, because it has a gentle slope and ancient rock walls and three pō`alima  
15 within, indicating that their parcel was within the lo`i portion of the LCA, as opposed to  
16 the kula portion. (**Id.**, ¶ 8.) [Hui/MTF and OHA, FOF B-442.]

17 f. The Kailiehus have about 0.00275 acre in lo`i kalo, estimating their use at 825  
18 gpd, based on Reppun’s high estimate (0.00275 acre x 300,000 gad), and request  
19 additional water for an additional 0.25 acre of lo`i, which is the amount their `ohana  
20 historically cultivated on their land, and for which they request an additional 75,000 gpd  
21 (0.25 acre x 300,000 gad). **Id.**, ¶¶ 15-17; SWUPA 2250, Attachment A at 2.) [Hui/MTF  
22 and OHA, FOF B-447, B-448.]

23  
24 376. **SWUPAs 2318/2319N—Nolan Ideoka and Lester Nakama**

25 a. The Ideokas and Lester Nakama filed existing- and new-use SWUPAs for TMK  
26 No. (2) 3-2-007:018 (“Parcel 18”) on April 30, 2009. (Nakama, WT, 2/3/16, ¶ 31;  
27 SWUPA 2318 at 4; SWUPA 2319N at 3.) [Hui/MTF and OHA, FOF B-449.]

28 b. Parcel 18 is 1.1 acres and is the entirety of LCA 4284D, confirmed by RP 5984,  
29 which was comprised of “34 lois and one small kula.” Ancient lo`i walls still exist  
30 throughout Parcel 18, and they estimate about 1 acre of the 1.1 acre was in lo`i cultivation  
31 at the time of the Māhele. The Commission had granted provisional approval. (Nakama,

1 WT, 2/3/16, ¶¶ 36, 38-39; Exh. 2318-Ideika-1; Provisional Order, Attachment C, Revised  
2 Exh. 7, p. 14.) [Hui/MTF and OHA, FOF B-452.]

3 c. Using Reppun’s high estimate, they estimate appurtenant rights as 300,000 gpd  
4 (1.0 acre x 300,000 gad). (Nakama, WT, 2/3/16, ¶¶ 40-41.) [Hui/MTF and OHA, FOF B-  
5 453.]

6 d. Estimated use as of April 30, 2008 was 96,425 gpd to irrigate 0.55 acres of kalo  
7 lo`i. The estimate was arrived by subtracting the estimated 1,425 gpd used by the  
8 Kailiehus from the 97,850 gpd metered flow in the `auwai by Wailuku Water Company.  
9 After the water flows through the lo`i, some is used to irrigate 0.5 acre of the yard and  
10 garden. They claim the water is insufficient and causes problems such small corms, taro  
11 rot, and uncontrollable weeds. (Nakama, WT, 2/3/16, ¶¶ 43-45; SWUPA 2318  
12 Attachment 1 at 2, Exhs. 2,3.) [Hui/MTF and OHA, FOF B-455-456.]

13 e. Current cultivation would be expanded by 0.22 acre, from 0.55 acre to 0.77 acre,  
14 which they estimate would require 231,000 gpd (0.77 acres x 300,000 gad). (Nakama,  
15 WT, 2/3/16, ¶ 47; SWUPA 2318 at 4; SWUPA 2319N at 3.) [Hui/MTF and OHA, FOF  
16 B-458.]

17  
18  
19 **d. Reservoir 25/WWC Line**

20  
21 377. The following SWUPAs receive water from the Spreckels Ditch via Reservoir 25/WWC  
22 Line. See Figure 1.

23  
24 378. **SWUPA 2144—Living Waters Foundation, LLC**

25 a. On April 29, 2009, Living Waters filed an existing-use SWUPA for TMK. No. (2)  
26 3-2-013:015 (“Parcel 15”), a 550-acre property for which it requested a metered 22, 938  
27 gpd for bananas, tapioca, beans, okra, dryland taro, and eggplant on 22 acres, an average  
28 of 1,043 gad. (SWUPA 2144, p. 2, table 1, p. 4, table 3.)

29 b. Because Living Waters did not submit written testimony in support of its  
30 SWUPA, two lessees, Noel Baloaloa and Justina Evangelista, provided written and oral  
31 testimony. At the time the SWUPA was submitted, there were eight farmers but now



1 there are four farmers in all, with Baloalooa farming 4 acres, Evangelista farming 6 acres,  
2 and two others farming the rest. (SWUPA 2144, Attachment (photo); Baloalooa and  
3 Evangelista, WT, 8/30/16, p. 1; Baloalooa, Tr., 9/19/16, p. 122, l. 4 to p. 131, l. 23.)

4 c. No appurtenant rights were claimed on the SWUPA, but documents were  
5 submitted during the provisional approval process, and 6 of 15 LCAs were approved as  
6 referencing water use. (Provisional Order, Attachment C, Revised Exh. 7, pp. 14-15.)

7 d. Of the LCAs listed on the provisional approval order, LCA 781:2 is not shown,  
8 and cross-examination attempted to show that this LCA was where the 22-acre  
9 agricultural activities take place, but Baloalooa was not sure where the 22-acre parcel was  
10 on the map he was shown. (Baloalooa, Tr. 9/19/16, p. 126, l. 19 to p. 128, l. 6.)

11  
12 379. **SWUPA 2153—Robert Hanusa**

13 a. On April 23, 2009, Robert Hanusa filed an existing-use SWUPA for TMK No. (2)  
14 3-2-016:025 (“Parcel 25”) for a metered use of 900 gpd for 0.25 acre of household  
15 landscape irrigation on his 0.5 acre property. (SWUPA 2153, p. 2, table 1, p. 4, table 3;  
16 Hanusa, Tr., 9/19/16, p. 40, l. 15 to p. 44, l. 20.)

17 b. Hanusa bought Parcel 25 in 1973 from Jim Stinson Realty, and is half of LCA  
18 3434, confirmed by RP 6166, described as kalo and kula with 3 pō`alima within it and a  
19 pō`alima on one boundary. (Hanusa, Tr., 9/19/16, p. 40, ll. 22-23; Exh. 2153-Hanusa-1, -  
20 3, 5-8.)

21 c. The Commission had granted provisional approval. (Provisional Order,  
22 Attachment C, Revised Exh. 7, p. 15.)

23  
24 380. **SWUPA 2348—Michael Bailie**

25 a. On April 28, 2009, Michael Bailie filed an existing-use SWUPA for TMK No. (2)  
26 3-2-006:004, a 5.2-acre he purchased from Wailuku Agribusiness in 2000 and on which  
27 he uses a metered use of 1,840 gpd to irrigate 2 acres of landscape, 2.3 acres of bamboo,  
28 and 1 acre of macadamia nuts. (Bailie, WT, 9/2/16, ¶¶ 1-4; SWUPA 2348, p. 2, table 1, p.  
29 4, table 3.)

30 b. Bailie did not claim appurtenant rights nor participate in the provisional approval  
31 process. (SWUPA 2348, p. 1; Provisional Order, Attachment C, Revised Exh. 7, p. 15.)

1 c. Bailie did not participate in the contested case hearing.

2  
3 381. **SWUPA 2182—Cecilia Chang (Jung)**

4 a. Cecilia Chang and Heinz Jung, her husband who has since passed away, filed a  
5 SWUPA for an existing use on April 21, 2009, for TMK No. (2) 3-2-016:001 (“Parcel  
6 1”). (Chang, WT, 12/915, ¶ 1.) [Hui/MTF and OHA, FOF B-459.]

7 b. Chang requests recognition of appurtenant rights in the estimated amount of  
8 150,000 gpd, based on Reppun’s high estimate for 0.5 acre of Parcel 1’s 0.683 acre.(0.5  
9 acres x 300,000 gad), and an existing use of 684 gpd from meter readings for 0.34 acre of  
10 a lawn and non-commercial garden. (**Id.**, ¶¶ 4, 11-13, 15; Chang, Tr., 7/12/16, p. 74, ll. 1-  
11 8.) [Hui/MTF and OHA, FOF B-460, B-463, B-465.]

12 c. Review of her deed from 1933 shows no reservations of water rights. (**Id.**, ¶ 2.)

13 d. The Commission granted provisional approval based on LCA 3446. (Provisional  
14 Order, Attachment C, Revised Exh. 7, p. 15.)

15 e. Parcel 1 is 0.683 acres and comprised of portions of two LCAs, No. 3446,  
16 confirmed by RP 3938, and No. 8559B:20.1, with approximately 0.624 acre or 91 percent  
17 falling under LCA 3446 and 2,252 square feet or 9 percent within LCA 8559B:20.1 to  
18 Lunalilo. (**Id.**, ¶ 9.)

19 f. LCA 3446 is described as “one piece of kalo and kula land,” with “5 poalima loi  
20 in it;” “1 taro section and pasture” with “5 poalima there;” and “aina lo`i,” specifying  
21 “lo`i 16” and “10 lo`i.” Based on LCA 3446 being largely described as containing lo`i,  
22 Chang estimates that 80 percent, or 0.499 acre (0.624 acre x 0.8) of the LCA was in  
23 wetland kalo cultivation at the time of the Māhele. (**Id.**, ¶ 10.) [Hui/MTF and OHA, FOF  
24 B-462.]

25 g. She therefore estimates that she has appurtenant rights to 0.5 acre of Parcel 1’s  
26 0.683 acre. (**Id.**, ¶ 11.) [Hui/MTF and OHA, FOF B-463.]

27  
28 382. **SWUPA 2593N—John Varel (Koolau Cattle Co.)**

29 a. John Varel, an organic farmer who has been farming in Waihe`e and Waiehu  
30 since 2002, owns four properties in Waihe`e and Waiehu for which he is seeking  
31 permits, three of which he acquired after the SWUPAs were filed and is thus pursuing in

1 place of the original applicants: SWUPAs 2262 and 2263N (Paleka), 2298 and 2299N  
2 (Varel), 2593N (Koolau Cattle Co.), and 3470N (Emmanuel Lutheran Church). All  
3 except the previous Paleka property are under 20-year agriculture designation are in his  
4 personal trust to preserve them as conservation and agricultural lands in perpetuity.  
5 (Varel, WT, 9/12/16, ¶¶ 1-3; Varel, Tr., 9/19/16, p. 132, ll. 5-17.)

6 b. Koolau Cattle Co. filed a SWUPA for a new use on February 22, 2010 for TMK  
7 Nos. (2) 3-2-009-001 through -005 (“Parcels 1-5”), a cluster property where all the  
8 TMKs are contiguous and comprise 113.589 acres. (**Id.**, ¶ 74.)

9 c. Water rights were reserved by Wailuku Ag. when it was sold to Dwayne Betsill of  
10 Koolau Cattle Co. in 2004. Varel bought these properties from Veda Das, who had  
11 previously subdivided TMK 3-2-009-001 into Parcels 1-5. Varel bought Parcel 1 in 2013  
12 and the other four parcels in 2015. (**Id.**, ¶¶ 74, 77.)

13 d. Varel states that the previous owners incorrectly filed a new use permit although  
14 they were existing users. They had a contract with WWC, water was on the mac nut  
15 orchards and on the adjacent pasture lands that was being put into dryland taro. The 73-  
16 acre macadamia nut orchard and 20 acres of dryland taro on Parcel 1 was being irrigated  
17 at the time of designation in 2008. (**Id.**, ¶ 75; Varel, Tr., 9/19/16, p. 140, ll. 7-19.)

18 e. SWUPA 2593N, which was filed on February 22, 2010, before Vedas subdivided  
19 TMK (2) 3-2-009-001 into five parcels, was filed for TMK (2) 3-2-009-001 and ten other  
20 TMKs: (2) 3-013-013 and -035 to -043. (SWUPA 2593N, p. 2, table 1, p. 3, table 2.)

21 f. Parcel 1 was listed at 113 acres, of which 15 acres of pasture was irrigated at  
22 21,135 gpd and 26 acres of vegetables and macnuts were irrigated at 295,000 gpd. Varel  
23 identifies the cluster of Parcels 1-5 as 113.589 acres. (SWUPA 2593N, p. 2, table 1; **Id.**, ¶  
24 74.)

25 g. The acreage of the current Parcels 1-5 are as follows:

- 26 1. Parcel 1: 73.09 acres.
- 27 2. Parcel 2: 20.969 acres.
- 28 3. Parcel 3: 9.034 acres.
- 29 4. Parcel 4: 5.393 acres.
- 30 5. Parcel 5: 5.103 acres.

31 (**Id.**, ¶¶ 106-109, 114.)

- 1 h. Varel requested a water-use permit for 551,477 gpd as follows:
- 2 1. Parcel 1: 321,596 gpd
- 3 a. 73.09 acres of macadamia nuts at 4,400 gad.
- 4 2. Parcel 2: 59,400 gpd
- 5 a. 17,500 gpd for 7 acres of fruit trees at 2,500 gad.
- 6 b. 2,500 gpd for 1 acre of organic garden at 2,500 gad.
- 7 c. 35,200 gpd for 8 acres of macadamia nuts at 4,400 gad.
- 8 d. 4,200 gpd for the domestic needs of 7 houses at 600 gpd for each.
- 9 3. Parcel 3: 69,561 gpd
- 10 a. 9.034 acres for feed and forage pasture at 7,700 gad.
- 11 4. Parcel 4: 83,325 gpd
- 12 a. 3,333 gpd for each of 25 aquaponic greenhouses to produce 80,000
- 13 pounds of tomatoes annually.
- 14 5. Parcel 5: 17,595 gpd
- 15 a. 6,375 gpd for 2.55 acres of fruit trees.
- 16 b. 11,220 gpd for 2.55 acres of macadamia nuts at 4,400 gad.

17 (**Id.**, ¶¶ 115-143.)

18 i. Of the 113 acres, 73 acres are in macnuts and have no water. Of the remaining 40

19 acres: 1) nine acres are still in pasture; 2) Varel plans to put the 25 aquaponic

20 greenhouses on five acres, with the water coming out at the end going to additional fruit

21 trees that he will be planting on the perimeter; 3) five acres currently split between

22 macnuts and pasture will be put into fruit trees or hydroponic greenhouses, whichever is

23 the more cost-effective measure; and 4) 20 acres are for the seven houses for his workers

24 on which he has also planted 300 fruit trees. Water there is a 6,000 gallon tank for the

25 fruit trees, trucked in from what he can access from his well or from leaks from the

26 Waihe`e Ditch (See FOF 328 [SWUPA 2298/2299N—Varel ].) (Varel, Tr., 9/19/16, p.

27 141, l. 12 to p. 142, l. 11; p. 159, ll. 2-11.)

28 j. On the pasture land, Varel has a tenant, Alan Mendez from the previous owner,

29 who has 15-20 head of cattle on it. Since Varel has owned it, there has been enough rain

30 that the grass is thick without irrigation. (Varel, Tr., 9/19/16, p. 149, l. 15 to p. 150, l. 7.)

1 k. Varel states that he currently uses a combination of catchment water, water that he  
2 trucks in, and a reliance on rain for the agricultural uses on the property, but it is not  
3 enough water for his needs. (**Id.**, ¶ 147.)

4 l. In the original SWUPA, Koolau Cattle Company had claimed appurtenant rights,  
5 but in the provisional approval process, no documentation was provided. (SWUPA  
6 2593N, p. 1; Provisional Order, Attachment C, Revised Exh. 7, pp. 15-16.)

7 m. In his written testimony of September 12, 2016, Varel claimed appurtenant rights  
8 as follows:

9 1. It was not possible to quantify appurtenant rights on Parcels 2-5, because  
10 they are parts of LCAs or grants which do not describe what was cultivated on  
11 them during the Māhele. (**Id.**, ¶¶ 106-109.)

12 2. Parcel 1 is composed of several LCAs, including all of LCA 2654,  
13 confirmed by RP 5995, and all of LCA 2413, confirmed by RP 5349. The  
14 remaining 64.59 acres consist of LCA 7713:24, confirmed by RP 4475.

15 a. LCA 7713:24 does not describe what was in cultivation at the time  
16 of the Māhele, due to the vast expanse of the award.

17 b. LCA 2654 was 2.98 acres and entirely cultivated in kalo.

18 c. LCA 2413 was 5.52 acres and contained kalo, kula, and a hale.

19 (**Id.**, ¶¶ 90-92, 94, 96-97.)

20 n. Varel then concluded that Parcel 1 has appurtenant rights of 1,451,200 gpd, based  
21 on the following:

22 1. LCA 2654: 894,000 gpd, based on 2.98 acres times Reppun's high  
23 estimate of 300,000 gad.

24 2. LCA 2413: 557,200 gpd, based on:

25 a. dividing 5.52 acres equally between kalo, kula, and a hale, so that:

26 i. kalo: 552,000 gpd, based on 1.84 acres x 300,000 gad.

27 ii. kula: 4,600 gpd, based on 1.84 acres x 2,500 gad for  
28 diversified agriculture.

29 iii. hale: 600 gpd, based on 600 gpd for a single-family  
30 home.

31 (**Id.**, ¶¶ 94-105.)

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**b. Waiehu Stream**

**i. North Waiehu Stream**

383. **SWUPA 2363N—Natalie Hashimoto & Carl Hashimoto**

a. On April 23, 2009, Natalie Hashimoto and her aunt, Yoshie Suehiro, filed a new-use SWUPA for TMK No. (2) 3-2-016:021 (“Parcel 21”). Suehiro no longer lives on the parcel, and Hashimoto and her brother Carl are the current owners and request that the permit be issued in both of their names. (Hashimoto, WT, 12/15/15, ¶ 1.) [Hui/MTF and OHA, FOF B-563.]

b. For years, the Hashimoto `ohana pumped water from Waiehu Stream for domestic uses, but the pump broke in April 2008, which is why they filed a SWUPA for new use. They intend to fix the pump and draw water again. (**Id.**, ¶ 12.) [Hui/MTF and OHA, FOF B-568.]

c. The Hashimotos request recognition of 60,000 gpd in appurtenant rights, based on Reppun’s high estimate of 300,000 gad, and a permit for future use of 600 gpd for a garden, based on Maui County’s single-family home. (**Id.**, ¶¶ 3, 12; Hashimoto, Tr. 7/18/16, p. 15, ll. 16-19.) [Hui/MTF and OHA, FOF B-564, B-568.]

d. The Commission provisionally approved appurtenant rights. (Provisional Order, Attachment C, Revised Exh. 7, p. 18.) [Hui/MTF and OHA, FOF B-566.]

e. Parcel 21 is 0.2 acre and nearly all is part of LCA 3434, confirmed by RP 6166, which was described as “1 taro section at pasture” and “3 Poalimas there.” The survey boundary shows the kula section to be located above and to the right of the LCA’s boundary. LCA 3434 also abuts Waiehu Stream, and the old `auwai runs through the kuleana on the Hashimotos’ parcel. (**Id.**, ¶¶ 4, 7-8; Hashimoto, Tr. 7/18/16, p. 16, l. 19 to p 18, l. 7; Exhs. 2363-Hashimoto-1-p. 5, -p. 6.)

f. The Hashimotos conclude that “nearly our entire parcel is covered by LCA 3434 and was cultivated in lo`i,” and therefore all 0.2 acre has appurtenant rights. (**Id.**, ¶¶ 8-9.)

g. However, a figure in which Parcel 21 is superimposed over LCA 3434 (mis-labeled “3433,” but its shape and other figures confirm that it is LCA 3434), shows

1 that approximately one-tenth of Parcel 21 falls into an adjacent LCA, which is not  
2 identified. (Exh. 2363-Hashimoto-2-p. 4.)

3  
4 **ii. South Waiehu Stream**

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6 384. **SWUPAs 2266/2267N—Isabelle Rivera**

7 a. On April 23, 2009, Isabelle Rivera filed existing- and new-use SWUPAs for TMK  
8 No. (2) 3-2-017:012 (“Parcel 12”), for which she requests recognition of appurtenant  
9 rights of 765,000 gpd and a permit for current and future uses of 726,600 gpd, of which  
10 600 gpd is her estimated domestic existing use and the remainder estimated by using  
11 Reppun’s high estimate of 300,000 gad for kalo lo`i. (Rivera, WT, 12/17/16, ¶¶ 1, 4, 9-  
12 11, 15.) [Hui/MTF and OHA, FOF B-518, B-519, B-523, B-524, B-525.]

13 b. The Commission had granted provisional recognition of appurtenant rights, which  
14 referenced 3443:1. (Provisional Order, Attachment C, Revised Exh. 7, p. 17.) [Hui/MTF  
15 and OHA, FOF B-522.]

16 c. Parcel 12 is 2.55 acres and is the entirety of LCA 3443:1 & 2, confirmed by RP  
17 6283, which was described as containing 17 lo`i kalo, including two pō`alima, without  
18 referencing any other land use. (**Id.**, ¶¶ 5, 9-11; Exh. 2266-Rivera-1.) [Hui/MTF and  
19 OHA, FOF B-522, B-523.]

20 d. Rivera requests an additional 726,000 gpd (2.42 acres x 300,000 gad) to restore  
21 2.42 acres of kalo lo`i, for a total of 726,600 gpd. (**Id.**, ¶¶ 13-15.) [Hui/MTF and OHA,  
22 FOF B-525.]

23  
24 385. **SWUPAs 2219/2220N—Regino Cabacungan & Kathy Alves**

25 a. On April 23, 2009, Regino Cabacungan filed existing- and new-use SWUPAs for  
26 TMK No. (2) 3-2-017:023 (“Parcel 23”), which is a combination of TMKs No. (2) 3-2-  
27 017:023 (“old Parcel 23”) and (2) 3-2-017:27 (“Parcel 27”). He requests that his  
28 daughter, Kathy Alves, be added to the SWUPAs. (Cabacungan/Alves, WT, 1/6/16, ¶¶ 1-  
29 2; Exh. 2219-Cabacungan-2.) [Hui/MTF and OHA, FOF B-526, B-527.]

1 b. Mr. Cabacungan received Parcel 27 from his mother-in-law in 1963, and  
2 purchased old Parcel 23 from Wailuku Water Company in 1977 with the deed containing  
3 a reservation of appurtenant rights. (**Id.**, ¶¶ 2-3.) [Hui/MTF and OHA, FOF B-531.]

4 c. No documentation of appurtenant rights was provided during the provisional  
5 approval process. (Provisional Order, Attachment C, Revised Exh. 7, p. 17.)

6 d. Parcel 23 is 0.34 acres: Parcel 27 was 0.21 acres and old Parcel 23 was 0.13 acres.  
7 (**Id.**, ¶ 11.)

8 e. Old Parcel 23 and Parcel 27 were both part of the konohiki award to Lunalilo,  
9 LCA 8559:20. The presence of lo`i on Parcel 27, the close proximity to the `auwai, and  
10 documents supporting a kuleana adjacent to the Parcel 27 portion of the Lunalilo grant—  
11 LCA 2625:5—indicate that Parcel 27 was a pō`alima. (**Id.**, ¶¶ 7, 12; Exh. 2219-  
12 Cabacungan-1, -4.) [Hui/MTF and OHA, FOF B-532, B-533.]

13 f. They request appurtenant rights of 102,000 gpd, based on Reppun’s high estimate  
14 of 300,000 gad for kalo lo`i applied to 0.34 acres, and a permit for 66,600 gpd, of which  
15 66,000 gpd is for 0.22 acre of kalo lo`i and 600 gpd was the estimated existing use to  
16 irrigate various garden crops and flowering trees. (**Id.**, ¶¶ 6, 16-19.) [Hui/MTF and OHA,  
17 FOF B-528, B-535, B-536.]

18  
19 **386. SWUPA 2369N—Jeff Smith**

20 a. Jeff and Ramona Lei Waiwaiole Smith filed a new-use SWUPA on April 23,  
21 2009, for TMK No. (2) 3-2-017:033 (“Parcel 33”), requesting appurtenant rights for  
22 558,000 gpd and a permit for 153,050 gpd, based on Reppun’s high estimate of 300,000  
23 gad for kalo lo`i and domestic uses based on *Waiāhole*’s 2,500 gad. (Smith, WT,  
24 12/14/15, ¶¶ 1, 5, 15-16.) [Hui/MTF and OHA, FOF B-512, B-513, B-517.]

25 b. Parcel 33 is 1.86 acres, which the Smiths purchased in 2001, with a deed that  
26 reserved appurtenant rights. (**Id.**, ¶¶ 1-2, 11.)

27 c. The Commission had granted provisional recognition of appurtenant rights.  
28 (Provisional Order, Attachment C, Revised Exh. 7, p. 18.)

29 d. Parcel 33 is comprised of LCA 3459:2, confirmed by RP 6753, described as “a  
30 section of kalo.” (**Id.**, ¶ 8; Exh. 2369-Smith-1.)



1 e. The Smiths seek water directly from the stream for 0.5 acre of kalo lo`i, a small  
2 aquaculture pond, and to supplement rain water for domestic purposes, including  
3 watering their 1.22-acre yard and non-commercial garden. (Smith, WT, 12/14/15, ¶¶ 15-  
4 16.) [Hui/MTF and OHA, FOF B-517.]

5  
6 387. **SWUPAs 2307/2308N—Francisco Cerizo**

7 a. On April 30, 2009, Francisco Cerizo filed existing- and new-use SWUPAs for  
8 TMK No. (2) 3-2-002:012 (“Parcel 12”) for the Modesta F. Cerizo Trust, for which he is  
9 a trustee. (Cerizo, WT, 12/15/15, ¶ 1.) [Hui/MTF and OHA, FOF B-537.]

10 b. Cerizo requests recognition of appurtenant rights for 360,000 gpd and a permit for  
11 139,850 gpd, of which 20,850 gpd was the existing use, using Reppun’s high estimate of  
12 300,000 gad for kalo lo`i and *Waiāhole*’s 2,500 gad for diversified agriculture. (**Id.**, ¶¶ 3,  
13 12, 14, 16-17.) [Hui/MTF and OHA, FOF B-538, B-541, B-543, B-544.]

14 c. Parcel 12 is 1.2 acres. (**Id.**, ¶12.) [Hui/MTF and OHA, FOF B-541.]

15 d. The Commission was unable to make a determination in the provisional  
16 recognition process, even after supplemental information was provided. (Provisional  
17 Order, Attachment C, Revised Exh. 7, p. 17.)

18 e. Cerizo nevertheless submitted documents and testimony for the CCH:

19 i. Parcel 12 is a portion of the konohiki award to Lunalilo, LCA 8559:20:1;

20 ii. Parcel 12 abuts South Waiehu stream, has eight terraced lo`i fed by the  
21 `auwai, and was likely cultivated in lo`i kalo from records supporting two  
22 neighboring LCAs.

23 (**Id.**, ¶¶ 4, 9-11, 15; Exh. 2307-Cerizo-2, -3, -4.) [Hui/MTF and OHA, FOF B-539, B-  
24 540.]

25 f. Cerizo has 0.06 acre in lo`i kalo and 1.14 acre in domestic uses/diversified  
26 agriculture and intends to restore a 0.4-acre portion of his garden back to lo`i kalo,  
27 resulting in 0.46 acre in lo`i kalo and 0.74 acre of domestic uses/diversified agriculture.  
28 (**Id.**, ¶ 17.) [Hui/MTF and OHA, FOF B-544.]

29  
30 388. **SWUPA 2343N—Thomas Cerizo**

1 a. On April 30, 2009, Thomas Cerizo filed a new-use SWUPA for TMK. No. (2) 3-  
2 3-002:014 (“Parcel 14”), described as a 0.4 acre property for which he requested 120,000  
3 gpd to place all the land into kalo lo`i, based on Reppun’s high estimate of 300,000 gad  
4 for kalo lo`i. However, Exhibit D describes Parcel 14 as 1.245 acres. (SWUPA 2343, p.  
5 2, table 1, p. 3, table 2, Exhibit D.)

6 b. Cerizo did not provide written testimony. During oral testimony at the CCH,  
7 Cerizo described the property as 1.245 acres, for which he is now requesting  
8 approximately 300,000 gpd to place the entire property into kalo lo`i if he could find a  
9 young farmer or young farmer family to develop the taro land once again. Cerizo owns  
10 the property with another person, who is growing some taro on it now, which he  
11 estimates as using maybe 30,000 gpd over the past four or five years. (T. Cerizo, Tr.,  
12 7/18/16, p. 137, l. 13 to p. 139, l. 6.)

13 c. Parcel 14 is part of LCA 2468:1, described as kalo and kula land. The  
14 Commission had granted provisional approval. (Exhibit 2343-Cerizo, p. 2; Provisional  
15 Order, Attachment C, Revised Exh. 7. P. 17.)

16 d. Appurtenant rights would be equivalent to half of Parcel 14’s 1.245 acres, or  
17 0.623 acre.

18  
19 **389. SWUPA 2258—Jason Miyahira**

20 a. On April 23, 2009, Lawrence and his son Jason Miyahira filed an existing-use  
21 SWUPA for TMKs No. (2) 3-3-002:009 (“Parcel 9”), No. (2) 3-3-002:021 (“Parcel 21”),  
22 and No. (2) 3-3-002:010 (“Parcel 10”). (Miyahira, WT, 12/6/15, ¶ 1.) [Hui/MTF and  
23 OHA, FOF B-555.]

24 b. Parcel 9 is 3.38 acres and owned in a hui with the Smith, Alexander, and Molina  
25 `ohana. The Miyahiras’s application for Parcel 9 is limited to the 2.08-acre portion (“Lot  
26 A”), with Renee Molina applying for the remaining 1.3 acres (“Lot B”) under SWUPA  
27 2171. (**Id.**, ¶ 1.) [Hui/MTF and OHA, FOF B-556.]

28 c. Parcel 10 is 0.08 acre and Parcel 21 is 0.06 acre. Both were purchased in 1999,  
29 and the deeds contain reservations of appurtenant rights. (**Id.**, ¶¶ 1-2, 4, 15-16.)

30 [Hui/MTF and OHA, FOF B-556, B-558.]

1 d. The Miyahiras irrigate 0.5 acre of kalo lo`i and 1.34 acres of a yard and garden.  
2 (**Id.**, ¶¶ 15-16.) [Hui/MTF and OHA, FOF B-561.]

3 e. They request appurtenant rights for Lot A in the amount of 624,000 gpd and a  
4 permit for Lot A and Parcels 10 and 21 for 154,020 gpd, which they estimate was their  
5 existing use, based on Reppun’s high estimate of 300,000 gad for kalo lo`i (0.5 acre x  
6 300,000 gad = 150,000 gpd), and Maui County domestic cultivation standard of 3,000  
7 gad (1.34 acres x 3,000 gad = 4,020 gpd). If the deeds to Parcels 10 and 21 survive the  
8 reservations, they request a total of 666,000 gpd in appurtenant rights for all three  
9 parcels. (**Id.**, ¶¶ 4, 11-14, 16.) [Hui/MTF and OHA, FOF B-557, B-560, B-562.]

10 f. The Commission had granted provisional approval of appurtenant rights, based on  
11 LCA 2572:1. (Provisional Order, Attachment C, Revised Exh. 7, p. 18.) [Hui/MTF and  
12 OHA, FOF B-559.]

13 g. Parcel 9 is the entirety of LCA 2572:1, confirmed by RP 8051, described  
14 variously as consisting of 33 lo`i, a section of lo`i, 5 pō`alima, taro pauku, and the  
15 boundaries of two pō`alima within `āpana 1. (**Id.**, ¶ 9; Exhs. 2258-Miyahira-1, -3.)  
16 [Hui/MTF and OHA, FOF B-559.]

17 h. Parcels 10 and 21 are located within Parcel 9’s Lot A and were both part of LCA  
18 8559B:20.1, a konohiki grant to William C. Lunalilo. (**Id.**, ¶ 5; Exh. 2258-Miyahira-2-p.  
19 1, -p.2.)

20 i. Because Parcels 10 and 21 are wholly within Lot A and described as pō`alima, the  
21 Miyahiras conclude that all 2.22 acres of Lot A (2.08 acres), Parcel 10 (0.08 acre) and  
22 Parcel 21 (0.06 acre) were in kalo lo`i at the time of the Māhele. (**Id.**, ¶ 9.)

23  
24 390. **SWUPA 2171—Renee Molina**

25 a. On April 29, 2009, Renee Molina filed an existing-use SWUPA for TMK No. (2)  
26 3-3-002:009 (“Parcel 9”), which her `ohana has owned in a hui with the Smith,  
27 Alexander, and Miyahira `ohana. Her request is limited to “Lot B,” the 1.3-acre portion  
28 of Parcel 9’s 3.38 acres. The Miyahiras have filed their own SWUPA 2258 for the  
29 remaining 2.08 acres. (Molina, WT, 11/15/15, ¶ 1; Exh. 2171-Molina-3.) [Hui/MTF and  
30 OHA, FOF B-545.]

1 b. Molina requests recognition of appurtenant rights for 390,000 gpd and a permit  
2 for 38,250 gpd, of which 20,000 gpd is the existing use, using Reppun’s high estimate of  
3 300,000 gad for lo`i kalo and the 5-gallon bucket method. (**Id.**, ¶¶ 3, 11-18.) [Hui/MTF  
4 and OHA, FOF B-546, B-551 to B-554.]

5 c. Parcel 9 is the entirety of LCA 2572:1, confirmed by RP 8051, described as  
6 consisting of 33 lo`i. (**Id.**, ¶¶ 4, 8; Exh. 2171-Molina-1.) [Hui/MTF and OHA, FOF B-  
7 550.]

8 d. The Commission provisionally approved appurtenant rights. (Provisional Order,  
9 Attachment C, Revised Exh. 7, p. 18.) [Hui/MTF and OHA, FOF B-550.]

10 e. Her existing use consisted of a 0.125 acre kalo lo`i and 0.25 acre garden, for  
11 which she requests an increase from 20,000 gpd to 38,250 gpd. (**Id.**, ¶¶ 13, 15-18.)  
12 [Hui/MTF and OHA, FOF B-552 to B-554.]

13  
14 391. **SWUPA 3465N—Pauline Curry, Maile Gomes & Jane Laimana**

15 a. In July 2, 2012, Pauline Curry, Maile Gomes and Jane Laimana filed a new-use  
16 SWUPA for TMK No. (2) 3-3-002:007, a 1.59-acres property, for 152,700 gpd for 0.5  
17 acre of kalo lo`i, and 0.9 acre of a yard and garden. (SWUPA 3465N, p. 2, table 1, p. 3,  
18 table2, Attachment 1, p. 2.)

19 b. Curry, Gomes and Laimana stated that the land has been in their family since the  
20 Māhele and their land is a portion of LCA 2447:1, confirmed by RP 6164. (SWUPA  
21 3465N, Attachment 1, p. 2 and Exhibit 4.)

22 c. The applicants had claimed appurtenant rights and were granted provisional  
23 approval by the Commission, which noted that LCA 2447, `āpana 1 was described as a  
24 section of lo`i and a pō`alima, and as pauku kalo and 1 pō`alima. (Provisional Order,  
25 Attachment C, Revised Exh. 7, p. 18.)

26 d. Curry, Gomes, and Laimana did not submit written testimony and did not  
27 participate in the CCH.

28  
29 **c. Wailuku River**

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31 **i. Wailuku River**

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392. **SWUPA 2304—Division of State Parks**

a. On April 27, 2009, the State Department of Land and Natural Resources, Division of State Parks (“State Parks”), filed an existing-use SWUPA for TMK No. (2) 3-3-003:012 (“Parcel 12”), a 6.185-acre parcel, for 5,000 gpd for approximately 500 square feet of kalo lo`i. (SWUPA 2304, p. 3, table 2, p. 4, table 3; Exhibit 2304-DLNR-1, p. 1; McEldowney, WT, 2/5/16, p. 12.) [State Parks, FOF 1-3, 8, 13.]

b. `Īao Valley State Monument, commonly referred to as `Īao Valley State Park, is located at the confluence of two streams, `Īao Stream and Kinihapai Stream, which merge to form the Wailuku River. (Exhs. 2304-DLNR-8, -9; McEldowney, WT, 2/5/16, pp. 2, 8-9.) [State Parks, FOF 14.]

c. Water from Kinihapai Stream is used to irrigate kalo lo`i in the Park’s “garden” area to offer educational and viewing features for the general public. The water is then returned back into the Wailuku River. (SWUPA 2304, p. 5; McEldowney, WT, 2/5/16, p. 9; Kumabe, WT, 2/5/16, p. 3.)

d. SWUPA 2304 originally described the existing use as an estimated 5,000 gpd on about four lo`i totaling approximately 500 square feet, but the lo`i were more precisely and individually mapped in April 2016 for a total area of 1,243.19 square feet (0.028 acres), and measurements of flow in May 2016 ranged from 3,000 gpd to 39,000 gpd, depending on whether water was flowing or not to parts of the lo`i. (SWUPA 2304, p.; McEldowney, WT (supplemental), 5/31/16, p. 1.; Kumabe, Tr., 7/19/16, p. 61, l. 14 to p. 63, l. 25.) [State Parks, FOF 28, 29; Hui/MTF and OHA, FOF C-277.]

e. State Parks planner Russell Kumabe testified that 3,000 gpd to 39,000 gpd would suffice for growing kalo as a demonstration project instead of for sustenance, and that 5,000 gpd would suffice if the 5,000 gpd were switched off between the upper and lower lo`i. Kinihapai Stream is also intermittent throughout the season, and they would want to manage what they can get from the stream, but more would be okay too and would provide flexibility to demonstrate more of the areas to be cultivated. (Kumabe, Tr., 7/19/16, p. 64, l. 13 to p. 65, l. 2, p. 67, l. 20 to p.69, l. 24.) [State Parks, FOF 30; Hui/MTF and OHA, FOF C-277.]

f. Parcel 12’s 6.185 acres is comprised of:

1           1.       LCA 3529:1, confirmed by RP 4059, which had two other `āpana, and  
2 consisted of 1.45 acres; and

3           2.       the remaining 4.735 acres, which is derived from portions of the 24,000-  
4 acre ahupua`a of Wailuku, granted in fee simple to Claus Spreckels in 1882 under Royal  
5 Patent Grant No. 3343.

6 (McEldowney, WT, 2/5/16, pp. 5, 7; Collins, WT, 2/5/16, pp. 2-3; [State Parks, FOF 13.]

7 g.       The 1854 award of LCA 3529 included 3 `āpana.

8           1.       `āpana 1 was 1.45 acres, described as kalo;

9           2.       `āpana 2 was 2.53 acres, described as `aina kalo; and

10          3.       `āpana 3 was 0.46 acres, described as `aina kalo.

11 (McEldowney, WT, 2/5/16, pp. 3-5; Exh. 2304-DLNR-1, exhibit 4.)

12 h.       `Āpana 1, which had eventually been conveyed to John Kalua, was conveyed to  
13 the Hawaiian government in 1899, and was set aside, along with portions of the Spreckels  
14 grant, by the State for `Īao Valley State Park in 1978. (McEldowney, WT, 2/5/16, p. 4, 6;  
15 Exh. 2304-2, exhibit A.)

16 i.       The 24,000-acre Spreckels grant ran from the ocean to the ridges forming the  
17 heads of Olowalu, Wailuku, Waihe`e, and Waiehu valleys. (Collins, WT (supplemental),  
18 3/16/16, p. 3.) [State Parks, FOF 15.]

19 j.       A 1961 “gift deed” from Wailuku Sugar Company to the State of Hawai`i of the  
20 Spreckels grant’s portion reserved water rights to Wailuku Sugar Company.  
21 (McEldowney, WT, 2/5/16, p. 7.)

22 k.       In the resubmitted application for provisional recognition, the tax map key  
23 number is (2) 3-3-03:012 (“Parcel 12”), but the prior tax map key was (2) 3-3-03:013  
24 (“Parcel 13”). In Executive Order 2926 setting aside the land for the Park, the  
25 accompanying map showed LCA 3529:1 and the portions from the Spreckels grant as a  
26 unified whole. However, a survey done in 1892 located LCA 3529:1 as a separate, stand-  
27 alone parcel, the 1892 survey depicts `āpana 1 in a very different position than in EO  
28 2926, and another map from Wailuku Sugar Company based on the 1892 survey place a  
29 portion of `āpana 1 outside the boundaries of the Spreckels grants from Wailuku Sugar  
30 Company. State Survey Division employees also agree that the map in EO 2926 does not  
31 appear to accurately represent placement of `āpana 1 in relation to the Spreckels deeds

1 mentioned in EO 2926. None of the deeds which purport to overlap `āpana 1 ever mention  
2 the LCA. This means there was no agreement or disclosure that the LCA would somehow  
3 be assumed, relinquished, or superseded by the deeds of the 1960s and 1970s, and  
4 Wailuku Sugar Company could not reserve water rights it never had to LCA 3529:1.  
5 Finally, the tax map plat also depicts `āpana 1 as a separate parcel from the grants for the  
6 Park and gives each separate parcel numbers. If the tax map is relied on, then the parcel  
7 numbers should be Parcel 12 for LCA 3529:1 and Parcel 13 for the State Parks property  
8 that was conveyed as part of the Spreckels grant. Until the question is resolved by a State  
9 Survey, either or both TMK parcel numbers 012 and 013 appear to be correct.

10 ((McEldowney, WT, 2/5/16, pp. 7-8; Exh. 2304-DLNR-1, exhibit 22, -8.)

11 l. The Commission had granted provisional approval after State Parks identified the  
12 park lands as Parcel 12 instead of as Parcel 13, and supplemental documentation of LCA  
13 3529 `āpana 1 described it as taro land. (Provisional Order, Attachment C, Revised Exh.  
14 7, p. 19.)

15 m. State Parks claimed appurtenant rights to at least 75 percent of LCA 3529:1,  
16 assuming the whole area was in kalo lo`i at the time of the Māhele, with a floor of 75  
17 percent because in 1908, the land in kalo lo`i was “about three-fourths of an acre.”  
18 (Kame`eleihiwa, Tr., 7/11/16, pp. 62-63, 65; Exh. 2304-DLNR-10, p. 2, ¶ 3.) [State  
19 Parks, FOF 19-22.]

20 n. State Parks therefore requests appurtenant rights recognition for at least three-  
21 fourths of an acre, or 75,000 gpd to 225,000 gpd, based on Reppun’s estimate of 100,000  
22 gad to 300,000 gpd for kalo lo`i, and as high as 262,500 gpd if treated as individual lo`i,  
23 based on 350,000 gad for individual lo`i. (Reppun, WDT (Exh. OHA-1), at 2, 13.) [State  
24 Parks, FOF 25.]

25  
26 **393. SWUPAs 2243/2244N—Ho`oululāhui, LLC (John & Rose Marie Dewey)**

27 a. On April 23, 2009, Ho`oululāhui, LLC filed existing- and new-use SWUPAs for  
28 TMK No. (2) 3-5-003:018 (“Parcel 18”). (Duey, WT, 2/3/16, ¶ 1.) [Hui/MTF and OHA,  
29 FOF B-586.]

30 b. `Īao Valley is the birthplace of Rose Marie Duey’s grandmother, and what they  
31 own now is part of her ancestral home. (**Id.**, ¶ 3; Duey, Tr., 7/28/16, p. 27, ll.10-12.)

1 c. The deed to Parcel 18 contained a reservation of appurtenant rights when the  
2 Dueys purchased the land from Wailuku Agribusiness in 2001. (SWUPA 2243,  
3 Attachment, p.2.) [Hui/MTF and OHA, FOF B-590.]

4 d. In their SWUPAs, the Dueys did not claim appurtenant rights because of the deed  
5 restriction but participated in the provisional approval process, and the Commission had  
6 granted provisional recognition based on LCAs 2610, and later on 3529:3 after additional  
7 information was provided. (SWUPA 2243; SWUPA 2244N; Provisional Order,  
8 Attachment C, Revised Exh. 7, p. 18.)

9 e. Parcel 18 is 18.146 acres and consists of LCA 2610, confirmed by RP 494, LCA  
10 3529:3, confirmed by RP 4059, and Royal Grant No. 3343 to Lunalilo:

- 11 1. 72% of LCA 2610 comprised 4.712 acres of Parcel 18.
- 12 2. 33% of LCA 3529:3 comprised 0.1271 acres of Parcel 18.
- 13 3. Royal Grant No. 3343 comprised the remainder of Parcel 18, or 13.307  
14 acres.

15 (**Id.**, ¶¶ 8, 12.)

16 f. LCA 2610 was described as containing 15 lo`i kalo and wauke. The 15 lo`i are the  
17 same lo`i the Dueys have found and begun to restore, which they had estimated at 1.42  
18 acres in their new-use SWUPA but now describe as covering about 3 acres. (**Id.**, ¶ 13;  
19 SWUPA 2244N, p. 3, table 2; Attachments, pp. 1, 3.)

20 g. Seventy-two percent of LCA 2610 was 4.712 acres, so LCA 2610 was 6.544  
21 acres.

22 g. LCA 3529:3 was described as aina kalo, without any other use mentioned. (**Id.**, ¶  
23 14.)

24 h. While the Dueys are not claiming appurtenant rights for the portion of land  
25 comprised of Royal Grant No. 3343, there is evidence of ancient terraces and springs  
26 throughout the 18.146 acres, and the site topography, slope, proximity to the river, and  
27 the presence of an ancient `auwai on the property give further evidence that the entire  
28 property might have been in kalo at the time of the Māhele. (**Id.**, ¶ 15.)

29 i. The Dueys request recognition of appurtenant rights for at least 1,451,700 gpd,  
30 and a permit for 836,600 gpd, of which 26,600 gpd is the existing use. (**Id.**, ¶¶ 7, 31.)  
31 [Hui/MTF and OHA, FOF B-587.]



1 j. The appurtenant rights request is based on the 4.839 acres derived from LCA  
2 2610 (4.712 acre) and LCA 3529:3 (0.1271 acre), using Reppun’s high estimate of  
3 300,000 gad. (**Id.**, ¶¶ 16-18.)

4 k. Currently, two of fifteen ancient lo`i on approximately 0.08 acre have been  
5 restored, and they also irrigate 3 acres of a domestic, non-commercial garden. Using a  
6 1.5-inch valve to control irrigation flow, they estimate their use at 21,600 gpd for the  
7 0.08-acre and 5,000 gpd for the garden, for a total existing use of 26,600 gpd. (**Id.**, ¶¶ 20-  
8 21.) [Hui/MTF and OHA, FOF B-591.]

9 l. They intend to restore the remaining lo`i of approximately 3 acres, but the amount  
10 of `auwai water is enough for only two lo`i. Based on their site-specific experience with  
11 the two lo`i, they estimate 270,000 gad would be sufficient and therefore request an  
12 additional 810,000 gpd (3 acres x 270,000 gad). In their original request, they had  
13 requested water for 1.42 acres but later changed the request to 3 acres. (**Id.**, ¶¶ 22-24, 31;  
14 SWUPA 2244N, p. 3, table 2.) [Hui/MTF and OHA, FOF B-592.]

15  
16 394. **SWUPA 2370N—Francis Ornellas**

17 a. On April 30, 2009, Francis Ornellas filed a new-use SWUPA for TMKs No. (2)  
18 3-5-001:002 (“Parcel 2”), No. (2) 3-5-001:003 (“Parcel 3”), No. (2) 3-5-001:004 (“Parcel  
19 4”), and No. (2) 3-5-001:005 (“Parcel 5”). (Ornellas, WT, 2/3/16, ¶ 1. [Hui/MTF and  
20 OHA, FOF B-593.]

21 b. The land had been in the Ornellas `ohana since “time immemorial” but a part had  
22 been sold, when one of Ornellas’s wife’s relatives sold his interest. Ornellas purchased  
23 this interest from Wailuku Agribusiness in 2002 via a quitclaim deed in which the water  
24 rights were reserved. (**Id.**, ¶¶ 1, 5.)

25 c. The parcels with reservations are a one-third interest in Parcel 2 and Parcels 3, 4,  
26 and 5, which are pō`alima within the one-third interest:

- 27 1. Parcel 2 is 1.27 acres.
- 28 2. Parcel 3 is 0.18 acre.
- 29 3. Parcel 4 is 0.03 acre.
- 30 4. Parcel 5 is 0.03 acre.

1 (Id., ¶¶ 5, 8, 16; Exh. 2370-Ornellas-1; Ornellas, Tr., 7/18/16, p. 43, l. 23 to p. 44, l. 3.)  
2 [Hui/MTF and OHA, FOF B-597, B-603.]

3 d. The Commission had granted provisional approval for all four parcels.  
4 (Provisional Order, Attachment C, Revised Exh. 7, p. 19.) [Hui/MTF and OHA, FOF B-  
5 598.]

6 e. Parcel 2 is the entirety of LCA 2414, confirmed by RP 6863. The LCA is  
7 described as containing 23 lo`i kalo, a wauke field, and a house lot. Ornellas also  
8 provided photographs depicting the ancient `auwai and lo`i features still visible on his  
9 lands, and the map of LCA 2414 also shows that the river used to flow right through this  
10 kuleana. Ornellas concludes that these facts, the presence of the three pō`alima within the  
11 kuleana, and information passed down from `ohana elders, confirm that Parcel 2 was  
12 cultivated mainly in lo`i kalo. (Id., ¶¶ 7-10; Exh. 2370-Ornellas-1, -2, -3, -4; SWUPA  
13 2370N at Attachment C.) [Hui/MTF and OHA, FOF B-598, B-599.]

14 f. Ornellas estimates his appurtenant rights for Parcel 2's 1.27 acres as 103,572 gpd,  
15 consisting of the following:

- 16 1. 750 gpd for pāhale (0.24 acre x 3,000 gad).
- 17 2. 153,000 gpd for lo`i kalo (0.51 acre x Reppun's 300,000 gad).
- 18 3. 1,530 gpd for wauke (0.51 acre x 3,000 gad).
- 19 4. Reducing the resulting 155,280 gpd by one-third for the appurtenant rights  
20 reservation on one-third of Parcel 2.

21 (Id., ¶¶ 11-14 .) [Hui/MTF and OHA, FOF B-600, B-601.]

22 g. If appurtenant rights survive the deeds's reservations, Ornellas requests  
23 recognition of the one-third of Parcel 2 and of Parcels 3, 4, and 5, for a total of 227,280  
24 gpd:

- 25 1. Parcel 2: 155,280 gpd.
- 26 2. Parcel 3: 54,000 gpd (0.18 acre x 300,000 gad).
- 27 3. Parcel 4: 9,000 gpd (0.03 acre x 300,000 gad).
- 28 4. Parcel 5: 9,000 gpd (0.03 acre x 300,000 gad).

29 (Id., ¶ 6.)

30 h. Ornellas requests a permit for 426,567 gpd:

1 1. 426,300 gpd for 1.421 acres of kalo lo`i using Reppun’s high estimate of  
2 300,000 gad.

3 2. 267 gpd for 0.089 acre for their home and non-commercial garden, based  
4 on Maui County domestic cultivation standard of 3000 gad.

5 (*Id.*, ¶¶ 6, 15-16.) [Hui/MTF and OHA, FOF B-594, B-602, B-603.]  
6

7 395. **SWUPA 2360N—Anthony Manoukian**

8 a. On May 4, 2009, Anthony Manoukian filed a new-use SWUPA for TMK No. (2)  
9 3-5-001-019 (“Parcel 19”), a 1.8-acre property for which he claimed appurtenant rights  
10 and requested a permit for 540,000 gpd, applying Reppun’s high estimate for kalo lo`i  
11 (1.8 acres x 300,000 gad). However, in an Attachment to his SWUPA, Manoukian stated  
12 he was planning to cultivate 1.428 acres of kalo lo`i and 0.089 acre of a native Hawaiian  
13 plant garden, for a total of 428,667 gpd. (SWUPA 2360N, p.1, p. 2, table 1, p. 3, table 2,  
14 Attachment A, p. 2.)

15 b. Manoukian stated that the land has been in his wife’s family “since time  
16 immemorial.” Wailuku Agribusiness came to own three pō`alima on their land, a total of  
17 0.24 acres and designated TMK Nos. (2) 3-5-001:003, -004, and -005, as well as an  
18 undivided 33.33% interest in TMK No. (2) 3-5-001:002, which Manoukian purchased via  
19 quitclaim deed in 2002, in which Wailuku Agribusiness reserved the water rights.  
20 (SWUPA 2360N, Attachment A, p. 2.)

21 c. Provisional recognition was denied without prejudice, with the notation: “TMK  
22 map shows LCA 2452. Docs provided for LCA 2414. Wailuku Agribusiness reserved  
23 water rights.” (Provisional Order, Attachment C, Revised Exh. 7, p. 19.)

24 d. Manoukian did not submit written testimony nor participate in the CCH.  
25

26 396. **SWUPA 2371N—Kimberly Lozano**

27 a. On April 30, 2009, Kimberly Lozano filed a new-use SWUPA for TMKs No. (2)  
28 3-4-036:001 (“Parcel 1”) and No. (2) 3-4-036:010 (“Parcel 10”). She had been using  
29 water on Parcel 1 when she filed but filed for a new use, because she wasn’t sure what  
30 the process was. (Lozano, WT, 12/14/15, ¶ 1; Lozano, Tr. 7/18/16, p. 135, l. 23 to p. 136,  
31 l. 4.) [Hui/MTF and OHA, FOF B-604.]

1 b. The deeds to both parcels contained a reservation of appurtenant rights when her  
2 parents purchased them for her from Wailuku Agribusiness in 2000. (Lozano, WT,  
3 12/14/15, ¶¶ 1-2.) [Hui/MTF and OHA, FOF B-608.]

4 c. Lozano is the great, great, granddaughter of Naka`ahiki Kawi, who was the  
5 konohiki of `Īao Valley, and she now resides on land that was her ancestors. (Lozano,  
6 WT, 12/14/15, p 132, ll. 8-15.)

7 d. The source of her water is a spring which flows through an open ditch to Wailuku  
8 River. (**Id.**, ¶ 15.)

9 e. Parcel 1 is 1.14 acres, and Parcel 10 is 0.1836 acres, and both derive from LCA  
10 2435, confirmed by RP 6397, and LCA 2458, confirmed by RP 6066. Parcel 1 also  
11 includes a pō`alima. (**Id.**, ¶ 6.)

12 f. The Commission had granted provisional recognition for Parcel 1, based on LCA  
13 2435 but not for Parcel 10, based on LCA 2458, described as having a pō`alima as a  
14 boundary. There is also a reference to 4405MM and that it was not shown on the TMK  
15 map. (Provisional Order, Attachment C, Revised Exh. 7, p. 19.)

16 g. Lozano explained in her written testimony that LCA 2435 had been mistakenly  
17 labeled as 2434, with “2434” initially written in RP 6397 and then “2435” written over,  
18 but “2434” still mistakenly used in the foreign testimony, translation of native testimony,  
19 and survey boundary. “2438” had been mistakenly used in the native testimony and  
20 native register for LCA 2458. Lozano then pointed out that the survey boundary for LCA  
21 No. 2434 matched those of LCA 2435; and that the same is true for LCAs 2438 and  
22 2458. (**Id.**, ¶¶ 7-9.)

23 h. LCA 2435 was described as kalo land with three pō`alima in it; and LCA 2458  
24 was variously described as 6 lo`i, 6 taro patches, or taro land. (**Id.**, ¶¶ 10-11.)

25 i. Lozano requests appurtenant rights for Parcels 1 and 10 for 402,000 gpd, based on  
26 Reppun’s high estimate (1.34 acre x 300,000 gad). (However, even using Reppun’s  
27 estimate, her request should have been for 1.324 acres, or for 397,200 gpd.) (**Id.**, ¶¶ 5,  
28 24.) [Hui/MTF and OHA, FOF B-605.]

29 j. She also requests a permit for 57,218 gpd:

1 1. 2,138 gpd for 0.855 acre of Parcel 1 for her yard and garden, using  
2 **Waiāhole**'s irrigation requirements for diversified agriculture (0.855 x 2,500  
3 gad).

4 2. 55,080 gpd for 0.1836 acre of Parcel 10 for kalo lo`i (0.1836 acre x  
5 300,000 gad).

6 (**Id.**, ¶¶ 16-17, 20.) [Hui/MTF and OHA, FOF B-610, B-611.]

7  
8 397. **SWUPA 2275—Duke & Jean Sevilla, Christina Smith, & County of Maui**

9 a. On April 23, 2009, Duke & Jean Sevilla and Christina Smith filed an existing-use  
10 SWUPA for TMKs No. (2) 3-3-001:001 (“Parcel 1”), No. (2) 3-3-001:041 (“Parcel 41”),  
11 and No. (2) 3-3-001:054 (“Parcel 54”), requesting 4,200 gpd for 1.2 acres of diversified  
12 agriculture. (Sevilla, WT, 3/18/16, ¶ 1; SWUPA 2275, p. 2, table 1, p. 4, table 3.)  
13 [Hui/MTF and OHA, FOF B-621.]

14 b. Parcel 41 is 0.933 acre and Parcel 54 is 0.488 acre, on which they have a garden  
15 on 0.1 acre of each parcel. The Sevillas own Parcel 41, and Christina and Lorin Smith  
16 own Parcel 54, but they manage their parcels collectively. (**Id.**, ¶ 2; SWUPA 2275, p. 4,  
17 table 3; Attachment, p. 1.) [Hui/MTF and OHA, FOF B-622.]

18 c. Parcel 1 is 63.7 acres, which their nonprofit Neighborhood Place of Wailuku  
19 leased from North Shore at Waiehu, LLC, on which they cultivated about 1.0 acre of  
20 dryland kalo. In May 2012, the County of Maui purchased the property, and on February  
21 4, 2016, the community nonprofit Ke Ao I Ka Makani Ho`eha`ili (“Ke Ao”) secured a  
22 right of entry through Duke Sevilla, the President of Ke Ao’s Board of Directors. The  
23 County of Maui is now a co-applicant for Parcel 1. (**Id.**, ¶¶ 29-30; SWUPA 2275, p. 4,  
24 table 3; Attachment, p. 1; Parsons, WT, 5/31/16, ¶ 6; Sevilla, Tr., 7/18/16, pp. 75, ll. 11-  
25 16, p. 103, ll. 8-12.) [Hui/MTF and OHA, FOF B-623.]

26 d. The parcels are watered from springs and wetlands in Paukūkalo, including  
27 Waiola Spring, which is on their land about 200 yards from the mouth of Wailuku River.  
28 They do not divert water from Wailuku River but utilize the naturally occurring springs  
29 and seeps on their land. Sevilla reports that with the partial restoration of Wailuku River,  
30 the flow in Waiola Spring on his `ohana’s land has increased and become more  
31 consistent, remaining saturated throughout the hot summer months. (SWUPA 2275,

1 Attachment, pp. 1-2; Sevilla, WT, 3/18/16, ¶¶ 13, 35; Exh. 2275 Sevilla-7 (before and  
2 after photos of Waiola Spring.)

3 e. Their use is not gauged and the existing use of 4,200 gpd was based on the  
4 general estimate of 600 gpd for each of the two 0.1 acre gardens, using Maui County’s  
5 single-family standard, and 3,000 gpd for the 1.0 acre of dryland kalo, using Maui  
6 County’s standard for domestic agriculture. (SWUPA 2275, p. 3, table 2; Attachment, p.  
7 2.)

8 f. In his March 18, 2016 written testimony, Sevilla:

9 1. requested an additional 100,000 gpd for a new use of 0.33 acre of kalo lo`i  
10 on Parcels 41 and 54, using Reppun’s high estimate of 300,000 gad);

11 2. stated that, in addition to the 1.0 acre of dryland kalo he was cultivating on  
12 Parcel 1 on the date of designation in 2008, Wes Wong was also cultivating 2  
13 acres of spring-fed lo`i; and

14 3. Ke Ao would like to restore and maintain a total of 20 acres of kalo lo`i on  
15 Parcel 1, which Sevilla estimates would require 6,000,000 gpd, using Reppun’s  
16 high estimate (20 acres x 300,000 gad), of which he also estimates that eight acres  
17 would be spring-fed lo`i and 12 acres would need water from either Wailuku  
18 River or Waiehu Stream.

19 (**Id.**, ¶¶ 21, 61-62.) [Hui/MTF and OHA, FOF B-634, B-645.]

20 g. If any water for Parcel 1 is allocated from the Wailuku River, Sevilla stated that  
21 “we’re fine with making that subject to the County’s Water Use Permit from the Wailuku  
22 River as well.” Sevilla, Tr., 7/18/16, p. 76, ll. 15-19.) .) [Hui/MTF and OHA, FOF B-  
23 623.]

24 h. Therefore, Sevilla now requests:

25 1. Parcels 41 and 54: 101,200 gpd, compared to the existing-use SWUPA  
26 request for 1,200 gpd for two gardens; and

27 2. Parcel 1: 6,000,000 gpd for 20 acres of kalo lo`i, compared to 3,000  
28 gpd for an estimated existing use on 1 acre of dryland kalo, which he now has  
29 increased to 600,000 gpd, claiming that 2 acres of kalo lo`i had also been an  
30 existing use.

31 (**Id.**, ¶¶ 27, 64.)

1 i. Sevilla did not and has not submitted a new-use SWUPA. (Sevilla, Tr., 7/18/16, p.  
2 79, l. 2 to p. 80, l. 23.)

3 j. The Sevillas and Smith claimed appurtenant rights but did not provide  
4 documentation and were therefore denied provisional recognition. (SWUPA 2275, p. 1;  
5 Provisional Order, Attachment C, Revised Exh. 7, p. 18.)

6 k. Sevilla now has submitted documents for all three parcels and claims appurtenant  
7 rights of 414,300<sup>18</sup> gpd for all of Parcel 41's 0.933 acre and Parcel 54's 0.488 acre, and  
8 1,771,680 gpd for Parcel 1, using Reppun's high estimate of 300,000 gad for kalo lo'i.  
9 (**Id.**, ¶¶ 8-15, 18, 41-55, 58.)

10 l. Parcels 41 and 54 are a portion of the same Royal Patent Grant No. 3343 to Claus  
11 Spreckels as in Parcel 1, which included 24,000 acres of former crown lands with no  
12 description of land use at the time of the Māhele but for which Sevilla described current  
13 land features on their portion of the Grant, and for which he claimed appurtenant rights  
14 for all of Parcels 41 and 54. (**Id.**, ¶¶ 8-15.)

15 m. Parcel 1's deed has a reservation of appurtenant rights in 2004, and Sevilla  
16 contends it is derived from multiple LCAs and a 24,000-acre Royal Patent Grant to Claus  
17 Spreckels. His claim for 1,771,680 gpd does not include the Grant to Spreckels or another  
18 large grant to Lunalilo, because he could not confirm what was cultivated on Parcel 1's  
19 portions of this property. (**Id.**, ¶¶ 40-41, 59; Chumbley, Tr. 7/18/16, p. 100, ll. 4-9.)

20 n. His claim of appurtenant rights of 1,771,680 gpd is for 9.87 acres of Parcel 1's  
21 63.7 acres:

22 domestic use

23 600 gpd: house lot on one-half of LCA 2447:9's 0.18 acres.

24 wetland kalo cultivation

25 1,002,000 gpd: (3.34 acres x 300,000 gad) on LCA 1759:9.

26 610,500 gpd: (1/2 x 4.07 acre x 300,000 gad) on LCA 11171.

27 fishpond cultivation

28 3,240 gpd: (1/2 x 0.18 acre x 36,000 gad) on LCA 2447:9.

29 10,440 gpd: (0.29 acre x 36,000 gad) on LCA 3441:3.

30 73,260 gpd: (1/2 x 4/07 acre x 36,000 gad) on LCA 11171.

---

<sup>18</sup> Sevilla added 0.933 and 0.488 as 1.381, but it should have been 1.421 acres.

1 49,680 gpd: (1.38 acre x 36,000 gad) on portion of LCA 7742:4.

2 21,960 gpd: (0.61 acre x 36,000 gad) on portion of CA 3253.

3 (**Id.**, ¶¶ 41-57.)

4  
5 398. **SWUPA 3623N—Noelani & Allan Almeida & Gordon Almeida**

6 a. On July 16, 2012, Noelani and Allan Almeida and Gordon Almeida filed a new-  
7 use SWUPA for TMKs No. (2) 3-3-001:022 (“Parcel 22”) and No. (2) 3-3-001:023  
8 (“Parcel 23”). Noelani and Allan own Parcel 23 and their cousin Gordon owns the  
9 adjacent Parcel 22, and they manage the parcels together as an `ohana. (Almeida, WT,  
10 8/28/16, ¶ 1.) [Hui/MTF and OHA, FOF B-612.]

11 b. The water they are requesting is from springs on their land that are fed by the  
12 Wailuku River and formerly supplied water for the lo`i. They do not divert water from  
13 the River but the existence of their spring is dependent upon a consistent flow in the  
14 River. (**Id.**, ¶ 14.)

15 c. Noelani and Gordon are both direct lineal descendants of Kaianui, the original  
16 claimant of LCA 3234C:2, confirmed by RP 4256, and their `ohana has lived  
17 continuously on this land since the Māhele. (**Id.**, ¶ 1.)

18 d. Parcel 22 is 1.92 acres, and Parcel 23 is 0.445 acre, for a combined total of 2.365  
19 acres, and both parcels fall within LCA 3234C:2. (**Id.**, ¶¶ 4, 10.) [Hui/MTF and OHA,  
20 FOF B-617.]

21 e. The native testimony describes this kuleana as kalo land with two ponds (“aina  
22 kalo and elua loko”) and also contains a pō`alima. Sketches of LCA 3234C:2 depict the  
23 pō`alima but not the two ponds. Based on the documents and the slope of the land, they  
24 estimate that both parcels were entirely in kalo at the time of the Māhele. (**Id.**, ¶¶ 8-9, 11;  
25 Exh. 3623-Almeida-1, -2; SWUPA 3623N, Exh. 4-A –B.) [Hui/MTF and OHA, FOF B-  
26 616.]

27 f. The Commission had granted provisional recognition, referencing LCA 3234C:2  
28 but described as only pauku kalo and pō`alima, without any reference to two ponds.  
29 (Provisional Order, Attachment C, Revised Exh. 7, p. 19.) [Hui/MTF and OHA, FOF B-  
30 616.]



1 g. They request recognition of appurtenant rights for 709,500 gpd (2.365 acre x  
2 Reppun’s high estimate of 300,000 gad). (**Id.**, ¶ 12.) [Hui/MTF and OHA, FOF B-618.]

3 h. At the time they filed their SWUPA, they had intended to grow lo`i kalo but  
4 subsequently decided to grow dryland kalo in addition to other crops in their domestic  
5 garden and therefore amend their SWUPA to use spring water on 1.091 acres for  
6 subsistence crops and to water their yard. They request 3,273 gpd (1.091 acres x Maui  
7 County domestic cultivation of 3,000 gad). (**Id.**, ¶¶ 15-19.) [Hui/MTF and OHA, FOF B-  
8 620.]

9  
10 **ii. `Īao-Maniania Ditch**

11  
12 **399. SWUPAs 2189/2190N & 2196—Wailuku Country Estates Irrigation Company**

13 a. On April 24, 2009, Wailuku Country Estates Irrigation Company (“WCEIC”)  
14 filed existing- and new-use SWUPAs on behalf of Wailuku Country Estates Community  
15 Association’s (“WCECA”) 184 lot owners and an existing-use SWUPA for the common  
16 areas of TMK (2) 3-003-017. (SWUPAs 2189, 2190N, and 2196.)

17 1. The Wailuku Country Estates subdivision is comprised of 207 lots over  
18 470 acres:

19 a. 184 owner lots comprise 420.709 acres;

20 b. lots 185-189 comprise the common areas of approximately 32.5  
21 acres; and

22 c. lots 190-207 comprise the remaining acres of unspecified uses  
23 which appear from the subdivision map to consist of miscellaneous small  
24 areas; e.g., lot 203 is 0.048 acres, lot 204 is 0.145 acres, and lot 205 is  
25 0.006 acres.

26 (Exhs. 2189-WCEIC-245, -266.)

27 b. The 184 lot owners filed individual SWUPAs (See Table 4), which collectively  
28 equaled:

29 1. 120 owners with metered existing uses of 210,890 gpd for agricultural  
30 activities on 98.75 acres, or approximately 2,135 gad:

- 1 a. 12 acres of vegetables, 8.0 acres of orchard, 14.25 acres of  
2 bananas, 3.25 acres of papayas, 9.5 acres of macadamia nuts, 1.0 acre of  
3 dryland taro, 7.75 acres of nursery plants, 2.25 acres of turf grass, 38.75  
4 acres of landscape, and 2 acres of livestock.
- 5 2. 118 of 120 existing-use owners plus the remaining 64 owners with  
6 proposed new uses of 511,700 gpd for agricultural activities on 220.5 acres, or  
7 approximately 2321 gad:
- 8 a. 47.25 acres of vegetables, 39 acres of orchard, 42.75 acres of  
9 bananas, 12.25 acres of papayas, 33.5 acres of macadamia nuts, 6.0 acres  
10 of dryland taro, 13.75 acres of nursery plants, 0.25 acre of turf grass, 24.5  
11 acres of landscape, and 1.25 acres of livestock.
- 12 3. Most of the agricultural activities take place year-round, with the  
13 exception of certain seasonal crops. Many of the homeowners sell their produce at  
14 farmers markets or to local businesses and restaurants, and a number of  
15 homeowners rely on their crops as their sole or majority income for their families.  
16 (SWUPAs 2189, 2190N; Exhs. 2189-WCEIC-8-191, -265, -468-471, -473, -476.)  
17 [WCEIC, FOF 23, 25-26, 60-66, 82.]
- 18 c. The existing use for the 32.5 acres of common areas equaled 158,768 gpd,  
19 calculated by subtracting the lot owners' use from total deliveries by WWC and taking  
20 into account water that is delivered to the kuleana users, who are not charged. (Exhs.  
21 2189-WCEIC-266, -476, -567, ¶ 5.) [WCEIC, FOF 68-69.]
- 22 1. 158,768 gpd for 32.5 acres equals 4,885 gad.
- 23 2. The common areas are described somewhat differently in WCEIC's  
24 documents:
- 25 a. 2.26 acres for a community park, 20 acres of roadside setbacks  
26 along six miles of roads (24-foot setback on the mauka side and 9.5-foot  
27 setback on the makai side), 9 acres of lot drainage swales (not including  
28 3.1 acres of swales in lots 52 to 62) , and 1 acre of retention basins. (Exhs.  
29 2189-WCEIC- 266, -469, ¶ 18, -476, ¶ 54.) [WCEIC, FOF 51.]
- 30 b. 2.262 acres for a community park (lot 185), 6.726 acres for Waihee  
31 Ditch (lot 186), 0.224 acres for access off Maika Place for owners/John

1 Russell (lot 187), 0.758 acres for County of Maui Water Tank site (lot  
2 188), and 23.028 acres for Roads and Shoulders (lot 189). (Exh. 2189-  
3 WCEIC-261.)

4 c. Photos of the lot and road drainage swales show spotty grass  
5 coverage on the roadside shoulders and tall weeds in some of the drainage  
6 swales. (SWUPA 2196-WCEIC, photos.)

7 d. Wailuku Country Estates is subject to a Declaration of Covenants, Conditions,  
8 and Restrictions (“CC&Rs”):

9 1. Each lot is designated for, and restricted to, agricultural use as defined in  
10 the zoning laws, and two water systems provide water: a potable water system and  
11 a non-potable system for agricultural use.

12 (Exh. 2189-WCEIC-224.) [WCEIC, FOF 6-8.]

13 e. WCEIC receives up to a maximum of 1 mgd from WWC and is charged a  
14 minimum charge of 500,000 gpd at the County rate:

15 1. The Maui County rate is \$1.90/1000gallons from 0-5,000 gallons,  
16 \$3.60/1000 gallons for the next 5001-15,000 gallons, and \$1.00/1000 gallons for  
17 anything over 15,000; however, the current rate has been set by the Public  
18 Utilities Commission at \$0.90/1000 gallons.

19 2. In addition to the minimum charge, an additional amount is paid by which  
20 the delivery charge for each quarter exceeds the minimum charge, defined as the  
21 County Rate times the gallons delivered each month plus general excise tax.

22 (Exh. Exh. 2189-WCEIC-232.) [WCEIC, FOF 10-14.]

23 f. Each lot owner is charged \$100/month for 2,666 gpd or 80,000 gallons per month.  
24 Any water used in excess is charged at \$2.00/1000 gallons, higher than the County of  
25 Maui agricultural rate of \$1.00/thousand gallons to encourage water conservation. (Exh.  
26 Exh. 2189-WCEIC-476.) [WCEIC, FOF 18.]

27 g. Appurtenant rights. Although no appurtenant rights were claimed when the  
28 SWUPAs were filed in 2009, WCEIC and WCECA participated in the Provisional  
29 Approval process, with many lots given provisional recognition. (Provisional Order:  
30 Attachment C, Revised Exh. 7, pp. 19-33.)

1 h. Based on area maps and other information provided by Title Guaranty, WCEIC  
2 calculated the proportion of each lot derived from the various LCAs that encompass the  
3 development. 27 LCAs were identified, overlapping 93 lots. The percent of each lot  
4 derived from the overlapping LCA(s) was then calculated. (Exhs. 2189-WCEIC-243-A, -  
5 243-B,-245.) [WCEIC, FOF 37.]

6 1. For example:

7 a. LCA 2502:1, which was approximately 15,320 square feet (0.35  
8 acres), is almost entirely in lot 45 (15,108 square feet), which is 2.584  
9 acres, and with the remaining 212 square feet in lot 42, which is 2.212  
10 acres. Therefore, essentially zero percent of lot 42 and 13 percent of lot 45  
11 are derived from LCA 2502:1. (Exhs. 2189-WCEIC-243-A, -49, table 3, -  
12 52, table 3.)

13 b. LCA 3275-E was approximately 6,232 square feet (0.14 acres) and  
14 is entirely in lot 31, which is 2.399 acres. Therefore, about 6 percent of lot  
15 31 is derived from LCA 3275-E. (Exhs. 2189-WCEIC-243-A, -38, table  
16 3.)

17 c. LCA 3225 was approximately 650,053 square feet (14.92 acres), of  
18 which only 226 square feet (0.005 acre) was in the subdivision, in lot 186,  
19 which is 6.726 acres and part of the Waihe`e Ditch, *supra*. Therefore,  
20 essentially zero percent of lot 186 was derived from LCA 3225. (Exh.  
21 2189-WCEIC-243-A.)

22 i. WCEIC claimed appurtenant rights for the subdivision by summarizing the  
23 percent of each LCA that was in the subdivision and multiplying by 150,000 gad, which  
24 it stated the Commission had previously applied and which is the median of the figures  
25 testified to by Paul Reppun. (Exh. 2189-WCEIC-243b-1.) [WCEIC, FOF 38, COL 19.]

26 1. The claimed appurtenant rights were based on 30 LCAs, which were  
27 essentially the same as the 27 identified as overlapping 93 lots, *supra*.

28 a. LCA 4452:9, which was 1,767,370 square feet (40.57 acres) and  
29 claimed to be overlapping 31 lots, was later withdrawn, as it was described  
30 as house or lots in Honolulu and Lahaina. (Exhs. 2189-WCEIC-243-A, -  
31 244, p. 72.)

1 b. LCA 2436:1 & 3 were listed separately (‘āpana 3 was mislabeled  
2 earlier as ‘āpana 2 in Exh. 2189-WCEIC-243-A, but there was already an  
3 LCA 2436:2 listed separately.)

4 c. LCA 2495:1-4 was listed separately as ‘āpana 1, ‘āpana 2,3, and  
5 ‘āpana 4.

6 d. LCA 4461:1&2 were listed as separate ‘āpana.

7 e. The revised list of LCAs from 27 to 30 included LCA 2502:3,  
8 listed as 7,437 square feet, or 0.17 acres. However, the original list of 27  
9 LCAs included LCA 2502:1, which was approximately 15,320 square feet  
10 (0.35 acres). Thus, ‘āpana 1 and not ‘āpana 3 will be used in the  
11 calculation of appurtenant rights.

12 (compare Exhs. 2189-WCEIC-243-A and -243b-1.)

13 2. Adding the gallons per day claimed for each LCA, WCEIC claimed  
14 appurtenant rights of 8,263,555 gpd for the Wailuku Country Estates subdivision.  
15 (WCEIC, FOF 38, COL 19.)

16 j. However, the appurtenant rights were calculated on the entire acreage of each  
17 LCA, whereas WCEIC had explicitly identified nine LCAs with acreage that should be  
18 reduced for appurtenant rights because of a houselot or unirrigated land. (Blackburn, Tr.,  
19 7/28/16, pp. 69-84.)

20 1. LCA 3335: pahale (houselot).

21 (Blackburn, Tr., 7/28/16, p. 69, l. 14 to p. 71, l. 1.)

22 2. LCA 377: pahale (houselot).

23 (Blackburn, Tr., 7/28/16, p. 71, l. 12 to p. 72, l. 19.)

24 3. LCA 3294-B:1:M:1: pahale (houselot).

25 (Blackburn, Tr., 7/28/16, p. 80, ll. 1-15.)

26 4. LCA 2495:2&3: pahale (houselot).

27 (Blackburn, Tr., 7/28/16, p. 80, l. 16 to p. 81, l. 5.)

28 5. LCA 3292: dryland taro; 54 loi, 26 dry loi, and a kula.

29 (Blackburn, Tr., 7/28/16, p. 81, l. 22 to p. 82, l. 16; Exh. 2189-WCEIC-205.)

30 6. LCA 2503:2: 23 lo`i, 2 sweet potato kula, 2 hala trees, one housesite.

31 (Blackburn, Tr., 7/28/16, p. 82, l. 17 to p. 83, l. 4; Exh. 2189-WCEIC-200.)

1 7. LCA 453:1: 93 patches and an unirrigated kula; 11 taro patches and a  
2 small kula.

3 (Blackburn, Tr., 7/28/16, p. 83, ll. 5-17.)

4 8. LCA 3330: 9 loi and 4 kula.

5 (Blackburn, Tr., 7/28/16, p. 84, ll. 22-23; Exh. 2189-WCEIC-207.)

6 9. LCA 3294-B:1:M:2: pahale (houseslot).

7 (Blackburn, Tr., 7/28/16, p. 84, ll. 22-23; Exh. 2189-WCEIC-195.)

8 k. In addition, of the 21 remaining LCAs that WCEIC claimed were cultivated  
9 entirely in kalo, 4 were described in the LCA documents as having part of the land in  
10 other than kalo lo`i.

11 1. LCA 3498: 4 mo`o, a portion are weed grown and a portion have taro.

12 (Exh. 2189-WCEIC-212.)

13 2. LCA 2495:4: taro mo`o and kula.

14 (Exh. 2189-WCEIC-198.)

15 3. LCA 406:1: house, taro in the patches and potato and sugar cane in the  
16 fields.

17 (Exh. 2189-WCEIC-194.)

18 4. LCA 2434 (mislabelled as 2435): land, houseslot, and kula; 3 pō`alima  
19 in it.

20 (Exh. 2189-WCEIC-196.)

21 l. Therefore, the portions of the LCAs that were in kalo irrigation at the time of the  
22 Māhele are as follows:

	<u>Acres</u>	<u>Kalo Irrigation</u>
23 1. LCA 3335	0.98	0.73 (0.98-.25)
24 2. LCA 3388	0.54	0.54
25 3. LCA 3294-B:2	0.56	0.56
26 4. LCA 3488	3.67	3.67
27 5. LCA 377	3.86	3.61 (3.86-.25)
28 6. LCA 3498	1.55	0.775 (1.55/2)
29 7. LCA 3294-B:1:M:1	0.53	0.28 (0.53-.25)
30 8. LCA 2495:1	0.19	0.19
31		

1	9.	LCA 2495:2&3	1.33	1.08 (1.33-.25)
2	10.	LCA 2495:4	1.06	0.53 (1.06/2)
3	11.	LCA 406:1	2.78	1.39 (2.78/2)
4	12.	LCA 3292	3.04	1.52 (3.04/2)
5	13.	LCA 453:2	1.04	1.04
6	14.	LCA 3275-E	0.14	0.14
7	15.	LCA 4461:1	2.48	2.48
8	16.	LCA 4461:2	1.29	1.29
9	17.	LCA 2436:1	0.23	0.23
10	18.	LCA 2436:3	0.17	0.17
11	19.	LCA 2502:1	0.35	0.35
12	20.	LCA 3225	14.92	14.92
13	21.	LCA 3237:	4.79	4.79
14	22.	LCA 2503:2	1.08	0.415 ([1.08-.25]/2)
15	23.	LCA 2436:2	2.40	2.40
16	24.	LCA 2533:1	3.40	3.40
17	25.	LCA 453:1	13.69	12.32 (90%)
18	26.	LCA 2434	3.06	1.405 ([3.06-.25]/2) (misabeled as
19		LCA 2435. <u>See</u> Exh. 2189-WCEIC-196.)		
20	27.	LCA 3387	0.68	0.68
21	28.	LCA 3330	8.87	4.435 (8.87/2)
22	29.	LCA 3294-B:1:M:2	0.77	0.52 (0.77-.25)
23	30.	LCA 2502:3	0.17	0.17

24 m. Sixty-one (61) lots have some land derived from one or more of these LCAs,  
25 down from an initial ninety-three (93) lots because of the elimination of LCA 4452:9.<sup>19</sup>  
26 (Exh. 2189-WCEIC-243-A.)

27 n. The acreage qualifying for appurtenant rights for each of these 61 lots is  
28 calculated through the following steps:

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<sup>19</sup> LCA 4452:9 was 40.57 acres and claimed to be overlapping 31 lots, but it was later withdrawn, because it was described as house or lots in Honolulu and Lahaina, *supra*.

1           1.       The percent of the lot derived from the LCA is calculated by dividing the  
2 square feet of the LCA that is in the lot by the square feet of the LCA.

3           2.       The acreage in the lot that has appurtenant rights is calculated by  
4 multiplying the acreage in the LCA qualifying for appurtenant rights by the  
5 percent of the lot derived from the LCA. (See acreage and appurtenant rights  
6 acreage for the 30 LCAs, *supra*, and acreage of each lot derived from LCAs in  
7 Exh. 2189-WCEIC-243-A.)

8           3.       Note that the acreage of the LCA may be greater than the acreage used to  
9 calculate appurtenant rights, because of the presence of houselots and/or  
10 unirrigated lands. Therefore, the acreage within each lot that has appurtenant  
11 rights may also be equal to or more than the acreage that is used to calculate  
12 appurtenant rights.

13          4.       Examples:

14           a.       Lot 10 contains 23,364 square feet of LCA 406:1's 121,078 square  
15 feet (2.78 acres), or 19 percent of the LCA. The LCA has appurtenant  
16 rights for 1.39 acres. Thus, Lot 10 has appurtenant rights for 0.264 acres  
17 (0.19x1.39).

18           i.       Lot 10 is 2.504 acres, or 109,074 square feet. Thus 21  
19 percent (23,364/109,074), or 0.52 acres, of lot 10 has appurtenant  
20 rights for 0.264 acres.

21           b.       Lot 11 contains 56,793 square feet of LCA 406:1's 121,078 square  
22 feet (2.78 acres), or 47 percent of the LCA. The LCA has appurtenant  
23 rights for 1.39 acres, so Lot 11 has appurtenant rights for 0.653 acres  
24 (0.47x1.39).

25           i.       Lot 11 is 2.636 acres, or 114,824 square feet. Thus, 49  
26 percent (56,793/114,824), or 1.29 acres (0.49x2.636), of Lot 11 has  
27 appurtenant rights from LCA 406:1 for 0.653 acres.

28           Lot 11 also contains 2,061 square feet of LCA 453:2's 45,145  
29 square feet (1.04 acres), or 5 percent of the LCA. The LCA has  
30 appurtenant rights for its entire 1.04 acres, so lot 11 has appurtenant rights  
31 for 0.052 acres (0.05x1.04).



1 The total acreage to calculate appurtenant rights from the two  
2 LCAs is 0.705 acres (0.653 + 0.052) of Lot 11's total acreage of 2.636  
3 acres.

4 The total acreage with appurtenant rights is 1.342 acres (1.29 +  
5 0.052), and the appurtenant right is calculated for 0.705 acre of the 1.342  
6 acres.

7 o. Appurtenant rights for each of the 61 lots are calculated in Table 5, with the  
8 results as follows:

9	Lot 10:	0.26 acres	Lot 107	0.61 acres	Lot 198	0.91 acres
10	Lot 11:	0.70 acres	Lot 108	0.56 acres		
11	Lot 29:	0.00 acres <sup>20</sup>	Lot 109	1.87 acres		
12	Lot 30:	0.92 acres	Lot 110	1.16 acres		
13	Lot 31:	1.31 acres	Lot 111	0.37 acres		
14	Lot 32	0.92 acres	Lot 112	0.00 acres		
15	Lot 37	0.74 acres	Lot 113	0.04 acres		
16	Lot 41	0.64 acres	Lot 114	0.62 acres		
17	Lot 42	1.61 acres	Lot 115	0.96 acres		
18	Lot 43	0.69 acres	Lot 116	1.34 acres		
19	Lot 44	1.30 acres	Lot117	0.40 acres		
20	Lot 46	0.51 acres	Lot 118	0.26 acres		
21	Lot 47	0.56 acres	Lot 119	1.25 acres		
22	Lot 49	0.10 acres	Lo 120	1.11 acres		
23	Lot 50	0.08 acres	Lot 121	0.58 acres		
24	Lot 51	0.21 acres	Lot 122	1.64 acres		
25	Lot 54	0.00 acres	Lot 123	1.10 acres		
26	Lot 55	0.00 acres	Lot 124	1.12 acres		
27	Lot 56	1.60 acres	Lot 125	0.75 acres		
28	Lot 57	1.85 acres	Lot 170	1.79 acres		
29	Lot 58	1.85 acres	Lot 171	1.04 acres		

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<sup>20</sup> No acreage means the lot contains less than 1% of an LCA. Lot 29 contains only 16 square feet of LCA 2436:2's 2.40 acres.

1	Lot 59	1.85 acres	Lot 172	0.65 acres
2	Lot 60	1.11 acres	Lot 184	0.01 acres
3	Lot 61	0.25 acres	Lot 185	1.14 acres
4	Lot 64	0.00 acres	Lot 186	0.00 acres
5	Lot 65	0.00 acres	Lot 187	0.00 acres
6	Lot 68	0.07 acres	Lot 190	0.86 acres
7	Lot 104	0.12 acres	Lot 193	0.01 acres
8	Lot 105	0.74 acres	Lot 196	0.00 acres
9	Lot 106	0.11 acres	Lot 197	0.43 acres

10 p. The total appurtenant rights acreage for the 61/207 lots in the subdivision is 43.79  
11 acres, compared to WCEIC’s claim for 55.09 acres (8,263,555 gpd, *supra*, divided by  
12 150,000 gad). (WCEIC, FOF 38, COL 19.)

13 1. Note that 53 of the 184 homeowner lots include some land derived from  
14 LCAs with appurtenant rights, but 6 essentially have no appurtenant rights  
15 because the portions are so small (lots, 29, 54, 55, 64, 65, 112), and 3 have claims  
16 to less than 0.1 acre of appurtenant rights (lots 68, 113, 184).

17 2. Note also that 3.65 acres are on lands that are not homeowner lots: a) 1.44  
18 appurtenant acres on the county park (lot 185), and 2.21 acres on miscellaneous  
19 pieces of land within the subdivision (lots 190, 193, 197, and 198).

20 q. Practical alternatives. WCEIC commissioned a consultant’s report on alternative  
21 irrigation supplies for Wailuku Country Estates. Based on use prior to and after the filing  
22 of SWUPAs in 2009, it concluded that an alternative source should be able to supply up  
23 to 0.7 mgd during short-term periods of peak use and at least 0.3 mgd on a long-term  
24 average basis. Cost estimates were provided for identified alternatives that could be  
25 realistically implemented. (Exh. 2189-WCEIC-270, pp. 1-6.)

- 26 1. Onsite groundwater.
- 27 i. When the subdivision lands were purchased by the developer from  
28 WWC, it gave up the right to drill a well on the property.
- 29 ii. All of the subdivision is within the `Īao Aquifer Water  
30 Management System, which is already over-allocated, with MDWS  
31 having 11 wells with permitted use of 20.998 mgd.

1           2.       Waikapū Aquifer System, with a sustainable yield of 3 mgd, has a number  
2 of wells developed with the intention to fully use the sustainable yield.

3           i.        Waikapu Properties has three potable wells with a combined pump  
4 capacity that exceeds 3 mgd, and two other exploratory wells for potable  
5 or non-potable irrigation use. (See SWUPAs 2205, 2356/2297N, 3471N,  
6 and 3472N—Waikapu Properties.)

7           ii.       Three completed wells with a combined pump capacity of 1.7 mgd  
8 and projected use between 0.4 mgd to 0.5 mgd to supply the Maalaea  
9 Plantation project by Spencer Homes Maui.

10          iii.       Well construction and pump installation permits for two wells for  
11 A&B with a combined pumping capacity of 3 mgd.

12          iv.        Pending use of these wells will exceed the aquifer’s 3 mgd  
13 sustainable yield, and no landowner or developer in the aquifer system  
14 would give land and easements for another well that would adversely  
15 impact its ability to develop groundwater for its project. A transmission  
16 pipeline would have to cross land owned by others as well as across  
17 Wailuku River.

18          3.        HC&S’s Well No. 7 or any other HC&S wells in the Kahului Aquifer.

19          i.        They are many miles away and transmission pipeline costs would  
20 be prohibitive even if easements could be obtained. With HC&S’s closure  
21 and recharge from irrigation in question, it will take many years to  
22 determine the long-term viability of the aquifer as a source of supply. In  
23 view of these circumstances, A&B would not supply water from one of its  
24 existing wells or provide land for a new well.

25          4.        The Waihe`e Aquifer System on the north side of the `Īao Aquifer is not a  
26 groundwater management area and has a sustainable yield of 4 mgd.

27          i.        Current pumpage is about 4.3 mgd and had peaked at 6.0 mgd in  
28 May 2010. (See 2178/2179N—MDWS.) WCEIC would have to acquire  
29 land and/or easements for a well site and a six-mile long transmission  
30 pipe. Based on specific assumptions of the well’s elevation, location, and  
31 depth, the transmission pipeline’s size and locations, and the storage tank

1 at the head of WCEIC's distribution system, costs would be \$9.08 million,  
2 not including the costs of acquiring land and easements and whether such  
3 lands and easements could be acquired. Operating costs would be  
4 approximately \$1.75 per 1,000 gallons, compared to \$1.40 per 1,000  
5 gallons from WWC.

6 5. Potable water from MDWS, which provides 540 gpd for each lot. MDWS  
7 does not have adequate resources to provide for irrigation, which on average, is  
8 three times greater than the potable supply MDWS is providing.

9 6. Reclaimed wastewater. Maui County's Wastewater Reclamation Division  
10 is actively pursuing the reuse of reclaimed wastewater from its Kihei and Lahaina  
11 plants, which produce R-1 quality wastewater which has few limitations on its  
12 reuse. However, both plants are far too distant to serve the subdivision. The  
13 nearest plant is in Kahului, which produces R-2 quality wastewater, which is not  
14 suitable for the subdivision due to setback requirements and other use limitations.  
15 The County also has no plans to convert to R-1, and even if it did, transmission  
16 costs would be prohibitive.

17 7. Desalination of onsite groundwater would require: a) a deep well to  
18 exclusively draw saline groundwater from beneath the `Īao basal groundwater  
19 lens at between 900 to 1100 feet below sea level and a salt-water pump capacity  
20 of 1.75 mgd; b) a reverse osmosis plant; c) deep wells to dispose of the  
21 hypersaline concentrate from the reverse osmosis process, located at least 1000  
22 feet away from the saltwater supply well and delivering the hypersaline  
23 concentrate between 1300 to 1500 feet below sea level, to avoid recirculation  
24 back to the saltwater supply well; and d) booster pumps at the plant, 6000 feet of  
25 8-inch transmission pipeline, and a 200,000 gallon steel tank at the head of the  
26 irrigation delivery system. Costs are estimated at \$10.2 million, with operating  
27 costs estimated at \$12.05 per thousand gallons.

28 (Exh. 2189-WCEIC-270, pp. 7-12.) [WCEIC, FOF 73-77.]

29  
30 400. **SWUPAs 2215/2216N—Gary & Evelyn Brito**

1 a. On April 23, 2009, the Britos filed existing- and new-use SWUPAs for TMK No.  
2 (2) 3-3-002:029 (“Parcel 29”). (Brito, WT, 8/26/16, ¶ 1.) [Hui/MTF and OHA, FOF B-  
3 570.]

4 b. The Britos have lived on this land “forever. My wife’s family has lived on that  
5 property for over 100 years.” (Brito, Tr., 9/19/16, p. 31, l. 22 to p. 32, l. 3; SWUPA 2215,  
6 Addendum, p. 2.)

7 c. Parcel 29 is 0.248 acre and is comprised of LCA 3387, confirmed by RP 6065, as  
8 well as a portion of a pō`alima:

9 1. LCA 3387 is described as 9 lo`i.

10 2. The award in which the pō`alima was located is not described, but is  
11 approximately one-quarter of Parcel 29.

12 (**Id.**, ¶¶ 4, 8-10; Exh. 2215-Brito-p. 18; Exhs. 2215-Brito and 2216N-Brito, sketch on last  
13 page of unnumbered additional attachments.)

14 d. The Commission has granted provisional recognition. (Provisional Order,  
15 Attachment C, Revised Exh. 7, p. 34.) [Hui/MTF and OHA, FOF B-574.]

16 e. The Britos request appurtenant rights of 74,400 gpd, based on Reppun’s high  
17 estimate of 300,000 gad and 0.248 acres, and a permit for 15,196 gpd, of which 8,490  
18 gpd was the existing use. (**Id.**, ¶¶ 3, 12-13, 23.) [Hui/MTF and OHA, FOF B-571, B-575,  
19 B-577, B-578.]

20 f. Their existing use of 8,490 gpd consisted of 7,890 gpd of metered use for 0.022  
21 acre of lo`i and an estimated 600 gpd for their 0.197-acre yard and garden. (**Id.**, ¶¶ 15,  
22 17.) [Hui/MTF and OHA, FOF B-577, B-579.]

23 g. They wish to expand their lo`i to 0.37 acre. Due to the slope and shape of their  
24 lo`i and the way they are “terraced down,” along with their experience for many years,  
25 they believe their kalo require slightly more water than the standard water duty to avoid  
26 warmer temperatures in the bottom lo`i and therefore request 394,500 gad (versus  
27 Reppun’s high estimate of 300,000 gad), for a total of 14,596 gpd. (**Id.**, ¶¶ 15-16; Brito,  
28 Tr., 9/19/16, p. 37, ll. 4-20, p. 39, ll. 4-25.) [Hui/MTF and OHA, FOF B-577, B-578.]

29 h. They also request 600 gpd for their 0.197-acre yard and garden. Although they  
30 have 3 houses, river water is used only for the yard. . (**Id.**, ¶ 17; Brito, Tr., 9/19/16, p. 29,  
31 l. 15 to p. 30, l. 9.) [Hui/MTF and OHA, FOF B-579.]

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401. **SWUPA 2236—Valentine Haleakala**

- a. On April 23, 2009, Valentine Haleakala filed an existing-use SWUPA for TMK No. (2) 3-3-002:003, a 0.29 acre property for which he requested 600 gpd of the 9,690 gpd of metered use provided by Wailuku Country Estate’s Irrigation Company to him and his two neighbors, his sister, Evelyn Brito and her husband Gary (SWUPAs 2215/2216N), and Kenneth Mendoza (SWUPAs 2256/2257N). (SWUPA 2236, p. 2, table 1, p. 3, table 2, p. 4, table 3, Addendum, p. 2.)
- b. Haleakala’s estimated use of 600 gpd, based on Maui County standard for a single-family home, was being used on 0.25 acre of his yard and domestic plants. (SWUPA 2236, p. 3, table 2, p. 4, table 3, Addendum, p. 2.)
- c. Haleakala had claimed appurtenant rights and had been provisionally approved. (SWUPA 2236, p. 1; Provisional Order, Attachment C, Revised Exh. 7, p. 34.)
- d. Haleakala claimed that his land has been in his `ohana “since time immemorial,” and had no indication that its appurtenant rights have been extinguished. (SWUPA 2236, Addendum, p. 2.)
- e. However, Haleakala claimed that his land was granted to Ka`awa by LCA 3488, confirmed by R.P. 5289, but provisional approval referred to LCAs 3387 and 3294-B:1, M:1, and that LCA 3387 was shared by the properties of Haleakala, the Britos, and Mendoza. Gary Brito confirmed that all three properties were part of LCA 3387. (SWUPA 2236, Addendum, p. 2; Provisional Order, Exhibits, p. 84, Exh. 7; Brito, Tr., 9/19/16, p. 33, l. 25 to p. 34, l. 2.)
- f. Haleakala did not submit written testimony and did not participate in the CCH.

402. **SWUPAs 2256/2257N—Kenneth Mendoza**

- a. On April 23, 2009, Kenneth Mendoza filed existing- and new-use SWUPAs for TMK No. (2) 3-2-002:025 (“Parcel 25”), for whom Gerald Mendoza submitted written testimony. (Mendoza, WT, 2/3/16, ¶ 1.) [Hui/MTF and OHA, FOF B-580.]
- b. The Commission has provisionally recognized appurtenant rights. (Provisional Order, Attachment C, Revised Exh. 7, p. 34.) [Hui/MTF and OHA, FOF B-584.]
- c. Parcel 25 is 0.11 acre and comprised of portions of:

- 1 1. LCA 2533:1, confirmed by RP 6529;
- 2 2. LCA 3387, confirmed by RP 6065 (*See* also, SWUPAs 2215/2216N—
- 3 Gary & Evelyn Brito); and
- 4 3. a pō`alima awarded under LCA 3324 to Claus Spreckels.

5 (**Id.**, ¶¶ 4-11.) [Hui/MTF and OHA, FOF B-582.]

6 d. The proportions comprising Parcel 25 are as follows:

- 7 1. approximately one-half (1/2) fall under LCA 2533;
- 8 2. approximately three-eighths (3/8) fall under LCA 3387; and
- 9 3. approximately one-eighth (1/8) fall under LCA 3324.

10 (**Id.**, ¶ 11; Exh. 2256-Mendoza-5.)

11 e. LCA 2533 is described as aina kalo, kalo land, and four pō`alima. LCA 3387 is

12 described as containing 9 lo`i. (**Id.**, ¶¶ 12-13; Exhs. 2256-Mendoza-1, -2.)

13 f. The pō`alima in LCA 3324 falls within Parcel 25. (**Id.**, ¶ 14.)

14 g. The Mendozas therefore claim that all 0.11 acre of Parcel 25 has appurtenant

15 rights. (**Id.**, ¶ 15.)

16 h. They request recognition of appurtenant rights for 33,000 gpd, based on Reppun’s

17 high estimate (0.11 acre x 300,000 gad). (**Id.**, ¶¶ 16-18.) [Hui/MTF and OHA, FOF B-

18 583.]

19 i. The Mendozas intend to cultivate kalo on 0.003 acre and request 1,184 gpd, or

20 394,500 gad, based on his neighbors’, the Britos’, estimate of their needs (*See*, SWUPAs

21 2215/2216N—Gary & Evelyn Brito, Brito, WT, 8/26/16, ¶¶ 15-16). (**Id.**, ¶¶ 21-22.)

22 [Hui/MTF and OHA, FOF B-583.]

23 j. They also request 600 gpd for their current domestic use for their garden, based

24 on Maui County standard for single-family use. (**Id.**, ¶ 20.) [Hui/MTF and OHA, FOF B-

25 584.]

26 k. Although Gerald Mendoza submitted written testimony, he did not appear for the

27 CCH.

28

29 **iii. `Īao-Waikapū Ditch**

30

31 403. **SWUPAs 2178/2179N—Maui County Department of Water Supply**

1 a. On April 3, 2009, Maui County Department of Water Supply (“MDWS”) filed  
2 SWUPAs for 1.784 gpd of existing use and 1.416 gpd of proposed new use, for a total 3.2  
3 mgd. (Exhs. 2178-County-1, -2; Taylor, Tr., 7/19/16, p. 20, ll. 9-10.) [MDWS, FOF12-  
4 13.]

5 b. Water from Wailuku River is diverted by WWC into the `Īao-Waikapū Ditch and  
6 delivered to MDWS’s `Īao Water Treatment Plant (“Īao WTP”), where it is treated and  
7 distributed throughout the Central Maui System. The Central Maui System receives water  
8 from a variety of sources, including the Īao WTP and Kepaniwai Well, Īao Tunnel,  
9 Mokuhan Wells 1 and 3, Waiehu Heights Wells 1 and 2, Waihe`e Wells 1, 2 and 3, North  
10 Waihe`e Wells 1 and 2, Kanoa Wells 1 and 2, and Maui Lani Wells 5, 6, and 7.

11 1. The North Waihe`e Wells 1 and 2 and the Kanoa Wells 1 and 2 draw 4.00  
12 mgd from the Waihe`e Aquifer, the recommended limit by CWRM.

13 2. The Maui Lani Wells 1, 2, and 3 draw 2.00 mgd from the Kahului  
14 Aquifer, the recommended limit by CWRM.

15 3. The other sources have water-use permits from CWRM for the High-Level  
16 Diked or Basal `Īao Aquifer.

17 (Taylor, WT, 7/5/16, ¶¶ 8, 15-16; Taylor, Tr., 7/19/16, p. 18, ll. 20-22, p. 22, ll. 1-6; Exh.  
18 2178-County-11, p. 5, table 6.) [MDWS, FOF 20-21.]

19 c. The Central Maui System is the largest water system in the County and serves the  
20 communities of Kuau, Paia, Sprecklesville, Kahului, Puunene, Kihei, Wailea, Makena,  
21 Waikapū, Wailuku, Waiehi, and Waihe`e as well as the Hawaiian Homelands at  
22 Paukukalo and Waiehu Kou. (Taylor, WT, 7/5/16, ¶¶ 7, 32; Exh. 2178-County-14;  
23 Taylor, Tr., 7/19/16, p. 18, ll. 4-6.) [MDWS, FOF16-17.]

24 d. The population served by the Central Maui System was approximately 101,525 as  
25 of 2015 and expected to grow by 24,464 through 2030 to approximately 125,789.  
26 (McLean, WT, 7/5/16, ¶¶ 4-5; Exh. 2178-County-4, table 1-2.) [MDWS, FOF19.]

27 e. Currently, the Central Maui System’s total peak available source is 25.696 mgd,  
28 with an average daily use of 20.5 mgd. By 2030, the growth of the population is projected  
29 to increase the demand between 7.7 mgd and 19.4 mgd, with a baseline of 13.6 mgd used  
30 for water-planning purposes. While the current peak available source of 25.696 mgd can  
31 meet the needs of the Central Maui population, MDWS will need to develop new sources



1 of water to meet future needs. (Taylor, WT, 7/5/16, ¶¶ 13-14; Exhs. 2178-County-11,  
2 tables 4, 6, -12, p. 6; Taylor, Tr., 7/19/16, p. 18, l. 25 to p. 19, l. 5, p. 21, ll. 11-15, ll. 20-  
3 22.) [MDWS, FOF 24-26.]

4 f. Single- and multi-families represent the highest percentage of current and  
5 projected water use at 63-64 percent, with agriculture and private irrigation at only 2  
6 percent, and most of the remainder used by commercial (11-12 percent), hotels (8-9  
7 percent), government (9 percent), and industrial (4 percent). (Taylor, WT, 7/5/16, ¶ 26;  
8 Taylor, Tr., 7/19/16, p. 24, ll. 1-20; Exhs. 2178-County-1, -2.) [MDWS, FOF 31-32.]

9 g. Efficiency and conservation are increased by:

- 10 1. Supply side: increased staffing for leak detection and repair,  
11 preventative and predictive maintenance of the system, and back-up sources.
- 12 2. Demand side: water conservation pricing, low-flow fixture distribution,  
13 direct fixture retrofits, water auditing, regulations related to water conservation,  
14 and public education and outreach activities.
- 15 3. Watershed partnerships: partnered with and provided funding for  
16 seven watershed partnerships on Maui and Molokai to educate the public on water  
17 use, as well as to ensure that upland watersheds are fully functioning.

18 (Taylor, WT, 7/5/16, ¶ 26; Taylor, Tr. 7/19/16, p. 24, l. 21 to p. 26, l. 22; Exhs. 2178-  
19 County-13, pp. 1-10, tables 1, 2.) [MDWS, FOF 33-37.]

20 h. MDWS has commissioned studies to look at sources of water for the Central  
21 Maui System for both current and future demands, including an engineering and cost  
22 analysis report and the Maui County Water Use and Development Plan, Central DWS  
23 District Plan Update:

- 24 1. Northward basal groundwater development, adding new wells in the north  
25 side of the Waihe`e Aquifer and in the Kahakuloa Aquifer, adding sixteen wells,  
26 plus transmission pipelines, storage tanks, and booster pump stations:
  - 27 i. the sustainable yield is 4 mgd, which MDWS currently pumps, and  
28 CWRM has asked MDWS to limit further withdrawals.
  - 29 ii. USGS has indicated that new wells in the northern portion of the  
30 Waihe`e and Kahakuloa Aquifers may not be as productive or cost-  
31 effective as hoped.

1 (Taylor, WT, 7/5/16, ¶ 30; Taylor, Tr., 7/19/16, p. 28, l. 4 to p. 29, l. 2, p.  
2 41, ll. 18-23, p. 42, ll. 3-9; Exhs. 2178-County- 11, p. 6, -9, p. 59 ¶ 370, -12, pp.  
3 30-32.) [MDWS, FOF 40-41.]

4 2. Eastward basal groundwater development, with a series of wells at  
5 elevation 1000 feet, transmission pipelines, storage tanks, and booster pump  
6 stations:

7 i. Estimated life cycle costs would be \$604 million.<sup>21</sup>

8 ii. MDWS's ability to utilize this option is restricted by a Consent  
9 Decree which was recently used to prevent MDWS from even developing test  
10 wells.

11 (Taylor, WT, 7/5/16, ¶ 31; Taylor, Tr., 7/19/16, p. 29, ll. 3-17, p. 42, ll. 10-16, p.  
12 43, ll. 9-24; Exhs. 2178-County-9, p. 59 ¶¶ 372-373, -11, p. 6, table 12, -12, pp.  
13 33-43.) [MDWS, FOF 42-45.]

14 3. Desalination of brackish groundwater, developing a 5 mgd reverse  
15 osmosis desalination facility in the Kahului aquifer and operational costs  
16 associated with the high intensity energy needs of the desalination process.

17 i. The Īao WTP that treats water from the Īao-Waikapū Ditch is  
18 located at an elevation that allows the membrane filtration system to be  
19 pressurized without pumping. Electricity costs to pressurize membrane  
20 processes are typically significant if the water must be pumped, but at the  
21 Īao WTP, the membranes are pressurized by gravity. In contrast, for  
22 desalination, brackish groundwater must be pumped up to the treatment  
23 plant, reverse osmosis would remove salt and other minerals to create  
24 potable water, and the residual brine liquid must be disposed via deep  
25 injection wells into salt water below the source of brackish groundwater.

26 ii. Dependence on imported energy and uncertainty associated with  
27 future energy prices adds a significant implementation risk.

28 iii. Estimated life cycle costs of \$598 million.

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<sup>21</sup> Life cycle costs incorporate capital, operating, and maintenance costs over a defined planning period, including inflationary costs. It allows evaluation of different alternatives on an equal basis. It is expressed as the net present value (NPV) of all costs incurred during the planning period or the amount of money that would need to be set aside today at a defined interest (discount) rate to fund the project or strategy. (Exh. 2178-County-11, p. 11.)

1 iv. This option, which would use brackish water from the Kahului  
2 aquifer, does not address the current withdrawal of 2.00 mgd of potable  
3 water from the aquifer, and how the potability of that water might be  
4 affected by withdrawing an additional 5 mgd of brackish water.

5 (Taylor, Tr., 7/19/16, p. 44, ll. 5-11, p. 44, l. 21 to p. 45, l. 8; Exhs. 2178-  
6 County-11, pp. 6-7, table 12, p. 12, -12, pp. 67-68.) [MDWS, FOF 46-49.]

7 4. Maximization of recycled wastewater and conservation.

8 i. The amount of water that could be replaced by treated water is  
9 limited, with an estimated maximum of 0.601 mgd and average annual  
10 demand of 0.38 mgd from the Wailuku-Kahului Wastewater Reclamation  
11 Facility (“WWRF”).

12 ii. It would require significant capital expenses, including the  
13 expansion of existing WWRFs, construction of storage tanks, and  
14 extended transmission lines. Costs would be \$37.60 million, with \$5.37  
15 million to upgrade the WWRF from R-2 to R-1, \$25.94 million to deliver  
16 0.191 mgd to the Maui Lani area, \$4.29 million to deliver 0.225 mgd to  
17 Kahului Airport and Kanaha Beach Park, and \$2.00 million to deliver  
18 0.185 mgd to distribute from Queen Kahamanu Center to existing HC&S  
19 pipelines formerly used for pineapple cannery wastewater to what was  
20 HC&S’s seed cane fields, Maui High School, Kahului Community  
21 College and Park, Kahului Elementary, and Hale Mahaolu.

22 iii. This assessment is limited to current users of MDWS’s potable  
23 water system. For example, most of the large users in the Maui Lani area  
24 currently use brackish groundwater for irrigation, so only 0.191 mgd is  
25 projected to replace potable water at a cost of \$25.94 million.

26 iv. The total production of the Wailuku-Kahului WWRF is 4 mgd, of  
27 which only 0.2 mgd is currently used. So the projected estimated  
28 maximum of 0.601 mgd and average annual demand of 0.38 mgd reflects  
29 current use of potable water that might be replaced by recycled water and  
30 not the water that is available.

1 (Exh. 2178-County-11, pp. 8-9, tables 8 and 10; Taylor, Tr., 7/19/16, p. 47, l. 14  
2 to p. 48, l. 13.) [MDWS, FOF 51-52.]

3 i. USGS had also previously indicated that the Waikapū Aquifer may be a possible  
4 source of new water, but the sustainable yield is only 2 mgd, and MDWS expected  
5 competition from private landowners for the available water. Waikapu Properties have  
6 five (5) wells, three shown to be potable and two in final testing for potability at the time  
7 of the CCH. (Exh. 2178-County-9, FOF 371; Atherton, WT, 2/5/16, ¶ 27.)

8 j. MDWS did not claim appurtenant rights nor participate in the provisional  
9 approval process. (Provisional Order, Attachment C, Revised Exh. 7, p. 34.)

10  
11 404. **SWUPA 2339—Roger Yamaoka and Kevin Yamaoka**

12 a. On April 30, 2009, Roger Yamaoka and Kevin Yamaoka filed an existing-use  
13 SWUPA for TMKs No. (2) 3-5-004:038 (“Parcel 38”) and No. (2) 3-5-004:039 (“Parcel  
14 39”), for 1,950 gpd on 0.89 acre of apple bananas and 0.46 acre of vegetables and fruits.  
15 (SWUPA 2339, p. 2, table 1, p. 4, table 3.)

16 b. Parcel 38 is 1.78 acres, on which they grow the 0.89 acre of apple bananas and  
17 0.30 acre of the vegetables and fruits, and Parcel 39 is 0.628 acre, on which they grow the  
18 remaining 0.16 acre of vegetables and fruits. (Yamaoka, Tr., 7/18/16, p. 155, ll. 3-15;  
19 SWUPA 2339, p. 4, table 3.)

20 c. Parcel 38 is owned by the Yamaokas’ two sisters, and Parcel 39 is owned by  
21 Roger and Kevin. (Yamoka, Tr., 7/18/16, p. 152, ll. 19-23.)

22 d. Their grandparents bought the land in the 1930’s, their deed is all in Hawaiian,  
23 and their dad said that the water rights were reserved. Roger Yamaoka does not know  
24 anything else about the reservation, except that it was sometime in the past. (Yamaoka,  
25 Tr., 7/18/16, p. 152, l. 2 to p. 153, l. 4.)

26 e. The Yamaokas claimed appurtenant rights in their SWUPA but did not participate  
27 in the provisional approval process and were denied without prejudice. (Provisional  
28 Order, Attachment C, Revised Exh. 7, p. 37.)

29 f. The Yamaokas have started 10,000 square feet of “wet taro,” but still only request  
30 the 1,950 gpd they originally requested, because “we don’t let the water just continue to  
31 run. We use what we need, and, you know, during the winter months of course with rain,

1 we don't have to access water if that's the case. So we're not here to be greedy in any  
2 way, we just want to sustain our agricultural use." (Yamaoka, Tr., 7/18/16, p. 154, ll. 1-  
3 7.)

4  
5 **405. SWUPA 2188—Leslie Vida, Jr.**

6 a. On April 9, 2009, Leslie Vida, Jr. filed existing-use SWUPA for TMK No. (2) 3-  
7 5-004:091 ("Parcel 91"). (L. Vida, WT, 1/2/16, ¶ 1.) [Hui/MTF and OHA, FOF B-650.]

8 b. Parcel 91 is 0.36 acre and a portion of LCA 76 to William Shaw, confirmed by  
9 RP 7694, a 10.34-acre farm. (**Id.**, ¶¶ 6, 10, 16.) [Hui/MTF and OHA, FOF B-654, B-  
10 658.]

11 c. Today, Shaw's descendants, including the Vida `ohana, reside on separate parcels  
12 following subdivision. In addition to Leslie Vida, Jr., others filing SWUPAs are his sister  
13 Donna Vida (SWUPAs 2292 & 2293), and his aunt and uncle, Claire and Robert Pinto  
14 (SWUPA 2303). (D. Vida, WT, 2/27/16, ¶ 11.) [Hui/MTF and OHA, FOF B-655.]

15 d. Waikapū Stream was historically the source for their `āina and surrounding  
16 kuleanas, but changes by Wailuku Sugar Company and Wailuku Water Company has  
17 resulted in Wailuku Water Company delivering water from Wailuku River via the `Īao-  
18 Waikapū Ditch system. (L. Vida, WT, 1/2/16, ¶¶ 19-22.)

19 e. The records supporting LCA 76 describe the kuleana as a "farm" and refer to lo`i  
20 kalo terracing down along to Pilipili, a house, and a stone wall. The records include a  
21 survey and a map of the 3.43-acre portion near the stream name Haaua, and the "water  
22 run" that brought water to this kuleana. (L. Vida, WT, 12/16, ¶¶ 13-14; Exh. 2188-Vida-  
23 2; D. Vida, WT, 2/27/16, ¶¶ 13-14; Exh. 2292-Vida-2; Pinto, WT, 1/29/16, ¶¶ 13-14;  
24 Exh. 2303-Pinto-2.) [Hui/MTF and OHA, FOF B-656.]

25 f. Given these descriptions and the lo`i terracing that still exists, the Vida `ohana  
26 estimated that the majority of the 10.34 acres, including all of their parcels, was  
27 cultivated in lo`i kalo at the time of the Māhele. (L. Vida, WT, 1/2/16, ¶ 15; D. Vida,  
28 WT, 2/27/16, ¶ 14; Pinto, WT, 1/29/16, ¶ 15.) [Hui/MTF and OHA, FOF B-657.]

29 g. The Commission had provisionally approved appurtenant rights for LCA 76.  
30 (Provisional Order, Attachment C, Revised Exh. 7, p. 35.) [Hui/MTF and OHA, FOF B-  
31 657.]

1 h. Because Vida concluded that his parcel was in the majority of LCA 76 that was  
2 cultivated in lo`i kalo at the time of the Māhele, he requested appurtenant rights for his  
3 entire parcel, or 108,000 gpd, applying Reppun’s high estimate of 300,000 gad for kalo  
4 lo`i to his entire 0.36 acres. (L. Vida, WT, 1/2/16, ¶ 15.) [Hui/MTF and OHA, FOF B-  
5 651.]

6 i. Vida also requested a permit for 11,725 gpd:

7 1. 0.0365 acre of kalo lo`i: existing use on 0.025 acre, with estimated  
8 use of 7,500 gpd, which he intends to increase by 0.0115 acre, with an estimated  
9 use of 3,450 gpd.

10 2. 0.31 acre of crops and medicinal plants, estimated at 775 gpd, using  
11 *Waiāhole*’s diversified agriculture rate of 2,500 gad.

12 (**Id.**, ¶¶ 23-26.) [Hui/MTF and OHA, FOF B-660, B-661, B-662.]  
13

14 406. **SWUPAs 2292 & 2293—Donna Vida**

15 a. On April 29, 2009, Leslie Vida, Sr. filed existing-use SWUPAs for TMKs No. (2)  
16 3-5-004:045 (“Parcel 45”) and No. (2) 3-5-004:056 (“Parcel 56”). Donna Vida inherited  
17 Parcel 56 from her father, Leslie Vida, Sr., after he passed away. Parcel 45 is the family  
18 cemetery. (Donna Vida, WT, 2/27/16, ¶¶ 1, 4, 16.) [Hui/MTF and OHA, FOF B-663, B-  
19 672.]

20 b. Parcel 56 is 0.9 acre and Parcel 45 is 0.07 acres, and both derive from LCA 76 to  
21 William Shaw, confirmed by RP 7694, from which SWUPAs for her brother, Leslie Vida  
22 (SWUPA 2188), and her aunt and uncle, Claire and Robert Pinto (SWUPA 2303), are  
23 also derived. (**Id.**, ¶ 11.) [Hui/MTF and OHA, FOF B-655.]

24 c. Today, Shaw’s descendants, including the Vida `ohana, reside on separate parcels  
25 following subdivision of LCA 76. (**Id.**, ¶ 11.)

26 d. Waikapū Stream was historically the source for their `āina and surrounding  
27 kuleanas, but changes by Wailuku Sugar Company and Wailuku Water Company has  
28 resulted in Wailuku Water Company delivering water from Wailuku River via the `Īao-  
29 Waikapū Ditch system. (L. Vida, WT, 1/2/16, ¶¶ 19-22.)

30 e. As discussed in SWUPA 2188—Leslie Vida, Jr., the records supporting LCA 76  
31 describe the kuleana as a “farm” and refer to lo`i kalo terracing down along to Pilipili, a

1 house, and a stone wall. The records include a survey and a map of the 3.43-acre portion  
2 near the stream name Haaua, and the “water run” that brought water to this kuleana. (L.  
3 Vida, WT, 12/16, ¶¶ 13-14; Exh. 2188-Vida-2; D. Vida, WT, 2/27/16, ¶¶ 13-14; Exh.  
4 2292-Vida-2; Pinto, WT, 1/29/16, ¶¶ 13-14; Exh. 2303-Pinto-2.) [Hui/MTF and OHA,  
5 FOF B-656.]

6 f. Given these descriptions and the lo`i terracing that still exists, the Vida `ohana estimated  
7 that the majority of the 10.34 acres, including all of their parcels, was cultivated in lo`i kalo at  
8 the time of the Māhele. (L. Vida, WT, 1/2/16, ¶ 15; D. Vida, WT, 2/27/16, ¶ 14; Pinto, WT,  
9 1/29/16, ¶ 15.) [Hui/MTF and OHA, FOF B-657.]

10 g. The Commission had provisionally approved appurtenant rights for LCA 76.  
11 (Provisional Order, Attachment C, Revised Exh. 7, 37.) [Hui/MTF and OHA, FOF B-  
12 657.]

13 h. Because Donna Vida concluded that her parcels were in the majority of LCA 76  
14 that was cultivated in lo`i kalo at the time of the Māhele, she requested appurtenant rights  
15 for the entirety of both parcels. However, while she applied Reppun’s high estimate of  
16 300,000 gad for kalo lo`i to all of Parcel 56’s 0.9 acres, she used Maui County standard  
17 for single-family homes of 600 gpd to estimate the use on Parcel 45’s 0.07 acres,  
18 resulting in a request for appurtenant rights of 270,600 gpd. (D. Vida, WT, 2/27/16, ¶ 15,  
19 17-18.) [Hui/MTF and OHA, FOF B-664.]

20 i. She requests existing-use permits of 175 gpd for Parcel 45’s 0.07 acre and 2,225  
21 gpd for Parcel 56’s 0.9 acres, using *Waiāhole*’s diversified agriculture duty of 2,500 gad  
22 as follows:

- 23 1. 175 gpd for Parcel 45’s 0.07 acres.
- 24 2. 0.89 acre of Parcel 56’s 0.9 acre for landscaping, fruit and medicinal trees  
25 and plants, and livestock.

26 (*Id.*, ¶¶ 5, 23-26.) [Hui/MTF and OHA, FOF B-664, B-671, B-672.]

27  
28 407. **SWUPA 2303—Claire Pinto**

29 a. On April 9, 2009, Robert and Claire Pinto filed an existing-use SWUPA for  
30 TMKs No. (2) 3-5-004:041 (“Parcel 41”) and No. (2) 3-5-004:051 (“Parcel 51”). Robert

1 Pinto has since passed away. (Pinto, WT, 1/29/16, ¶¶ 1, 9; Pinto, Tr, 7/18/16, p. 32, l. 13.)  
2 [Hui/MTF and OHA, FOF B-673.]

3 b. Parcel 41 is 0.48 acre and Parcel 51 is 0.66 acres, and both derive from LCA 76 to  
4 William Shaw, confirmed by RP 7694, from which SWUPAs for Leslie Vida (SWUPA  
5 2188) and Donna Vida (SWUPAs 2292 and 2293), are also derived. (**Id.**, ¶¶ 11, 16.)  
6 [Hui/MTF and OHA, FOF B-655.]

7 c. Today, Shaw’s descendants, including the Vida `ohana, reside on separate parcels  
8 following subdivision of LCA 76. (**Id.**, ¶ 11.)

9 d. Waikapū Stream was historically the source for their `āina and surrounding  
10 kuleanas, but changes by Wailuku Sugar Company and Wailuku Water Company has  
11 resulted in Wailuku Water Company delivering water from Wailuku River via the `Īao-  
12 Waikapū Ditch system. (**Id.**, ¶¶ 21-22.)

13 e. As discussed in SWUPA 2188—Leslie Vida, Jr., the records supporting LCA 76  
14 describe the kuleana as a “farm” and refer to lo`i kalo terracing down along to Pilipili, a  
15 house, and a stone wall. The records include a survey and a map of the 3.43-acre portion  
16 near the stream name Haaua, and the “water run” that brought water to this kuleana. (L.  
17 Vida, WT, 12/16, ¶¶ 13-14; Exh. 2188-Vida-2; D. Vida, WT, 2/27/16, ¶¶ 13-14; Exh.  
18 2292-Vida-2; Pinto, WT, 1/29/16, ¶¶ 13-14; Exh. 2303-Pinto-2.) [Hui/MTF and OHA,  
19 FOF B-656.]

20 f. Given these descriptions and the lo`i terracing that still exists, the Vida `ohana  
21 estimated that the majority of the 10.34 acres, including all of their parcels, was  
22 cultivated in lo`i kalo at the time of the Māhele. (L. Vida, WT, 1/2/16, ¶ 15; D. Vida,  
23 WT, 2/27/16, ¶ 14; Pinto, WT, 1/29/16, ¶ 15.) [Hui/MTF and OHA, FOF B-657.]

24 g. The Commission had provisionally approved appurtenant rights for LCA 76.  
25 (Provisional Order, Attachment C, Revised Exh. 7, p. 37.) [Hui/MTF and OHA, FOF B-  
26 657.]

27 h. Because Claire Pinto concluded that her parcels were in the majority of LCA 76  
28 that was cultivated in lo`i kalo at the time of the Māhele, she requested appurtenant rights  
29 for the entirety of both parcels, or 342,000 gpd (1.14 acres x Reppun’s high estimate of  
30 300,000 gad for kalo lo`i). (Pinto, WT, 1/29/16, ¶ 18.)



1 i. Pinto also requested a permit for 2,750 gpd for 1.1 acres, applying *Waiāhole’s*  
2 diversified agriculture duty of 2,500 gad, for domestic uses such as washing, landscaping,  
3 and watering fruit trees, Native Hawaiian/medicinal plants, and for animals. (**Id.**, ¶¶ 24-  
4 26.) [Hui/MTF and OHA, FOF B-681, B-682.]

5  
6 408. **SWUPAs 2350/2546N—Towne Realty/Wailuku Kuakahi, LLC**

7 a. On April 30, 2009, Towne Realty of Hawaii, Inc./Wailuku Kuakahi, LLC filed an  
8 existing-use SWUPA for TMK No. (2) 3-5-002:003 (“Parcel 3”) and on December 9,  
9 2009, filed a new-use SWUPA for the same Parcel 3 of 150 acres. (SWUPA 2350;  
10 SWUPA 2546, p. 3, table 2.)

11 b. The existing-use SWUPA requested 21,301 gpd of metered use for 0.75 acre of  
12 fruit and vegetable crops, and the new-use SWUPA requested an estimated 675,000 gpd  
13 for 20 acres of fruit and vegetable crops and 113 acres of pasture for goats, cows, and  
14 other animals. (SWUPA 2350, p. 2, table 1, p. 4, table 3; SWUPA 2546, p. 2, table 1, p.  
15 3, table 2.)

16 c. No appurtenant rights were claimed, and the applicant did not participate in the  
17 provisional approval process. (Provisional Order, Attachment C, Revised Exh. 7, p. 38.)

18 d. No written testimony was submitted nor did the applicant participate in the CCH.

19  
20 409. **SWUPA 2345—Stanford Carr Development, LL**

21 a. On April 30, 2009, Stanford Carr Development, LLC filed an existing-use  
22 SWUPA for TMK No. (2) 3-5-001:067 for 63,902 gpd of metered use for dust control on  
23 200 acres. (SWUPA 2345, p. 2, table 1, p. 4, table 3.)

24 b. The applicant did not claim appurtenant rights nor participate in the provisional  
25 approval process. (Provisional Order, Attachment C, Revised Exh. 7, p. 38.)

26 c. The applicant did not submit written testimony nor participate in the CCH.

27  
28 410. **SWUPAs 2349/2495N—Endurance Ii Wai Hui**

29 a. On April 30, 2009, Endurance Investors, LLC and Association of Ii Wai Hui, LP,  
30 filed existing- and new-use SWUPAs for TMK No. (2) 3-5-002:002 (“Parcel 2”),  
31 requesting 357 gpd of metered existing use on 2 acres of their 50-acre property for “feed

1 & forage” and 260,000 gpd of new use on 60.08 acres of the same property. (SWUPA  
2 2349, p. 2, table 1, p. 4, table 3; SWUPA 2495N, p. 2, table 1, p. 3, table 2.)

3 b. The 260,000 gpd on 60.08 acres was for 49.08 acres of “Agrili” and 11 acres of  
4 “Agron.” The proposed water duty was 5,000 gad, but 7-8 acres were to be for other than  
5 agriculture use but necessary for the operation of the agriculture activity, so the net  
6 request was for 260,000 gpd and not 300,000 gpd. (SWUPA 2495N, p. 2, table 1, p. 3,  
7 table 2.)

8 c. No other documents were filed, including any explanation of the discrepancy  
9 between 50 acres in SWUPA 2349 and 60.08 acres in SWUPA 2495N for the same  
10 TMK. No appurtenant rights were claimed, and the applicant did not participate in the  
11 provisional approval process. (SWUPA 2349, p. 1; SWUPA 2495N, p. 1; Provisional  
12 Order, Attachment C, Revised Exh. 7, p. 38.)

13 d. The applicant did not participate in the CCH.  
14

15 411. **SWUPA 2164—Waiolani Mauka Community Association**

16 a. On April 22, 2009, Waiolani Mauka Community Association filed an existing-use  
17 SWUPA for TMKs No. (2) 3-5-032:106 and No. (2) 3-5-032:various for 2 acres of turf  
18 grass and 0.5 acre of landscape for common areas. (SWUPA 2164, p. 2, table 1, p. 4,  
19 table 3.)

20 b. The applicant did not claim appurtenant rights nor participate in the provisional  
21 approval process. (Provisional Order, Attachment C, Revised Exh. 7, p. 35.)

22 c. The applicant did not submit written testimony nor participate in the CCH.  
23

24 412. **SWUPA 2200—Emmanuel Lutheran Church & School**

25 a. On April 23, 2009, Emmanuel Lutheran Church & School filed a new-use  
26 SWUPA for TMK No. (2) 3-5-002:011 for 25.263 acres, on which it planned to irrigate  
27 30,000 gpd on 20+ acres of landscape and playing fields. (SWUPA 2200, p. 2, table 1, p.  
28 3, table 2.)

29 b. The applicant did not claim appurtenant rights nor participate in the provisional  
30 approval process. (Provisional Order, Attachment C, Revised Exh. 7, p. 18.)

31 c. The applicant did not submit written testimony nor participate in the CCH.

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413. **SWUPA 2183—Kihei Garden & Landscaping Company, LLP**

a. On April 15, 2009, Kihei Garden & Landscaping Company, LLP filed an existing-use SWUPA for TMK No. (2) 3-5-02:017 (“Parcel 17”), a 24.982-acre property, which Kihei Garden has occupied since 1988 under a lease agreement and which it bought in 2005. (Okamura, WT, 3/26/16, ¶ 2; SWUPA 2183.)

b. Kihei Garden has an average of 60 full-time employees and an annual payroll of \$2.5 to \$3 million, and its activities are consistent with both State and County uses on agricultural zoned land and is consistent with County community plans. (*Id.*, ¶ 4.)

c. Kihei Garden requests 33,261 gpd of metered use on 15 acres of various landscape plants, both in the ground and on nursery benches, for propagation of plant starts such as shrubs, groundcovers and trees. (*Id.*, ¶ 2; SWUPA 2183, p. 2, table 1, p. 4, table 3.)

d. In 2008, during testimony in the previous round of this contested case, Kihei Garden had projected that its usage was going to decrease over time as more and more native plants and less water-consuming plants were being use. But John Okamura, the managing partner, has not found this to be the case. Native plants are not using water in the amount that had been projected, and more ornamentals, which use more water, are still being used for the tourist industry, primarily, hotels. (Okamura, Tr., 9/20/16, p. 93, ll. 15-24.)

e. Kihei Garden did not claim appurtenant rights nor participate in the provisional approval process. (SWUPA 2183, p. 1; Provisional Order, Attachment C, Revised Exh. 7, p. 35.)

f. Kihei Garden obtains its water from WWC.

Alternative sources:

1. MDWS has said it can only supply a single, three-quarter inch water meter, which is not large enough to support their current nursery operation.

2. Reclaimed water was considered but because no pipeline exists from the Kahului treatment plant to anywhere close to its location, Kihei Garden would have to install a transmission pipeline from existing plants or pipes to its property. The cost of running that pipeline would be several million dollars, which is not

1 economically feasible for Kihei Garden. In addition, obtaining all the necessary  
2 easements over the land between the existing plant and its land would be nearly  
3 impossible.

4 3. As for drilling a well, its property deed reserved the ground water to the  
5 seller, and even if it could drill a well, the property is above the `Īao aquifer, and  
6 obtain a permit would not be possible.

7 (*Id.*, ¶¶ 4-5.)

8  
9 414. **Waikapu Ranch Applicants**

10 The following six applicants are owners of 6 of the 8 lots in the Waikapu Ranch  
11 subdivision and have applied for recognition of appurtenant rights and new-use permits.  
12 Waikapu Ranch had filed an existing-use SWUPA but was instructed by the Commission to file  
13 a new-use SWUPA after the existing-use SWUPA was found to be incomplete and not accepted.  
14 Subsequently, the 6 owners filed individual new-use SWUPAs and claims for appurtenant rights.  
15 (Exh. OHA-27; Provisional Order, Attachment C, Revised Exh. 7, p. 44.) [Hui/MTF and OHA,  
16 FOF C-196.]

17  
18 415. **SWUPA 3671N—Kurt & Betsy Sloan**

19 a. On October 9, 2012, the Sloans filed a new-use SWUPA for TMK No. (2) 3-5-  
20 004:111 (“lot 5”), a 5.511-acre parcel, for which they requested 25,600 gpd on 4 acres of  
21 fruit orchard. (SWUPA 3671N, p. 2, table 1, p. 3, table 2.) [Joint Proposed Findings of  
22 Fact and Conclusions of Law for Applicants Ken Ota *et al.* (“Joint Proposed”), FOF 24;  
23 Hui/MTF and OHA, FOF C-213.]

24 b. On July 5, 2016, Sloan filed an amended new-use SWUPA, changing his request  
25 to 65,000 gpm (2,167 gpd) for the same 4 acres of fruit orchard, or 433.3 gad. (SWUPA  
26 3671N, dated 7/5/16, p. 2, table 1, p. 3, table 2; Sloan, WT, 2/26/16, ¶ 3.) [Joint  
27 Proposed, FOF 13; Hui/MTF and OHA, FOF C-217.]

28 c. The Sloans bought the property in April 2008, when it was pretty much a cane  
29 field. When the property closed, they started planting what are now approximately 500  
30 trees, which now provides income to pay their mortgage. (Sloan, Tr., 7/22/16, p. 108, l. 5  
31 to p. 109, l. 10, p. 128, l. 16 to p. 129, l. 1, p. 129, l. 23 to p. 130, l. 5.)

1 d. Sloan states that his request is for about 2,000 gpd, but his current use is 1,000  
2 gpd for his 9-year-old trees. However, “2,000 gallons per day is really small,” “real  
3 conservative for our farm,” is based on “best uses,” and figures that “maybe right now is  
4 using about a third of what it will when they’re full grown.” (Sloan, Tr., 7/22/16, p. 109,  
5 ll. 19-24, p.112, ll. 6-17.)

6 e. Although the Sloans claimed appurtenant rights in their SWUPAs, they did not  
7 participate in the provisional approval process. Kurt Sloan states that he filed the  
8 SWUPA in 2012 because Avery Chumbley told him that they stood a chance of losing  
9 their water and helped him get started on the paperwork. (Sloan, Tr., 7/22/16, p. 122, ll.  
10 13-23.)

11 f. The deed to Lot 5 contains a reservation of water rights made in May 2004. (Exh.  
12 A to Exh. Sloan-1, at 12, ¶ 6.) [Hui/MTF and OHA, FOF C-211.]

13 g. In his February 29, 2016 written testimony, Sloan requested recognition of  
14 appurtenant rights for 2,167 gpd, the same amount as for his amended new-use SWUPA  
15 request of 2,167 gpd. (**Id.**, ¶ 3.) [Hui/MTF and OHA, FOF C-217.]

16 h. Lot 5 is derived from all of LCA 2203, confirmed by RP 3131, and portions of  
17 LCA 8875, confirmed by RP 5926, and LCA 3702, confirmed by RP 6338, and other  
18 LCAs within the subdivision that were not documented. (Exh. Sloan-1; Sloan, Tr.,  
19 7/22/16, p. 131, l. 20 to p. 133, l. 1.) [Joint Proposed, FOF 8.]

20 i. LCA 2203 was 0.97 acres and referred to as “taro lands” and a “section of loi.”  
21 All 0.97 acre is part of Lot 5. (Sloan, WT (supplemental), 8/16/16, ¶ 7; Ota, WT, 2/26/16,  
22 ¶¶ 6, 9; Exhs. Ota-1, -10, -11, -13, -27.) [Joint Proposed, FOF 12.]

23 j. LCA 8875 was 0.96 acres, and referred to as house lot and four taro lo`i.  
24 Approximately 90 percent (0.864 acre) is part of Lot 5. (Sloan, WT (supplemental),  
25 8/16/16, ¶ 5; Ota, WT, 2/26/16, ¶ 7; Exhs. Ota-1, -6, -7, -27.) [Joint Proposed, FOF 9.]

26 k. LCA 3702 was 2.21 acres, and described as taro, dryland, and a house lot and that  
27 there was a pō`alima in it. Approximately 25 percent (0.553 acres) is part of Lot 5.  
28 (Sloan, WT (supplemental), 8/16/16, ¶ 6; Exhs. Ota-1, -8, -27.) [Joint Proposed, FOF 10-  
29 11.]

30 l. Of LCA 2203’s 0.97 acre, all 0.97 acre is presumed to have been in kalo lo`i,  
31 *supra*, FOF 163.

1 m. Of LCA 8875's 0.96 acres, the house lot is presumed to have been 0.25 acre, with  
2 the remainder of 0.71 acre presumed to be in kalo lo`i, *supra*, FOF 162. Therefore, the  
3 house lot was 26 percent and kalo lo`i was 74 percent. 74 percent of Lot 5's share of  
4 0.864 acre is 0.639 acre.

5 n. Of LCA 3702's 2.21 acres, the house lot is presumed to have been 0.25 acre, and  
6 the remaining 1.96 acre equally divided into dryland and taro, or 0.98 acre in kalo lo`i,  
7 *supra*, FOF 162, 168. 0.98 acre of kalo lo`i out of 2.21 acres is 44 percent, and 44 percent  
8 of Lot 5's share of 0.553 acre is 0.243 acre.

9 o. Therefore, of Lot 5's 5.511 acres, appurtenant rights would attach to 1.852 acres  
10  $(0.97 + 0.639 + 0.243 = 1.852)$ .

11  
12 416. **SWUPA 3665N—Ken & Saedene Ota**

13 a. On September 27, 2012, the Otas filed a new-use SWUPA for TMK No. (2) 3-5-  
14 004:109 ("lot 3"), a 5.2-acre property for which they requested 25,600 gpd for 4 acres of  
15 Hawaiian landscape tree nursery. (SWUPA 3665N, p. 2, table 1, p. 3, table 2.) [Joint  
16 Proposed, FOF 26; Hui/MTF and OHA, FOF C-201.]

17 b. On July 5, 2016, Ota filed an amended new-use SWUPA, changing his request to  
18 5,667 gpd for the same 4 acres and same use. (Ota, WT, 2/29/16, ¶¶ 3, 17; Ota-Exhibit  
19 16, p. 2, table 1, p. 3, table 2.) [Joint Proposed, FOF 24; Hui/MTF and OHA, FOF C-  
20 198.]

21 c. The Otas bought the property in April 2008, which was all grass. About 75  
22 percent of his planned four acres, or three acres, are currently planted with landscape and  
23 fruit trees. He uses about 1,100 gad, for a total of about 3,300 gpd for the currently  
24 planted acres and is requesting a little over 5,000 gpd. (Ota, Tr., 7/19/16, p. 72, ll. 8-9, p.  
25 73, l. 14 to p. 74, l. 17.)

26 d. Although the Otas claimed appurtenant rights in their SWUPAs, they did not  
27 participate in the provisional approval process and submitted documentation on February  
28 29, 2016. (Ota, WT, 2/29/16; Ota, Tr., 7/19/16, p. 87, l. 20 to p. 89, l. 6.) [Hui/MTF and  
29 OHA, FOF C-211.]

30 e. The deed to Lot 3 contains a reservation of water rights made in May 2004. (Exh.  
31 A to Exh. Ota-15, at 16, ¶ 6.) [Hui/MTF and OHA, FOF C-197.]

1 f. In his February 29, 2016 written testimony, Ota requested recognition of  
2 appurtenant rights for 5,667 gpd, the same amount as for his amended new-use SWUPA  
3 request of 5,667 gpd. (**Id.**, ¶ 3.) [Hui/MTF and OHA, FOF C-201.]

4 g. In his written testimony, Ota stated that Lot 3 was comprised of a portion of  
5 multiple LCAs that made up the eight-lot subdivision, but the property description stated  
6 that Lot 3 derives from only one of the LCAs, “a portion of Grant 2007, Apana 3 to John  
7 Richardson.” (Ota, WT, 2/29/16, ¶ 4; Exhibit A to Exh. Ota-15, at 5; Exhs. OHA-26, 30;  
8 Ota, Tr., 7/19/16, p. 89, l. 23 to p. 90, l. to p. 93, l. 22.) [Hui/MTF and OHA, FOF C-  
9 199.]

10 h. Ota stated that Grant 2007 includes a description of an irrigated patch, but the  
11 reference to an irrigated patch was to `āpana 2 and not to `āpana 3. (Ota, Tr., 7/19/16, p.  
12 94, l. 5 to p. 96, l. 7.) [Hui/MTF and OHA, FOF C-200.]

13 i. Ota was unable to identify any evidence he submitted that established water use  
14 on Lot 3 at the time of the Māhele. (Ota, Tr., 7/19/16, p. 96, ll. 4-7.) [Hui/MTF and OHA,  
15 FOF C-200.]

16  
17 417. **SWUPA 4442N—Gerald Lau Hee**

18 a. On February 29, 2016, Gerald Lau Hee filed testimony in support of a new-use  
19 SWUPA that he would be filing. On July 5, 2016, Gerald Lau Hee filed a new-use  
20 SWUPA for TMK No. (2) 3-5-004:023 (“Lot 1”), a 5.973-acre property, for 1,667 gpd on  
21 a proposed 4 acres of fruit trees. (SWUPA 4442N, p. 2, table 1, p. 3, table 3; Exhibit A, p.  
22 5 of Exh. Lau Hee-1; Kaeo Lau Hee, Tr. 9/19/16, p. 90, l. 19 to p. 91, l. 24.) [Joint  
23 Proposed, FOF 34-35, 76.]

24 b. The Hees bought the property in 2015 and intend to build a home on it. There are  
25 plans for a main house, a cottage, and a barn. Since they bought the property they have  
26 fenced the perimeter of the lot and planted some bananas and citrus and will have 4 acres  
27 of fruit and nut trees and do not intend on selling anything. (Hee, WT, 2/29/16, ¶ 1; Kaeo  
28 Lau Hee, Tr. 9/19/16, p. 79, l. 21 to p. 80, l. 20.) [Joint Proposed, FOF 34.]

29 c. The deed to the property has a reservation of water rights dated May 2004.  
30 (Exhibit A to Exh. Lau Hee-1 at 10, ¶ 8.) [Hui/MTF and OHA, FOF C-219.]

1 d. Hee claimed appurtenant rights in his SWUPA of July 5, 2016 and requested  
2 1,667 gpd in appurtenant rights, the same amount of his permit request, and provided  
3 documentation in his written testimony of February 29, 2016. (SWUPA 4442N, p. 1; **Id.**,  
4 ¶¶ 3-10.)

5 e. In his written testimony, Lau Hee stated that Lot 1 was comprised of a portion of  
6 multiple LCAs that made up the eight-lot subdivision, but the property description only  
7 identifies Grant 2007, apana 3; Grant 1714, apana 2; LCA 8672, apana 1, confirmed by  
8 RP 6483; and LCA 2225, confirmed by RP 3116. (**Id.**, ¶ 4; Exhibit A to Exh. Lau Hee-1,  
9 p. 4.)

10 f. The description of an irrigated patch ascribed to Grant 2007, apana 3, was to  
11 `āpana 2 and not to `āpana 3. (Lau Hee, Tr. 9/19/16, p. 83, ll. 1-12; Ota, Tr., 7/19/16, p.  
12 94, l. 5 to p. 96, l. 7.) [Hui/MTF and OHA, FOF C-200.]

13 g. Lau Hee did not submit any evidence of water use on Grant 1714, apana 2 at the  
14 time of the Māhele. (Lau Hee, Tr. 9/19/16, p. 83, ll. 13-20.)

15 h. Nor did Lau Hee submit any evidence of water use on LCA 8672, apana 1. (Lau  
16 Hee, Tr. 9/19/16, p. 83, l. 21 to p. 84, l. 3.)

17 i. As for LCA 2225, if any is in Lot 1, it might be a few square feet. (Lau Hee, Tr.  
18 9/19/16, p. 84, l. 4 to p. 85, l. 7.)

19  
20 418. **SWUPA 4443N—Roy Kitagawa**

21 a. On July 5, 2016, Roy Kitagawa filed a new-use SWUPA for TMK No. (2) 3-5-  
22 004:110, consisting of 4 acres, on which he proposed to grow ornamental and fruit trees,  
23 using 416.7 gad, for a total of 1,166.7 gpd. (SWUPA 4443N, p. 2, table 1, p. 3, table 2.)

24 b. On February 24, 2016, Kitagawa had submitted written testimony in support of  
25 the SWUPA that he would be filing and for appurtenant rights that he would be claiming.  
26 (Kitagawa, WT, 2/24/16, ¶ 3.)

27 c. Kitagawa did not participate in the hearings on provisional approval of  
28 appurtenant rights, which had a deadline of February 6, 2012 for applications to be filed  
29 and which had concluded on December 31, 2014, *supra*, FOF 19-20.



1 d. Kitagawa subsequently withdrew his SWUPA during the hearings. (Joint  
2 Proposed Findings of Fact and Conclusions of Law for Applicants Ken Ota *et al.*, FOF 1,  
3 ft. 1; Tr., 9/19/16, p. 4, ll. 21-22.)  
4

5 419. **SWUPA 4444N—Anthony Takitani**

6 a. On February 29, 2016, Anthony Takitani filed testimony in support of a new-use  
7 SWUPA that he would be filing. On July 5, 2016, Takitani filed a new-use SWUPA for  
8 TMK No. (2) 3-5-004:113 (“Lot 7”), a 5.121-acre property, for which he requested 2,833  
9 gpd for 3.5 acre of fruit and ornamental trees at 769 gad, and 0.5 acre of pasture for goats  
10 at 283 gad. He started in 2013 with 1.0 acre of trees and the 0.5 acre pasture. (SWUPA  
11 444N, p. 2, table 1, p. 3, table 2; Exhibit A, p. 8 to Exh. Takitani-1.) (Joint Proposed,  
12 FOF 30; Hui/MTF and OHA, FOF C-207.]

13 b. Takitani bought the property in May 2008 and uses it mostly now for his  
14 residence and the pasture for his goats. (Takitani, Tr., 7/19/16, p. 105, ll. 15-17.)

15 c. The deed to Lot 7 has a reservation of water rights that date to May 2004. (Exhibit  
16 A, p. 14 to Exh. Takitani-1.) [Hui/MTF and OHA, FOF C-203.]

17 d. Takitani also requested recognition of appurtenant rights, and in both his  
18 appurtenant rights claim and water-use permit requests, Takitani requested 85,000 gpm,  
19 or 2,8333 gpd. Takitani stated that he didn’t know what was used at the time of the  
20 Māhele and was requesting what he would need for potential future agricultural use.  
21 (Takitani, WT, 2/29/16, ¶ 3; SWUPA 444N, p. 1; Takitani, Tr., 7/19/16, p. 105, l. 22 to p.  
22 106, l. 9.)

23 e. Lot 7 is a portion of Grant 2007, `āpana 3; LCA 3702, confirmed by RP 6338;  
24 LCA 2225, confirmed by RP 3116; and LCA 443, confirmed by RP 497. (Exhibit A, p. 8  
25 to Exh. Takitani-1.)

26 f. Takitani states that Grant 2007 includes a description of an irrigated patch, but the  
27 description of an irrigated patch ascribed to Grant 2007, apana 3, was to `āpana 2 and not  
28 to `āpana 3. (**Id.**, ¶ 6; Lau Hee, Tr. 9/19/16, p. 83, ll. 1-12; Ota, Tr., 7/19/16, p. 94, l. 5 to  
29 p. 96, l. 7.) [Hui/MTF and OHA, FOF C-200.]

30 g. LCA 3702 was 2.21 acres, and described as taro, dryland, and a house lot and that  
31 there was a pō`alima in it. (**Id.**, ¶ 8; Exh. Ota-1, -8.)

1 h. LCA 2225 was described as three “taro pauku” and one “Wauke kula.” (**Id.**, ¶ 10;  
2 Exh. Ota-13.)

3 i. Takitani also referenced LCA 2203 as “taro” and a “section of loi,” but the LCA  
4 is not part of Lot 7. (**Id.**, ¶ 10; Exh. Ota-12.)

5 j. Takitani did not provide any documentation of LCA 443, but in Ota’s documents,  
6 which Takitani and the others relied on, LCA 443 is described as containing “6 acres, 1  
7 rood, 29 rods,” but no (translated) description of its uses. (Exhs. Ota-2, -3.)

8 k. Takitani did not provide any documentation of the acreage of the LCAs that are  
9 contained in Lot 7.

10  
11 **420. SWUPA 4445N—SPV Trust (Shane Victorino)**

12 a. The written direct testimony of Michael Victorino, for applicant SPV Trust, was  
13 submitted in the hearing on September 20, 2016. (Tr., 9/20/16, p. 4, l. 25 to p. 5, l. 19.)  
14 (Proposed Joint, FOF 2.)

15 b. On March 3, 2016, Michael Victorino filed testimony on behalf of his son, Shane  
16 Victorino, investment trustee of SPV Trust, in support of a SWUPA that they would be  
17 filing. The new-use SWUPA was filed on July 5, 2016, for TMK No. (2) 3-5-004:112  
18 (“Lot 6”), a 6.062-acre property, for 1,667 gpd for 4 acres of fruit trees at a rate of 417  
19 gad. (Victorino, WT, 3/3/16, ¶ 3; SWUPA 4445N, p. 2, table 1, p. 3, table 2; Exhibit A,  
20 p. 8 to Exh. SPV-1.) (Proposed Joint, FOF 32.)

21 c. SPV Trust purchased the property in 2014, after the Provisional Approval  
22 hearings, on which Shane Victorino intends to build a home. The property is subject to a  
23 reservation of water rights made in May 2004. (Victorino, WT, 3/3/16, ¶ 1; Exhibit A to  
24 Exh. SPV-1, p. 9.) [Proposed Joint, FOF 18; Hui/MTF and OHA, FOF C-225.]

25 d. SPV Trust requests appurtenant rights in the same amount as the SWUPA request,  
26 1,667 gpd. (Victorino, WT, 3/3/16, ¶ 3.) Hui/MTF and OHA, FOF C-231.]

27 e. Lot 6 is comprised of a portion of LCA 9202, `āpana 2 (sic-920:2?), confirmed by  
28 RP 2004; LCA 3702, confirmed by RP 6338; and LCA 443, confirmed by RP 497.  
29 (Exhibit A to SPV-1, p. 1.) [Hui/MTF and OHA, FOF C-227.]

30 f. LCA 920:2 was 8 acres and described as “kula.” (Exh. Ota-5.) [Hui/MTF and  
31 OHA, FOF C-229.]

1 g. LCA 3702 was 2.21 acres, and described as taro, dryland, and a house lot and that  
2 there was a pō`alima in it. A small portion is part of the flag/driveway of Lot 6.

3 (Victorino, WT, 3/3/16, ¶ 8; Sloan, WT (supplemental), 8/16/16, ¶ 6; Exh. Ota-1, -8, -  
4 27.) [Proposed Joint, FOF 8, 15; Hui/MTF and OHA, FOF C-229.]

5 h. LCA 443 was described as containing “6 acres, 1 rood, 29 rods,” but no  
6 (translated) description of its uses. (Exhs. Ota-2, -3.)

7 i. Apart from the reference to a small portion of LCA 3702 being part of Lot 6’s  
8 flag/driveway, there is no information of how much of these LCAs presently comprise  
9 Lot 6.

10  
11 421. **SWUPAs 2207/2208N—Makani Olu Partners**

12 a. On April 23, 2009, Makani Olu filed an existing-use SWUPA for TMKs (2) 3-5-  
13 004-014 (“Parcel 14”) and (2) 3-5-004-018 (“Parcel 18”), and a new-use SWUPA for  
14 Parcel 18.

15 1. Parcel 14 is 1.2 acres and Parcel 18 is 67.4 acres.

16 2. The existing-use request was for 17,948 gpd in metered use:

17 a. Parcel 14:

18 i. 2,900 gpd for 0.75 acre of agriculture crops (fruit trees), at  
19 a rate of 3,867 gad (2,900/0.75);

20 ii. 1,000 gpd for 0.25 acre of ornamental plants and a nursery  
21 greenhouse, at a rate of 4,000 gad (1,000/0.25); and

22 iii. 1,200 gpd for 0.20 acre of cemetery landscape, at a rate of  
23 6,000 gad (1,200/0.20).

24 b. Parcel 18:

25 i. 1,200 gpd for 0.25 acres of bananas and papayas, at a rate  
26 of 4,800 gad (1,200/0.25);

27 ii. 8,348 gpd for 4.0 acres of livestock consumption feed,  
28 forage pasture, at a rate of 2,087 gad(8348/4.0);

29 iii. 1,000 gpd for 0.25 acre of tree field stock nursery, at a rate  
30 of 4,000 gad (1,000/0.25); and

31 iv. 2,500 gpd for 1.0 acre of home site landscape.

1                   3.       The new-use request was for 453,530 gpd for 58.9 acres of feed  
2                   and forage pastures for livestock, at a rate of 7,700 gad.

3                   4.       All of Parcel 14's 1.2 acres were included in the existing-use request, and  
4                   of Parcel 18's 67.4 acres, 64.4 acres were covered: 5.5 acres in existing  
5                   use and 58.9 acres for a new use.

6 (SWUPA 2207, p. 3, table 2, p. 4, table 3; SWUPA 2208N, p. 2, table 1.)

7                   b.       Makani Olu filed for provisional recognition of appurtenant rights for Parcel 18's  
8                   67.4 acres, submitting documentation for 26 LCAs, 23 of which were approved by the  
9                   Commission. (Provisional Order, Attachment C, Revised Exhibit 7, pp. 35-37.)

10                  c.       Makani Olu requested recognition of appurtenant rights for Parcel 18 for 2.235  
11                  mgd, based on the following:

12                  1.       There were a total of 404 lo`i in the 23 LCAs recognized as having water  
13                  use at the time of the Māhele.

14                  2.       Using a historical description of lo`i as measuring 40 x 40 feet, or 1,600  
15                  square feet, 404 lo`i would equal 14.9 acres of lo`i.

16                  3.       The Commission had estimated water requirements for lo`i complexes of  
17                  130,000 to 150,000 gad in its 2010 D&O.

18                  4.       Multiplying 14.9 acres by 150,000 gad, results in 2.235 mgd.

19 (Chumbley, WT, 2/2/16, pp. 1-11.)

20                  d.       Makani Olu had claimed that 100 percent of the LCAs with appurtenant rights  
21                  were within the lands owned by it, but when it looked at greater detail, some LCAs were  
22                  shared with other TMKs. OHA then introduced into evidence a list of 21 LCAs, of which  
23                  7 were solely owned by Makani Olu, and 14 were shared with other TMKs. (Chumbley,  
24                  Tr., 7/19/16, p. 194, l. 3 to p. 194, l. 18; Exh. OHA-32.)

25                  e.       OHA's list of 21 was in fact complete and contained all 26 LCAs on which the  
26                  Commission had provisionally ruled. The Commission had separately addressed LCA  
27                  5742's two `āpana and LCA 11022's four `āpana, in addition to separately addressing  
28                  LCA 11022's `āpana 1 for both Parcels 14 and 18. (Provisional Order, Attachment C,  
29                  Revised Exhibit 7, pp. 35-37.)

30                  f.       Makani Olu was the sole owner of 7 LCAs:

31                  1.       One LCA had been denied:

- 1 a. LCA 3539:1 was 2.17 acres but the Commission found that no  
2 water use was documented. (Exh. 2207-Makani Olu-1.)
- 3 b. However, LCA 3539:1 was described as mo`o with 48 lo`i and also  
4 a kula and a house site. (Appurtenant Rights Documentation [2207],<sup>22</sup> pp.  
5 244, 254-257, 259, 263-265.)
- 6 c. Therefore, LCA 3539:1 had water use on 0.96 acres ( $2.17 - 0.25 =$   
7  $1.92/2 = 0.96$ ).
- 8 2. Makani Olu claimed that the other six LCAs had water use:
- 9 a. LCA 2208 was claimed to be 0.12 acre of lo`i.
- 10 i. There was no `āpana 1.
- 11 ii. `Āpana 2 was 0.12 acre and described as a small mo`o and  
12 2 other lo`i, or as 4 lo`i.  
13 (Appurtenant Rights Documentation [2207], pp. 71, 78, 85.)
- 14 b. LCA 3343 was claimed to be 0.98 acre of kalo land.
- 15 i. On the other hand, there is no description of the contents of  
16 the 0.98 acres. (Appurtenant Rights Documentation [2207], pp.  
17 155-157, 161-162.)
- 18 c. LCA 3402 was claimed to be 2.83 acres of lo`i.
- 19 i. Lots 1 & 6 were 1.94 acres of taro and kula land.
- 20 ii. Lot 3 was 0.58 acres of taro.
- 21 iii. Lot 5 was 0.31 acre of a house lot and taro.
- 22 iv. There were no lots 2 or 4.  
23 (Appurtenant Rights Documentation [2207], pp. 170, 174-176,  
24 179, 181.)
- 25 v. Therefore, water use was 1.61 acres: lots 1&6 was 0.97  
26 acres ( $1.94/2 = 0.97$ ), lot 3 was 0.58 acre, and lot 5 was 0.06 acre  
27 ( $0.31 - 0.25 = 0.06$ ).
- 28 d. LCA 3525 was claimed to be 0.24 acre of lo`i.

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<sup>22</sup> This document has no page numbers, and the LCAs are generally listed in chronological order. Page numbers are the pdf pages in the electronic version.

1 i. LCA 3525 `āpana 3 was described as a houselot on 0.24  
2 acres, so there was no water use. `Āpana 1 had been given to  
3 someone else, and `āpana 2 was not cultivated. (Appurtenant  
4 Rights Documentation [2207], pp. 214, 221.)

5 e. LCA 3547 was claimed to be 2.19 acres of lo`i.

6 i. The description was for 219 acres of a mo`o with 33 lo`i, or  
7 a taro pauku. (Appurtenant Rights Documentation [2207], pp. 277,  
8 289, 300, 305.)

9 f. LCA 8586 was claimed to be 1.15 acres of lo`i.

10 i. `Āpana 1:1 was described as 0.38 acre of a taro mo`o with  
11 one pō`alima, `āpana 2:2 as 0.76 acre of a taro pauku, and `āpana 3  
12 as 0.01 acre with no description. (Appurtenant Rights  
13 Documentation [2207], pp. 375, 379, 381.)

14 (Exh. OHA-32; Exhs. 2207-Makani Olu-1, -2.)

15 g. These seven LCAs comprised 9.68 acres of Parcel 18's 67.4 acres, leaving 57.72  
16 acres.

17 h. Of the 14 LCAs shared with other TMKs, the proportion of four (4) LCAs  
18 between Parcel 18 and other TMKs can be determined as follows:

19 1. LCA 205 was 13.61 acres of approximately 7/8s kalo patches and 1/8  
20 coffee grounds.

21 a. SWUPA 2276—Ione Shimizu's parcel 31 is 0.53 acre and a  
22 portion of LCA 205.

23 b. Therefore, Parcel 18 contains 13.08 acres of LCA 205, 7/8s of  
24 which was in kalo, or 11.45 acres.

25 (Exhs. 2207-Makani Olu-1, -2; FOF 436, *infra*, SWUPA 2276—Shimizu.)

26 2. LCA 434 was 5.2 acres with 41 lo`i.

27 a. SWUPA 2268—Katherine Riyu's parcel 28 is 0.61 acre, all of  
28 which are in LCA 434.

29 b. SWUPA 2338—Judith Yamanoue's parcels 27 and 41 total 1 acre  
30 (0.71 + 0.29), about 3/5s, or 0.6 acre, is in LCA 434.

31 c. Therefore, Parcel 18 contains about 3.99 acres of LCA 434.

1 (Exhs. 2207-Makani Olu-1, -2; FOF 437, *infra*, SWUPA 2268—Riyu; FOF 438,  
2 *infra*, SWUPA 2338—Yamanoue.)

3 3. LCA 8672 was claimed to be 1.86 acres of lo`i.

4 a. LCA 8672 consisted of three `āpana:

5 i. `Āpana 1 was 1.55 acres in taro and kula.

6 ii. `Āpana 2 was 0.25 acre in taro.

7 iii. `Āpana 3 was 0.06 acre with one patch.

8 iv. Some testimony states that `āpana 2, and not `āpana 1, was  
9 in kalo and kula, but the claimant describes `āpana 1 as a mo`o with  
10 11 lo`i and a kula adjoining the west side of the mo`o.

11 v. Therefore, 1.09 acres was in kalo ( $1.55/2 + 0.25 + 0.06$ ).

12 b. SWUPA 4442N—Gerald Lau Hee’s Lot 1 is 5.973 acres and  
13 comprised of portions of Grant 2007:3, Grant 1714:2, LCA 2225, and  
14 LCA 8672:1.

15 i. Lot 1’s description largely consists of descriptions of the  
16 two grants, with the LCAs identified at the end of the boundary  
17 descriptions, and LCA 2225 described as maybe a few feet of Lot  
18 1. Therefore, Hee’s Lot 1 likely also contained only a very small  
19 portion of LCA 8672:1.

20 (Exhs. 2207-Makani Olu-1, -2; FOF 417, *supra*, SWUPA 4442N—Lau Hee.)

21 4. LCA 11022 was claimed to be 4.44 acres and consisting of four `āpana,  
22 with 1-3 described as taro mo`o, and no reference to water use in `āpana 4.

23 a. `Āpana 1 was 0.48 acre, `āpana 2 and 3 were 3.29 acres, and  
24 `āpana 4 was 0.67 acres.

25 b. Therefore, water use was 3.77 acres ( $4.44 - 0.67$ ).

26 c. LCA 11022 consisted of 4 other `āpana in Waikapū: `āpana 5-7  
27 were pō`alima—sizes not specified, and `āpana 8 was a houselot of 0.6  
28 acre.

29 i. Waikapu Properties’ Parcel 3 contains `āpana 6.

30 (Appurtenant Rights Documentation [2207], pp. 3, 57, 411-413, 417-419;

31 Provisional Order, Attachment C, Revised Exhibit 7, pp. 36-37; Exhs. 2207-

1 Makani Olu-1, -2; Exh. 2356-Waikapu-3, Attachment 1-A, Quitclaim Deed,  
2 10/26/2006, handwritten pages 12, 15;Exh. OHA-32.)

3 i. The preceding four (4) LCAs comprise 23.37 acres of Parcel 18. The seven LCAs  
4 that are wholly within Parcel 18's 67.4 acres comprised 9.68 acres, leaving 57.72 acres.  
5 Subtracting 23.37 acres from 57.72 acres leaves 34.35 acres.

6 j. The following four (4) LCAs have acreage remaining after accounting for their  
7 inclusion in Parcel 18:

8 1. LCA 3201 was 3.85 acres of pasture and had been denied. (Exhs. 2207-  
9 Makani Olu-1; -2; Provisional Order, Attachment C, Revised Exh. 7, p. 36.)

10 a. However, the reference to pasture was in a second `āpana, where  
11 the pasture was adjacent to it:

12 i. `Āpana 1 was 3.85 acres, bordered by `auwai, and  
13 uncultivated land on the western side.

14 ii. `Āpana 2 was 1.6 acres, bordered by walls and kula land,  
15 and a road and pasture to the east.

16 iii. Thus, there was 1.6 acres more of LCA 3201 than was  
17 claimed by Makani Olu.

18 (Appurtenant Rights Documentation [2207], pp. 139, 144, 148-150.)

19 b. By the description that `āpana 1 abuts `auwai and that uncultivated  
20 land was on the western side, it can be presumed that the 3.85 acres was  
21 being cultivated in kalo lo`i, *supra*, FOF 165.

22 2. LCA 492 was claimed to be 10.26 acres of taro.

23 a. However, `āpana 1 was 10.26 acres, but described as taro pauku  
24 and kula with 1 pō`alima, with 51 taro patches.

25 b. Therefore, water use was 5.13 acres.

26 c. There were other lots totaling 1.23 acres in LCA 492: a kaina of  
27 0.1 acre, a pō`alima of 0.8 acre, `āpana 2 had been exchanged, `āpana 3  
28 was 0.08 acre of a taro patch, `āpana 4 was 0.25 acre of a houselot.

29 (Appurtenant Rights Documentation [2207], pp. 54, 56-57, 62-63.)

30 3. LCA 3549 was claimed to be 2.62 acres of lo`i.



1 a. `Āpana 1 was described as 2.62 acres of taro pauku with 1 lo`i  
2 pō`alima and 1 lo`i paahao within it.

3 b. There were other `āpana totaling 3.64 acres: `āpana 2 was 2.12  
4 acres of taro pauku, and `āpana 3 was 1.52 acres of taro pauku.

5 (Appurtenant Rights Documentation [2207], pp. 301, 325, 334-336, 421.)

6 4. LCA 5742 was claimed to be 1.2 acres with 17 lo`i, a house lot, and some  
7 dry land.

8 a. `Āpana 1:1 was 0.72 acre and 1:2 was 0.36 acre, for a total of 1.2  
9 acre of taro pauku with 31 lo`i and 1 pō`alima.

10 b. There was an additional 0.12 acre of a houselot and a dry lo`i in  
11 `āpana 2.

12 (Appurtenant Rights Documentation [2207], pp. 354-355, 357, 359-360, 364-  
13 365.)

14 k. The preceding four (4) LCAs comprised 17.93 acres of Parcel 18 and had  
15 additional acreage not accounted for in Parcel 18's shares and which would be in other  
16 LCAs. Subtracting 17.93 acres from the 34.35 acres remaining after subtracting the  
17 acreage from eleven (11) LCAs that were previously described from Parcel 18's 67.4  
18 acres, leaves 16.42 acres.

19 l. Makani Olu claims 17.56 acres from the remaining six (6) LCAs, meaning that it  
20 claims 1.14 acres more than is remaining in Parcel 18 after the previous 15 LCAs were  
21 accounted for. Because the exact proportions for each of the six (6) remaining LCAs are  
22 not known, each will be reduced by 16.42/17.56, or by 9 percent.

23 1. LCA 3104 was claimed to be 1.67 acres of taro and kula.

24 a. LCA 3104 was 1.83 acres, minus 0.16 acre of a pō`alima that was  
25 exchanged, or a net of 1.67 acres. It was described as kalo and kula, and  
26 with 33 lo`i.

27 b. The acreage is reduced by 9 percent, or from 1.67 acres to 1.52  
28 acres.

29 c. Water use would be on 0.76 acres (1.52/2), or half taro, half kula.

30 (Appurtenant Rights Documentation [2207], pp. 96, 98, 102, 105, 113.)

31 2. LCA 3107 was claimed to be 3.62 acres of taro.

1 a. However, `āpana 1 was 0.8 acres of taro pauku, `āpana 2 was 1.27  
2 acres of taro pauku, `āpana 3 and 4 were included in other LCAs, `āpana 5  
3 was 0.9 acre of taro pauku, `āpana 6 was 0.12 are of 3 lo`i, and `āpana 7  
4 was 0.53 acre of aouselot.

5 b. 3.62 acres are reduced by 9 percent, or from 3.62 acres to 3.29  
6 acres.

7 c. Therefore, water use was for 2.76 acres (3.29 – 0.53 for the  
8 ousselot).

9 (Appurtenant Rights Documentation [2207], pp. 110, 113, 121-123.)

10 3. LCA 3508 was claimed to be 3.21 acres of taro.

11 a. However, `āpana 1 was 0.69 acre of a ousselot and kula, āpana 2  
12 was 1.87 acres of taro pauku, and `āpana 3 was 0.65 acre of taro mo`o.

13 b. 3.21 acres are reduced by 9 percent, or from 3.21 acres to 2.92  
14 acres.

15 c. Therefore, water use was for 2.23 acres (2.92 – 0.69 for the  
16 ousselot and kula).

17 (Appurtenant Rights Documentation [2207], pp. 90, 105.)

18 4. LCA 3538 was claimed to be 1.91 acre of taro and kula.

19 a. However, `āpana 1 was 1.64 acres of taro land plus 0.12 acre for a  
20 ousselot, and `āpana 2 was 0.25 acre of a taro patch.

21 b. 1.91 acres are reduced by 9 percent, or from 1.91 acres to 1.74  
22 acres.

23 c. Therefore, water use was for 1.62 acres (1.74 – 0.12 for the  
24 ousselot).

25 (Appurtenant Rights Documentation [2207], pp. 248-249.)

26 5. LCA 3545 was claimed to be 2.08 acre of lo`i.

27 a. However, it was described as 2.08 acres of a mo`o of 36 lo`i and a  
28 kula, with 3 pō`alima within it.

29 b. 2.08 acres are reduced by 9 percent, or from 2.08 acres to 1.89  
30 acres.

31 c. Therefore, water use was for 0.95 acres (1.89/2).

1 (Appurtenant Rights Documentation [2207], pp. 273, 275, 181-282.)

2 6. LCA 3548k was claimed to be 5.07 acres of a paahao patch, which the  
3 Commission provisionally approved as water use.

4 a. However, it was described as 5.07 acres of a mo`o with 49 lo`i,  
5 less 1.5 acres of a paahao patch, for a net of 3.57 acres (5.07- 1.5).

6 b. 3.57 acres are reduced by 9 percent, from 3.57 acres to 3.25 acres.

7 (Appurtenant Rights Documentation [2207], pp. 313, 327.)

8 (Exhs. 2207-Makani Olu-1, -2; Exh. OHA-32; Provisional Order, Attachment C,  
9 Revised Exh. 7, pp. 35-37.)

10 m. From the foregoing analysis of the 21 LCAs, there were 50.69 acres in kalo lo`i  
11 at the time of the Māhele, out of a total of 65.54 acres of Parcel 18's 67.4 acres. Out of  
12 the 65.54 acres, two LCAs were determined not to have any kalo lo`i at the time of the  
13 Māhele: LCA 3343's 0.98 acre, and LCA 3525's 0.24 acres, leaving 64.32 (65.54 – 1.22)  
14 acres of Parcel 18's 67.4 acres with all or part of the acreage in kalo lo`i at the time of  
15 the Māhele.

16 n. The acreage claimed by Makani Olu for appurtenant rights on Parcel 18's 67.4  
17 acres was 14.9 acres, based on assumptions of the size of kalo lo`i at the time of the  
18 Māhele and a count of lo`i among the 23 provisionally approved LCAs. (Chumbley, WT,  
19 2/2/16, p. 2.)

20 o. The different methods employed by Makani Olu and Kame`eleihiwa lead to  
21 vastly different results. For example, LCA 434 was 5.2 acres and described as containing  
22 41 lo`i. Kame`eleihiwa's method would ascribe the entire 5.2 acres to kalo lo`i, *supra*,  
23 FOF 163. Makani Olu's method counted the 41 lo`i and multiplied by 1,600 square feet,  
24 assuming a lo`i size of 40x40 feet, resulting in 1.51 acres. (Chumbley, WT, 2/2/16, p. 3.)  
25

26 **422. SWUPA 2204—Luke McLean**

27 a. On April 22, 2009, Glenn McLean filed an existing-use SWUPA for TMK No. (2)  
28 3-5-004:057 ("Parcel 57"). His son, Luke McLean, testified on his behalf that the permit  
29 be issued to his son. (SWUPA 2204, p. 1; McLean, WT, 3/18/16, ¶¶ 1-2.) [Hui/MTF and  
30 OHA, FOF B-871.]

1 b. Parcel 57 is 1.14 acres, for which Glenn McLean estimated existing use as 500  
2 gpd in the SWUPA, but Luke now estimates it at 16,000 gpd for lo`i kalo, Hawaiian food  
3 crops, a large vegetable garden, fruit orchard and a collection of native plants. Luke  
4 explained that, when the 500 gpd was listed, his father was representing the family at the  
5 time, lives in Hana, and hadn't been on the land in probably the last 15 years. They have  
6 never had a water meter, and Luke believes his father "just made the humble assumption  
7 that that was all we were using." (**Id.**, ¶¶ 13-14; McLean, Tr., 7/18/16, p. 107, l. 23 to p.  
8 108, l. 9.)

9 c. Current use was listed for 1.25 acres, even though the property is only 1.14 acres:  
10 0.5 acre of fruit trees, 0.25 acre of dryland taro, 0.25 acre of vegetables, and 0.25 acre of  
11 a native plant nursery. But the SWUPA had estimated only 500 gpd for all these uses and  
12 had requested another 500 gpd to open lo`i. (SWUPA 2204, p. 2, table 1, p. 3, table 2, p.  
13 4, table 3.)

14 d. McLean now requests a permit for 300,000 gpd "to expand cultivation of  
15 historical lo`i kalo, Hawaiian food crops, vegetable gardens, fruit orchards, and native  
16 plants." (**Id.**, ¶ 21.)

17 e. McLean also requests recognition of appurtenant rights for 342,000 gpd for his  
18 1.14 acres, applying Reppun's high estimate of 300,000 gad, so presumably the 300,000  
19 gpd permit request is for 1.0 acres of kalo lo`i, but he does not explain how the remaining  
20 0.14 acres will maintain his other crops, since they presumably cover the entire parcel  
21 currently. (**Id.**, ¶ 21.) [Hui/MTF and OHA, FOF B-877.]

22 f. McLean is the direct lineal descendant of the original claimant to Parcel 57,  
23 Kuamu, who was awarded LCA 2225:1-4, confirmed by RP 3116. `Āpana 1-3 consisted  
24 of sections of kalo, and `āpana 4 was wauke kula. (**Id.**, ¶¶ 3-4, 7-9; Exh. 2204-McLean-1-  
25 p. 4-6; McLean, Tr. 7/18/16, p. 112, ll. 1-3.)

26 g. LCA 2225:1-4 was 3.31 acres, of which the McLeans now own only Parcel 57's  
27 1.14 acres. (**Id.**, ¶ 4.)

28 h. Three-quarters of LCA 2225:1-4 was in kalo lo`i, or 2.48 acres, so appurtenant  
29 rights attach to three-quarters of Parcel 57, or 0.855 acre (1.14 acre x 0.75). The  
30 Commission had granted provisional approval. (Provisional Order, Attachment C,  
31 Revised Exh. 7, p. 35.)

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423. **SWUPA 2440N—Spencer Homes**

a. On July 20, 2009, Spencer Homes Inc./Waikapu Gardens Subdivision filed a new-use SWUPA for TMKs No. (2) 3-5-028:062, No. (2) 3-5-031:121, No. (2) 3-5-002:016, and No. (2) 3-5-029:098, for 115,446 gpd on 14.65 acres of 16.25 acres of common area and 2.3 acres of 16.53 acres of sod farms. (SWUPA 2240N, p. 2, table 1, p. 3, table 2.)

b. Spencer Homes did not claim appurtenant rights nor participate in the provisional approval process. (SWUPA 2240N, p. 1; Provisional Order, Attachment C, Revised Exh. 7, p. 38.)

c. Spencer Homes did not submit written testimony nor participate in the CCH.

424. **SWUPA 2191—Charles Dando Sr**

a. On April 20, 2009, Charles Dando Sr. filed separate existing-use SWUPAs for TMKs No. (2) 3-5-030:116 (“Parcel 116”), situated in Waikapu, and (2) 3-4-033:014 (“Parcel 14”), situated in Wailuku, for home landscape irrigation. (SWUPA 2191, p. 4, table 3; SWUPA 2192, p. 4, table 3.) [Hui/MTF and OHA, FOF B-869.]

b. SWUPA 2191 is for Parcel 116’s 0.113 acre, for which he is requesting 1,749 gpd on 0.1 acre. (SWUPA 2191, p. 2, table 1, p. 4, table 3; Dando, WT, 7/25/16, ¶¶ 1-4). [Hui/MTF and OHA, FOF B-869.]

c. When it was pointed out that 1,743<sup>23</sup> gpd over 0.1 acre was 17,430 gad, Dando replied that when he averaged the meter readings over a year in 2007 to 2008, he “was establishing the yard and everything, so it should be way down from that.” (Dando, Tr., 7/29/16, p. 97, ll. 1-16.) [Hui/MTF and OHA, FOF B-869.]

d. Dando did not participate in the provisional approval process and does not request recognition of appurtenant rights. (Provisional Order, Attachment C, Revised Exh. 7, p. 35.)

425. **SWUPA 2154—Rojac Trucking, Inc.**

a. On April 24, 2009, Rojac Trucking, Inc., filed an existing-use SWUPA for TMKs No. (2) 3-5-027:017, No. (2) 3-5-027:018, and No. (2) 3-5-027:019, for a metered use of

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<sup>23</sup> The actual quantity was 1,749 gpd, not 1,743 gpd.

1 5,145 gpd for 0.35 acre of 0.88 acre for landscaping, and 2.0 acres of 3.09 acres for dust  
2 control and cleaning/washing of trucks and maintenance areas. (SWUPA 2154, p. 2, table  
3 1, p. 4, table 3.)

4 b. No claim was made for appurtenant rights, and Rojac Trucking did not participate  
5 in the provisional approval process. (Provisional Order, Attachment C, Revised Exh. 7,  
6 p. 35.)

7 c. Rojac Trucking did not submit written testimony nor participate in the CCH.  
8

9 **d. Waikapū Stream**

10  
11 **i. South Waikapū Ditch**

12  
13 426. The surface water sources for the following multiple SWUPAs from Waikapu Properties  
14 are Waikapū Stream and Waihe`e Ditch, which contains waters from all of the streams and  
15 rivers. They are included here under South Waikapū Ditch, because Waikapu Properties' original  
16 SWUPAs received water from Waikapū Stream through the South Waikapū Ditch's Reservoir 1.  
17 When HC&S closed its sugar cane operations and returned the leased `Īao-Waikapū fields,  
18 Waikapu Properties amended its SWUPAs, which now includes HC&S's former SWUPA 2205  
19 for the `Īao-Waikapū fields, and intends to move its operations largely to the `Īao-Waikapū  
20 fields.

21  
22 427. **SWUPAs 2205, 2356/2297N, 3471N, and 3472N—Waikapu Properties**

23 a. In 2005, through various entities, Michael Atherton, the managing general partner  
24 of several related entities, including but not limited to Waikapu Properties, Maui Tropical  
25 Plantation ("MTP"), and Waiale 905 Partners, LLC, acquired in excess of 1,600 acres  
26 involving four parcels of land from Wailuku Agribusiness. This includes the addition of  
27 organic row crop cultivation by Kumu Farms, as well as large-scale dryland taro, banana,  
28 and other row crop production by Ho`aloha Farms. (Atherton, WT, 2/5/16, ¶ 5.)

29 [Waikapu Properties, FOF 26-27.]

30 b. In 2006, again through various entities, Mr. Atherton acquired MTP, which is  
31 addressed in SWUPA 2203—Maui Tropical Plantation, *infra*, FOF 475.

1 c. On April 22, 2009, HC&S had filed existing-use SWUPA 2205 for its leased ʻĪao-  
2 Waikapū fields, for which it requested 8.97 mgd, and which it subsequently returned to  
3 Waikapu Properties, *supra*, FOF 25. (SWUPA 2205, p. 2, table 1, p. 3, table 3.)

4 1. However, in the narrative accompanying its SWUPA, HC&S claimed that  
5 its daily use was 10.58 mgd, or 7,098 gad over 1,491 acres. (SWUPA 2205,  
6 Narrative, pp. 5-6.)

7 2. In its 2010 proposed D&O and reiterated in the 2014 mediated agreement,  
8 the Commission had found that reasonable use was 6.06 mgd, or 541 gad over  
9 1,120 cultivated acres. (2014 Mediated Agreement, FOF 44-45.)

10 d. On April 30, 2009, Waikapu Properties filed:

11 1. Existing-use SWUPA 2356 for TMK (2) 3-6-004:003 (“Parcel 3”), for  
12 which it requested a metered use of 516,714 gpd for 61.1 acres of Parcel 3’s  
13 657.2 acres, at a rate of 8,457 gad. The metered use was for sugar cane. Parcel 3  
14 was planted in sugar cane by HC&S, and was not planned to continue in sugar  
15 cane but to be partially planted in coffee. (SWUPA 2356, p. 2, table 1, p. 3, table  
16 2, caption to photo attachment.)

17 2. New-use SWUPA 2297N for the same Parcel 3, for which it requested  
18 1,340,000 gpd for 200 acres: a) 100 acres for livestock feed and forage at a rate of  
19 7,700 gad (770,000 gpd); b) 30 acres of coffee, wind breaks, and ground cover at  
20 a rate of 10,000 gad (300,000 gpd); and c) 70 acres for reforestation of native and  
21 endemic trees and shrubs at a rate of 3,857 gad (270,000 gpd). (SWUPA 3472N,  
22 p. 2, table 1, p. 3, table 2.)

23 e. On February 6, 2012, Waikapu Properties filed new-use SWUPA 3471N for  
24 TMK (2) 3-6-004-006 (“Parcel 6”), for which it requested 109,048 gpd on 52.98 acres for  
25 herbs at a drip irrigation rate of 2,058 gad. (SWUPA 3471N, p. 2, table 1, p. 3, table 2.)

26 1. Parcel 6 is elbow-shaped, with the long arm running along the west  
27 (mauka) side of MTP, above Waihe`e Ditch, and the short arm running along the  
28 south side of MTP, below the Waihe`e Ditch. Parcel 6 comprises parts of three  
29 fields:

30 a. The portion mauka of MTP is within field 733.

31 b. The “elbow,” above the Waihe`e Ditch, is a portion of field 735.

1 c. The portion below the Waihe`e Ditch is within field 737.  
2 (Exh. 3471-Waikapu-1; Waikapu Properties, LLC’s Notice With Regard to  
3 SWUPA 2206, 2356, 2297N, and 3472N, September 19, 2016, Exhibit A [map].)  
4 [Hui/MTF and OHA, FOF C-69 to C-73.]

5 f. On February 6, 2012, Waikapu Properties filed another new-use SWUPA 3472N  
6 for TMK (2) 3-6-006-036 (“Parcel 36”), for which it requested 5,544 gpd on 0.72 acres  
7 for livestock feed and forage at a sprinkler rate of 7,700 gad. (SWUPA 3472N, p. 2, table  
8 1, p. 3, table 2.)

9 1. Parcel 36 is a sliver of land between fields 761 and 763, below the  
10 Waihe`e Ditch. (Waikapu Properties, LLC’s First Amendment to SWUPA 2206,  
11 Exhibit A, November 30, 2016.)

12 2. The September 24, 2003 deed contained a reservation of water rights.  
13 (Exh. OHA-13 at 2.) [Hui/MTF and OHA, FOF C-44.]

14 g. Excluding SWUPA 2205, which was transferred from HC&S to Waikapu  
15 Properties in July 2016 while the CCH was being conducted, Waikapu Properties’ total  
16 request was:

17	1.	SWUPA 2356:	516,714 gpd.
18	2.	SWUPA 2297N:	1,300,000 gpd.
19	3.	SWUPA 3471N:	109,048 gpd.
20	4.	SWUPA 3472N:	<u>5,544 gpd.</u>
21		Total:	1,931,306 gpd

22 (Atherton, WT, 2/5/16, ¶ 13.) [Waikapu Properties, FOF 30.]

23 h. SWUPAs 2356 and 2297N were both for Parcel 3, which was in sugar cane under  
24 HC&S. Waikapu Properties did not explain why they applied for an existing-use under  
25 SWUPA 2356 for converting sugar cane to coffee but filed a new-use under SWUPA  
26 2297N for converting the same sugar fields to other agricultural uses, when all uses could  
27 have been filed under existing-use SWUPA(s).<sup>24</sup>

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<sup>24</sup> HRS 174C-3 defines “agricultural use” as “the use of water for the growing, processing, and treating of crops, livestock, aquatic plants and animals, and ornamental flowers or similar foliage,” and defines “existing agricultural use” as “replacing, or alternating the cultivation of any agricultural crop with any other agricultural crop, which shall not be construed as a change in use.”



1 i. Following the transfer of SWUPA 2205 from HC&S to Waikapu Properties  
2 during the CCH, Waikapu Properties submitted additional testimony on expanding its  
3 current agricultural operations onto the `Īao-Waikapū fields. (Second Suppl. Decl. of  
4 Michael Atherton, and First Suppl. Decls. of Grant Schule, Robert Pahia, and William  
5 Jacintho, 8/24/16.) Waikapu Properties, FOF 44.]

6 j. Grant Schule is founder and owner of Kumu Farms and farms over 80 acres in  
7 Waikapū, producing over 25 fruit and vegetables along with a handful of specialty crops  
8 and markets directly to customers on Maui, ships inter-island to O`ahu, and exports  
9 SunRise papaya to the U.S. mainland. (Schule, WT, 5/29/16, ¶¶ 2-3; Schule, Tr., 7/28/16,  
10 p. 222, l. 9 to p. 223, l. 9.)

11 k. Bobby Pahia of Ho`aloha Farms is the largest producer of dryland kalo in the state  
12 and currently farms 61 acres, primarily in dryland kalo, and allows other farmers to farm,  
13 who grow bananas, sweet potato, and various vegetable crops. (Pahia, WT, 5/29/16, ¶ 3;  
14 Pahia, Tr., 7/28/16, p. 228, ll. 11-19; First Amendment to SWUPA 2206, Exhibit A,  
15 November 30, 2016.)

16 l. William Jacintho is owner of Na`alae Beef Company and Beef and Blooms and  
17 leases about 100 acres of pasture in Waikapū on which he raises about 50 head of Angus,  
18 Brangus, and Wagyu cattle, as part of his ranching business throughout Maui. Na`alae  
19 Beef Company carries about 60 head conventionally, and has been raising some Wagyu  
20 cattle for the past 10 years. Beef and Blooms has about 80 head of certified organic cattle.  
21 (Jacintho, WT, 5/29/16, ¶¶ 2-3; Jacintho, Tr. 7/28/16, p. 193, ll. 3-23.)

22 m. Counsel for Waikapu Properties subsequently entered into discussions with  
23 counsels for OHA and Hui/MTF to modify and clarify Waikapu Properties' water  
24 request. Following those negotiations and in light of Waikapu Properties' abilities to re-  
25 allocate field usage because of the return of the `Īao-Waikapū fields, it filed a first  
26 amendment to SWUPAs 2356/2297N, 3471N, and 3472N as follows:

27 1. Reduction in the request to 81,794 gpd, from Waikapū Stream, a 96  
28 percent decrease.

29 2. Change in the types of crops being grown from coffee to organic produce  
30 and row crops.

1 3. Water requested from Waikapu Stream for Kumu Farms' 18 acres for  
2 organic row crops will continue only until such time as substitute fields are  
3 certified organic, at which time the water allocation for those 18 acres will be  
4 reduced to that necessary for drinking water for cattle at 250 gad.

5 4. Water requested for feed and forage for cattle to be replaced by drinking  
6 water only.

7 5. All farming operations will be relocated to areas makai of the Waihe'e  
8 Ditch such that no surface water is needed from Waikapū Stream other than 250  
9 gad for drinking water for cattle.

10 6. Hoaloha Farms will be entitled to water and harvest crops that are  
11 currently in-ground above Waihe'e Ditch and which utilize water from Waikapū  
12 Stream, and will transition to lands below Waihe'e Ditch and off of Waikapū  
13 Stream as such crops are harvested.

14 (Waikapu Properties, LLC's Notice With Regard to SWUPA 2206, 2356, 2297N, and  
15 3472N, September 19, 2016; Waikapu Properties, LLC's First Amendment to SWUPA  
16 Nos. 2356, 2297N, 3471N, and 3472N, November 30, 2016.) [Waikapu Properties, FOF  
17 46.]

18 n. This amendment to the SWUPAs addressed Fields 731 and 733. Field 731 is 86.5  
19 acres currently leased to Makani Olu for cattle. Field 733 is 110.5 acres, of which Kumu  
20 Farms leases 18 acres and Beef and Blooms leases 86.5 acres. (Waikapu Properties,  
21 LLC's First Amendment to SWUPA Nos. 2356, 2297N, 3471N, and 3472N, November  
22 30, 2016.)

23 o. At the same time, a first amendment to SWUPA 2205 addressed the fields  
24 formerly leased by HC&S for sugar cane and addressed Fields 735, 737 (portion), 747,  
25 749, 751, 753, 757, 761, 763, 765, and 767. (Waikapu Properties, LLC's First  
26 Amendment to SWUPA No. 2206,<sup>25</sup> November 30, 2016.)

27 p. The combined amendments resulted in SWUPA 3471N's Parcel 6's 52.98 acres  
28 combined and subsumed in fields 731, 733, and 735, and SWUPA 3472N's Parcel 36's

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<sup>25</sup> Again, an occasional reminder that HC&S had unintentionally switch SWUPA numbers for 2205 and 2206, and the correct numbers are 2205 for Waikapu Properties' 'Āo-Waikapū fields, and 2206 for HC&S's Waihe'e-Hopoi fields.

0.72 acres apparently omitted. (First Amendment to SWUPA 2206, Exhibit A, November 30, 2016.)

q. The resulting modifications requested 100,169 gpd from Waikapū Stream and 3,315,130 gpd from the Waihe`e Ditch, for a total of 3,415,299 gpd. (Waikapu Properties, LLC’s Notice With Regard to SWUPA 2206, 2356, 2297N, and 3472N, September 19, 2016, Exhibit B; Waikapu Properties, LLC’s First Amendment to SWUPA 2206, Exhibit A, November 30, 2016.) [Waikapu Properties, FOF 47, 55.]

r. The combined modified water request was as follows:

Field	Acres	User	Use	gpd/acre	Total gpd	Source
731	86.5	Makani Olu	Cattle	250	21,625	Waikapū Stream
733	18	Kumu Farms	Row Crop	2058	37,044	Waikapū Stream
733	92.5	Beef & Blooms	Cattle	250	23,125	Waikapū Stream
735	73.5	Beef & Blooms	Cattle	250	18,375	Waikapū Stream
737*	77.3	Beef & Blooms	Cattle	250	19,325	Waihe`e Ditch
737*	66.5	Kumu Farms	Row Crop	3000	199,500	Waihe`e Ditch
747	91.8	Kumu Farms	Row Crop	3000	275,400	Waihe`e Ditch
749	119	Kumu Farms	Row Crop	3000	357,000	Waihe`e Ditch
751	154.5	Ho`aloha Farms	Taro/Row Crop	5400	834,300	Waihe`e Ditch
753	155.3	Ho`aloha Farms	Taro/Row Crop	5400	838,620	Waihe`e Ditch
757	73.4	Ho`aloha Farms	Taro/Row Crop	5400	396,360	Waihe`e Ditch
761	40.5	Kumu Farms	Row Crop	3000	121,500	Waihe`e Ditch
763	51.1	Beef & Blooms	Cattle	250	12,775	Waihe`e Ditch
765	63.5	Beef & Blooms	Cattle	250	15,875	Waihe`e Ditch
767 <sup>1</sup>	81.5	Beef & Blooms	Cattle	250	20,375	Waihe`e Ditch
767 <sup>2</sup>	<u>41.5</u>	Ho`aloha Farms	Taro/Row Crop	5400	<u>224,100</u>	Waihe`e Ditch
Totals:	1,286.4				3,415,299	

\*portion of field 737; <sup>1</sup>above highway; <sup>2</sup>below highway (100,169 Waikapū Stream  
3,315,130 Waihe`e Ditch)

(First Amendment to SWUPA 2206, Exhibit A, November 30, 2016.) [Waikapu Properties, FOF 55.]

s. Waikapu Properties also stated that metered use over 140 acres over the past four years was 540,000 gpd, or an average of about 3,860 gad, and extrapolating 3,860 gad over 760.5 acres of crops resulted in 2,935,530 gpd. The amount they are asking for, 3,315,130 gpd, is a little higher because there is less rain on the lower `Īao-Waikapū

1 fields to which they would be relocating their crop plantings. (First Amendment to  
2 SWUPA 2206, Exhibit A, November 30, 2016; Atherton, Tr., 9/20/16, p. 41, l. 4 to p. 42,  
3 l. 7.)

4 1. However, their current use was overestimated. Over the past four years,  
5 the largest delivery to Waikapu Properties from WWC was 15.81 million gallons,  
6 or 527,000 gpd, in April 2016, and in May 2016, water delivery was down to  
7 11.43 million gallons, or 368,710 gpd. Over 140 acres, these averaged 3,764 gad  
8 and 2,634 gad, respectively. (Exh. OHA-49.) [Hui/MTF and OHA, FOF C-102-  
9 105.]

10 t. This request should be modified in the following areas:

11 1. Drinking water for cattle: 25 gad instead of 250 gad.

12 a. William Jacintho, owner of Na`alae Beef Company and Beef and  
13 Blooms, leases about 100 acres currently, on which he raises about 50  
14 head of Angus, Brangus, and Wagyu cattle, which is pretty much what the  
15 land can support. (Jacintho, WT, 5/29/16, ¶¶ 2-3; Jacintho, Tr. 7/28/16, p.  
16 192, l. 19 to p. 194, l. 3.)

17 b. “One rule of thumb is cattle drink about a gallon of water per  
18 hundred pounds of weight that they have per day. So an average cow, say  
19 weighing about 1,000 pounds, mature animal, will drink about at least ten  
20 gallons a day. That’s on normal weather. If it’s hotter, they’ll drink, can be  
21 even double.” (Jacintho, Tr., 7/28/16, p. 205, ll. 1-7.)

22 c. “Well, I haven’t made my request yet, but I would like to ask for,  
23 you know, probably 15 gallons per head per day.” (Atherton, Tr., 7/29/16,  
24 p. 28, ll. 9-25.)

25 d. Makani Olu grazes about 70 head of cattle on its 86.5 acres.  
26 (Atherton, Tr., 7/29/16, p. 62, l. 8 to p. 63, l. 14.)

27 e. Hui/MTF and OHA concludes that 25 gad, 10 percent of the 250  
28 gad claimed by Waikapu Properties, is still more than double what Beef  
29 and Blooms and Makani Olu would need at their current grazing densities,  
30 and that “(b)ased on the evidence in the record, 25 gad should be more

1 than sufficient to provide drinking water for cattle grazed on WP's land  
2 above Waihe'e Ditch." (Hui/MTF and OHA, FOF C-92, COL 191.)

3 2. Field 737: 10.8 acres instead of 77.3 acres for Beef & Blooms:

4 a. Field 737 is a total of 77.3 acres. 66.5 acres is currently farmed by  
5 Kumu Farms and will continue to be farmed by Kumu Farms. (First  
6 Amendment to SWUPA 2206, Exhibit B, November 30, 2016. )

7 3. Field 731: 1,750 gpd:

8 a. Makani Olu grazes about 70 head of cattle on its 86.5 acres.  
9 (Atherton, Tr., 7/29/16, p. 62, l. 8 to p. 63, l. 14.)

10 b. At 25 gallons/head, the daily drinking water is 1,750 gpd.

11 4. Field 747 should be reduced from 91.8 acres to 71.8 acres:

12 a. 20 acres were transferred to the County prior to 2013. (Exh. OHA-  
13 6, ¶ 1[b].)

14 5. Irrigation requirements for row crop: 2,500 gad instead of 3,000 gad:

15 a. Waikapu Properties states that the irrigation requirements for  
16 Kumu Farms' row crops of 3,000 gad is based on 45% of HDOA  
17 allocations for vegetables. It's prior request was for 2,058 gad, based on  
18 actual use. (First Amendment to SWUPA 2206, Exhibit A, November 30,  
19 2016; Atherton, WT, 8/23/16, ¶ 7.)

20 6. Irrigation requirements for taro/row crop: 2,500 gad instead of 5,400 gad.

21 a. Irrigation requirements of 5,400 gad were stated to be based on  
22 45% of HDOA allocations, but its prior request claimed 5,400 gad for taro  
23 and 6,700 gad for taro/row crops, based on HDOA. (Pahia, WT, 8/23/16, ¶  
24 6.)

25 b. 45% of 5,400 would be 2,430, and 45% of 6,700 gad would be  
26 3,015 gad.

27 c. Although no explanation was given, according to HDOA, dryland  
28 taro would require less water than row crops. If 3,000 gad is 45% of  
29 HDOA allocations for row crops, then HDOA allocation would be about  
30 6,700 gad for row crops. But again, there is no explanation why a mixture

1 of taro and row crops would be the same requirement as for row crops,  
 2 when taro is allocated less by HDOA.

3 u. Waikapu Properties' request should therefore be as follows, after Kumu Farms  
 4 relocates to below the Waihe`e Ditch, whose water is included in the total for Waihe`e  
 5 Ditch:

6	<u>Field</u>	<u>Acres</u>	<u>User</u>	<u>Use</u>	<u>gpd</u>	<u>Total gpd</u>	<u>Source</u>
7	731	86.5	Makani Olu*	Cattle	25	1,750	Waikapū Stream
8	733	110.5	Beef & Blooms	Cattle	25	2,763	Waikapū Stream
9	735	73.5	Beef & Blooms**	Cattle	25	1,838	Waikapū Stream
10	737***	10.8	Beef & Blooms**	Cattle	25	270	Waihe`e Ditch
11	763	51.1	Beef & Blooms**	Cattle	25	1,278	Waihe`e Ditch
12	765	63.5	Beef & Blooms**	Cattle	25	1,588	Waihe`e Ditch
13	767 <sup>1</sup>	81.5	Beef & Blooms**	Cattle	25	2,038	Waihe`e Ditch
14	737***	66.5	Kumu Farms	Row Crop	2500	166,250	Waihe`e Ditch
15	747	71.8	Kumu Farms	Row Crop	2500	179,500	Waihe`e Ditch
16	749	119	Kumu Farms	Row Crop	2500	297,500	Waihe`e Ditch
17	751	154.5	Ho`aloha Farms	Taro/Row Crop	2500	386,250	Waihe`e Ditch
18	753	155.3	Ho`aloha Farms	Taro/Row Crop	2500	388,250	Waihe`e Ditch
19	757	73.4	Ho`aloha Farms	Taro/Row Crop	2500	185,500	Waihe`e Ditch
20	761	40.5	Kumu Farms	Row Crop	2500	101,250	Waihe`e Ditch
21	767 <sup>2</sup>	<u>41.5</u>	Ho`aloha Farms	Taro/Row Crop	2500	<u>103,750</u>	Waihe`e Ditch
22	Totals:	1,199.9 acres				1,819,775 gpd	
23		(270.5 acres: Waikapū Stream				(6,351 gpd: Waikapū Stream	
24		929.4 acres: Waihe`e Ditch)				1,813,424 gpd: Waihe`e Ditch)	

25 \*70 head on 86.5 acres; \*\*1 head/2 acres; \*\*\*portion of field 737; <sup>1</sup>above highway; <sup>2</sup>below highway

26 v. Alternate sources:

27 1. Waikapū Properties is developing five (5) wells as part of its long-term  
 28 plans to develop a portion of its lands as housing for Maui residents:

29 a. Three wells have been identified as suitable for potable use, have  
 30 undergone testing to determine water quality, and two have been  
 31 permitted. Two have sustainable pumping capacities of 1.4 mgd and 10  
 32 mgd, respectively, and the third will further further testing, and, based on  
 33 an increase in chlorides, may be less than 700 gpm.

1           b.       The fourth and fifth wells have shown low salinity levels, and  
2           testing has been conducted to determine the viability of those wells for  
3           domestic use, and if not, for possible non-potable use. The non-potable  
4           wells would be used for landscaping and open space—parks—on his  
5           projects.

6           c.       Availability of ground water for agricultural purposes in the future  
7           will depend greatly on whether all or some of the wells will be transferred  
8           to the County of Maui or remain a private water system, and development  
9           of the infrastructure to transmit and deliver the water from the wells to the  
10          intended recipients.

11          (Atherton, WT, 5/31/16, ¶¶ 12-15; Atherton, Tr., 7/29/16, p. 18, ll. 12-19, p. 139,  
12          ll. 4-11; Exhs. OHA-7, FEIS, at V-108-109 & App. I; OHA-44; OHA-45.)

13          [Waikapu Properties, FOF 97-105.] [Hui/MTF and OHA, FOF C-126.]

14          2.       If and when Waikapu Properties' housing plans are developed, it is  
15          anticipated to generate approximately 650,000 gpd of R-1 quality recycled water.  
16          (Exh. OHA-7, FEIS at V-113 and App. K.) [Hui/MTF and OHA, FOF C-126.]

17          w.       Appurtenant rights:

18          1.       Waikapū Properties had claimed appurtenant rights for Parcels 3, 6, and  
19          36, and HC&S had not claimed rights for the `Īao-Waikapū Fields. (SWUPA  
20          2205, p. 1; SWUPA 2356, p. 1; SWUPA 2297N, p. 1; SWUPA 3471N, p. 1;  
21          SWUPA 3472N, p. 1.)

22          2.       In the provisional approval process, the Commission had:

23               a.       approved 15 of 16 LCAs for Parcel 3;

24               b.       approved none of 8 LCAs and 5 grants for Parcel 6; and

25               c.       approved three of three LCAs for Parcel 36.

26          (Provisional Order, Attachment C, Revised Exh. 7, pp. 42-45.)

27          3.       During the CCH and in negotiations with Hui/MTF and OHA, Waikapu  
28          Properties stated that it would not be pursuing appurtenant rights in this CCH  
29          except to the extent of seeking drinking water for cattle and reserved the right to  
30          re-submit at a later date. (Atherton, Tr., 9/20/16, p. 43, ll. 1-8.) [Hui/MTF and  
31          OHA, FOF C-50.]

- 1           4.     Appurtenant rights were requested for portions of Parcel 3’s 657.2 acres:  
2           a.     LCAs 2361:2, 3528:1, 3528:2, and 2394. The first three had been  
3           provisionally approved, but LCA 2394 had not been listed. (Provisional  
4           Order, Attachment C, Revised Exh. 7, pp. 42-43.)  
5           b.     LCA 2361: apana 1 was described as “containing 16-1/2 acres;”  
6           and apana 2 as “containing 4 chains, 49 fathoms, 43 square feet,” with  
7           foreign testimony referring to “kalo land” and native testimony  
8           referencing 14 patches and a pō`alima. (Exh. 2356-Waikapu-3 at Exhibit  
9           1.) [Waikapu Properties, FOF 34.]  
10          c.     LCA 3528:1 was 3.9 acres, and testimony noting it was bounded  
11          by Waikapū Stream and contained lo`i and taro pauku. (Exh. 2356-  
12          Waikapu-3 at Exhibit 13.) [Waikapu Properties, FOF 35.]  
13          d.     LCA 3528:2 was 1.56 acres and was bounded on both sides by a  
14          kahawai and `auwai and contined taro auku with a pō`alima bounding both  
15          sections. (Exh. 2356-Waikapu-3 at Exhibit 13.) [Waikapu Properties, FOF  
16          36.]  
17          e.     LCA 2394: apana 1 was 1.36 acres, bounded on one side by  
18          “auwai,” and was a section of lo`i; apana 2 was 0.35 acres, bounded by  
19          “Waihee, by creek,” and contained “4 lois.” (Exh. 2356-Waikapu-3 at  
20          Exhibit 8.) [Waikapu Properties, FOF 37.]  
21          5.     Waikapu Properties requests recognition of appurtenant rights at 150,000  
22          gad for:  
23                  a.     0.25 acres of LCA 2361:2, or 37,500 gpd;  
24                  b.     3.9 acres of LCA 3528:1, or 585,000 gpd;  
25                  c.     1.56 acres of LCA 3528:2, or 234,000 gpd; and  
26                  d.     1.71 acres of LCA 2394:1-2, or 256,500 gpd.  
27          6.     The total appurtenant rights request is for 1,113,000 gpd for 7.42 acres.  
28

29   428.   SWUPAs 2336/2337N—Colin Kailiponi & Alfred Santiago



1 a. On April 30, 2009, Colin Kailiponi, landowner, and Alfred Santiago, lessee, filed  
2 existing- and new-use SWUPAs for TMKs No. (2) 3-6-005:019 (“Parcel 19”) and No. (2)  
3 3-6-005:024 (“Parcel 24”). (SWUPA 2336; SWUPA 2337N.)

4 b. Parcel 19 is 3.4 acres, and Parcel 24 is 0.2 acres, for which they requested an  
5 estimated 288,000 gpd in existing use for 0.5 acres of kalo lo`i and 0.2 acres of  
6 diversified agriculture, and an estimated 579,000 gpd in new use for 1 acre of kalo lo`i  
7 and 1 acre of diversified agriculture. (SWUPA 2336, p. 2, table 1, p. 4, table 3; SWUPA  
8 2337N, p. 2, table 1, p. 3, table 2.)

9 c. The land has been in the Kailiponi `ohana since the time of the Māhele. (SWUPA  
10 2336, Attachment 1, p. 2.)

11 d. They claimed appurtenant rights and were provisionally approved by the  
12 Commission. (SWUPA 2336, p. 1; SWUPA 2337N, p. 1; Provisional Order, Exhibits, p.  
13 92, Exh. 7.)

14 e. Kailiponi and Santiago did not submit written testimony and did not participate in  
15 the CCH.

16  
17 429. **SWUPAs 2260/2261N—Ho`okahi Alves (Miyashiro Trust)**

18 a. On April 23, 2009, the Jinsei Miyashiro Trust filed existing- and new-use  
19 SWUPAs for TMK No. (2) 3-6-006:027 (“Parcel 27”) which Ho`okahi Alves and his  
20 `ohana purchased in October 2014, where they now live. (Alves, WT, 1/29/16, ¶ 1.)  
21 [Hui/MTF and OHA, FOF B-805.]

22 b. Parcel 27 is 0.712 acre, for which Alves request appurtenant rights of 213,600 gpd  
23 and a permit for 150,600 gpd, based on Reppun’s high estimate of 300,000 gad for kalo  
24 lo`i and Maui County single-family home standard of 600 gpd. (**Id.**, ¶¶ 5, 13, 15-18.)  
25 [Hui/MTF and OHA, FOF B-806, B-810, B-811, B-812.]

26 c. Under SWUPA 2260, the Trust had requested 2,857 gpd for 0.1 acre of  
27 diversified agriculture for its `ohana, neighbors, and community members. A modified  
28 bucket method was used on October 23, 2008, using a 2-gallon bucket, calculating the  
29 flow over a 24-hour period as 40,000 gallons per day. Irrigating for half a day once a  
30 week, the estimated existing use was 2,857 gpd. (SWUPA 2260, Addendum, p. 2.)

1 d. Under SWUPA 2261N, the Trust had requested 75,000 gpd for 0.25 acre of kalo  
2 lo`i, using Reppun’s high estimate of 300,000 gad. (SWUPA 2261N, p. 1, p. 3, table 3;  
3 Addendum, p. 2.)

4 e. Alves is currently requesting 150, 600 gpd for 0.5 acre of kalo lo`i and a garden.  
5 (**Id.**, ¶¶ 5, 17.) [Hui/MTF and OHA, FOF B-806, B-811, B-812.]

6 f. Parcel 27 is comprised of portions of LCA 10481:5, confirmed by RP 3131, LCA  
7 5280:1-3, confirmed by RP 6699, and Government Grant 1678:2:

8 1. LCA 10481:5 is described as paukukalo.

9 2. LCA 5280:1-3 are described as containing lo`i, including a pō`alima  
10 within.

11 3. The pō`alima in LCA 5280:1-3 is part of Government Grant 1678:2.

12 The Commission had granted provisional recognition for the LCAs. (**Id.**, ¶¶ 6, 11-12;  
13 Exh. 2260-Alves-1, -2, 4; Provisional Order, Attachment C, Revised Exh. 7, p. 42.)  
14 [Hui/MTF and OHA, FOF B-809.]

15 g. Based on these documents, Alves claimed appurtenant rights for Parcel 27’s entire  
16 acreage of 0.712 acre. (**Id.**, ¶ 14.)

17 h. Alves does not translate his documents on Government Grant 1678:2, but it  
18 appears to consist of multiple pieces, of which the pō`alima is only a small part.

19 Furthermore, the pō`alima appears to be only a small part—less than 1/25<sup>th</sup>—of Parcel  
20 27’s 0.712 acre. (Exh. 2260-Alves-3, -4.) Therefore, it would be reasonable to ascribe  
21 appurtenant rights to almost all of the 0.712 acres, or to 0.710 acre.

22  
23 **430. SWUPAs 2217/2218N—John Minamina Brown Trust/Crystal Smythe, Trustee**

24 a. On April 23, 2009, the John Minamina Brown Trust, through its sole trustee  
25 Crystal Smythe (formerly Crystal Alboro), filed existing- and new-use SWUPAs for  
26 TMKs No. (2) 3-6-006:025 (“Parcel 25”) and No. (2) 3-6-006:029 (“Parcel 29”).  
27 (Smythe, WT, 2/5/16, ¶ 1; Smythe, Tr., 7/19/16, p. 6, ll. 2-6.) [Hui/MTF and OHA, FOF  
28 B-813.]

29 b. Parcel 25 is 0.62 acre and Parcel 29 is 0.63 acre, for a combined total of 1.25  
30 acres, for which Smythe requests recognition of appurtenant rights of 375,000 gpd, based

1 on Reppun’s high estimate of 300,000 gad. (**Id.**, ¶¶ 13-15.) [Hui/MTF and OHA, FOF B-  
2 820.]

3 c. Smythe also had requested : 90,300 gpd for an existing 0.3 acre of kalo lo`i and  
4 0.1 acre domestic garden, plus 255,000 gpd for an additional 0.85 acre of kalo lo`i, 0.43  
5 acre on Parcel 25 and 0.42 acre on Parcel 29. The total request was 345,300 gpd.  
6 (SWUPA 2217, p. 2, table 1, p. 4, table 3; SWUPA 2218N, p. 1, p.3, table 2.)

7 d. In her written testimony, Smythe had requested 300,600 gpd for 1 acre of kalo lo`i  
8 and 600 gpd for a 0.1 acre of papayas. At the hearing, she confirmed that she was  
9 requesting 0.85 acre in addition to her existing 0.3 acre of kalo lo`i, for a total of 1.15  
10 acres, and that she was requesting 600 gpd, not 300 gpd, for her garden. (**Id.**, ¶¶ 5, 13,  
11 20-21; Smythe, Tr., 7/19/16, p. 11, l. 22 to p. 12, l. 12.) [Hui/MTF and OHA, FOF B-813,  
12 B-822.]

13 e. Parcel 25 is comprised of a portion of LCA 2577:1, confirmed by RP 4948, and  
14 Parcel 29 is the entirety of LCA 3277, confirmed by RP 3119:

15 1. LCA 2577:1 contained 11 lo`i as well as a pō`alima.

16 2. LCA 3277 is described as containing lo`i kalo.

17 The Commission had granted provisional approval. (**Id.**, ¶¶ 6, 11-12; Exh. 2217-Brown-  
18 1, -2, -3; Provisional Order, Attachment C, Revised Exh. 7, p. 42.) [Hui/MTF and OHA,  
19 FOF, B-819.]

20  
21 431. **SWUPA 2366N—George & Yoneko Higa**

22 a. On April 23, 2009, George and Yoneko Higa filed a new-use SWUPA for TMKs  
23 No. (2) 3-6-006:003 (“Parcel 3”), No. (2) 3-6-006:004 (“Parcel 4”), No. (2) 3-6-006:005  
24 (“Parcel 5”), and No. (2) 3-6-006:016 (“Parcel 16”). (Higa, WT, 2/3/16, ¶ 1.) [Hui/MTF  
25 and OHA, FOF, B-838.]

26 b. Parcel 3 is 1.093 acres, Parcel 4 is 0.222 acres, Parcel 5 is 0.16 acre, and Parcel 16  
27 is 0.16 acres. (**Id.**, ¶¶ 10-13; Exh. 2366N-Higa-1.) [Hui/MTF and OHA, FOF, B-844, B-  
28 846, B-848, B-850.]

29 c. The Higas request appurtenant rights for all acres on the four parcels for 416,100  
30 gpd, based on Reppun’s high estimate of 300,000 gad, and a permit for 3,000 gpd for one  
31 acre of garden crops. (**Id.**, ¶¶ 4, 19.) [Hui/MTF and OHA, FOF, B-838, B-851.]

1 d. The Higas are not using stream water because their access to Waikapū Stream has  
2 been severely limited by upstream users and alterations to the traditional `auwai. Before  
3 the `auwai mauka of her land was destroyed, Yoneko Higa’s family had always used  
4 `auwai water for gardening, and as recently as 1989, for kalo. . (**Id.**, ¶¶ 19, 24.)

5 [Hui/MTF and OHA, FOF, B-851.]

6 e. Parcel 3’s 1.093 acres are comprised of:

7 1. the entirety of LCA 3397:1 & 2, confirmed by RP 4122, consisting of 0.84  
8 acre, with `āpana 1 described as a “paukukalo” and `āpana 2 as a “pahale.”

9 2. at least half of LCA 3523:1, confirmed by RP 3141, consisting of 0.229  
10 acre, with `āpana 1 described as “a section of lois.”

11 3. the entirety of LCA 2361:1, confirmed by RP 498, consisting of 0.024  
12 acre, for which water rights were reserved in 1959.

13 (**Id.**, ¶¶ 2, 6-8; Exh. 2366-Higa-1; SWUPA 2366, Addendum, p. 2.) [Hui/MTF and OHA,  
14 FOF, B-840, B-841, B-842, B-843.]

15 f. Higa claims appurtenant rights to 0.843 acre of Parcel 3, after subtracting 0.25  
16 acre for the pahale but not the 0.024 acre derived from LCA 2361:1, whose water rights  
17 were reserved in 1959, from Parcel 3’s 1.093 acres. (**Id.**, ¶¶ 9-10.)

18 g. Parcel 4’s 0.222 acre is comprised of about 90 percent of LCA 3224:3, confirmed  
19 by RP 4115, described as a “section of lois.” (**Id.**, ¶ 11; Exh. 2366-Higa-5.) [Hui/MTF  
20 and OHA, FOF B-845.]

21 h. Parcel 5’s 0.16 acre is comprised of a portion of a government grant, confirmed  
22 by RP 1713. The grant does not provide the land use at the time of the grant, but Higa  
23 believes that Parcel 5’s location between the kalo lo`i lands of LCAs 3523:1 and 3224:3  
24 makes it likely that the grant was also cultivated in kalo lo`i. (**Id.**, ¶ 12, Exh. 2366-Higa-  
25 1, -3, -5.) [Hui/MTF and OHA, FOF B-847.]

26 i. Parcel 16’s 0.16 acre is comprised of three government grants, confirmed by RP’s  
27 1710:2 (0.06 acre) and 1520/170 (0.10 acre). The grants do not provide the land use at  
28 the time of the grant, but Higa believes that they were also cultivated in kalo lo`i, because  
29 they are adjacent to the lo`i kalo lands of LCA 3397:1. (**Id.**, ¶ 13, Exh. 2366-Higa-1, -2.)

30 [Hui/MTF and OHA, FOF B-847.]

1 j. Grant 1710:2 seems to be carved out of a corner of LCA 3397:1 & 2, and Grant  
2 1520/170 is on the adjacent corner. But their sizes, 0.06 acre and 0.10 acre, respectively,  
3 could just as well have been for pahale, especially since LCA 3397:2 was a pahale.

4 (Exhibit 2366-Higa-1.)

5 k. The Commission had granted provisional approval for LCAs 3397:1& 2, 3523:1,  
6 and 3224:3. (Provisional Order, Attachment C. Revised Exh. 7, pp. 43-44.) [Hui/MTF  
7 and OHA, FOF B-842.]

8  
9 432. **SWUPA 2368—Teruo Kamasaki**

10 a. On April 23, 2009, Teruo and Evelyn Kamasaki filed an existing-use SWUPA for  
11 TMK No. (2) 3-6-007:010 (“Parcel 10”). The Kamasaki’s mistakenly filed out a “new  
12 use” form, but the SWUPA was filed before the April 30, 2009, deadline for existing-use  
13 applications. The Kamasakis’ daughter, Cynthia McCarthy, testified because her dad  
14 passed away since the filing of the SWUPA. (McCarthy, WT, 2/1/16, ¶ 1; McCarthy, Tr.,  
15 7/13/16, p. 102, ll. 2-14, p. 105, l. 18 to p. 106, l. 1.) [Hui/MTF and OHA, FOF, B-824.]

16 b. Parcel 10 is 0.71 acre, for which McCarthy requests recognition of appurtenant  
17 rights of 213,000 gpd, based on Reppun’s high estimate of 300,000 gad, and a permit for  
18 2,010 gpd for 0.67 acre of her yard and garden, based on Maui County’s standard for  
19 domestic cultivation of 3,000 gad, in which her father used to grow fruits and vegetables  
20 until July 2004, when the pipe that used to bring water from the `auwai to their land was  
21 pulled out and destroyed. (**Id.**, ¶¶ 3, 9-12; SWUPA 2368, p. 3, table 2, Attachment, p. 2.)  
22 [Hui/MTF and OHA, FOF, B-827, B-831, B-832.]

23 c. In July 2004, during construction to widen and level the plantation road, Wailuku  
24 Agribusiness destroyed the culvert and the concrete flume on both sides of the road,  
25 destroying the Kamasakis’ pipe system in the process. WWC has replaced the  
26 Kamasakis’ one-inch pipe under the road and installed a four- or six-inch culvert, but the  
27 Kamasakis’ pipe continues to be vandalized and broken. McCarthy would like to see the  
28 pipe reinstalled and would use the water to restart the non-commercial garden. (**Id.**, ¶ 14;  
29 Kamasaki, WT, 9/14/07, ¶ 7 (MA06-01); Kamasaki, WT, 11/16/07, ¶¶ 4-5 (MA06-01);  
30 Exh. A-58 (MA06-01); Suzuki, Tr., 12/14/07, p. 87, ll. 14-23, p. 155, ll. 9-21 (MA06-  
31 01).) [Hui/MTF and OHA, FOF, B-832, B-836, B-837.]

1 d. Parcel 10 is comprised of a portion of LCA 432, confirmed by RP 102. McCarthy  
2 states that the LCA describes the existence of numerous lo`i, but in the Commission’s  
3 Provisional Order, LCA 432 is described as follows: “NT ref. wet & dry patches, 2 mud  
4 houses, 1 grass house. NR ref. stream border, numerous taro patches.” McCarthy’s  
5 exhibit does not translate from the Hawaiian, but the native testimony includes “maloo  
6 kahi mau loi” and “2 halelepo 1 hale pili.” (*Id.*, ¶¶ 7-8; Exh. 2368-Kamasaki-1, -2;  
7 Provisional Order, Attachment C, Revised Exh. 7, p. 44.)

8 e. One-half of Parcel 10’s 0.71 acre, or 0.355 acre, is entitled to appurtenant rights.  
9 The existence of dry patches and three houses, without further specification and without  
10 information on the size of LCA 432, leads to a 50:50 split between kalo lo`i and other  
11 uses for LCA 432 at the time of the Māhele, *supra*, FOF 168.  
12

13 433. **SWUPA 2155—Clayton Suzuki**

14 a. On April 20, 2009, Clayton Suzuki and his wife, Linda Kadosaki, filed an  
15 existing-use SWUPA for TMKs No. (2) 3-6-006:009 (“Parcel 9”), No. (2) 3-6-006: 013  
16 (“Parcel 13”) and No. (2) 3-6-006:022 (“Parcel 22”). (SWUPA 2155.)

17 b. Parcel 9 is 0.12 acre, Parcel 13 is 4.253 acres, and Parcel 22 is 0.06 acre. Suzuki  
18 owns a ten percent undivided interest in Parcel 22.

19 c. Suzuki’s existing-use request was for 17,379 gpd, estimated between May 2007  
20 and December 2007, and metered from January-April 2008, after a meter was installed in  
21 December 2007. Irrigation was over 4.34 acres: bitter melon on Parcel 9’s 0.12 acre;  
22 pasture on 0.02 acre of Parcel 22’s 0.06 acre; and dryland taro, bitter melon and fruit  
23 trees on 1.2 acres, landscaping on 1.0 acre, and pasture on 2.0 acres (total of 4.2 acres) of  
24 Parcel 13’s 4.253 acres, with the remaining 0.053 acres with a house and swimming pool.  
25 (SWUPA 2155, p. 2, table 1, p. 4, table 3; Suzuki, Tr., 7/18/16, p. 148, ll. 15-24.)

26 [Hui/MTF and OHA, FOF B-879.]

27 d. The Suzukis moved to the property in 2005, and in 2007-2008, the acreage was  
28 not fully planted. Over the past five years, the average use was 21,371 gpd, which is the  
29 requested use for the application. The Suzukis have a county water meter for household  
30 use. (Suzuki, Tr., 7/18/16, p. 140, ll. 2-4, 9-11; Suzuki, Opening Brief, 2/4/16, p. 7.)

1 e. The Suzukis purchased the property from Wailuku Agriculture in 2003 with  
2 reservations of water rights. (Suzuki, Tr., 7/18/16, p. 140, ll. 1-2.) [Hui/MTF and OHA,  
3 FOF B-878.]

4 f. The Commission granted provisional approval for 11 of 12 LCAs: one for Parcel  
5 9, nine of ten for Parcel 13, and one for Parcel 22, which is shared with Parcel 13. (Exh.  
6 2155-Suzuki, Exh. 1; Provisional Order, Attachment C, Revised Exh. 7, pp. 41-42).

7 g. Suzuki suggested that his appurtenant rights could be quantified by reference to  
8 historical lo`i size, using a figure of 40 by 40 feet, or 1,600 square feet, and counting the  
9 number of lo`i in the records for the LCAs, arriving at 183 lo`i. However, he did not  
10 calculate what the acreage would be. (Suzuki, Opening Brief, Direct Testimony, 2/2/16,  
11 pp. 3-6, 9; 2155-Suzuki, Exhibit 2.)

12 h. After subtracting for government grants and the LCA that had no documentation  
13 of water use at the time of the Māhele, Suzuki claimed appurtenant rights for 3.889 acres,  
14 from the following LCAs:

- 15 1. Parcel 9: 0.12 acre: all of LCA 3526:1, described as “pauku loi.”
- 16 2. Parcel 22: 0.06 acre: half of LCA 3107:6, described as “3 loi.”
- 17 3. Parcel 13:
  - 18 i. 0.06 acre: half of LCA 3107:6, described as “3 loi.”
  - 19 ii. 0.120 acre: all of LCA 3224:2, described as “taro pauku.”
  - 20 iii. 0.038 acre: 4.61% of LCA 3224:3, described as “taro  
21 pauku.”
  - 22 iv. 0.430 acre: all of LCA 3224:4, described as “1 loi.”
  - 23 v. 0.320 acre: all of LCA 3224:5, described as “house lot.”
  - 24 vi. 2.460 acres: all of LCA 3337:1-3, described as “taro  
25 pauku,” “taro loi,” and “taro pauku,” respectively.
  - 26 vii. 0.071 acre: 23.67% of LCA 3523:1, described as “taro  
27 pauku.”
  - 28 viii. 0.150 acre: all of LCA 3523:3, described as “3 taro lois.”
  - 29 ix: 0.060 acre: all of LCA 5324:4, described as “2 loi.”

30 (2155-Suzuki, Exhibit 2; Exhibit 2155-Suzuki.)

1 i. Subtracting 0.320 acre for the house lot described on LCA 3224:5, the total  
2 acreage with taro loi is 3.569 acres (3.889 acres – 0.320 acre).

3  
4 434. **SWUPA 2156—Nadao Makimoto**

5 a. On April 20, 2009, Nadao Makimoto filed an existing-use SWUPA for TMK No.  
6 (2) 3-6-006:021 (“Parcel 21”). Clayton Suzuki testified for Makimoto at the hearing.  
7 (SWUPA 2156; Suzuki, Tr., 7/18/16, p. 150, l. 16 to p. 151, l. 9.) [Hui/MTF and OHA,  
8 FOF B-881.]

9 b. Parcel 21 is 0.585 acres, which Makimoto purchased from Sunichi Arakawa in  
10 1964. (Suzuki, Tr., 7/18/16, p. 150, ll. 20-25.)

11 c. Makimoto requested a permit for 10,400 gpd for the 0.585 acres—0.30 acre of  
12 vegetable truck crops, 0.10 acre of fruit trees, and 0.185 acre of landscaping. (SWUPA  
13 2156, p. 2, table 1, p. 4, table 3; Suzuki, Tr. 7/18/16, p. 151, ll. 1-7.) [Hui/MTF and OHA,  
14 FOF B-881.]

15 d. Makimoto’s existing use of 10,400 gpd was measured by a meter installed in  
16 August 2008, and from September 2008 to February 2009, the average daily use was  
17 10,400 gpd, which he used to estimate his existing use from May 2007 to April 2008.  
18 (SWUPA 2156, p. 2, table 1.)

19 e. Makimoto also claimed appurtenant rights for Parcel 21’s 0.585 acres, which  
20 contains the entirety of LCA 491:4’s 0.115 acre and LCA 3522’s 0.470 acres. The  
21 Commission had granted provisional approval. (Exh. 2156-Makimoto, pp. 1-2;  
22 Provisional Order, Attachment C, Revised Exh. 7, p. 42.)

23 f. LCA 491:4 was described as containing 8 lo`i, kula wauke, and 3 sweet potato  
24 patches. (Exh. 2156-Makimoto, at page labeled as “Page 674.”)

25 g. LCA 3522 was described as containing 7 parcels:

26 1. parcel 1 with taro pauku and a kula.

27 2. parcel 2 with 4 taro lo`i.

28 3. parcel 3 with 4 taro lo`i.

29 4. parcel 4 with 5 taro lo`i.

30 5. parcel 5 with 9 taro lo`i.

31 6. parcel 6 with 1 taro lo`i.



1                   7.       parcel 7 with potato mala.

2                   (Exh. 2156-Makimoto, at page labeled as “Page 680.”)

3       h.       While Makimoto did not provide calculations on the amount of appurtenant rights  
4       he requested, he based his request on the number of lo`i in the LCAs which comprise  
5       Parcel 21: multiplying each by 1,600 square feet (a 40 ft. x 40 ft. lo`i), then by a water  
6       duty of 150,000 gad (the duty the Commission had adopted in the Nā Wai `Ehā contested  
7       case—CCH-MA06-01, June 2010). (Makimoto, WT, 2/2/16, pp. 8-9.)

8       i.       Using Kame`eleihiwa’s guiding principle #3, *supra*, FOF 168, fifty percent of  
9       LCA 491:4’s 0.115 acre would be attributable to kalo lo`i, or 0.058 acre, as well as fifty  
10      percent of LCA 3522’s 0.470 acre, or 0.235 acre, for a total of 0.293 acre of Parcel 21’s  
11      0.585 acre.

12  
13                                   **ii.       Waikapū Stream**

14  
15   435.   **SWUPA 2163—David Niehaus**

16      a.       On April 6, 2009, David Niehaus filed an existing-use SWUPA for TMK No. (2)  
17      3-5-002:007, a 163-acre property for which he requested 48,000 gpd for 0.275 acre of  
18      taro and reforestation of 8 acres of native trees, later referred to in his Opening Brief as  
19      “approximately 1 acre of taro and 8 acres of other food crops (such as sweet potato) and  
20      native Hawaiian plants.” (SWUPA 2163, p. 2, table 1, p. 4, table 3, p. 5, table 4; Niehaus,  
21      Opening Brief, 2/5/16, p. 1.)

22      b.       Niehaus claimed appurtenant rights but did not provide documents during the  
23      provisional approval process, with the Commission noting that Wailuku Agribusiness had  
24      reserved all water and water rights. Niehaus purchased his property from Wailuku  
25      Agribusiness on February 21, 2002, with a reservation of all water rights, but Niehaus  
26      claimed that Wailuku Agribusiness never transferred to WWC any rights of the property  
27      that Wailuku Agribusiness purported to reserve. (Exh. 2163-Niehaus-1; Provisional  
28      Order, Attachment C, Revised Exh. 7, pp. 38-39.)

29      c.       On July 31, 2015, Niehaus submitted documents in support of his appurtenant  
30      rights claim. (Exh. 2163-Niehaus-2.)

1 d. While Niehaus filed an Opening Brief, he did not submit written testimony and  
2 did not participate in the CCH.

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4 436. **SWUPA 2276—Ione Shimizu**

5 a. On April 23, 2009, Ione Shimizu filed an existing-use SWUPA for TMK No. (2)  
6 3-5-012:031 (“Parcel 31”), for which she requested a permit for an estimated 11,052 gpd:  
7 9,600 gpd for 0.032 acre of kalo lo`i and 1,452 gpd for 0.484 acre for a non-commercial  
8 garden, both of which she estimated using Reppun’s high estimate of 300,000 gad and  
9 Maui County diversified agriculture standard of 3,000 gad. (Shimizu, WT, 2/3/16, ¶¶ 11,  
10 13; SWUPA 2276, Attachment A, p.1, p. 2; table 1; p. 4, table 3.) [Hui/MTF and OHA,  
11 FOF B-686.]

12 b. Parcel 31 is 0.53 acre, with 0.484 acre in a domestic garden and 0.032 acre in lo`i  
13 kalo. (**Id.**, ¶¶ 9, 12-13.) [Hui/MTF and OHA, FOF B-690.]

14 c. Shimizu had not claimed appurtenant rights in her SWUPA nor did she participate  
15 in the provisional approval process. However, in her written testimony of 2/3/16, Shimizu  
16 claimed appurtenant rights, based on documents that showed that Parcel 31 is comprised  
17 of a portion of LCA 205, confirmed by RP 7660, which is described as “kalo patches of  
18 this land” and “coffee ground.” (SWUPA 2276, p. 1; Provisional Order, Attachment C,  
19 Revised Table 7, p. 40; **Id.**, ¶ 6; Exh. 22760-Shimizu-1.) [Hui/MTF and OHA, FOF B-  
20 687, B-688, B-689.]

21 d. Shimizu states that it is unclear where the “kalo patches” and coffee ground” were  
22 located but believes that the kalo patches were on her portion of LCA 205, because Parcel  
23 31 contains remnants of an extensive lo`i complex with stone terracing (at least ten  
24 distinct lo`i in various sizes) and an `auwai running through the south side of the parcel.  
25 (**Id.**, ¶¶ 6-8; Exh. 22760-Shimizu-1.) [Hui/MTF and OHA, FOF B-687, B-688.]

26 e. Shimizu therefore believes that Parcel 31’s entire 0.53 acre has appurtenant rights.  
27 (**Id.**, ¶ 9.)

28 f. However, the drawn map for LCA 205 depicts a clear demarcation between  
29 “Coffee Ground” and the rest of the LCA, with approximately one-eighth (1/8) as coffee  
30 grounds. (Exh. 2276-Shimizu-1-p. 3.)

1 g. Therefore, about seven-eighths (7/8), or 0.46 acre of Parcel 31's 0.53 acre, were  
2 in kalo patches at the time of the Māhele.

3  
4 437. **SWUPA 2268—Katherine Riyu**

5 a. On April 23, 2009, Katherine Ryu filed existing-use SWUPA 2268 for TMK No.  
6 (2) 3-5-012:028 ("Parcel 28"). Pamela Dickson and her son, Dustin Vegas, who care for  
7 Riyu's garden and cultivate lo`i kalo on part of the land, testified on Riyu's behalf.  
8 (Dickson, WT, 1/28/16, ¶ 1. [Hui/MTF and OHA, FOF B-692.]

9 b. The deed to Parcel 28 contains a reservation of appurtenant rights when Wailuku  
10 Sugar Company sold the parcel to Katherine Riyu's husband, but no information on the  
11 date of sale was introduced into evidence. (*Id.*, ¶¶ 1-2; SWUPA 2268, Supplement, p. 2.)  
12 [Hui/MTF and OHA, FOF B-696.]

13 c. The Commission had granted provisional approval of appurtenant rights, based on  
14 LCA 434. (Provisional Order, Attachment C, Revised Exh. 7, p. 40.)

15 d. Parcel 28 is 0.61 acre and part of LCA 434:1, confirmed by RP 495, which was  
16 described as containing 41 lo`i, and with the map accompanying the LCA showing it  
17 surrounded by a lo`i pō`alima and lo`i pa`ahao. (*Id.*, ¶¶ 10-11, 14.)

18 e. Riyu requests recognition of appurtenant rights for 183,000 gpd, based on  
19 Reppun's high estimate of 300,000 gad for lo`i kalo applied to 0.61 acre. (*Id.*, ¶ 14.)  
20 [Hui/MTF and OHA, FOF B-693.]

21 f. Vegas and Dickson irrigate a garden and lawn and 11 lo`i kalo on about half, or  
22 0.305 acre. They believe Maui County's single-family home's 600 gpd is sufficient for  
23 the garden, and request 91,500 gpd for the lo`i (0.305 acre x 300,000 gad) for a total  
24 permit request of 92,100 gpd. (*Id.*, ¶¶ 5, 15-17.) [Hui/MTF and OHA, FOF B-693, B-  
25 697, B-698.]

26 g. In the original SWUPA, Riyu had requested 1,230 gpd on 0.41 acre of Parcel 28's  
27 0.61 acres, using Maui County's diversified agriculture standard of 3,000 gad. (SWUPA  
28 2268, p. 2, table 1; p. 4, table 3; Supplement, p. 1.)

29 h. Dickson and Vega have replaced 0.305 acre with kalo lo`i nearly two years ago.  
30 (Dickson, Tr., 7/18/16, p. 10, l. 18 to p. 12, l. 2.)

31 i. No new-use SWUPA has been filed.

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438. **SWUPA 2338—Judith Yamanoue**

a. On April 30, 2009, Melvin Riyu and Judith Yamanoue filed an existing-use SWUPA for TMKs No. (2) 3-5-012:027 (“Parcel 27”) and No. (2) 3-5-012:041 (“Parcel 41”), on which Pamela Dickson and her son, Dustin Vega live. Dickson testified on Yamanoue’s behalf. (Dickson, WT, 1/28/16, ¶ 1; Dickson, Tr., 7/18/16, p. 6, ll. 6-8.) [Hui/MTF and OHA, FOF B-699.]

b. Parcel 27 is 0.71 acre and Parcel 41 is 0.29 acre, for a total of 1.0 acre. (**Id.**, ¶ 15.) [Hui/MTF and OHA, FOF B-705.]

c. Riyu and Yamanoue did not claim appurtenant rights in their SWUPAs and did not participate in the provisional process. However, Dickson’s January 18, 2016 written testimony and supporting documents claimed appurtenant rights for both parcels, which were comprised of portions of LCA 434:1, confirmed by RP 495; LCA 2199, confirmed by RP 3129; Government Grant 1673:3 to John Richardson; and a pō`alima. LCA 434:1 was described as containing 41 kalo lo`i; LCA 2199 was described as kalo land with one pō`alima; Government Grant 1673:3 was described as containing three taro patches. (SWUPA 2338, p. 1; Provisional Order, Attachment C, Revised Exh. 7, p. 41; **Id.**, ¶¶ 5, 12-14; Exh. 2338 Riyu-1-p.3; -2-p.4; -3-p.3.) [Hui/MTF and OHA, FOF B-704.]

d. The overlay of parcels 27 and 41 over the two LCAs and the Grant show them to apparently be entirely in LCA 434:1, Grant 1673:3, and the pō`alima. (Exhs. 2338-Riyu-4, p. 1, -5, p. 1.)

e. Dickson and Vega requested appurtenant rights to both parcels for a total of 1.0 acre, or 300,000 gpd, using Reppun’s high estimate of 300,000 gad for kalo lo`i. (**Id.**, ¶¶ 17-18.) [Hui/MTF and OHA, FOF B-705.]

f. The existing-use SWUPA stated that the existing use in 2008 was 1,920 gpd for a garden on 0.64 acre of Parcel 27’s 0.71 acres, using Maui County diversified agriculture standard of 3,000 gad. (SWUPA 2338, p. 2, table 1; p. 4, table 3; Supplement, p. 2.)

g. Dickson’s and Vegas’s permit request now consists of the following:  
1. irrigation of a non-commercial garden and lawn, for which they request 600 gpd, based on Maui County’s single-home standard of 600 gpd.

1                   2.       cultivation of 11 lo`i kalo on 0.5 acre, for which they request 150,000 gpd  
2                   (0.5 acre x Reppun’s high estimate of 300,000 gad).

3                   (**Id.**, ¶¶ 19-21.)

4                   h.       Dickson stated that the kalo lo`i has been in place for two or three years, replacing  
5                   0.5 acre of the original 0.64 acre garden. (Dickson, Tr., 7/18/16, p. 7, l. 21 to p. 9, l. 15.)

6                   i.       A new-use permit has not been filed.

7  
8   439.   **SWUPA 2277—Warren Soong**

9                   a.       On April 23, 2009, Warren Soong filed an existing-use SWUPA for TMK No. (2)  
10                  3-5-012:026, which was subsequently subdivided into two parcels: 1) TMK No. (2) 3-5-  
11                  012:047 (“Parcel 47”), which Soong still owns and on which he lives; and 2) TMK No.  
12                  (2) 3-5-012:026 (“Parcel 26”), which was sold to the Pellegrino `ohana. Parcel 26 is  
13                  being addressed with the Pellegrinos’s applications, SWUPAs 2332 and 2333N. (Soong,  
14                  WT, 1/30/16, ¶¶ 1-2.) [Hui/MTF and OHA, FOF B-708.]

15                  b.       Parcel 47 is 0.85 acre, for which Soong requests recognition of appurtenant rights  
16                  of 255,000 gpd, based on Reppun’s high estimate of 300,000 gad for lo`i kalo, and a  
17                  permit for 600 gpd for his garden and lawn, based on the Maui County single-family  
18                  home standard of 600 gpd. (**Id.**, ¶¶ 4, 12-14.) [Hui/MTF and OHA, FOF B-711, B-713.]

19                  c.       Parcel 47 is comprised of a portion of LCA 2199, confirmed by RP 3129, and  
20                  described as kalo land with a pō`alima within it. (**Id.**, ¶¶ 5, 10; Exh. 2277-Soong-1, -2.)  
21                  [Hui/MTF and OHA, FOF B-710.]

22                  d.       The Commission had granted provisional approval of appurtenant rights.  
23                  (Provisional Order, Attachment C, Revised Exh. 7, p. 40.) [Hui/MTF and OHA, FOF B-  
24                  710.]

25  
26   440.   **SWUPA 2311—Theodore & Zelig Harders**

27                  a.       On April 23, 2009, the Harders filed an existing-use SWUPA for TMK No. (2) 3-  
28                  5-012:039 (“Parcel 39”), on which the Harders’ `ohana has lived on for generations.  
29                  (Harders (SWUPA 2311), WT, 1/26/16, ¶ 1.) [Hui/MTF and OHA, FOF B-763.]

30                  b.       Parcel 39 is 0.403 acres and consists of portions of three kuleana awards:

1           1.       LCA 3296, confirmed by RP 3147, described by Harder as `āpana 1 being  
2 a section of kalo land. But LCA 3296 consisted of two `āpana, with `āpana 1  
3 described as “a section of kalo,” and `āpana 2 described as “Potato ground.” (**Id.**,  
4 ¶ 14; Exh. 2240-T&Z-2-p. 3.)

5           2.       LCA 6041:3, confirmed by RP 2813, described as containing two lo`i  
6 kalo.

7           3.       LCA 460:1, confirmed by RP 2165, referred to by Harders as being  
8 described as “numerous taro patches,” but actually described as “numerous kalo  
9 patches and a kula.”

10 (**Id.**, ¶¶ 5, 9, 11-14; Exh. 2311-Harders-1-p. 6; -2; -3-p. 6; -4-p. 1.) [Hui/MTF and OHA,  
11 FOF B-767, B-768.]

12 c.       The great majority of Parcel 39, about 80 percent, is comprised of LCA 3296,  
13 with a small portion, about 10 percent, from LCA 6041:3, and an even smaller portion  
14 from LCA 460:1, with the latter comprising less than 5-10 percent of Parcel 39, or about  
15 0.02 to 0.04 acres. (Exh. 2311-Harders-4-p. 1.)

16 d.       LCA 460:1 was 7.41 acres, of which Parcel 28 of SWUPAs 2240/3467N now  
17 comprises 3.71 acres, and Parcel 1 of SWUPA 2230 now comprises 1.978 acres, for a  
18 total of 5.69 acres, or about 77 percent of LCA 460:1. (Harders (SWUPA 2240/3467N),  
19 WT, 1/26/16, ¶¶ 5, 11, 17; Exh. 2240-T&Z-1, -6; Dodd (Federcell), WT, 2/3/16, ¶¶ 5, 12;  
20 Exh. 2230-Federcell-2.)

21 e.       Ancient lo`i are still prevalent on the 77 percent of LCA 460:1 that now comprise  
22 Parcels 28’s and 1’s, and they are adjacent to Waikapū Stream and a traditional `auwai.  
23 (Harders (SWUPA 2240/3467N), 1/26/16, ¶ 13; Dodd (Federcell), WT, 2/3/16, ¶ 11;  
24 Exh. 2240-Harders-6 & 2240-T&Z-7; Exh. 2230-Federcell-4.)

25 f.       The Harders had concluded that all of the three LCAs had been in kalo lo`i and  
26 requested 120,900 gpd in appurtenant rights for Parcel 39, based on Reppun’s high  
27 estimate of 300,000 gad for kalo lo`i applied to Parcel 39’s entire 0.403 acres. (Harders  
28 (SWUPA 2311), WT, 1/26/16, ¶ 4.) [Hui/MTF and OHA, FOF B-764.]

29 g.       However, LCA 3296 was kalo lo`i and potato ground, so only half had  
30 appurtenant rights. (Exh. 2311-Harders-4-p. 1.) About 80 percent of Parcel 39’s 0.403

1 acre is comprised of LCA 3296, or 0.32 acre, of which half, or 0.16 acre, would have  
2 appurtenant rights.

3 h. Moreover, a small part of LCA 460:1 was in kula, described as “numerous kalo  
4 patches and a kula.” Observable ancient lo`i are present on at least 77 percent of what  
5 was LCA 460:1, so a reasonable estimate is that 80 percent was in kalo lo`i at the time of  
6 the Māhele. LCA 460:1 comprises only 0.02 to 0.04 (average of 0.03 acre) acre of Parcel  
7 39’s 0.403 acres, and 80 percent, or 0.02 acre would have been in kalo lo`i.

8 i. Thus, of Parcel 39’s 0.403 acre, 0.233 acre (0.402 acre – [0.16 + 0.01 acre])  
9 would have appurtenant rights.

10 i. The Commission had granted provisional recognition of appurtenant rights.  
11 (Provisional Order, Attachment C., Revised Exh. 7, p. 40.)

12 j. The Harders also requested a permit for 600 gpd for their garden and lawn, based  
13 on Maui County’s single-family home standard of 600 gpd. (*Id.*, ¶¶ 4, 18.) [Hui/MTF and  
14 OHA, FOF B-769.]

15  
16 441. **SWUPAs 2240/3467N—T & Z Harders Family Limited**

17 a. On April 23, 2009, T & Z Harders Family Limited filed an existing-use SWUPAs  
18 for TMK No. (2) 3-5-004:028 (“Parcel 28”), and nearly three years later, on February 6,  
19 2012, a new-use SWUPA for the same parcel. (Harders (SWUPAs 2240 & 3467N), WT,  
20 1/26/16, ¶ 1.) [Hui/MTF and OHA, FOF B-748.]

21 b. Parcel 28 is 11.247 acres and is comprised of:

- 22 1. Approximately one-half of LCA 460.1, confirmed by RP 2165.
- 23 2. The entirety of LCA 8808:1, 2, & 4, confirmed by RP 2164;
- 24 3. Approximately one-third of LCA 3296, confirmed by RP 3147.
- 25 4. Approximately one-half of LCA 6041:3, confirmed by RP 2813.
- 26 5. Part of Government Grant 3042 to Adam Pupuhi.

27 (*Id.*, ¶¶ 5, 11; Exh. 2240-T&Z-6 (map).) [Hui/MTF and OHA, FOF B-753.]

28 c. The Commission granted provisional recognition of appurtenant rights, with the  
29 comment that rights had been assigned to Wailuku Sugar, but Nicholas Harders stated  
30 that this property has been in their `ohana for generations, and of their five properties,  
31 three have deed restrictions from 1967, but two, including Parcel 28, do not. The Harders

1           `ohana has submitted five SWUPAs. They have lived on some of these parcels for  
2           generations and were able to buy the other parcels, which have reservation of water  
3           rights, assigned by Edmund Rogers to Wailuku Sugar in 1967. The parcels under  
4           SWUPAs 2240 and 2311 are the ones without reservations. (Provisional Order,  
5           Attachment C, Revised Exh. 7, pp. 39-40; Harders, Tr., 7/18/16, p. 59, l. 10 to p. 60, l.  
6           21; **Id.**, ¶ 2; SWUPA 2238, Attachment, p. 1.)

7           d.       For LCA 8808, `āpana 1 and 2 were each described as a section of lo`i, and  
8           `āpana 4 was described as 4 kula. But the land consisted of four pieces, with `āpana 3  
9           described as 6 lo`i. (**Id.**, ¶ 16; Exh. 2240-T&Z-4-p.5.) Therefore, about three fourths of  
10          LCA 8808 was in kalo lo`i.

11          e.       For LCA 3296, Harders states that `āpana 1 is described as a piece of kalo land,  
12          but LCA 3296 consisted of two `āpana, with `āpana 1 described as “a section of kalo,”  
13          and `āpana 2 described as “Potato ground.” (**Id.**, ¶ 14; Exh. 2240-T&Z-2-p. 3.) Therefore,  
14          about half of LCA 3296 was in kalo lo`i.

15          f.       LCA 6041:3 was described as having two lo`i kalo. (**Id.**, ¶ 15; Exh. 2240-T&Z-3-  
16          p. 6.) Therefore, all of LCA 6041:3 was in kalo lo`i.

17          g.       For LCA 460:1, confirmed by RP 2165, referred to by Harders as being described  
18          as “numerous taro patches,” was actually described as “numerous kalo patches and a  
19          kula.” LCA 460:1 was 7.41 acres, of which Parcel 28 now comprises 3.71 acres, and  
20          Parcel 1 of SWUPA 2230 now comprises 1.978 acres, for a total of 5.69 acres, or about  
21          77 percent of LCA 460:1. Ancient lo`i are still prevalent on the 77 percent of LCA 460:1  
22          that now comprise Parcels 28 and 1, and they are adjacent to Waikapū Stream and a  
23          traditional `auwai. (Harders (SWUPA 2240/3467N), WT, 1/26/16, ¶¶ 5, 11, 13, 17; Exh.  
24          2240-T&Z-1, -6; Dodd (Federcell), WT, 2/3/16, ¶¶ 5, 11-12; Exh. 2230-Federcell-2, -4;  
25          Harders (SWUPAs 2240 & 3467N), WT, 1/26/16, ¶ 14; Exh. 2240-Harders-6 and 2240-  
26          T&Z-7; Exh. 2311-Harders-4-p. 1.) Therefore, about 80 percent of LCA 460:1 was in  
27          kalo lo`i.

28          h.       For Government Grant 3042, Harders states that it does not indicate what was cultivated on this  
29          portion of Parcel 28, but visible lo`i kalo terracing across the land indicates this portion was historically  
30          cultivated in kalo. However, the map of Parcel 28 overlaid on the LCAs and Government Grant show that  
31          Grant 3042 covered a vast area and that the portion now included in Parcel is an extremely small part.



1 (Exh. 2240-Harders-6-p. 1.) Therefore, an insignificant amount of Government Grant 3042 can be  
2 attributed to kalo lo`i.

3 i. Thus, for Parcel 28's 11.247 acres, approximately 7.57 acres have appurtenant  
4 rights:

5 1. LCA 460:1: 80 percent of the 3.71 acres now in Parcel 28, or 2.97 acres.

6 2. LCA 8808:1, 2, & 4: 75 percent of the entirety, or 5.5 acres, which falls  
7 within Parcel 28, or 4.13 acres. (Exhs. 2240-T&Z-4 and 2240-Harders-6.)

8 [Hui/MTF and OHA, FOF B-758.]

9 3. The remaining LCAs and Government Grant total 2.04 acres (11.247 acres  
10 - 9.21 acres). The Government Grant is about 60 percent, or 1.22 acre; LCA 3296  
11 about 30 percent, or 0.61 acre; and LCA 6041:3 about 10 percent, or 0.20 acres.

12 (Exh. 2240-Harders-6-p.1.) [Hui/MTF and OHA, FOF B-759.]

13 a. Government Grant: insignificant appurtenant rights.

14 b. LCA 3296: 0.31 acres (50 percent of 0.61 acres).

15 c. LCA 6041:3 0.16 acres (80 percent of 0.20 acres).

16 j. In contrast to the 7.57 acres of Parcel 28 that has appurtenant rights, the Harders  
17 requested recognition of appurtenant rights of 3,374,100 gpd, based on Parcel 28's entire  
18 11.247 acres and Reppun's high estimate of 300,000 gad for lo`i kalo. (**Id.**, ¶¶ 4, 19-20.)  
19 [Hui/MTF and OHA, FOF B-749.]

20 i. The Harders also request a permit for current and future uses of 1,507,500 gpd:

21 1. 7,500 gpd for 3 acres of a large non-commercial garden, part of  
22 which had previously been a plant nursery, estimated by applying  
23 *Waiāhole's* diversified agriculture irrigation rate of 2,500 gad. The 3-acre  
24 non-commercial garden replaces part of the plant nursery and is estimated  
25 to use less—7,500 gpd—than the original estimated existing use of  
26 20,680 gpd.

27 2. 1,500,000 gpd for 5 acres of kalo lo`i, using Reppun's high  
28 estimate of 300,000 gad. One acre had been the original request of the  
29 February 6, 2012 new-use SWUPA, and the request is now expanded to  
30 add 4 acres.

1 (Id., ¶¶ 4, 21-22; SWUPA 2240, p. 2, table 1; p. 4, table 3; SWUPA 3467N, p. 2, table 1;  
2 p. 4, table 3.) [Hui/MTF and OHA, FOF B-749, B761, B-762.]

3  
4 442. **SWUPAs 2332/2333N—Hōkūao & Alana Pellegrino**

5 a. On April 30, 2009, Victor and Walette Pellegrino filed existing- and new-use  
6 SWUPAs for TMKs No. (2) 3-5-012:020 (“Parcel 20”) and No. (2) 3-5-012:023 (“Parcel  
7 23”). The Pellegrinos own and live on Parcel 20, and their son and his wife, Hōkūao and  
8 Alana Pellegrino, own and live on Parcel 23. Subsequently, Victor and Walette  
9 purchased TMK No. (2) 3-5-012:026 (“Parcel 26”) from Warren Soong, part of Soong’s  
10 original application under SWUPA 2277. Hōkūao Pellegrino testified on behalf of all.  
11 (Pellegrino, WT, 2/1/16, ¶¶ 1-4.) [Hui/MTF and OHA, FOF B-714, B-715.]

12 b. Parcel 20 is 0.175 acre; Parcel 23 is 2.134 acre; and Parcel 26 is 0.671 acre. (Id., ¶  
13 20.)

14 c. The deed to Parcel 20 contains a reservation of appurtenant rights. Edmund  
15 Rogers assigned the water rights to Wailuku Sugar Company in 1967. (Id., ¶ 9 n.1;  
16 SWUPA 2239 (T & Z Harders), Attachment, p. 1.) [Hui/MTF and OHA, FOF B-719.]

17 d. Parcel 20 is comprised of LCA 8808:3, confirmed by RP 2164, and described as  
18 containing 6 lo`i. (Id., ¶¶ 10-11.)

19 e. Parcel 23 is comprised of LCA 3340:1, confirmed by RP 3115, and LCA 3110:1,  
20 confirmed by RP 3152. LCA 3340:1 is described as “kuleana taro patches.” LCA 3110:1  
21 is described as a section of lo`i that contains a pō`alima and also described as 40 taro  
22 patches and a pō`alima. Additionally, Parcel 23 has remnants of an extensive lo`i  
23 complex with stone terracing, at least 12 lo`i ranging in size from 300 square feet to  
24 6,000 square feet, and adjacent to Waikapū Stream. (Id., ¶¶ 13-15.) [Hui/MTF and OHA,  
25 FOF B-721, B-722.]

26 f. Parcel 26 is comprised of a portion of LCA 2199, confirmed by RP 3129,  
27 described as kalo land with a pō`alima. Like Parcel 23, Parcel 26 has remnants of an  
28 extensive lo`i system, with a number of intact lo`i throughout the parcel. (Id., ¶ 16; Exhs.  
29 2332-Pellegrino-4; 2277-Soong-2.) [Hui/MTF and OHA, FOF B-722, B-723.]

1 g. The Commission provisionally approved appurtenant rights for the LCAs  
2 associated with all three parcels, but noted the reservation on Parcel 20. (Provisional  
3 Order, Attachment C, Revised Exh. 7, p. 40.) [Hui/MTF and OHA, FOF B-724.]

4 h. The Pellegrinos request appurtenant rights of 640,200 gpd for Parcel 23 and  
5 201,300 gpd for Parcel 26, for a total of 841,500 gpd, based on Reppun's high estimate of  
6 300,000 gad for lo`i kalo. (*Id.*, ¶¶ 8, 19-20.) [Hui/MTF and OHA, FOF B-725.]

7 i. If the deed to Parcel 20 survives the reservation of appurtenant rights, they request  
8 an additional 52,500 gpd in appurtenant rights. (*Id.*, ¶¶ 8, 20.)

9 j. They also request permits for existing uses of 62,400 gpd on Parcels 20 and 23,  
10 and new uses of 187,800 gpd on Parcel 26 as follows:

11 1. Parcel 20: 600 pgd for a 0.09-acre home garden, using Maui County's  
12 single-family home standard of 600 gpd.

13 2. Parcel 23: 1,800 gpd for 0.6 acre of diversified agriculture, using  
14 3,000 gad; and 60,000 gpd for 0.2 acre of kalo lo`i, using Reppun's high estimate  
15 of 300,000 gad.

16 3. Parcel 26: 186,300 gpd for 0.621 acre of kalo lo`i, using Reppun's  
17 high estimate of 300,000 gad, and 1,500 gpd for a 0.5-acre garden, for a total  
18 request of 187,800 gpd. However, Parcel 26 is 0.671 acre, so the garden would be  
19 0.05 acre, not 0.5 acre, or 150 gpd, for a revised total of 186,450 gpd in proposed  
20 new uses.

21 (*Id.*, ¶¶ 21-23.) [Hui/MTF and OHA, FOF B-726, B-727, B-728.]

22  
23 **443. SWUPA 2239—Theodore & Zelig Harders**

24 a. On April 23, 2009, the Harders filed an existing-use SWUPA for TMK No. (2) 3-  
25 5-0012:016 ("Parcel 16"). (Harders, WT, 1/26/16, ¶ 1.) [Hui/MTF and OHA, FOF B-  
26 742.]

27 b. Parcel 16 is 0.32 acre and has a reservation of water rights, which Edmund Rogers  
28 assigned to Wailuku Sugar in 1967. (SWUPA 2239, p. 4, table 3; Attachment, p. 1.)  
29 [Hui/MTF and OHA, FOF B-746.]

30 c. The Commission had granted provisional approval but noted the reservation by  
31 Edmund Rogers. (Provisional Order, Attachment C, Revised Exh. 7, p. 40.)

1 d. If the deed survives the reservation, the Harders request recognition of  
2 appurtenant rights for 96,420 gpd, based on Reppun’s high estimate of 300,000 gad for  
3 lo`i kalo, applied to 0.3214 acre. (**Id.**, ¶¶ 14-15.) [Hui/MTF and OHA, FOF B-743.]

4 e. The Harders also request a permit for 600 gpd for their garden and lawn. (**Id.**, ¶¶  
5 16-17.) [Hui/MTF and OHA, FOF B-743.]  
6

7 444. **SWUPA 2237—Karl & Lee Ann Harders**

8 a. On April 23, 2009, Karl and Lee Ann Harders filed an existing-use SWUPA for  
9 TMK No. (2) 3-5-012:013 (“Parcel 13”). (SWUPA 2237.)

10 b. Parcel 13 is 0.24 acre and has a reservation of water rights, which Edmund Rogers  
11 assigned to Wailuku Sugar in 1967. (SWUPA 2237, p. 4, table 3; Attachment, p.1.)

12 c. The Commission had granted provisional approval but noted the reservation by  
13 Edmund Rogers. (Provisional Order, Attachment C, Revised Exh. 7, p. 39.)

14 d. They request a permit for 600 gpd for watering their yard and garden of  
15 approximately 0.08 acre. (SWUPA 2237, p. 4, table 3; Attachment, p.2.)  
16

17 445. **SWUPA 2235—Russell Gushi**

18 a. On April 23, 2009, Russell Gushi filed an existing-use SWUPA for TMK No. (2)  
19 3-5-012:015 (“Parcel 15”), which he purchased in 1992. (Gushi, WT, 12/22/15, ¶ 1.)  
20 [Hui/MTF and OHA, FOF B-770.]

21 b. Parcel 15 is 0.319 acre, for which he requests appurtenant rights of 95,700 gpd,  
22 and a permit for 600 gpd for his garden and fruit trees. (**Id.**, ¶¶ 4, 12.) [Hui/MTF and  
23 OHA, FOF B-771.]

24 c. The deed has a reservation of appurtenant rights when Edmund Rogers sold the  
25 property to the prior owner (presumed to be in 1967, when Rogers reserved water rights  
26 for properties he had sold, See SWUPA 2237—Karl & Lee Ann Harders, SWUPA  
27 2239—Theodore & Zelig Harders, SWUPA 2238—Theodore & Zelig Harders Family  
28 Limited Partnership). (**Id.**, ¶ 2.) [Hui/MTF and OHA, FOF B-772.]

29 d. The Commission had granted provisional approval but noted the reservation by  
30 Edmund Rogers. (Provisional Order, Attachment C, Revised Exh. 7, p. 39.)  
31

1 446. **SWUPA 2271—Waldemar & Darlene Rogers**

2 a. On April 23, 2009, Waldemar and Darlene Rogers filed an existing-use SWUPA  
3 for TMK No. (2) 3-5-012:012 (“Parcel 12”). (Rogers, WT, 1/28/16, ¶ 1.) [Hui/MTF and  
4 OHA, FOF B-800.]

5 b. Parcel 12 is 0.29 acre, for which the Rogers request recognition of appurtenant  
6 rights for 87,000 gpd, based on Reppun’s high estimate of 300,000 gad, and a permit for  
7 600 gpd for 0.145 acre of their lawn and garden, based on Maui County’s single-family  
8 home standard of 600 gpd. (**Id.**, ¶¶ 4, 14, 18-19, 21; SWUPA 2271, p. 2, table 1, p. 4,  
9 table 3.) [Hui/MTF and OHA, FOF B-800, B-802.]

10 c. Waldemar Rogers inherited Parcel 12 from his father, Edmund Rogers, around  
11 1970, and the deed contains a reservation of appurtenant rights. (**Id.**, ¶¶ 1-2.) [Hui/MTF  
12 and OHA, FOF B-801.]

13 d. The Commission had granted provisional recognition of appurtenant rights but  
14 had noted that the rights had been assigned to Wailuku Sugar. (Provisional Order,  
15 Attachment C, Revised Exh. 7, p. 40.)  
16

17 447. **SWUPAs 2213/2214N—Alan Birnie<sup>26</sup>**

18 a. On April 23, 2009, Alan Birnie filed existing- and new-use SWUPAs for TMK  
19 No. (2) 3-5-012:010 (“Parcel 10”). (Birnie, WT, 1/27/16, ¶ 1.) [Hui/MTF and OHA, FOF  
20 B-774.]

21 b. Parcel 10 is 0.23 acres, for which Birnie requests appurtenant rights of 69,000  
22 gpd, based on Reppun’s high estimate of 300,000 gad for kalo lo`i, and a permit for 1,950  
23 gpd: a new use for 0.0045 acre of kalo lo`i and an existing use for 0.202 acre of his  
24 garden, multiplied by Maui County’s standard for diversified agriculture of 3,000 gad.  
25 (**Id.**, ¶¶ 5, 15, 17-20; SWUPA 2213, Attachment, p. 1; SWUPA 2214N, Attachment, p.  
26 1.) [Hui/MTF and OHA, FOF B-779.]

27 c. Edmund Rogers assigned the water rights to Wailuku Sugar in 1967. (SWUPA  
28 2213, Attachment, p. 2; SWUPA 2214, Attachment, p. 2.)

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<sup>26</sup> The hearing transcript incorrectly labels Birnie’s testimony as that of Lester Nakama, Tr., 9/19/16, p. 63, l. 3 to p. 71, l. 8.

1 d. The Commission granted provisional approval of appurtenant rights but noted the  
2 reservation to Wailuku Sugar. (Provisional Order, Attachment C, Revised Exh. 7, p. 39.)  
3

4 448. **SWUPA 2211—Dorothy Bell**

5 a. On April 23, 2009, Dorothy Bell filed an existing-use SWUPA for TMK No. (2)  
6 3-5-012:011 (“Parcel 11”), a 0.26-acre property, for which she requested an estimated  
7 1,440 gpd, using the bucket method, for 0.17 acre of her yard and garden. (SWUPA  
8 2211, p. 2, table 1, p. 4, table 3, Attachment, p. 2.)

9 b. Edmund Rogers assigned the water rights to her property to Wailuku Sugar in  
10 1967. (SWUPA 2211, Attachment, p. 2.)

11 c. Bell did not claim appurtenant rights in her SWUPA but participated in the  
12 provisional approval process and was granted provisional approval for two LCAs with  
13 the notation that Edmund Rogers had assigned the water rights to Wailuku Sugar.  
14 (SWUPA 2211, p. 1; Provisional Order, Attachment C, Revised Exh. 7, p. 39.)

15 d. Bell did not participate in the CCH.  
16

17 449. **SWUPA 2212—Douglas Bell**

18 a. On April 23, 2009, Douglas Bell filed an existing-use SWUPA for TMK No. (2)  
19 3-5-012:008 (“Parcel 8”). (Bell, WT, 1/26/16, ¶ 1.) [Hui/MTF and OHA, FOF B-780.]

20 b. Parcel 8 is 0.34 acre, for which Bell requests recognition of appurtenant rights of  
21 102,000 gpd, based on Reppun’s high estimate of 300,000 gad, and a permit for 2,160  
22 gpd for 0.25 acre of a garden and lawn, using the “bucket method” (180 gallons x 12  
23 hours). (*Id.*, ¶¶ 4, 10-15.) [Hui/MTF and OHA, FOF B-780, B-785, B-786.]

24 c. Bell did not claim appurtenant rights in his SWUPA, stating that Edmund Rogers  
25 had assigned the water rights to Wailuku Sugar in 1967, but participated in the  
26 provisional approval process and was granted provisional recognition with the notation  
27 that rights had been reserved to Wailuku Sugar. (*Id.*, ¶¶ 1-2; SWUPA 2212, Attachment,  
28 p. 2; Provisional Order, Attachment C, Revised Exh. 7, p. 39.)

29 d. However, during oral testimony, Bell stated that when he bought the property  
30 from Edmund Rogers in 1972, he wasn’t aware of any reservation and thought it  
31 belonged to Edmund Rogers. He also provided a copy of his deed and stated that there

1 wasn't anything in it about reservation of water. Upon review of the deed, the Hearings  
2 Officer stated for the record that there was no description of any reservation in it. (*See*  
3 *Tr.*, 7/18/16, p. 51, l. 2 to p. 52, l. 10, p. 82, ll. 7-10.) [Hui/MTF and OHA, FOF B-783.]

4 e. Parcel 8 is comprised of a portion of LCA 3108:1, confirmed by RP 2314, with  
5 the description that the land was "aina kalo" with 2 mookalo." This is the same LCA as  
6 claimed under SWUPA 2315—Leinaala Kihm, who stated that her deed had a  
7 reservation. (*Id.*, ¶ 9; Exh. 2212-Bell-1, -2; Letter dated July 14, 2016, SWUPA 2315—  
8 Leinaala Kihm.) [Hui/MTF and OHA, FOF B-784.]

9  
10 450. **SWUPA 2238—Theodore & Zelig Harders Family Limited Partnership**

11 a. On April 23, 2009, the Theodore & Zelig Harders Family Limited Partnership  
12 filed an existing-use SWUPA for TMKs No. (2) 3-5-012:006 ("Parcel 6") and No. (2) 3-  
13 5-012:007 ("Parcel 7"). (Harders, WT, 1/26/16, ¶ 1.) [Hui/MTF and OHA, FOF B-737.]

14 b. The Harders `ohana has submitted five SWUPAs. They have lived on some of  
15 these parcels for generations and were able to buy the other parcels, which have  
16 reservation of water rights, assigned by Edmund Rogers to Wailuku Sugar in 1967. The  
17 parcels under SWUPAs 2240 and 2311 are the ones without reservations. (Harders, *Tr.*,  
18 7/18/16, p. 59, l. 10 to p. 60, l. 21; *Id.*, ¶ 2; SWUPA 2238, Attachment, p. 1.)

19 c. Parcel 6 is 0.32 acre, and Parcel 7 is 0.36 acre, for a total of 0.68 acre. (SWUPA  
20 2238, p. 2, table 1.)

21 d. The Commission granted provisional approval but noted the deeds' reservations  
22 to Wailuku Sugar. (Provisional Order, Attachment C, Revised Exh. 7, pp. 39-40.)  
23 [Hui/MTF and OHA, FOF B-740.]

24 e. If appurtenant rights survive the deeds' reservations, the Harders Family request  
25 204,000 gpd in appurtenant rights, based on Reppun's high estimate of 300,000 gad for  
26 kalo lo'i. (*Id.*, ¶¶ 5, 17-19.) [Hui/MTF and OHA, FOF B-738.]

27 f. They also request a permit for 1,800 gpd for three homes and surrounding lawn  
28 and garden, using the Maui County single-family home standard of 600 gpd. In the 2009  
29 SWUPA, the request was for 1,200 gpd for two homes—one on half of each of the two  
30 parcels. (*Id.*, ¶¶ 5, 20-21; SWUPA 2238, p. 4, table 3; Attachment, pp. 1-2.) [Hui/MTF  
31 and OHA, FOF B-738.]

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451. **SWUPA 2259—Jerri Young (Miyamoto)**

a. On April 23, 2009, Elsie Miyamoto filed an existing-use SWUPA for TMK No. (2) 3-5-012:009 (“Parcel 9”). She has since passed away, and her daughter and current landowner, Jerri Jane K. Young, submitted testimony and requested that her name replace her mother’s on the permit application. (Young (Miyamoto), WT, 9/13/16, ¶ 1.) [Hui/MTF and OHA, FOF B-787.]

b. Parcel 9 is 0.19 acres, for which Young requests appurtenant rights of 57,000 gpd and a permit for 600 gpd for her lawn and garden. (**Id.**, ¶¶ 15, 20.) [Hui/MTF and OHA, FOF B-788.]

c. Parcel 9 was purchased by Elsie Miyamoto around 1967 from Edmund Rogers, and the deed has a reservation of appurtenant rights. The Commission had granted provisional approval, with the notation that rights had been reserved to Wailuku Sugar. (**Id.**, ¶ 2; Provisional Order, Attachment C, Revised Exh. 7, p. 40 .) [Hui/MTF and OHA, FOF B-789.]

d. Since Miyamoto passed away, her neighbor Nicholas Harders has cared for her garden and lawn, using the same amount of water for the same uses and believes the single-family home standard of 600 gpd will suffice. (**Id.**, ¶ 15.) [Hui/MTF and OHA, FOF B-790.]

452. **SWUPA 2224—James Dodd**

a. On April 23, 2009, James Dodd filed an existing-use SWUPA for TMK No. (2) 3-5-012:005 (“Parcel 5”), where he has lived since he purchased it in 1977. (Dodd, WT, 2/3/16, ¶ 1.) [Hui/MTF and OHA, FOF B-791.]

b. Parcel 5 is 0.32 acre, for which Dodd requests recognition of appurtenant rights for 96,000 gpd and a permit for 4,113 gpd in existing uses. (**Id.**, ¶¶ 5, 12.) [Hui/MTF and OHA, FOF B-791.]

c. The deed to Parcel 5 contains a reservation of water rights to Wailuku Sugar in 1967. (**Id.**, ¶ 2; Dodd, Tr., 7/28/16, p. 6, ll. 6-14; p. 8, ll. 9-16.) [Hui/MTF and OHA, FOF B-792.]



1 d. The Commission had granted provisional approval but also noted the reservation  
2 to Wailuku Sugar. (Provisional Order, Attachment C, Revised Exh. 7, p. 39.)

3 e. Dodd irrigates 0.26 acre of fruit trees, garden, and lawn, and measured the  
4 irrigation rate by a modified “bucket method,” filling each of two quart jars in 7 seconds.  
5 He then extrapolated the 7 seconds into a 24-hour day, resulting in a rate of 6,170 gpd,  
6 which he reduced by one-third to 4,113 gpd. He did a similar measurement for his  
7 neighbor, Patricia Federcell, with the same results. (*Id.*, ¶ 17; Dodd (Federcell), WT,  
8 2/3/16, ¶ 16.)

9 f. Dodd reduced the measured rate of 6,170 gpd to 4,113 gpd, because: “My  
10 irrigation application varies depending of (*sic*) the season. During the wet winter months,  
11 I may not irrigate at all. But during the hot summer months, I sometimes irrigate  
12 continuously, over a 24-hour period. Based on many years of water use over a twelve-  
13 month period I irrigate Mrs. Federcell’s (as well as his own) garden using the hoses about  
14 2/3 of the time. So, I estimate the average water use at 2/3 of 6,170 gallons per day, or  
15 4,133 gallons per day.” (Dodd (Federcell), WT, 2/3/16, ¶ 16.)

16 g. However, 2/3s of 6,170 gpd, or 4,133 gpd, still reflects 24-hour irrigation over  
17 eight months, while his testimony was that only “during the hot summer months, I  
18 sometimes irrigate continuously, over a 24-hour period.” (Dodd (Federcell), WT, 2/3/16,  
19 ¶ 16.)

20 h. 4,133 gpd over 0.26 acre equals a rate of 15,896 gad. This is far in excess of Maui  
21 County’s “average typical residential customer” use of 400 to 600 gpd for combined  
22 indoor and outdoor use, irrigation of 1,500 to 2,000 gpd for “lush tropical landscape  
23 treatment” in arid areas, and Maui County’s domestic cultivation standard of 3,000 gad,  
24 *supra*, FOF 300.

25  
26 **453. SWUPA 2230—Patricia Federcell**

27 a. On April 23, 2009, Patricia Federcell filed existing-use SWUPA for TMK No. (2)  
28 3-5-012:001 (“Parcel 1”). Federcell’s neighbor James Dodd, cares for her garden and she  
29 gave him permission to testify on her behalf. (Dodd (Federcell), WT, 2/3/16, ¶ 1.)

30 [Hui/MTF and OHA, FOF B-794.]

1 b. Parcel 1 is 1.198 acres, for which Federcell and Dodd request appurtenant rights  
2 of 593,400 gpd, and a permit for 4,113 gpd for a 0.25-acre home garden. (**Id.**, ¶¶ 4, 12;  
3 SWUPA 2230, p. 2, table 1, p. 4, table 3.) [Hui/MTF and OHA, FOF B-795, B-797.]

4 c. In her existing-use application, Federcell stated that although she had purchased  
5 her property, her deed did not indicate that the appurtenant rights were reserved.  
6 (SWUPA 2230, Attachment, pp. 1-2.)

7 d. However, in granting provisional recognition, the Commission had noted that  
8 there was a reservation to Wailuku Sugar, and Federcell's Parcel 1 is adjacent to Dodd's  
9 Parcel 5 and both are derived from LCA 460.1. (Provisional Order, Attachment C,  
10 Revised Exh. 7, p. 39.)

11 e. Parcel 1 is comprised of a portion of LCA 460:1, confirmed by RP 2165. (**Id.**, ¶ 4;  
12 Exh. 2230-Federcell-2.) [Hui/MTF and OHA, FOF B-796.]

13 f. LCA 460:1 was 7.41 acres and described as "numerous kalo patches and a kula."  
14 Parcel 1's 1.978 acres and Parcel 28's (SWUPA 2240) 3.71 acres total 5.69 acres, or  
15 about 77 percent of LCA 460:1. Ancient lo'i are still prevalent on the 77 percent of LCA  
16 460:1 that now comprise Parcels 1 and 28, and they are adjacent to Waikapū Stream and  
17 a traditional `auwai. (Harders (SWUPA 2240/3467N), WT, 1/26/16, ¶¶ 5, 11, 13, 17;  
18 Exh. 2240-T&Z-1, -6; Dodd (Federcell), WT, 2/3/16, ¶¶ 5, 11-12; Exh. 2230-Federcell-2,  
19 -4; Harders (SWUPAs 2240 & 3467N), WT, 1/26/16, ¶ 14; Exh. 2240-Harders-6 and  
20 2240-T&Z-7; Exh. 2311-Harders-4-p. 1.) Therefore, about 80 percent of LCA 460:1 was  
21 in kalo lo'i.

22 g. On his own property, Dodd irrigates 0.26 acre of fruit trees, garden, and lawn, and  
23 measured the irrigation rate by a modified "bucket method," filling each of two quart jars  
24 in 7 seconds. He then extrapolated the 7 seconds into a 24-hour day, resulting in a rate of  
25 6,170 gpd, which he reduced by one-third to 4,113 gpd. He did a similar measurement for  
26 his neighbor, Patricia Federcell, with the same results. (**Id.**, ¶ 17; Dodd (Federcell), WT,  
27 2/3/16, ¶ 16.)

28 h. Dodd reduced the measured rate of 6,170 gpd to 4,113 gpd, because: "My  
29 irrigation application varies depending of (*sic*) the season. During the wet winter months,  
30 I may not irrigate at all. But during the hot summer months, I sometimes irrigate  
31 continuously, over a 24-hour period. Based on many years of water use over a twelve-

1 month period I irrigate Mrs. Federcell's (as well as his own) garden using the hoses about  
2 2/3 of the time. So, I estimate the average water use at 2/3 of 6,170 gallons per day, or  
3 4,133 gallons per day." (Dodd (Federcell), WT, 2/3/16, ¶ 16.)

4 i. However, 2/3s of 6,170 gpd, or 4,133 gpd, still reflects 24-hour irrigation over  
5 eight months, while his testimony was that only "during the hot summer months, I  
6 sometimes irrigate continuously, over a 24-hour period." (Dodd (Federcell), WT, 2/3/16,  
7 ¶ 16.)

8 j. 4,133 gpd over 0.25 acre equals a rate of 16,532 gad. This is far in excess of Maui  
9 County's "average typical residential customer" use of 400 to 600 gpd for combined  
10 indoor and outdoor use, irrigation of 1,500 to 2,000 gpd for "lush tropical landscape  
11 treatment" in arid areas, and Maui County's domestic cultivation standard of 3,000 gad,  
12 *supra*, FOF 300.

13  
14 454. **SWUPA 2315—Leinaala Kihm**

15 a. On April 30, 2009, Leinaala Kihm filed an existing-use SWUPA for TMK No. (2)  
16 3-5-012:003 ("Parcel 3"), requesting an estimated 2,200 gpd of domestic use for her lawn  
17 and garden. (SWUPA 2315, p. 2, table 1.)

18 b. Parcel 3 is 14,000 square feet (0.32 acre). (Exhibit 2315-Kihm (map.)

19 c. In her SWUPA, Kihm did not claim appurtenant rights and later stated that her  
20 deed had a reservation, but participated in the provisional approval process and was  
21 granted provisional approval for LCA 3108.1, with the notation "'two moos of kalo' for  
22 Apana 1. Water rights assigned to Wailuku sugar." (SWUPA 2315, p. 1; Letter dated July  
23 14, 2016; Provisional Order, Attachment C, Revised Exh. 7, p. 40.)

24 d. Kihm did not participate in the CCH.

25  
26 455. **SWUPA 2354—Fong Construction Co.**

27 a. On April 30, 2009, Fong Construction Company Inc. filed an existing-use  
28 SWUPA for an unspecified TMK. (SWUPA 2354; Provisional Order, Attachment C,  
29 Revised Exh. 7, p. 39.)

30 b. Estimated existing-use was 3,507 gpd, with a request for 4,000 gpd, on 2 acres for  
31 dust control. (SWUPA 2354, p. 2, table 1, p. 3, table 3, p.4, table 4.)

1 c. No appurtenant rights were claimed. (Provisional Order, Attachment C, Revised  
2 Exh. 7, p. 39.)

3 d. No further information was provided nor did Fong Construction Co. participate in  
4 the contested case hearing.

5  
6 456. **SWUPA 2180—Hawaiian Cement**

7 a. On April 24, 2009, Hawaiian Cement filed an existing-use SWUPA for TMK No.  
8 3-8-007:101 for dust control on 15 of its 56 acres, with an estimated use of 9,959 gpd,  
9 using gravel instead of grass to reduce the amount of water needed. (SWUPA 2180, p. 2,  
10 table 1, p. 4, table 3, Letter of Memorandum, 4/8/09.)

11 b. No appurtenant rights were claimed nor did it participate in the provisional  
12 approval process. (SWUPA 2180; Provisional Order, Attachment C, Revised Exh. 7, p.  
13 39.)

14 c. No further documents were provided, nor did Hawaiian Cement participate in the  
15 contested case hearing.

16  
17 457. **SWUPA 2352—U.S. Fish & Wildlife Service**

18 a. The U.S. Fish & Wildlife Service (“USFWS”) filed an existing-use SWUPA for  
19 TMK No. (2) 3-2-005:002, dated April 30, 2009 but marked as received by the  
20 Commission on 12:59 p.m. on May 1, 2009. (SWUPA 2352.)

21 b. The TMK is for Keālia Pond National Wildlife Refuge, into which Waikapū  
22 Stream flows at its terminus. There is no actual diversion by USFWS. (SWUPA 2352,  
23 Attachment 1.)

24 c. The Refuge receives water from two other sources, Pohakea and Paleaahu  
25 Streams, and occasionally pumps groundwater to augment pond levels. It is difficult to  
26 state what quantity of water is required from Waikapū Stream itself, and USFWS stated  
27 that it was willing to work with the state to develop a more exact estimate of the quantity  
28 of water necessary. (SWUPA 2352, Attachment 1.)

29 d. Although USFWS claimed appurtenant rights in its SWUPA, it did not provide  
30 any documents nor participate in the provisional approval process.

1 e. USFWS also provided no further information nor participate in the contested case  
2 hearing. (Provisional Order, Attachment C, Revised Exh. 7, p. 39.)

3  
4 **e. Multiple Sources**

5  
6 **i. Waihe`e Ditch**

7  
8 458. Waihe`e Ditch:

9 a. Water that reaches the Hopoi Chute, which drops water down into the Spreckels  
10 Ditch near its terminus at Waiale Reservoir, comes from Waihe`e River and Wailuku  
11 River via the `Īao-Maniania Ditch. Water used to also come from North Waiehu Stream  
12 via the North Waiehu Ditch, which has since been abandoned, *supra*, FOF 136.

13 b. After the Hopoi Chute, water comes from Wailuku River via the `Īao-Waikapū  
14 Ditch, from an intake on Waikapū Stream, and water remaining in the South Waikapu  
15 Ditch. These waters are used for the `Īao-Waikapū fields and a few other users, including  
16 MTP and now including the other Waikapu Properties. (SWUPA 2205, Narrative, pp. 2-  
17 3; *see* FOF 116-121, 135, 421, *supra*.)

18 459. The `Īao-Maniania Ditch, which drops water from Wailuku River into the Waihe`e Ditch,  
19 is now the first place that the Waihe`e Ditch carries other than Waihe`e River water.

20  
21 460. **SWUPA 2142—Hale Mua Properties**

22 a. On April 29, 2009, Hale Mua Properties filed a new-use SWUPA for TMK No.  
23 (2) 3-3-002:031, a 238-acre property, for which it requested 800,000 gpd for 238 acres of  
24 an affordable and market housing project and 1,000,000 gpd for the Maui Department of  
25 Water Supply public water system for domestic uses. Hale Mua Properties proposed to  
26 build a surface water treatment plant to produce potable water. (SWUPA 2142, p. 2, table  
27 1, p. 4, table 3.)

28 b. Hale Mua Properties did not claim appurtenant rights nor participate in the  
29 provisional approval process. (SWUPA 2142, p. 1; Provisional Order, Attachment C,  
30 Revised Exh. 7, p. 3.)

31 c. Hale Mua Properties did not submit written testimony nor participate in the CCH.

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461. **SWUPA 2351N—Wahi Ho`omalua LP**

a. On April 30, 2009, Wahi Ho`omalua filed a new-use SWUPA for TMKs (2) 3-3-002-001 (“Parcel 1”), consisting of 834.016 acres, and (2) 3-3-002-026 (“Parcel 26”), consisting of 0.886 acres, updated on July 7, 2010 by letter and amendment, requesting 984,516 gpd for:

- 1. Parcel 1: 240,000 gpd to produce 144,000 gpd of potable drinking water for 80 potential connections on 40 lots, 739,200 gpd for 168 acres planted in macadamia nuts, at a rate of 4,400 gad.
- 2. Parcel 26: 5,316 gpd for flood irrigation on 0.886 acres of wetland taro at 6,000 gad.

(SWUPA 2351N, p. 2, table 1, p. 3, table 2, Addendum; Russell, WT, 2/4/16, ¶¶ 3,5.)  
[Wahi Ho`omalua, FOF 1-2.]

b. Wahi Ho`omalua acquired the land from Wailuku Agribusiness Co., Inc. in 2003. The deed for parcel 26 stated that the water rights had been conveyed to HC&S by Bill of Sale dated December, 24, 1924. (Exhs. 2351-Wahi-13, -14, Schedule B Exceptions.)  
[Wahi Ho`omalua, FOF 9.]

1. The land was part of Wailuku Sugar Co. sugar cane fields planted in the early 1900’s until about 1982, when the land was planted in macadamia nuts, and active cultivation stopped in 1999. The macadamia trees in fields 36 and 37 in the northeast portion of the land are still growing and the irrigation system is still in place although in disrepair. Field 36 was watered from Waihe`e Ditch via reservoir 37, and field 37 was watered from Wailuku River via the `Iao-Maniania Ditch and reservoir 45. (SWUPA 2351N, Addendum, pp. 1, 3.)

c. Parcels 1 and 26 include about 19 LCAs along South Waiehu Stream and several LCAs along Wailuku River. Irrigation water would be supplied from the Waihe`e Ditch via reservoir 37 and from Wailuku River via the `Iao-Maniania Ditch and reservoir 45. (SWUPA 2351N, Addendum, p.3.)

d. In the provisional approval process, Wahi Ho`omalua claimed appurtenant rights for seventeen (17) LCAs in Parcel 1 and one (1) LCA in Parcel 26. The Provisional Order recognized twelve (12) LCAs, denied 1 LCA without prejudice, and made no

1 determination of the remaining 5 LCAs, including the LCA in Parcel 26. (Provisional  
2 Order, Attachment C, Revised Exh. 7, pp. 33-34.) [Wahi Ho`omalū, FOF 4-5.]

3 e. On February 5, 2015, Wahi Ho`omalū's Opening Brief included a declaration  
4 requesting it be granted quantification of its appurtenant rights on 17 LCAs, the 12 that  
5 were provisionally approved and the 5 that had not yet been determined, and requested  
6 that its water permit be amended to include water to grow kalo on all of its LCAs with  
7 appurtenant rights. (Wahi Ho`omalū Opening Brief, Declaration of Russell, ¶ 5.) [Wahi  
8 Ho`omalū, FOF 6.]

9 f. On July 28, 2016, Wahi Ho`omalū further amended its request for appurtenant  
10 rights and its water use permit request:

- 11 1. Withdrew its request for 240,000 gpd to produce domestic water for future  
12 development.
- 13 2. Left unchanged its request for 739,200 gpd for 168 acres planted in  
14 macadamia nuts.
- 15 3. Reduced its request for wetland kalo to six of the LCAs that it claimed had  
16 appurtenant rights and in the amount for growing kalo in the quantification of  
17 appurtenant rights.

18 (Russell, WT, 7/28/16, ¶ 22; Russell, Tr., 7/19/16, p. 161, l. 12 to p. 162, l. 14; Russell,  
19 Tr., 9/19/16, pp. 46-50.) [Wahi Ho`omalū, FOF 6.] [Hui/MTF and OHA, FOF C-159-C-  
20 260.]

21 g. Of the original 18 LCAs Wahi Ho`omalū had claimed had appurtenant rights, it  
22 did not pursue the LCA that had been denied and withdrew its request for 2 of the 5 that  
23 had not yet been determined because it was not able to quiet their titles. Of the remaining  
24 15, LCA 3456 in Parcel 26 is also a portion of the same land awarded in LCA 2468:1. In  
25 the event appurtenant rights to Parcel 26's LCA 3456 has been extinguished, Wahi  
26 Ho`omalū would pursue that portion of LCA 2468:1 that remains in Parcel 1. (Russell,  
27 Tr., 7/19/16, p. 124, l. 25 to p. 125, l. 2, p. 125, l. 17 to p. 128, l. 6.) [Wahi Ho`omalū,  
28 FOF 8.] [Hui/MTF and OHA, FOF C-241-C-243.]

29 h. Finally, during testimony at the September 19, 2016 hearings, Wahi Ho`omalū  
30 reduced its request for a water-use permit for wetland kalo to 2.64 acres on six of the  
31 LCAs that it was claiming for appurtenant rights, or 396,000 gpd (2.64 acre x 150,000

1           gad). If appurtenant rights to LCA 3456 for Parcel 26 has been extinguished, substituting  
2           0.21 acre of LCA 2468:1 would reduce the water-use permit request to 2.42 acres, or  
3           363,000 gpd (2.42 acres x 150,000 gad). (Russell, Tr., 9/19/16, p. 46, l. 14 to p. 50, l. 18.)  
4           [Wahi Ho`omalua, FOF 46.]

5           i.       Wahi Ho`omalua's final claim for appurtenant rights was based on the following  
6           LCAs:

7               1.       LCA 2461:2: 0.45 acres described as six patches or reference to lois, for  
8               which it claimed appurtenant rights on all 0.45 acres. (Exhs. 2351-Wahi-1A, 2,  
9               18, 29.) [Wahi Ho`omalua, FOF 20.]

10              2.       LCA 2468:2: 2.94 acres described as 7 patches or reference to lois, for  
11              which it claimed appurtenant rights on all 2.94 acres. (Exhs. 2351-Wahi-1A, 3,  
12              20, 30.) [Wahi Ho`omalua, FOF 21.]

13                  a.       However, 2.94 acres includes both `āpana 1 and 2, which are 2.49  
14                  acres and 0.45 acres, respectively. (Exhs. 2351-Wahi-1A, 3.) [Hui/MTF  
15                  and OHA, FOF C-248c.]

16                  b.       Therefore, LCA 2468:2 is 0.45 acres, all of which should be  
17                  claimed for appurtenant rights.

18              3.       LCA 2554:1: 0.50 acres described as areas of kalo, for which it claimed  
19              appurtenant rights for all 0.50 acres (Exhs. 2351-Wahi-1A, 4, 21, 31.) [Wahi  
20              Ho`omalua, FOF 22.]

21              4.       LCA 2554:2: 1.38 acres described as taro and kalo, for which it claimed  
22              appurtenant rights for all 1.38 acres. (Exhs. 2351-Wahi-1A, 4, 22, 31.) [Wahi  
23              Ho`omalua, FOF 23.]

24              5.       LCA 3259: 4.83 acres described as 1 taro section and 2 pō`alimas or  
25              large kalo plots, for which it claimed appurtenant rights for all 4.83 acres. (Exhs.  
26              2351-Wahi-1A, 5, 19, 32.) [Wahi Ho`omalua, FOF 24.]

27              6.       LCA 3275D: 2.06 acres described as kalo and kula in `āpana 1, 1 lo`i  
28              each in `āpana 2 and 3, 3 lo`i in `āpana 4, 46 lo`i in `āpana 5, and 6 lo`i in `āpana  
29              6. `Āpana 2-6 are also described collectively as Chief's Taro Plantation.

30                  a.       Wahi Ho`omalua claimed appurtenant rights for half, or 1.03 acres,  
31                  because of the presence of kula along with kalo.



1                   b.       However, `Āpana 1 was 2.03 acres, and the Chief's Taro Plantation  
2                   was 0.03 acres. Therefore half of 2.03 acres, or 1.015 acres, should be  
3                   claimed for appurtenant rights, and all of the Chief's Taro Plantation, or  
4                   0.03 acres, should be claimed for appurtenant rights, for a total of 1.045  
5                   acres.

6                   (Exhs. 2351-Wahi-1A, 6, 23, 33.) [Wahi Ho`omalū, FOF 25.]

7                   7.       LCA 3275E:2:       1.12 acres described as lo`i sections or kalo, for  
8                   which it claimed appurtenant rights for all 1.12 acres. (Exhs. 2351-Wahi-1A, 7,  
9                   24, 34.) [Wahi Ho`omalū, FOF 26.]

10                  8.       LCA 3275E:3:       6.62 acres described as 22 taro patches or 22 lo`i  
11                  and a Chief's Taro Plantation, for which it claimed appurtenant rights for all 6.62  
12                  acres. (Exhs. 2351-Wahi-1A, 7, 24, 34.) [Wahi Ho`omalū, FOF 27.]

13                  9.       LCA 3275E:6:       3.39 acres described as taro pauka or lo`i sections  
14                  and kalo, for which it claimed appurtenant rights for all 3.39 acres. (Exhs. 2351-  
15                  Wahi-1A, 7, 24, 25.) [Wahi Ho`omalū, FOF 28.]

16                  10.       LCA 3275W: 0.49 acres, described as a house site.

17                  a.       Wahi Ho`omalū claimed appurtenant rights for 0.24 acres after  
18                  subtracting 0.25 acres for the house site.

19                  b.       However, no description other than a house site was provided, and  
20                  the parcel was bordered on three sides by kula and on the fourth, by a pali  
21                  (cliff).

22                  c.       Therefore, no appurtenant rights are attached to LCA 3275W.

23                  (Exhs. 2351-Wahi-1A, 8, 26.) [Wahi Ho`omalū, FOF 29.]

24                  11.       LCA 3451:   1.53 acres, described as kalo and kula, for which it claimed  
25                  appurtenant rights for half, or 0.765 acres, because of the presence of kula as well  
26                  as kalo. (Exhs. 2351-Wahi-1A, 9, 35.) [Wahi Ho`omalū, FOF 30.]

27                  12.       LCA 11222: 1.58 acres described as kalo and kula, for which it claimed  
28                  appurtenant rights for half, or 0.79 acres, because of the presence of kula as well  
29                  as kalo. (Exhs. 2351-Wahi-1A, 10, 36.) [Wahi Ho`omalū, FOF 31.]

30                  13.       LCA 1806:2: 0.46 acres described as 3 taro patches or kalo land of 3 lo`i  
31                  and which Wahi Ho`omalū also states contained a house site, for which it

1 therefore claimed appurtenant rights for 0.21 acres after subtracting 0.25 acres for  
2 the house site.

3 a. However, there is no reference to a house site on `āpana 2.

4 b. Therefore, appurtenant rights should accrue to all 0.46 acres.

5 (Exhs. 2351-Wahi-1A, 16, 27.) [Wahi Ho`omalu, FOF 32.]

6 14. LCA 3456: 0.886 acres described as 3 sections, taro pauka, 25 taro  
7 patches, 3 taro patches or kalo land and 3 lo`i, for which it claims appurtenant  
8 rights for all 0.886 acres if the deed for Parcel 26 survives the water reservation  
9 made in 1924. (Exhs. 2351-Wahi-1A, 12, 37, 38.) [Wahi Ho`omalu, FOF 33-34.]

10 15. LCA 2468:1 2.49 acres described as taro land and pasture or kalo and  
11 kula lands. (Exhs. 2351-Wahi-1A, 3, 15, 20, 30.) [Wahi Ho`omalu, FOF 34.]

12 a. Wahi Ho`omalu states that this is the same parcel of land as LCA  
13 3456 awarded under a different grant and owned as part of parcel 1. The  
14 portion of LCA 2468:1 that is not in neighboring TMKs is 0.43 acres, of  
15 which it claims appurtenant rights for half, or 0.215 acres, because of the  
16 presence of kula as well as kalo.

17 (Exhs. 2351-Wahi-1A, 3, 15, 20, 30.) [Wahi Ho`omalu, FOF 34.]

18 j. In sum, Wahi Ho`omalu requests:

19 1. 739,200 gpd for 168 acres planted in macadamia nuts, at a rate of 4,400  
20 gad.

21 2. 396,000 gpd (2.64 acre x 150,000 gad) for kalo lo`i, or in the alternative,  
22 363,000 gpd (2.42 acres x 150,000 gad), as follows:

<u>LCA</u>	<u>Acreage</u>	<u>Appt. Rights Acreage</u>		<u>Permit Request (gpd)</u>
		<u>Claimed</u>	<u>Revised</u>	
2461:2	0.45	0.45	0.45	0
2468:2	2.94	2.94	0.45	0
2554:1	0.50	0.50	0.50	0
2554:2	1.38	1.38	1.38	75,000 (0.5 acre)
3259	4.83	4.83	4.83	75,000 (0.5 acre)
3275D	2.06	1.03	1.045	0
3275E:2	1.12	1.12	1.12	0

1	3275E:3	6.62	6.62	6.62	0
2	3275E:6	3.39	3.39	3.39	0
3	3275W	0.49	0.24	0.00	0
4	3451	1.53	0.765	0.765	75,000 (0.5 acre)
5	11222	1.58	0.79	0.79	75,000 (0.5 acre)
6	1806:2	0.46	0.21	0.46	31,500 (0.21 acre)
7	3456	0.886	0.886	0.886	64,500 (0.43 acre)
8	2468:1*	<u>0.43 (part)</u>	<u>0.215</u>	<u>0.215</u>	<u>31,500 (0.21 acre)</u>
9	Totals:	28.236/	25.366/	22.901/	396,000/
10		27.78*	24.695*	22.23*	363,000*
11		* alternative to LCA 3456			

12  
13  
14

**a. Piihana Field 49 Kuleana Pipe**

15 462. The Pi`ihana-Field 49 Kuleana Pipe carries water from the Waihe`e Ditch to the  
16 following kuleanas:

17

18 463. **SWUPA 2192—Charles Dando Sr.**

19 a. On April 20, 2009, Charles Dando Sr. filed separate existing-use SWUPAs for  
20 TMKs No. (2) 3-5-030:116 (“Parcel 116”), situated in Waikapu, and (2) 3-4-033:014  
21 (“Parcel 14”), situated in Wailuku, for home landscape irrigation. (SWUPA 2191, p. 4,  
22 table 3; SWUPA 2192, p. 4, table 3.) [Hui/MTF and OHA, FOF B-869.]

23 b. SWUPA 2192 is for Parcel 14’s 0.543 acre, for which he is requesting 1,705 gpd  
24 for 0.5 acre. (SWUPA 2192, p. 2, table 1, p. 4, table 3; Dando, WT, 7/25/16, ¶¶ 1-4).  
25 [Hui/MTF and OHA, FOF B-869.]

26 c. When it was pointed out that 1,705 gpd over 0.5 acre was 3,410 gad and that on  
27 his other property he was using 1,749 gpd on 0.1 acre, Dando replied that when he  
28 averaged the meter readings over a year in 2007 to 2008, he “was establishing the yard  
29 and everything, so it should be way down from that.” (Dando, Tr., 7/29/16, p.96, l. 19 to  
30 p. 97, l. 16.) [Hui/MTF and OHA, FOF B-869.]

1 d. Dando did not participate in the provisional approval process and does not request  
2 recognition of appurtenant rights. (Provisional Order, Attachment C, Revised Exh. 7, p.  
3 2.)

4  
5 464. **SWUPAs 2273/2274N—Alfred Santiago**

6 a. Alfred Santiago and El Ranchitos DeMello filed SWUPAs on April 23, 2009 for  
7 TMK Nos. (2) 3-4-024:22 (“Parcel 22”) and (2)3-4-024:027 (“Parcel 27”), which  
8 together total 1.626 acres. Santiago uses 0.8 acres of Parcel 22 and 0.7 acres of Parcel 27  
9 (1.5 acres out of a total of 1.626 acres) for diversified agriculture, including tapioca, dry  
10 land kalo, banana, sweet potato, and similar crops. (Santiago, WT, February 2, 2016, ¶¶  
11 1, 5, 17-18.) [Hui/MTF and OHA, FOF B-115, B-120, B-121.]

12 b. Existing uses were not measured, and Santiago estimates use at 10,000 gpd based  
13 on his over 30-year experience and expertise in farming these lands. This amounts to  
14 6,667 gad (10,000 gallons divided by 1.5 acres). (**Id.**, ¶¶ 17-18.) [Hui/MTF and OHA,  
15 FOF B-121.]

16 c. Santiago would like to re-establish lo`i kalo on the 1.5 acres and based on his  
17 experience, he agrees with Reppun’s water and estimates he will need 450,000 gpd (1.5  
18 acres x 300,000 gad). (**Id.**, ¶¶ 21, 27.) [Hui/MTF and OHA, FOF B-122.]

19 d. The two parcels have been in the DeMello `ohana for generations, but the `ohana  
20 has agreed that permits should be issued in Santiago’s name, as he has cultivated the lo`i  
21 on these kuleana for decades. (**Id.**, ¶ 1.) [Hui/MTF and OHA, FOF B-115.]

22 e. Parcels 22 and 27 are comprised of portions of two LCAs—LCA 3257:2,  
23 confirmed by RP 4329, and LCA 3333, confirmed by RP 5152—as well as a portion of a  
24 pō`alima. (**Id.**, ¶ 7; Exh. 2273-Santiago-4.) [Hui/MTF and OHA, FOF B-119.]

25 f. LCAs 3257:2 and 3333 are described as containing lo`i and nothing else. And the  
26 close proximity of these kuleana to the river and `auwai support that these lands were  
27 cultivated exclusively in lo`i kalo at the time of the Māhele. The Commission granted  
28 provisional approval. (**Id.**, ¶¶ 8-10; Exh. 2273-Santiago-5, p. 4; Exh. 2273-Santiago-6, p.  
29 4; Provisional Order, Attachment C, Revised Exh. 7, p. 3.) [Hui/MTF and OHA, FOF B-  
30 119.]

1 g. Using Reppun’s high estimate, Santiago requests appurtenant rights for 1.626  
2 acres, or 487,800 gpd (1.626 acres x 300,000 gad). (**Id.**, ¶ 12.) [Hui/MTF and OHA, FOF  
3 B-120.]

4 h. Again using Reppun’s high estimate, he requests a total 450,000 gpd for the 1.5  
5 acres he plans to convert into lo`i kalo. (**Id.**, ¶¶ 21, 27.) [Hui/MTF and OHA, FOF B-  
6 122.]

7  
8 465. **SWUPA 2043—DeMello**

9 a. This SWUPA was filed for the same two properties as for SWUPAs  
10 2273/2274N—Alfred Santiago (immediately *supra*), but Alfred Santiago is pursuing the  
11 applications after consultation with the property owner, El Ranchitos DeMello, because  
12 Santiago has been cultivating this land for decades. (Santiago, WT, 2/2/16, ¶ 1.)

13  
14 466. **SWUPA 2287—Michelle Haller**

15 a. On April 24, 2009, Steve Haller filed an existing-use SWUPA for TMK No. (2)  
16 3-4-031:001 (“Parcel 1”), a 46.97-acre property for which he requested 19,519 gpd of  
17 metered use on 31 acres: 25 acres of vegetables and 6 acres of ornamental and nursery  
18 plants. Michelle Haller testified at the hearing, as her husband had recently passed away.  
19 (SWUPA 2287, p. 2, table 1, p. 4, table 3; Haller, WT, 3/18/16, ¶ 4; Michelle Haller<sup>27</sup>,  
20 Tr., 9/19/16, p. 12, ll. 9-21.)

21 b. About 70 percent of the land is producing, and they have farmers or their  
22 descendants that have been there since they purchased the property in 2004 from Wailuku  
23 Water Company, which has been providing the water. (Haller, Tr., 9/19/16, p. 12, ll. 21-  
24 24, p.19, ll. 2-12.)

25 c. Michelle Haller says that currently, about 31 acres would be vegetable farming,  
26 with about seven acres in trees.

27 d. In his written testimony of March 18, 2016, Steve Haller had submitted  
28 documents on “32 Land Commission Awards and 15 Poalima on 46.97 acres,” but he had  
29 not submitted any documents during the provisional approval process and had been  
30 denied without prejudice. Michelle Haller stated that they haven’t had legal counsel, so

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<sup>27</sup> Michelle Haller is misidentified in the transcript as “Michelle Baillie.” Tr., 9/19/16 at 3 (Index of Witnesses), 12.

1 her son did the research. (**Id.**, ¶ 4; Provisional Order, Attachment C, Revised Exh. 7, p.2;  
2 Haller, Tr., 9/19/16, p, 17, l. 23 to p. 18, l. 11.) [Hui/MTF and OHA, FOF B-865.]

3 e. The “32 Land Commission Awards” included counting `āpana within each LCA  
4 separately, and the number of LCAs were 18. No documentation was provided for LCA  
5 2405:05 and the 15 pō`alima, and documentation was provided for 17 LCAs. (Exh. 2287-  
6 Haller-1.)

7 f. The following are the documentation of the 17 LCAs:

- 8 1. LCA 3221, confirmed by RP 4814, was 2.84 acres and described as 25 lo`i  
9 and kalo lands.
- 10 2. LCA 7742:2, 3, and 7, confirmed by RP 7433, was 7.58 acres:
  - 11 i. `āpana 1 was described as kalo land, taro moo, and 1 lo`i;
  - 12 ii. `āpana 2 was described as 3 lo`i, one dry, or as 2 taro lo`i;
  - 13 iii. `āpana 7 had boundary descriptions but no description of contents.

14  
15 **467. SWUPA 2223—Winifred & Gordon Cockett**

16 a. The Cocketts filed an existing-use SWUPA on April 23, 2009, for TMK No. (2)  
17 3-4-031:008 (“Parcel 8”), which has been in their family for over 60 years, requesting  
18 recognition of appurtenant rights in the amount of 195,000 gpd for 0.65 acres, using  
19 Reppun high estimate of 300,000 gad, and an existing-use permit of 942 gpd, based on  
20 irrigating 0.314 acre of non-commercial gardening and applying the 2002 State of  
21 Hawai`i Water System Standard for Maui County domestic cultivation of 3,000 gad.  
22 (Cockett, WT, August 28, 2016, ¶¶ 1, 3; SWUPA 2223, Att. A, p. 2.) [Hui/MTF and  
23 OHA, FOF B-108, B-109, B-113, B-114.]

24 b. Parcel 8 is a portion of LCA 3382, confirmed by RPs 3793 and 5288, with 24 lo`i  
25 by foreign testimony and existing physical features that the land was cultivated entirely in  
26 lo`i kalo. The Commission granted provisional approval. (Cockett, WT, August 28, 2016,  
27 ¶¶ 7, 9; SWUPA 2223, Att. E, p. 13; Provisional Order, Attachment C, Revised Exh. 7, p.  
28 2.) [Hui/MTF and OHA, FOF B-112.]

29 c. Their existing use was not measured but instead estimated using 3,000 gad,  
30 resulting in 942 gpd. An “average typical residential customer” in Maui County uses 400  
31 to 600 gpd of combined indoor and outdoor use, and as high as 1,500 to 2,000 gpd for

1 irrigation of “lush tropical landscape treatment” in arid areas. Maui County has  
2 accommodated agricultural development lots with 600 to 1,200 gpd, but limits further  
3 allocations so as not to provide excessive amounts of water to developments not engaged  
4 in bona fide agriculture. (FOF 300.)

5  
6 **b. Wailuku Town Kuleana Ditch**

7  
8 468. The Wailuku Town Kuleana Ditch is next on Waihe`e Ditch:

9  
10 469. **SWUPA 2181—Kaanapali Kai**

11 a. On April 30, 2009, Kaanapali Kai filed an existing-use SWUPA for TMK No. (2)  
12 3-4-014:060 (“Parcel 60”), a 6.088-acre property, for 4,595 gpd of metered use on 5.0  
13 acres of household landscaping. Kaanapali Kai is a corporation owned by the Yokouchi  
14 family, and it is used as a residence for members of the family. Sheryl-Lynn Suzuki,  
15 president of Kaanapali Kai, says her father purchased the property in 1992, but she also  
16 said she purchased it from Wailuku Agribusiness in 2002. (Suzuki, WT, 8/26/16, ¶¶ 1-3;  
17 SWUPA 2181, p. 2, table 1, p. 4, table 3; Suzuki, Tr., 9/20/16, p. 32, ll. 18-21.)

18 b. There is a main house, a four-car garage, a cottage, and a tennis court in disrepair.  
19 Suzuki’s niece was living in the house, but no one lives there now. (Suzuki, Tr., 9/20/16,  
20 p. 32, l. 24 to p. 33, l. 1, p. 37 ll. 7-10.)

21 c. The dwellings and a small pool receive County water. (Suzuki, Tr., 9/20/16, p. 36,  
22 ll. 8-11.) [Hui/MTF and OHA, FOF C-272.]

23 d. Kaanapali Kai did not claim appurtenant rights nor participate in the provisional  
24 approval process. (SWUPA 2181, p. 1; Provisional Order, Attachment C, Revised Exh. 7,  
25 p. 2.)

26  
27 470. **SWUPAs 2209/2210N—Vernon Bal**

28 a. On April 23, 2009, Vernon Bal filed existing- and new-use SWUPAs for TMK  
29 No. (2) 3-4-007:042, a 0.33-acre property for which he requested 600 gpd of existing use  
30 for 0.28 acres of a yard and garden, and 1,800 gpd of new use for 0.006 acre for kalo lo`i,

1 applying Reppun’s high estimate of 300,000 gad. (SWUPA 2209, p. 2, table 1, p. 4, table  
2 3; SWUPA 2210N, p. 2, table 1, p. 3, table 2.)

3 b. Bal claimed appurtenant rights and was granted provisional recognition by the  
4 Commission. (SWUPA 2209, p. 1; SWUPA 2210N, p. 1; Provisional Order, Attachment  
5 C, Revised Exh. 7, p. 2.)

6 c. Bal did not submit written testimony nor participate in the CCH.

7  
8 471. **SWUPAs 2241/2242N—Mary Ann Velez (Higa)**

9 a. On April 23, 2009, existing- and new-use SWUPAS were filed for TMKs No. (2)  
10 3-4-004:016 (“Parcel 16”) and No. (2) 3-4-004:017 (“Parcel 17”) by Darrell Higa, who  
11 has since passed away. Mary Ann Velez’s mother, Perolina Domogma, is the majority  
12 owner of both parcels and Velez, who was Higa’s partner, has been managing the  
13 properties since Higa passed away. (Velez, WT, 2/3/16, ¶¶ 2-3.) [Hui/MTF and OHA,  
14 FOF B-138.]

15 b. Parcel 16 is 0.445 acre and Parcel 17 is 0.468 acre, a total of 0.913 acres, for  
16 which Velez requests existing use of an estimated 1,200 gpd for 0.22 acre on Parcel 16  
17 and 0.17 acre on Parcel 17 for domestic agriculture and a new-use of 138,000 gpd to  
18 return 0.46 acre to kalo lo`i, based on Reppun’s high estimate of 300,000 gad. (**Id.**, ¶¶ 14-  
19 16; SWUPA 2241, p. 2, table 1, p. 4, table 3; SWUPA 2242N, p. 2, table 1, p. 3, table 2.)

20 c. Darrell Higa had claimed appurtenant rights and been granted provisional  
21 approval for both parcels. (SWUPA 2241, p. 1; SWUPA 2242N, p. 1; Provisional Order,  
22 Attachment C, Revised Exh. 7, pp. 2-3.)

23 d. Parcel 16 was directly fed by an ancient `auwai and lies within LCA 3339:2,  
24 confirmed by RP 6251, described as kalo land and 24 lo`i. (**Id.**, ¶ 8; Exh. 2241-Velez-4.)

25 e. Velez states that Parcel 17 lies within LCA 2532:3, described as “taro mo`o,”  
26 while provisional recognition stated that Parcel 17 lies within `āpana 4, which was a  
27 houselot. (**Id.**, ¶ 9; Exh. 2241-Velez-5-p. 6; Provisional Order, Exhibits, p. 56, Exh. 7.)

28 f. Velez states that what was surveyed as `āpana 4 in the LCA was actually  
29 described as `āpana 3 in the testimony and that “taro mo`o” means “narrow strip of land  
30 in taro,” corresponding to the layout of her land in LCA 2532 compared to the layout of  
31 `āpana 4. Furthermore, a portion of the LCA states “Apana 5 Pahale,” which means



1 “Parcel 5. Houselot.” Velez also states that it was not uncommon where a pō`alima is  
2 between two `āpana and the pō`alima is awarded to someone else, thus breaking one  
3 `āpana into two and causing a re-numbering of the parcels in the LCA. (*Id.*, ¶ 9; Exh.  
4 2241-Velez-5-p. 2.)

5  
6 472. **SWUPA 2247/2248N—Jordanella Ciotti (Ince/Kinzer)**

7 a. Jordanella Ciotti purchased TMK No. (2) 3-4-004:019 (“Parcel 19”) from the  
8 original applicants, who filed for existing- and new-use SWUPAs on April 23, 2009.  
9 (Ciotti, WT, 12/9/15, ¶ 1; SWUPA 2247, at 1; SWUPA 2248, at 1.) [Hui/MTF and OHA,  
10 FOF B-131.]

11 b. Ciotti requests recognition of appurtenant rights in the amount of 135,300 gpd and  
12 a permit for 18,805 gpd, of which 1,088 gpd was the existing use on April 30, 2008,  
13 using Reppun’s high estimate for kalo lo`i of 300,000 gad and 2002 State of Hawai`i  
14 Water System Standard for Maui County domestic cultivation of 3,000 gad. (*Id.*, ¶¶ 3,  
15 11-13, 25.) [Hui/MTF and OHA, FOF B-132, B-135.]

16 c. Ciotti currently irrigates 0.1125 acre of her yard and non-commercial garden and  
17 an 18- by 6-foot lo`i kalo of approximately 0.0025 acres, for which she estimates a total  
18 use of 1,088 gpd, 338 gpd for her yard and commercial garden (0.1125 acre x 3,000 gad)  
19 and 750 gpd for her lo`i (0.0025 acre x 300,000 gad). (*Id.*, ¶¶ 11, 13-14.) [Hui/MTF and  
20 OHA, FOF B-135.]

21 d. She requests an additional 17,717 gpd: 16,530 gpd (300,000 gad x 0.0551 acre) to  
22 restore a 60- x 40-foot lo`i on approximately 0.0551 acre and 1,187 gpd (0.3957 acre x  
23 3,000 gad) to irrigate grass and non-commercial crops throughout the remainder of her  
24 property, or 0.3957 acre. (*Id.*, ¶¶ 16-19.) [Hui/MTF and OHA, FOF B-136.]

25 e. However, the 0.3957 acre for which she requests additional water must include  
26 the 0.1125 acre she is already irrigating, because Parcel 19 is only 0.451 acres, and  
27 0.0025 acre is her existing 18- by 6-foot lo`i kalo and she proposes to restore 0.0551 acre  
28 (60- by 40-foot lo`i kalo), which together total 0.0576 acre, leaving a remainder of 0.3934  
29 acre.

30 f. So Ciotti’s request for additional water to irrigate grass and non-commercial crops  
31 should have been applied to 0.2809 acres, not to 0.3957 acres.

1 g. Parcel 19 is 0.451 acres, and includes LCA 3209:4, confirmed by RP 7893,  
2 consisting of approximately 0.23 acres. The records state that there were five lo`i kalo,  
3 without reference to any other use. The Commission provisionally approved appurtenant  
4 rights. (**Id.**, ¶¶ 5-6; Exh. 2247-Ciotti-1, at 1; Exh. 2247-Ciotti-2, at 1; Provisional Order,  
5 Attachment C, Revised Exh. 7, p. 3.) [Hui/MTF and OHA, FOF B-133 to B-134.]

6 h. Ciotti requests recognition of 135,300 gpd in appurtenant rights, based on  
7 Reppun’s highest estimate for her 0.451 acres (0.451 acre x 300,000 gad). (**Id.**, ¶ 8.)  
8 [Hui/MTF and OHA, FOF B-132.]

9 i. However, only 0.23 acres are derived from LCA 3209:4, so even using Reppun’s  
10 highest estimate, her request for appurtenant rights should have been 69,000 gpd (0.23  
11 acres x 300,000 gad).

12  
13 473. **SWUPAs 2245/2246N—Greg Ibara**

14 a. Greg Ibara filed existing- and new-use SWUPAs on April 23, 2009, for TMK No.  
15 (2) 3-4-004:020 (“Parcel 20”), which he purchased in 1998. (Ibara, WT, 12/9/15, ¶ 1.)  
16 [Hui/MTF and OHA, FOF B-125.]

17 b. Parcel 20 is 1.171 acres, for which he requests recognition of appurtenant rights  
18 351,300 gpd (1.171 acres x 300,000 gad), using Reppun’s high estimate. (**Id.**, ¶¶ 7-8.)  
19 [Hui/MTF and OHA, FOF B-128.]

20 c. Again using Reppun’s high estimate, he estimates his existing use to irrigate  
21 0.007 acre at 2,100 gpd (0.007 acre x 300,000 gad), and requests an additional 6,000 gpd  
22 to restore lo`i on 0.02 acres (0.02 acres x 300,000 gad). (**Id.**, ¶¶ 9-12.) [Hui/MTF and  
23 OHA, FOF B-128 to B-129.]

24 d. Parcel 20 is comprised of portions of two LCAs: LCA 2621, confirmed by RP  
25 3214, and LCA 3233:2, confirmed by RP 7559. Records describe these kuleana as mo`o  
26 kalo, without referencing any other land use. Physical features, including land slope and  
27 proximity to an `auwai intake and pō`alima, further supports that these lands were  
28 cultivated in lo`i. The Commission provisionally approved appurtenant rights for these  
29 LCAs. (**Id.**, ¶¶ 5-6; Exhs. 2245-Ibara-2, -3; Provisional Order, Attachment C, Revised  
30 Exh. 7, p. 3.) [Hui/MTF and OHA, FOF B-126 to B-127.]

1 c. Waihe'e Ditch after Intake on Waikapū Stream

2  
3 474. After the intake on Waikapū Stream, the remaining SWUPAs are:

4  
5 475. **SWUPA 2203—Maui Tropical Plantation**

6 a. On April 24, 2009, Maui Tropical Plantation (“MTP”) filed an existing-use  
7 SWUPA for TMK No. (2) 3-6-005:007 (“Parcel 7”), a 59.054-acre parcel for which it  
8 requested an average metered use of 124,532 gpd by trickle drip or sprinklers:

- 9 1. 82,332 gpd for 40 acres of rotating row crops at an average of 2,058 gad;  
10 2. 36,000 gpd for 15 acres of landscaping at an average of 2,400 gad; and  
11 3. 6,200 gpd for 4 acres of ornamental and nursery plants at an average of  
12 1,550 gad.

13 (SWUPA 2203, p. 2, table 1, p. 3, table 2, p. 4, table 3.) [Waikapu Properties/MTP FOF  
14 9-11.]

15 b. A comparison of metered uses versus Hawai` Department of Agriculture  
16 “HDOA”) Water Use Guidelines is as follows:

	<u>MTP</u>	<u>HDOA</u>
17 agricultural crop irrigation	2,058 gad	4,400-6,700 gad
18 Landscape irrigation	2,400 gad	4,000-6,000 gad
19 Ornamental/Nursery irrigation	1,550 gad	3,700-6,000 gad

20  
21 (MTP Opening Brief, p. 8, Exh. D.) [Waikapu Properties/MTP FOF 12.]

22 c. In 2006, MTP was acquired through various entities by Michael Atherton, the  
23 managing general partner of several related entities, including but not limited to Waikapu  
24 Properties, MTP, and Waiale 905 Partners, LLC. (Atherton, WT, 2/5/16, ¶ 5.) [Waikapu  
25 Properties/MTP FOF 28.]

- 26 1. The deed to MTP contained a reservation of water rights recorded on  
27 March 24, 1983. (Exh. OHA-16, Exhibit A at 16, ¶ 6.) [Hui/MTF and OHA, FOF  
28 C-53.]

29 d. Waikapu Properties and its related entities also have SWUPAs 2205, 2356,  
30 2297N, and 3472N, *supra*, FOF 429, which receive waters from Waikapū Stream through  
31 the South Waikapū Ditch. SWUPA 2205 is for the `Īao-Waikapū fields formerly

1 cultivated for sugar cane by HC&S, which has been returned to Waikapu Properties,  
2 *supra*, FOF 25.

3 e. MTP was built by C. Brewer & Company more than 30 years ago, which  
4 Atherton has transformed into an eco-tourism site, emphasizing agriculture, farm to table  
5 values, and other tourism education activities. It currently employs over 50 local residents  
6 on property and is also home to a variety of local businesses, including Maui Tropical  
7 Plantation, Mill House Restaurant (using farm-fresh ingredients from MTP lands), Maui  
8 Chef's Table, Mill House Café (featuring 100% Maui coffees), Moku Pua Soap Factory,  
9 Ron L. Jewelers, Flyin`Hawaiian Ziplines, Maui Ziplines, and Kumu Farms. (*Id.*, ¶ 6;  
10 MTP Opening Brief, p. 8.) [Waikapu Properties/MTP FOF 20.f.]

11 f. Although MTP's SWUPA did not claim appurtenant rights, it had filed for  
12 provisional approval of appurtenant rights for 11 LCAs and 8 land grants and had been  
13 provisionally approved for 9 LCAs and one land grant. (SWUPA 2203, p. 1; Provisional  
14 Order, Attachment C, Revised Exh. 7, p. 4.)

15 g. On September 20, 2016, Mr. Atherton testified that his entities were no longer  
16 asserting claims for appurtenant rights, except as necessary to secure drinking water for  
17 cattle grazing above the Waihe`e Ditch, which would be pursued under the other  
18 SWUPAs and reserved the right to re-submit a permit application for appurtenant rights  
19 for other parcels at a later date. (Atherton, Tr., 9/20/16, p. 43, ll. 1-8.) [Waikapu  
20 Properties/MTP FOF 33.]

21  
22 476. **SWUPA 2186—MMK Maui**

23 a. On April 22, 2009, MMK Maui, LP ("MMK") filed an existing-use SWUPA for  
24 TMK Nos. (2) 3-6-004-010, -011, -012, and -014 for 1,292,704 gpd of metered use on  
25 two golf courses, the King Kamehameha and Kahili Courses. (SWUPA 2186, p. 2, table  
26 1, p. 3, table 2.) [MMK, FOF 1, 4-5.]

27 b. The golf courses encompass approximately 350 acres, on which water delivered  
28 by WWC is used to irrigate 302 acres of Bermuda grass and 3 acres of miscellaneous  
29 landscape. (Carroll, WT, 2/5/16, ¶ 17; SWUPA 2186, p. 3, table 2.) [MMK, FOF 3.]

30 c. MMK states that, based on water meter readings from June 2006 through  
31 December 2015, as well as further considerations regarding the weekly, monthly, and

1 yearly variability of water usage over a 9.5-year period and the actual need to adequately  
2 and efficiently water the golf courses, it currently requests 1.25 mgd. (Dooge, Tr.,  
3 7/22/16, p. 19, ll. 11-19; Bechert, Tr., 7/22/16, p. 49, ll. 3-11.) [MMK, FOF 6.]

4 1. 1.29 mgd and 1.25 mgd over 305 acres equal 4,230 gad and 4,098 gad,  
5 respectively.

6 d. The average for the period, June 2006 through December 2015, was 1.037 mgd,  
7 ranging from a low of 0.129 mgd in March 2014 to a high of 2.485 mgd in April 2007.

8 1. Per calendar year, water use ranged from 1.4 mgd in 2007 to 0.66 mgd in  
9 2014.

10 2. Typically, water needs decreased during the winter months and increased  
11 during the summer months. For example, in January and February 2011, the  
12 courses used 21.9 and 18.7 mgd, respectively, whereas from June to September  
13 2011, the courses used 41.1 (June), 38.4 (July), 39.9 (August), and 41.4  
14 (September) million gallons, respectively.

15 3. MMK states that the water usage in 2014 and 2015 decreased to 0.66 mgd  
16 and 0.70 mgd, respectively, without any significant changes to water-saving  
17 measures or mitigation efforts, and that the reason was unusual weather patterns  
18 that caused more frequent and consistent rain throughout the majority of months  
19 during years 2014 and 2015. Conversely, huge rainfall followed by several weeks  
20 of no rain may result in the same quantity of rainfall, but there is still a need to  
21 irrigate within a week after the rainfall, so the need for irrigation is still greater  
22 where the rainfall is less frequent and not as consistent, even though total rainfall  
23 is the same.

24 (Bechert, WT, 2/5/16, ¶¶ 25-27, 30; Bechert, Tr., 7/22/16, p. 53, ll. 7-20, p. 61, l. 23 to p.  
25 62, l. 19, p. 62, l. 25 to p. 63, l. 4; Exh. 2186-MMK-4.) [MMK, FOF 27-33.]

26 e. MMK believes that the average of 1.037 mgd over the last 9.5 years is more  
27 indicative of the average usage it may see over the next ten years, but an amount based on  
28 average use does not necessarily meet the needs of the golf courses for drier months, and  
29 that in regions where the annual rainfall is highly variable, the estimate should be based  
30 on one of the drier years rather than an average over the years.

31 1. 2007 was one of the highest yearly average usage at 1.34 mgd.

1           2.       Between 2006 and 2015, the driest month in each year averaged 1.53 mgd.  
2 (Bechert, WT, 2/5/16, ¶ 31; Exh. 2186-MMK-4.) [MMK, FOF 33-34.]

3           f.       Therefore, MMK's revised request of 1.25 mgd is approximately the mid-point  
4 between the historical 9.5-year usage of 1.037 mgd and the driest month average over the  
5 same period of 1.53 mgd. 1.25 mgd closely compares to the 1.20 mgd 12-month moving  
6 average from April 2008 to March 2009, the period immediately preceding the filing of  
7 the SWUPA on April 22, 2009; and the 1.29 mgd 12-month moving average from May  
8 2007 to April 2008 that was used to calculate the existing use as of April 30, 2008. (Exhs.  
9 OHA-49, 2186-MMK-4.) [MMK, FOF 37-38.]

10          g.       MMK also noted that even if it requested more water than what it actually needed,  
11 due to the nature of golf course irrigation in which too little water is harmful and too  
12 much water is not desired due to suboptimal and soggy/wet golfing conditions, it would  
13 not benefit from using more water than what it needed. Proper irrigation requires an  
14 adequate amount of water at the time water is needed on a daily/weekly/monthly basis.  
15 Without the necessary and adequate amount of irrigation water, the golf courses will not  
16 be able to adequately maintain the turf grass. (Beckert, WT, 2/5/16, ¶¶ 32, 34; Carroll,  
17 Tr., 7/22/16, p. 70, ll. 7-14; Beckert, Tr., 7/22/16, p. 50, l. 16 to p. 51, l. 1; Exh. 2186-  
18 MMK-3, p. 435.) [MMK, FOF 39.]

19          h.       The golf courses have a water-delivery agreement with WWC for a maximum of  
20 4 mgd and paid approximately \$4 million for the perpetual delivery of up to 2.7 mgd.

21           1.       Water from the Waihe`e Ditch is pumped into Kahili Course Reservoir 4,  
22 then pumped into a distribution system consisting of hundreds of individually  
23 controlled sprinkler heads to irrigate the Kahili Course and, through a transfer  
24 pump, pumped from Reservoir 4 into King Kamehameha Course Reservoir 18,  
25 where the water is pumped through a distribution system again consisting of  
26 hundreds of individually controlled sprinkler heads to irrigate the King  
27 Kamehameha Course.

28           2.       Daily water needs is communicated to WWC, who controls and releases  
29 on a weekly or so basis the amount of pumped water from the Waihe`e Ditch  
30 based on the immediate needs of the golf courses. WWC takes meter readings

1 weekly or so and regulates the pumps that allow water into the reservoirs at the  
2 golf courses.

3 (Carroll, WT, 2/5/16, ¶¶ 6-7; Dooge, WT, 2/5/16, ¶¶12, Beckert, WT, 2/5/16, ¶¶ 16, 23;  
4 Beckert, Tr., 7/22/16, p. 48, l. 14 to p. 49, l. 2; Exh. 2186-MMK-2.) [MMK, FOF 11-12,  
5 18, 25.]

6 i. Steps taken to mitigate water use include:

7 1. The two reservoirs are rubber-lined to minimize water leakage and  
8 designed to capture, hold, and store water (including rainwater).

9 2. Both courses utilize Bermuda turf grass, commonly known as a drought-  
10 resistant species of grass.

11 3. Staff manually monitor and adjust the duration of water usage on a daily  
12 basis, as a fully automatic irrigation system that does not require periodic  
13 programming and maintenance does not exist.

14 4. More than 5,000 sprinkler heads are used on the golf courses, in which the  
15 duration and volume of water released can be individually controlled for efficient  
16 use of water. A central control system gives staff full control and monitoring of  
17 the sprinkler heads remotely, for daily/hourly access and control of watering.

18 5. Soil moisture levels are assessed daily by visual assessment of the turf and  
19 soil, including the use of soil probes to measure moisture conditions.

20 6. Irrigation is done mainly in the evenings and early mornings, which are  
21 cooler and less dry periods.

22 (Bechert, WT, 2/5/16, ¶¶ 18-22, 24; Bechert, Tr., 7/22/16, p. 45, l. 11 to p. 46, l. 5, p. 46,  
23 ll. 6-16, p. 47, ll. 5-13, p. 48, ll. 1-13, p. 50, ll. 16-23; Exh. 2186-MMK-3, pp. 383, 407,  
24 432-434.) [MMK, FOF 20-24, 26.]

25 j. Alternatives:

26 1. In January 2016, Carroll of MMK met with Pearson, the Deputy Director  
27 of CWRM, to inquire whether it would be a reasonable alternative for MMK to  
28 drill its own well and was informed that the possibility was not promising. A&B  
29 and Atherton were also looking to drill wells and dedicate them to the County.  
30 The 3 mgd sustainable yield of the Waikapū Aquifer would be consumed entirely  
31 by these wells. Moreover Pearson believed that MMK could not use potable water

1 for golf courses. (Carroll, WT, 2/5/6, ¶ 12; Carroll, Tr., 7/22/16, p. 67, ll. 6-12.)  
2 [MMK, FOF 45.]

3 2.. Also in January 2016, Carroll met with Mike Atherton, owner of MTP,  
4 which is located near the golf course, to inquire whether water might be available  
5 for MMK from Atherton's wells. Atherton was not sure how much water was  
6 going to be available, how much he would need for his own purposes, when the  
7 water would be available for use, or what the quality of the water would be and  
8 that he was conducting tests to clarify those issues (see 2205, 2356/2357N/3471N,  
9 & 3472N—Waikapu Properties). Carroll concluded that well water was not a  
10 reasonable alternative today but may come available in the distant future. (Carroll,  
11 WT, 2/5/6, ¶¶ 10-11; Carroll, Tr., 7/22/16, p. 67, l. 6 to p. 68, l. 1, p. 73, l. 7 to p.  
12 74, l. 2.) [MMK, FOF 43-44.]

13 3. In January 2016, Carroll also contacted Derek Takahashi, Recycled Water  
14 Coordinator and Project Manager, Wastewater Reclamation Division of the  
15 County of Maui, regarding the possibility of reclaimed water. Mr. Takahashi  
16 stated that the closest wastewater reclamation facility is located in Kahalui near  
17 Kanaha Beach Park and that the County does not have any recycled water  
18 distribution systems for Central Maui where the golf courses are located. There is  
19 also no distribution system from the more distant Kihei Wastewater Facility to  
20 Central Maui. (Carroll, WT, 2/5/6, ¶ 13; Carroll, Tr., 7/22/16, p. 68, l. 17 to p. 69,  
21 l. 15, p. 71, ll. 16-24, p. 79, l. 20 to p. 80, l. 7; Exh. 2186-MMK-11.) [MMK, FOF  
22 46.]

23 k. MMK did not claim appurtenant rights. (SWUPA 2186, p. 1; Provisional Order,  
24 Attachment C, Revised Exh. 7, p. 5.)

25  
26 **477. SWUPA 2151—Pohakulepo Recycling LLC**

27 a. On April 24, 2009, Pohakulepo Recycling, LLC filed an existing-use SWUPA for  
28 TMK No. (2) 3-6-04:007 for the metered use of 8,555 gpd for dust control on 14.8 acres  
29 and rock crushing operations on 0.1 acre. (SWUPA 2151, p. 2, table 1, p. 4, table 3.)



1 b. The water is necessary to meet Hawai`i Department of Health and Land Use  
2 Commission permits and Maui County permits to control fugitive dust emissions.  
3 (Jacintho, WT, 7/22/16, ¶ 5.)

4 c. The quarry serves the entire West Maui communities as well as several central  
5 Maui communities and has eight employees with a combined annual salary of over  
6 \$900,000. (*Id.*, ¶ 7.)

7 d. Reclaimed water has been considered but because no pipeline exists from the  
8 County of Maui, it is deemed unfeasible. The cost of putting in a transmission pipe would  
9 be several million dollars, would require an Environmental Impact Statement and  
10 numerous grants of easements. There is also no county water meter nor service line to the  
11 property. (*Id.*, ¶ 8.)

12 e. Pohakulepo Recycling, LLC did not claim appurtenant rights nor participate in the  
13 provisional approval process. (SWUPA 2151; Provisional Order, Attachment C, Revised  
14 Exh. 7, p. 5.)

15  
16 478. **SWUPA 2272—Nobriga’s Ranch**

17 a. On April 27, 2009, Nobriga’s Ranch filed an existing-use SWUPA for TMK No.  
18 (2) 3-6-001:018. (SWUPA 2272.)

19 b. Metered use on 100 acres of the 257.784 property averaged 25,776 gpd for  
20 pasture grass. (SWUPA 2272, p. 2, table 1, p. 4, table 3.)

21 c. Nobriga’s Ranch neither claimed appurtenant rights nor participated in the  
22 provisional recognition process. (SWUPA 2272, p. 1; Provisional Order, Attachment C,  
23 Revised Exh. 7. p. 5.)

24 d. Nobriga’s Ranch also provided no further information and did not participate in  
25 the contested case hearing.

26  
27 **ii. Spreckels Ditch**

28  
29 479. On the Spreckels Ditch, after the intakes from South Waiehu Stream and Wailuku River  
30 and the Hopoi Ditch from the Waihe`e Ditch, the only remaining SWUPA is HC&S at the  
31 terminus of what used to be the Waiale Reservoir.

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480. **SWUPA 2206-HC&S**

- a. On April 22, 2009, HC&S filed existing-use SWUPA 2205 for 10.58 mgd for 1,491 acres of its leased `Īao-Waikapū fields and existing-use SWUPA 2206 for 36.29 mgd for 4,408 acres of its Waihe`e-Hopoi fields. (SWUPA 2206, Addendum, p. 1.) [HC&S FOF 2.]
- b. On April 17, 2014, the Commission approved and adopted the 2014 Mediated Agreement, *supra*, FOF 16, in which the Commission had found that HC&S’s reasonable daily water use requirements for sugar cane cultivation was 5,408 gad or 6.06 mgd on 1,120 cultivated acres of the `Īao-Waikapū fields and 5,958 gad or 21.75 mgd on 3,650 cultivated acres of the Waihe`e-Hopoi fields. (CCH-MA06-01, June 2010, COL 92-93; 2014 Mediated Agreement, FOF 44-45.)
- c. On January 6, 2016, A&B announced it would close HC&S by the end of the year and transition to diversified agriculture, *supra*, FOF 22.
- d. On February 5, 2016, HC&S filed its opening brief and direct witness statements in support of SWUPA 2205 and SWUPA 2206<sup>28</sup> and requested 4.84 mgd for 1,120 acres of the `Īao-Waikapū fields and 19.48 mgd for 3,650 acres of the Waihe`e-Hopoi fields. The request for 19.48 mgd for the Waihe`e-Hopoi fields included an allocation of 17.33 mgd for agricultural irrigation and 2.15 mgd for system losses for those portions of the West Maui Ditch System that are operated and controlled by HC&S. (Volner, WT, 2/5/16, at 1. Hew, WT, 2/5/16, at 1.) [HC&S FOF 6.]
- e. The amended request was based on HC&S’s intended transition from sugarcane cultivation to bioenergy tropical grasses, which estimated that such grasses required approximately 80% to 85% of the water requirement for biannually-harvested sugarcane, based on a preliminary assessment arising out of HC&S’s participation in a Department of Defense study of biofuel production. Using the Commission’s finding that sugarcane cultivation required 5,408 gad on the `Īao-Waikapū fields and 5,958 gad on the Waihe`e-Hopoi fields, HC&S’s estimates of irrigation requirements for bioenergy tropical grasses

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<sup>28</sup> Throughout the contested case proceedings, HC&S mistakenly referred to its application for the Waihe`e-Hopoi fields as SWUPA 2205 and for the `Īao-Waikapū fields as SWUPA 2206, when it should have been the other way around. On February 3, 2017, HC&S filed a Correction of SWUPA numbers requesting official notice of the inadvertent switch in SWUPA numbers.

1 is 4,326 gad for the 1,120 acres of the `Īao-Waikapū fields, or 4.84 mgd, and 80% of  
2 5,958 gad, or 4,776 gad for the 3,650 acres of the Waihe`e-Hopoi fields, or 17.33 mgd.<sup>29</sup>  
3 Because of higher than normal rainfall during 2016, HC&S was unable to conduct  
4 appropriate irrigation trials to accurately determine the actual water duty for sorghum.  
5 (Volner, WT, 2/5/16, §§ 10-12; Volner, WT, 5/31/16, § 3.)

6 f. On July 25, 2016, HC&S gave notice that it will not pursue the SWUPA for the  
7 `Īao-Waikapū fields, because it would no longer lease those lands. Waikapu Properties,  
8 LLC, the owner of those fields, will continue to pursue SWUPA 2205 in place of HC&S,  
9 *supra*, FOF 25.

10 g. Whereas HC&S's diversified agriculture plans for some of the approximately  
11 35,000 acres of its former sugar lands in Central Maui are premature, its plans for the  
12 3,650 acres of the Waihe`e-Hopoi fields are further along, because: 1) its large expanse of  
13 relatively flat and rock-free terrain has been identified as the fields most suitable for  
14 growing bioenergy crops, which would be mechanically planted and harvested; and 2)  
15 HC&S plans to cultivate these bioenergy crops itself rather than try to identify someone  
16 else who would do it. (Volner, WT, 5/31/16, § 5.) [HC&S FOF 13.]

17 h. "Bioenergy crops" include a variety of crops that can support biogas or biofuel  
18 production, including, but not limited to, fuel for jets, marine and land vehicles, and to  
19 generate electricity. These bioenergy crops may include, but are not limited to, annual  
20 seed crops, such as soybean, safflower, sunflower and canola; perennial oil-bearing trees,  
21 such as jatropha, kukui and pongamia; and tropical grasses, such as energy canes,  
22 banagrass, sorghum, hemp and new hybridized perennial tropical grasses. (Volner, WT,  
23 2/5/16, § 2; Volner, Tr., 7/29/16, p. 160, ll. 4-15.) [HC&S FOF 14.]

24 i. The transition from sugar cane to bioenergy crops has several advantages.  
25 Because of the similarities between the two, HC&S may be able to take advantage of  
26 existing infrastructure and equipment and adapt management practices (e.g., integrated  
27 pest management) to new crops. (Volner, WT, 5/31/16, § 3.) [HC&S FOF 15.]

28 j. HC&S plans to have a mix of bioenergy crops that will be rotated over the course  
29 of a few seasons. The primary focus for the Waihe`e-Hopoi fields will be on tropical  
30 grasses to take advantage of the large expanse of contiguous, relatively flat fields that are

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<sup>29</sup> The actual number should have been 17.43 mgd (4776 gad x 3,650 acres = 17.43 mgd).

1 conducive to the efficient planting and harvesting of these types of crops. The bioenergy  
2 crop most likely to initially replace sugar cane is sorghum, which is in the same family as  
3 sugar cane. Sorghum was selected as an initial “anchor” crop because of the experience  
4 gained by HC&S’s participation in a five-year, \$10 million Department of Defense study  
5 of biofuel production started in 2010. Sorghum was one of the crops included in the  
6 study, and HC&S participated in crop and harvest trials of different varieties of energy  
7 crops and also participated in anaerobic digestion yield-testing on a 6-acre plot, gaining  
8 preliminary experience with the requirements, including water requirements and  
9 irrigation practices, for growing some of these energy crops. (Volner, WT, 2/5/16, § 3;  
10 Volner, WT, 5/31/16, § 3.) [HC&S FOF 16-17.]

11 k. HC&S states that further research and testing are necessary for growing these  
12 energy crops on a large scale and has been capturing cost data, testing farming methods at  
13 scale, and refining the economic model based on a 50-acre trial fields. In mid-2016,  
14 HC&S planted an additional 200 acres, including approximately 150 acres in sorghum  
15 and 25-30 acres of various oil seed crops, to validate bioenergy crop density, irrigation  
16 layout, per-acre yield in different soil types, water demand, and field-scale costs. Testing  
17 on larger acreages allows HC&S to better understand actual yields, input costs and the  
18 market for bioenergy crops. (Volner, WT, 2/5/16, § 3; Volner, WT, 5/31/16, § 3.) [HC&S  
19 FOF 18-19.]

20 l. Sugar cane was a two-year crop, meaning that it was planted and harvested on a  
21 two-year cycle. The energy crops mature in a much shorter period of 60 to 105 days.  
22 Multiple harvests from a single planting are possible with some crops, such as sorghum,  
23 but other crops are truly annual crops, providing only one harvest per planting. (Volner,  
24 Tr., 7/29/16, p. 160, l. 20 to p. 161, l. 6.) [HC&S FOF 20.]

25 m. Sorghum ratoons, and multiple harvests are possible without the need for  
26 replanting. In mid-2016, one of the sorghum trial plots was in its fourth harvest cycle and  
27 continued at productive levels over the multiple harvests. Sorghum matures in three to  
28 four months, yielding up to four harvests a year. Yields, however, appear to decrease  
29 during the shorter-day-length period from November through February, and, therefore,  
30 HC&S is looking for varieties that will yield better during the fall and winter periods.  
31 (Volner, WT, 5/31/16, § 3.) [HC&S FOF 21.]

1 n. In addition to sorghum trials, HC&S is working on cover crops with mixtures  
2 including tillage radishes, clovers, mung beans, rye grass, turnips, buckwheat, and sunn  
3 hemp, where appropriate. The focus is to increase soil organic matter, improve soil tilth  
4 and water-holding capacity, and increase beneficial insect populations to reduce the need  
5 for pesticide spraying. At any one time, approximately ten percent of the Waihe`e-Hopoi  
6 fields will be in cover crops. Cover crops will also be utilized as borders around the fields  
7 of bioenergy crops. After the completion of bioenergy crops cycles lasting multiple years,  
8 the entire field will be planted in cover crops to protect against erosion and to replenish  
9 the soil. Cover crops are expected to be planted in the entire field for approximately a  
10 three-month period as part of a three-year crop rotation cycle to minimize pests, control  
11 weeds, improve soil health and reduce tillage requirements. (Volner, WT, 5/31/16, § 4;  
12 Volner, Tr., 7/29/16, p. 160, ll. 14-24.) [HC&S FOF 22.]

13 o. The fields will not lie fallow in the sense that there would be nothing planted for a  
14 period of time. The Waihe`e-Hopoi fields are subject to very high winds, and without  
15 cover crops, soil erosion would be a serious problem. (Volner, Tr., 7/29/16, p. 161, l. 14  
16 to p. 162, l. 12.) [HC&S FOF 23.]

17 p. All the lands that comprise the Waihe`e-Hopoi fields are classified as Agriculture  
18 under the state land-use classification and zoned for agricultural use, and a majority of  
19 the 3,650 cultivated acres have been designated Important Agricultural Lands (“IAL”)  
20 pursuant to HRS Ch. 205, Part III. (Volner, WT, 2/5/16, § 5; Volner, Tr., 7/29/16, p. 159,  
21 ll. 10-15.) [HC&S FOF 48-49.]

22 q. System losses:

23 1. The portions of the West Maui Ditch System that are owned and  
24 controlled by HC&S includes approximately 10.51 miles of open, lined and  
25 unlined ditches and pipelines and two reservoirs. (Hew, WT, 2/5/16, § 1.) [HC&S  
26 FOF 36.]

27 2. Evidence presented in CCH-MA06-01, June 2010, included HC&S’s  
28 estimate that it loses 6-8 mgd through seepage from Waiale Reservoir, depending  
29 on the level of the reservoir, and 3 to 4 mgd from seepage throughout the rest of  
30 its ditch and reservoir system. The Commission limited system losses to 2.0 mgd  
31 “for purposes of the restoration of stream flows under an amended IIFS,” and

1 reaffirmed those losses in the 2014 Mediated Agreement without prejudice to the  
2 rights of any party and of the Commission to revisit the issue in the context of any  
3 proceeding involving a WUPA by HC&S. (CCH-MA06-01, June 2010, FOF 122;  
4 2014 Mediated Agreement, COL 16.) [HC&S FOF 37-40.]

5 3. To address leakage from the unlined Waialae Reservoirs, HC&S analyzed  
6 several loss-mitigation options and determined that bypassing the reservoirs  
7 would be the most cost-effective way of mitigating losses. Thus, HC&S no longer  
8 uses the Waiale reservoirs for water storage and bypasses them with a concrete-  
9 lined bypass. (Hew, Tr., 7/29/16, p. 101, ll. 12-25.) [HC&S FOF 45.]

10 4. HC&S cannot eliminate all of its reservoirs to reduce system losses,  
11 because the ditch and reservoir system is essential to the continued irrigation of its  
12 agricultural lands. (Hew, WT, 5/31/16, § 2.) [HC&S FOF 47.]

13 5. HC&S requests 2.15 mgd for system losses, based on calculations for  
14 seepage rates using the National Engineering Handbook, which is published by  
15 the Soil Conservation Service of the US. Department of Agriculture (“SCS-  
16 USDA”), plus an average daily evaporation rate of 0.40 acre-inches. The  
17 Handbook is a proxy to having to actually measure evaporation and seepage  
18 losses from each part of the system. Based on these calculations, losses ranges  
19 from 2.15 to 4.20 mgd. (Hew, WT, 25/16, §§ 1-2; Hew, Tr., 7/29/16, p. 101, ll. 1-  
20 11, p. 104, l. 6 to p. 121, l. 21.) [HC&S FOF 41.]

21 r. Alternative sources:

22 1. Well No. 7:

23 a. Brackish water from Well No. 7 (USGS No. 16) was the primary  
24 source of irrigation for the Waihe`e-Hopoi fields from 1927 until  
25 additional surface water became available when Brewer ceased its sugar  
26 operations in the 1980s and the Waihe`e and Spreckels Ditch flows  
27 previously used by Brewer were allowed to flow uninterrupted into the  
28 Waiale Reservoir. (CCH-MA06-01, June 2010, FOF 263, 494.) [HC&S  
29 FOF 59.]

30 b. CCH-MA06-01, June 2010 had determined that Well No. 7 was a  
31 practicable alternative source of 9.5 mgd, but after the remand from the

1 Hawai`i Supreme Court, HC&S spent \$1,658,369 to upgrade Well No. 7  
2 by installing a second booster pump (Pump 7D) and a 4,000-foot pipeline  
3 extending to the Waihe`e Ditch, enabling HC&S to pump a maximum of  
4 18.5 mgd on a sustained daily basis. The Commission concluded in the  
5 2014 Mediated Agreement that up to 18.5 mgd was a practical alternative,  
6 without prejudice to revisiting the issue in any future proceeding involving  
7 a WUPA by HC&S. (2014 Mediated Agreement, FOF 50, COL 14.)  
8 [HC&S FOF 60.]

9 c. HC&S maintains that it would be uneconomical, at least for the  
10 short term to pump 18.5 mgd, or even 9.5 mgd, on a sustained basis until  
11 crops can be grown on a commercial scale and producing revenues that  
12 can cover costs. As a byproduct of sugar cane cultivation, HC&S  
13 generated electricity by burning bagasse and operated hydropower  
14 turbines on its East Maui Ditch system, generating enough electricity to be  
15 self-sufficient and have excess power to sell to Maui Electric Company.  
16 At least for the short-term, generating electricity will be limited to its  
17 hydroelectric facilities, which depend on the East Maui Irrigation system  
18 water historically producing a maximum of 6 MWH of power. The  
19 amount of power that can be generated in the future will depend on the  
20 IIFS amendments currently before the Commission. Ideally, HC&S will  
21 be able to utilize some of the biofuel stock that it grows to generate  
22 electricity for its own use, but even if that were to happen, it will be  
23 several years before biofuel stock becomes available in sufficient  
24 quantities, and HC&S would have to renovate or rebuild its power plant to  
25 be able to utilize new fuel sources. (Volner, WT, 2/5/16, §§ 6-7.) [HC&S  
26 FOF 61-64.]

27 d. HC&S estimates that it would cost \$178 (based on MECO's rate of  
28 \$0.22 per kwh) to pump 1 mgd from Well No. 7 to the Waihe`e Ditch.  
29 18.5 mgd would amount to more than \$1.2 million annually, and 9.5 mgd  
30 would cost more than \$600,000 annually. No income is derived from the  
31 crops in their research and testing phase, and until more data is collected

1 for its economic model, HC&S would not know what water costs can be  
2 borne and states that given the current stage of the energy crop industry in  
3 Hawai`i and the lack of agronomic data, HC&S maintains that Well No. 7  
4 cannot be viewed as a practicable alternative source during the period of  
5 transition from sugar to diversified agriculture. (Volner, WT, 2/5/16, §§ 6-  
6 7.) [HC&S FOF 65-67.]

7 e. The Kahului Aquifer, from which Well No. 7 draws brackish  
8 water, has a sustainable yield of only 3 mgd based on natural recharge  
9 (Water Resources Protection Plan).

10 i. Between 1927 and 1985, when HC&S pumped an average  
11 of about 21 mgd from Well No. 7, both HC&S and Brewer were  
12 cultivating sugar cane, largely by furrow irrigation, which meant  
13 there was significant irrigation recharge.

14 ii. Between 1993 and 2007, the Waihe`e-Hopoi fields received  
15 approximately 39 mgd from the Waiale Reservoir, and HC&S had  
16 reported its existing use in 2008 under SWUPA 2206 as 36.29  
17 mgd. However, in 2010, the Commission had determined that  
18 21.75 mgd was the irrigation requirement on 3,650 cultivated acres  
19 of the Waihe`e-Hopoi fields. Therefore, despite the use of drip  
20 irrigation, irrigation on the Waihe`e-Hopoi was significantly  
21 greater than what was required.

22 iii. After 2010, when HC&S upgraded Well No. 7 and  
23 increased pumping to approximately 18.5 mgd, surface water  
24 imports decreased as a result of the amended IIFS. To date, well  
25 data shows no significant adverse impact to the aquifer due to the  
26 increased pumping and decrease in surface water imports.  
27 However, 2014, 2015, and the first half of 2016 have been  
28 relatively wet years, which may have mitigated the impact of  
29 increased withdrawals.

30 iv. Thus, data collected thus far is not sufficient to assess the  
31 long-term impact on the Kahului Aquifer of increased pumping



1 from Well No. 7 and decreased surface water imports. According  
2 to Nance, WCEIC's expert in water resource engineering, the  
3 closure of HC&S's sugar plantation substantially reduces the  
4 amount of recharge to the aquifer and, therefore, the viability of  
5 Well No. 7 needs to be pragmatically determined as the years roll  
6 by.

7 (CCH-MA06-01, June 2010, FOF 494-495, COL 92-93; 2014 Mediated  
8 Agreement, FOF 44-45; SWUPA 2206, Addendum, p. 1; Hew, WT,  
9 2/5/16, § 3; Nance, Tr., 9/20/16, p. 9, ll. 9-13, p. 16, l. 11 to p. 17, l. 8.)  
10 [HC&S FOF 68-72.]

11 2. HC&S's `Īao Tunnel well:

12 a. Well No. 5330-02 develops ground water which is discharged into  
13 the Spreckels Ditch between HC&S's intakes on South Waiehu Stream  
14 and Wailuku River, for which HC&S has WUP No. 691, an interim permit  
15 with an allocation of 0.1 mgd from `Īao Tunnel. (CCH-MA06-01, June  
16 2010, FOF 154-155; Hew, WT, 2/5/16, § 2.) [HC&S FOF 73.]

17 b. When the interim permit was issued on October 28, 2010, `Īao  
18 Tunnel was not separately metered, and one of the conditions of the  
19 interim permit was that HC&S measure the amount collected, and, within  
20 five years the Commission was to make a final determination of the  
21 amount of the allocation. HC&S installed a flow meter in February 2011,  
22 has been submitting monthly ground water reports to the Commission, and  
23 in June 2015, requested by letter that the interim permit be converted to a  
24 full and final permit, which to date has not been brought before the  
25 Commission. (Hew, WT, 2/5/16, § 3.) [HC&S FOF 74-75.]

26 c. Provided that the Commission approves HC&S's request to  
27 convert the interim permit to a permanent permit with an allocation of 0.1  
28 mgd, HC&S states that it is a practicable alternative source to Nā Wai  
29 `Ehā surface waters. (HC&S's Proposed FOF, COL, and D&O, February  
30 17, 2017, FOF 76.)

1           3.       In addition to Well No. 7, there are 13 other brackish water wells that  
2 supplement surface water from the East Maui Irrigation System for HC&S’s East  
3 Maui fields, which is the subject of a parallel contested case before the  
4 Commission. These wells are alternative sources to the East Maui streams. (CCH-  
5 MA13-01. See “Hearings Officer’s Amended Proposed Findings of Fact,  
6 Conclusions of Law, & Decision and Order,” August 2, 2017.)

7           4.       HC&S had utilized wastewater from its Puunene Mill to irrigate certain  
8 fields, none of which were part of the Waihe`e-Hopoi fields. Moreover, Puunene  
9 Mill has shut down with the cessation of sugar cultivation. (CCH-MA06-01, June  
10 2010, FOF 505; Volner, WT, 2/5/16, § 8.) [HC&S FOF 80.]

11          5.       Ola Wai 1 and 2 proposed wells:

12           a.       These wells have not been drilled, which A&B is working with the  
13 County of Maui on their possible development. If they are drilled, they  
14 will be connected to MDWS’s system for domestic and municipal uses  
15 and not for agricultural irrigation. (Volner, 5/31,16, § 11.) [HC&S FOF  
16 84.]

17          6.       Recycled wastewater and desalination:

18           a.       These two possible alternatives have been addressed in Section  
19 I.G.2—Possible Alternatives Shared by Applicants and specifically by  
20 HC&S. (HC&S FOF 77-79, 80.)

21           s.       HC&S requests an existing-use permit for 17.33 mgd for agricultural irrigation  
22 and 2.15 mgd for system losses. For the short term, HC&S states that Well No. 7 is not a  
23 practicable alternative, because while it is technologically feasible to pump up to 18.5  
24 mgd from Well No. 7, it no longer has the “free” energy from its past electricity  
25 generation and will not be generating income from its fields in research and testing to  
26 cover operational costs. (HC&S’s Proposed FOF, COL, and D&O, p. 20.)

27           t.       HC&S states that offstream water use will vary from day to day throughout the year, so  
28 there will be times when IIFS requirements are met, when the needs of other surface water  
29 permittees are met, and there will still be water available for other reasonable-beneficial  
30 offstream uses. Because HC&S is the last user on the Spreckels Ditch, its use of whatever water  
31 is available in the Spreckels Ditch at its terminus would not impact any other permittee’s

1 allocation. As nearly the last user on the Waihe`e Ditch very few permittees take water from the  
2 Waihe`e Ditch after the Hopoi Chute drops water from the Waihe`e Ditch into the Spreckels  
3 Ditch near its terminus. HC&S proposes that it and other down-ditch permittees should be able to  
4 coordinate their day-to-day water requirements such that HC&S, from time to time, will be able  
5 to utilize water in the Waihe`e Ditch without negatively impacting down-ditch permittees’  
6 allocations. HC&S’s Proposed FOF, COL, and D&O, p. 21.)

7 u. HC&S did not claim appurtenant rights under either SWUPAs 2205 or 2206. (SWUPA  
8 2205—HC&S, p. 1; SWUPA 2206—HC&S 2206, p. 1.)

9

## 10 **II. CONCLUSIONS OF LAW**

11

### 12 **A. The State Water Code, the State Constitution, and the Public Trust Doctrine**

13

#### 14 **1. The State Water Code Does Not Supplant the Public Trust Doctrine**

15

16 1. Hui/MTF and OHA, citing the State Water Code, assert that “(a)ccording to HRS 174C-  
17 101, the right to cultivate kalo on one’s own land, regardless of whether the land has appurtenant  
18 rights...’shall not be abridged or denied by the Water Code’...There is no separate inquiry into  
19 whether the exercise of that right is reasonable, beneficial, the legislature has already made that  
20 determination.” (Bunn, Tr., July 11, 2016, p. 20, ll. 3-16.)

21 2. To the contrary, “(t)he state has certain powers and duties which it cannot legislatively  
22 abdicate. This court has held that the (public trust) doctrine would invalidate such measures,  
23 sanctioned by statute but violative of the public trust (*reference omitted*).” (*In re Water Use*  
24 *Permit Applications* [“*Waiāhole I*”], 94 Haw. 97, 130-131; 9 P.3d 409, 442-443 [2000].)

25 3. The public trust is a state constitutional doctrine which “continues to inform the Code’s  
26 interpretation, define its permissible ‘outer limits,’ and justify its existence...(T)he Code does  
27 not supplant the protections of the public trust doctrine.” (*Waiāhole I*, 94 Haw., at 133; 9 P.3d, at  
28 445.)

29 4. “This Court has described the public trust relating to water resources as the authority and  
30 duty ‘to maintain the purity and flow of our waters for future generations and to assure that the

1 waters of our land are put to reasonable and beneficial uses (*emphases in original*).” (*Waiāhole*  
2 *I*, 94 Haw. at 138; 9 P.3d at 450.)

3 5. “‘Reasonable-beneficial use’ means the use of water in such a quantity as is necessary for  
4 economic and efficient utilization, for a purpose, and in a manner which is both reasonable and  
5 consistent with the state and county land use plans and the public interest.” (HRS § 174C-3.)

6

7 **2. There are no Absolute Priorities under the Public Trust**

8

9 6. The public trust doctrine and the Hawai`i Constitution require the Commission both to  
10 protect natural resources and to promote their use and development. “The state water resources  
11 trust thus embodies a dual mandate of 1) protection and 2) maximum reasonable and beneficial  
12 use.” (*Waiāhole I*, 94 Haw. at 139; 9 P.3d, at 451.)

13 7. The purposes or protected uses of the water resources trust are: 1) maintenance of waters  
14 in their natural state; 2) domestic water use of the general public, in particular, protecting an  
15 adequate supply of drinking water; 3) the use of water in the exercise of Native Hawaiian and  
16 traditional and customary rights; and 4) the reservation of water enumerated by the State Water  
17 Code. (*Waiāhole I*, 94 Haw., at 136-137; 9 P.3d, at 448-458; *In re Wai`ola o Moloka`i, Inc.*  
18 [*“Wai`ola”*], 103 Haw. 401, at 431; 83 P.3d 664, at 694 (2004).)

19 8. “In this jurisdiction, the water resources trust also encompasses a duty to promote the  
20 reasonable and beneficial use of water resources in order to maximize their social and economic  
21 benefits to the people of the state...(We) have indicated a preference for accommodating both  
22 instream and offstream uses where feasible...(and) reason and necessity dictate that the public  
23 trust may have to accommodate offstream diversions inconsistent with the mandate of protection,  
24 to the unavoidable impairment of public instream uses and values.” (*Waiāhole I*, 94 Haw., at  
25 139, 141, 142; 9 P.3d, at 451, 453, 454.)

26 9. “Given the diverse and not necessarily complementary range of water uses, even among  
27 public trust uses alone, (the Court) consider(s) it neither feasible nor prudent to designate  
28 absolute priorities between broad categories of uses under the water resources trust. There are no  
29 absolute priorities between uses under the water resources trust...( and) the Commission  
30 inevitably must weigh competing public and private water uses on a case-by-case basis,

1 according to any appropriate standards provided by law (*emphasis added*).” (*Waiāhole I*, 94  
2 Haw., at 142; 9 P.3d, at 454.)

3 10. There are two sections under the Code that might be interpreted to give absolute priority  
4 to appurtenant rights (HRS § 174C-63<sup>30</sup>) and Native Hawaiian water rights (HRS § 174C-101<sup>31</sup>),  
5 but the public trust is a state constitutional doctrine that “continues to inform the Code’s  
6 interpretation, define its permissible ‘outer limits,’ and justify its existence...(T)he Code does  
7 not supplant the protections of the public trust doctrine.” (*Waiāhole I*, 94 Haw., at 132; 9 P.3d, at  
8 444.)

9 11. “(A)ny balancing between public and private purposes begins with a presumption in  
10 favor of public use, access and enjoyment...(I)t effectively prescribes a ‘higher level of scrutiny’  
11 for private commercial uses.” (*Waiāhole I*, 94 Haw., at 142; 9 P.3d, at 454.)

12 12. The public trust creates an affirmative duty of the Commission “to take the public trust  
13 into account in the planning and allocation of water resources, and to protect public trust uses  
14 whenever feasible<sup>32</sup> (*emphasis added*).” (*Waiāhole I*, 94 Haw., at 141; 9 P.3d, at 453.)

15 13. The Court has distilled the following principles to assist agencies in the application of the  
16 public trust doctrine:

---

<sup>30</sup> **[§174C-63] Appurtenant rights.** Appurtenant rights are preserved. Nothing in this part shall be construed to deny the exercise of an appurtenant right by the holder thereof at any time. A permit for water use based on an existing appurtenant right shall be issued upon application. Such permit shall be subject to sections 174C-26 and 174C-27 and 174C-58 to 174C-62.

However, section 174C-27(a) requires that the Commission certify that the use is reasonable-beneficial.

<sup>31</sup> **[§174C-101] Native Hawaiian water rights.**

(c) Traditional and customary rights of appurtenant tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778 shall not be abridged nor denied by this chapter. Such traditional and customary rights shall include, but not be limited to, the cultivation or propagation of taro on one’s own kuleana and the gathering of hihiwai, opae, o’opu, limu, thatch, ti leaf, aho cord, and medicinal plants for subsistence, cultural, and religious purposes.

(d) The appurtenant water rights of kuleana and taro lands, along with those traditional and customary rights assured in this section, shall not be diminished or extinguished by a failure to apply for or to receive a permit under this chapter.

However, in laying out a three-pronged test to protect traditional and customary practices, such protection is not absolute but required to the extent feasible, which the Court has defined as “a balancing of the benefits and costs” and not whether the action is “capable of achievement.” (*Ka Pa`aKai O Ka`aina v Land Use Commission*, 94 Haw. 31, at 47, 7 P.3d 1068, at 1084 (2000); (*Waiāhole I*, at 141 n. 39; 9 P.3d, at 453 n. 39.)

<sup>32</sup> The Court refers to the term “feasible” as a balancing of benefits and costs and not to mean “capable of achievement.” (*Waiāhole I*, 94 Haw., at 141 n. 39; 9 P.3d, at 453 n. 39.)

- 1 a. The agency’s duty and authority is to maintain the purity and flow of our  
2 waters for future generations and to assure that the waters of our land are put to  
3 reasonable and beneficial use.
- 4 b. The agency must determine whether the proposed use is consistent with  
5 trust purposes:
- 6 i. the maintenance of waters in their natural state;
  - 7 ii. the protection of domestic water uses of the general public;
  - 8 iii. the protection of water in the exercise of Native Hawaiian and  
9 traditional and customary rights; and
  - 10 iv. the reservation of water enumerated by the State Water Code.
- 11 c. The agency is to apply a presumption in favor of public use, access,  
12 enjoyment, and resource protection.
- 13 d. The agency shall evaluate each proposal for use on a case-by-case basis,  
14 recognizing that there can be no vested rights in the use of public water.
- 15 e. If the requested use is private or commercial, the agency should apply a  
16 high level of scrutiny.
- 17 f. The agency should evaluate the proposed use under a ‘reasonable and  
18 beneficial use’ standard, which requires examination of the proposed use in  
19 relationship to other public and private uses.

20 Applicants have the burden to justify the proposed water use in light of the trust purposes.

- 21 a. Permit applicants must demonstrate their actual needs and the propensity  
22 of draining water from public streams to satisfy those needs.
- 23 b. Applicant must demonstrate the absence of a practicable alternative water  
24 source.
- 25 c. If there is a reasonable allegation of harm to public trust purposes, then  
26 they must demonstrate that there is no harm in fact or that the requested use is  
27 nevertheless reasonable and beneficial.
- 28 d. If the impact is found to be reasonable and beneficial, the applicant must  
29 implement reasonable measures to mitigate the cumulative impact of existing and  
30 proposed diversions on trust purposes, if the proposed use is to be approved.

31 (*Kauai Springs, Inc. v Planning Commission of the County of Kaua`i* [hereinafter “*Kauai*  
32 *Springs*”], 133 Haw. 141, 174-175; 324 P.3 951, 984-985 [2014].)

33

34 **B. Burden of Proof**

35

36 **1. Interim Instream Flow Standards (IIFS)**

37

1 14. "In the context of IIFS petitions, the water code does not place a burden of proof on any  
2 particular party; instead, the water code and our case law interpreting the code have affirmed the  
3 Commission's duty to establish IIFS that 'protect instream values to the extent practicable' and  
4 'protect the public interest.'" (*Nā Wai `Ehā*, at 258; 287 P.3d, at 159, citing *In re Water Use*  
5 *Permit Applications* [“*Waiāhole I*”], 105 Haw. 1, at 11; 93 P.3d 643, at 653 [2004]; and HRS  
6 §174C-71[2][A].)

7 15. In setting an IIFS, the Commission "need only reasonably estimate instream and  
8 offstream demands." (*In re `Īao Ground Water Management Area High-Level Surface Water Use*  
9 *Permit Applications and Petition to Amend Interim Instream Flow Standards of Waihe`e River*  
10 *and Waiehu, `Īao, and Waikapu Streams Contested Case Hearing* [“*Nā Wai `Ehā*”], 128 Haw.  
11 228, 258; 287 P.3d 129, 159 [2012]); “*Waiāhole I*”, 94 Haw., at 155 n. 60; 9 P.3d, at 467 n. 60.)

12 16. "In requiring the Commission to establish instream flow standards at an early planning  
13 stage, the Code contemplates the designation of the standards based not only on scientifically  
14 proven facts, but also on future predictions, generalized assumptions, and policy judgments."  
15 (*Waiāhole I*, 94 Haw., at 155; 9 P.3d, at 467.)

16 17. “Where the Commission’s decisionmaking evinces a ‘high level of openness, diligence,  
17 and foresight commensurate with the high priority these rights command under the laws of our  
18 state,’ the decision satisfies close look review governing public trust resources.” (*Nā Wai `Ehā*,  
19 128 Haw. at 253; 287 P.3d at 154, citing *In re Wai`ola o Moloka`i, Inc.* [“*Wai`ola*”], 103 Haw.  
20 401, at 422; 83 P.3d 664, at 685 [2004].)

## 22 2. Water-Use Permit Applications (WUPAs)

23  
24 18. As this contested case also incorporates water-use permit applications, “permit applicants  
25 have the burden of proof of justifying their proposed uses.” (*Waiāhole I*, 94 Haw., at 160; 9 P.3d,  
26 at 472.)

27 19. The applicant has the burden of proof for a water-use permit to “make any withdrawal,  
28 diversion, impoundment, or consumptive use of water in any designated water management  
29 area.” (HRS § 174C-48(a).)

30 20. To obtain a permit, the applicant shall establish that the proposed use of water:

- 31 a. Can be accommodated with the available water source;

- 1           b.     is a reasonable-beneficial use as defined in HRS § 174C-3;  
2           c.     will not interfere with any existing legal use of water;  
3           d.     is consistent with the public interest;  
4           e.     is consistent with state and county general plans and land use  
5                 designations;  
6           f.     is consistent with county land use plans and policies; and  
7           g.     will not interfere with the rights of the department of Hawaiian home  
8                 lands as provided in section 221 of the Hawaiian Homes Commission Act.  
9           (HRS § 174C-49(a).)

10  
11           **C.     Native Hawaiian Traditional and Customary Rights**

12  
13   21.     Article 12, § 7 of the Hawai`i Constitution states that: “The State reaffirms and shall  
14   protect all rights, customarily and traditionally exercised for subsistence, cultural and religious  
15   purposes and possessed by ahupua`a tenants who are descendants of native Hawaiians who  
16   inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such  
17   rights.”

18   22.     HRS Title 1, Chapter 1, § 1-1 states that: “The common law of England, as ascertained  
19   by English and American decisions, is declared to be the common law of the State of Hawaii in  
20   all cases, except as otherwise expressly provided by the Constitution of the laws of the United  
21   States, or by the laws of the State, or fixed by Hawaiian judicial precedent or established by  
22   Hawaiian usage (*emphasis added*).”

23   23.     In Hawai`i, HRS Title 1, Chapter 1, § 1-1 had codified the doctrine of custom, and the  
24   statute was derived from a law passed on November 25, 1892 (L1892, Chapter 57, § 5). Thus, in  
25   Hawai`i, “the Hawaiian usage mentioned in HRS § 1-1 is usage which predated November 25,  
26   1892 (*emphasis added*).” (*State v Zimring [I]*, 52 Haw. 472, at 475; 479 P.2d 202, at 204  
27   [1970].)

28   24.     In reaffirming that Hawaiian usage must predate November 25, 1892, the Hawai`i  
29   Supreme Court also required that “it is established that the application of a custom has continued  
30   in a particular area (*emphasis added*).” (*Public Access Shoreline Hawaii v Hawaii County*



1 *Planning Commission* ( hereinafter, “*PASH*”), 79 Haw. 525, at 442; P. 2d 1246, at 1263 [1995],  
2 *cert. denied* 517 U.S. 1163; 116 S. Ct. 1559; 134 L.Ed. 2d 660 [1996].)

3 a. The custom does not need to have been continuous since November 25, 1892 and  
4 can be established from expert testimony and kama`āina witness testimony.  
5 (*PASH*, 79 Haw., at 450; 903 P.2d, at 1271; *State of Hawaii v Hanapi*  
6 [hereinafter, “*Hanapi*”], 89 Haw. 177, at 187, n. 12; 970 P.2d 485, at 495, n. 12  
7 [1998].)

8 25. The requirements for persons claiming a constitutional right to engage in traditional and  
9 customary practices are as follows:<sup>33</sup>

10 a. qualifying as a Native Hawaiian refers to “those persons who are ‘descendants of  
11 native Hawaiians who inhabited the islands prior to 1778’ and who assert  
12 otherwise valid<sup>34</sup> customary and traditional rights”; and

13 b. (O)nce a (person) qualifies as a native Hawaiian, he or she must then establish  
14 that his or her claimed right is constitutionally protected as a customary or  
15 traditional native Hawaiian practice (*emphasis added*).”

16 c. In other words, the right has two parts: a) that it is a customary or traditional  
17 native Hawaiian practice; and b) that the practice is constitutionally protected.  
18 (*Hanapi*, 89 Haw., at 186-187; 970 P.2d, at 495-496.)

19 26. There are six elements essential to such practices: 1) the purpose is to fulfill a  
20 responsibility related to subsistence, cultural or religious needs of the practitioner’s family; 2) the  
21 practitioner learned the practice from an elder; 3) the practitioner is connected to the location of  
22 practice, either through a family tradition or because that was the location of the practitioner’s  
23 education; 4) the practitioner has taken responsibility for the care of the location; 5) the practice  
24 is not for a commercial purpose; and 6) the practice is consistent with custom. (*State v Pratt*  
25 [hereinafter, “*Pratt*”], 127 Haw. 206, at 209; 277 P.3d 300, at 303 [2012].)

26 27. Hui/MTF and OHA maintain that “Native Hawaiians need not show that their direct  
27 ancestors had established a T&C practice on the land or in the ahupua`a in question. Rather,

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<sup>33</sup> There are three factors and the third, referring to entry on private property, is that a party claiming his or conduct is constitutionally protected must also prove that the exercise of the right occurred on undeveloped or less than fully developed property.

<sup>34</sup> The Court has consistently recognized that “the reasonable exercise of ancient Hawaiian usage is entitled to protection under Article XII, section 7 (emphasis in original).” *PASH*, 79 Haw., at 442; 903 P.2d, at 1263.

1 Native Hawaiians need only show that a T&C practice of kalo cultivation had been established in  
2 the ahupua`a by 1892, based upon which Native Hawaiians would have a right to exercise such  
3 practice regardless whether they trace their direct ancestry to the land or ahupua`a. Nothing in  
4 the legal precedents on T&C rights require such a direct ancestral connection.” (Hui/MTF and  
5 OHA COL 51.)

6 28. To the contrary, all of the Hawai`i Supreme Court rulings have limited persons of native  
7 Hawaiian ancestry who are found to have such rights in the subject area to those who can  
8 personally trace their practices in the subject area to a period prior to November 25, 1892. This is  
9 a personal right, and other native Hawaiians who engage in such practices in the same location  
10 but cannot trace their practices prior to November 25, 1892, do not have the right to engage in  
11 such practices in that same location.<sup>35</sup> (*Kalipi v Hawaiian Trust Company, Ltd. Et al.*  
12 [hereinafter, “*Kalipi*”], 66 Haw. 1; 656 P.2d 745 [1982]; *Pele Defense Fund v Paty* [hereinafter,  
13 “*PDF*”], 73 Haw. 578; 837 P.2d. 1247 [1993]; *PASH; Hanapi; Ka Pa`aKai O Ka`aina v Land*  
14 *Use Commission* [hereinafter “*Ka Pa`aKai*”], 94 Haw. 31; 7 P.3d 1068 [2000]; *Pratt*.)

15 a. For example:

- 16 1. In *Kalipi*, gathering rights were limited to “lawful occupants” of an  
17 ahupua`a, meaning persons within the ahupua`a in which they seek to  
18 exercise gathering rights. *Kalipi*’s claim was as an owner of land inside  
19 the ahupua`a but who resided outside the ahupua`a, and his claim was  
20 denied. He had provided no evidence for a claim as one who resided  
21 outside the ahupua`a, but the Court addressed this issue in *PDF, infra*.
- 22 2. In *PDF*, the Court held that native Hawaiian rights may extend beyond the  
23 ahupua`a in which a native Hawaiian resides where such rights have been  
24 customarily and traditionally exercised in this manner. The Court in *PDF*  
25 held that, if it can be shown that the subject area was a traditional  
26 gathering area utilized by tenants of the abutting ahupua`a and if *PDF*  
27 members can show that they are such tenants and did engage in such  
28 practices in the subject area, than they may have a right to enter those  
29 lands to exercise their traditional practices.

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<sup>35</sup> Although they may have standing to participate in the contested case as interested parties, distinct from the general public, to protect/restore the natural resource (in this case the Nā Wai `Ehā streams and rivers).

1           3.     *Ka Pa`aKai*'s members averred that they, their ancestors, friends and  
2                     families have crossed an 1800-1801 lava flow to gather salt for  
3                     subsistence.

4           4.     In *Pratt*, defendant Pratt testified that a land grant sold to the Kupihea  
5                     family for part of the ahupua`a for the Kalalau Valley was his family's  
6                     land, is where he spends time in the park, and believes he is responsible  
7                     for the Kalalau Valley because his ancestors are buried there.

8 29.     In order for the State to fulfill its constitutional duty to protect Native Hawaiian  
9     traditional and customary practices, the Commission has the duty to determine:

- 10         a.     the identity and scope of valued cultural, historical, or natural resources in the  
11                 petition area, including the extent to which traditional and customary Native  
12                 Hawaiian rights are exercised in the petition area;
- 13         b.     the extent to which those resources—including traditional and customary Native  
14                 Hawaiian rights—will be affected or impaired by the proposed actions; and
- 15         c.     the feasible<sup>36</sup> action, if any, to be taken by the Commission to reasonably protect  
16                 Native Hawaiian rights if they are found to exist. (*Ka Pa`aKai*, 94 Haw., at 47;  
17                 P.3d, at 1084.)

18 30.     Note that here, as with the application of the public trust doctrine, *supra*, COL 8-9, 11-12,  
19     there are no absolute rights, but a balancing of costs and benefits on a case-by-case basis.

20

21           **D.     Appurtenant Rights**

22

23 31.     WWC asserts that the Commission engaged in illegal rulemaking without administrative  
24     rules for appurtenant rights, and that the applications for appurtenant rights should be deferred  
25     and stayed pending adoption and publication of administrative rules. (WWC, COL 41-47.)

- 26         a.     To the contrary, the Court has stated that “we have adopted the general rule that  
27                 the choice between proceeding by general rule or by individual ad hoc litigation is one  
28                 that lies primarily in the informed discretion of the administrative agency. One useful

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<sup>36</sup> The Court has defined “feasible” as a “balancing of the benefits and costs” and not whether the action is “capable of achievement.” Note that this is the same balancing of benefits and costs that the Court has laid out under the public trust doctrine (*See Waiāhole I*, 94 Haw., at 141 n. 39; 9 P.3d, at 453 n. 39.)

1 distinction between rulemaking and adjudication is that the former affects the rights of  
2 individuals in the abstract, while the latter operates concretely upon individuals in their  
3 individual capacity (*internal marks and references omitted*).” (*Waiāhole I*, 94 Haw., at  
4 169; 9 P.3d, at 481.)

5  
6 **1. Applications Addressed in this Contested Case Hearing**

7  
8 32. On December 31, 2014, the Commission issued its Provisional Order on recognition of  
9 appurtenant rights, the first of a two-step process to recognize and quantify appurtenant rights of  
10 lands in Nā Wai `Ehā. The quantification would be done along with the surface WUPA process,  
11 which, along with amending the IIFS, are the subjects of this CCH. (FOF 19-20.)

12 33. Provisional recognition was not an exclusive determination of all claimed and unclaimed  
13 appurtenant rights, because appurtenant rights were preserved in 1978 by Article XI, § 7 of the  
14 Hawai`i Constitution and in 1987 by HRS § 174C-63 of the State Water Code. Thus, at the  
15 conclusion of this CCH, claims not recognized or not addressed may still be brought before the  
16 Commission.

17 34. The Provisional Order also did not rule out additional information being brought before  
18 the Commission. According to the December 31, 2014 Provisional Order: “First, the  
19 Commission will provisionally rule on the issue whether particular parcels have valid claims for  
20 Appurtenant rights, subject to the rights of land owners to file or submit additional information at  
21 a later time. Second, following this provisional order (and at a later time), the Commission will  
22 take up the question of how much water (or a duty of water) a particular parcel has a claim to use  
23 (*emphases added*).” (Provisional Order, p. 2.)

24 35. This CCH is that “later time,” with the remaining question being what is encompassed in  
25 the phrase “additional information.”

26 36. “For the provisional recognition phase, it was only necessary to document certain words  
27 that indicated water might have been used on the LCA.” (Minute Order #1, p. 3, June 25, 2015.)

28 37. The Provisional Order was “subject to a) the right of those Applicants who requested  
29 more time to file additional material by January 31, 2015; b) the need of the Commission staff to  
30 update information that was or may be received in the future; and c) later determination by the  
31 Commission (*emphases added*). (Provisional Order, p. 3.)

- 1 38. In this CCH, participants submitted a wide range of “additional information,” including:  
2 a. Additional information on approved LCAs for provisionally recognized TMKs  
3 (e.g. SWUPA 2342-Higashino).  
4 b. Substitute LCA(s) for provisionally recognized TMKs (e.g. SWUPA 2342-  
5 Higashino).  
6 c. New LCA(s) for provisionally recognized TMKs (e.g., SWUPA 2313-Kana).  
7 d. New LCA(s) on provisionally denied TMKs (e.g., SWUPA 2342-Higashino).  
8 e. New TMKs by parties with another provisionally recognized TMK (e.g. SWUPA  
9 2706N-HILT).  
10 f. New TMKs by parties not previously recognized for other TMKs (e.g., SWUPA  
11 2275-Sevilla).  
12 g. New appurtenant rights submission by parties who did not participate in the  
13 provisional approval process (e.g., SWUPA 2283-Pang).
- 14 39. “The purpose of the due process hearings (on provisional recognition) was to afford an  
15 opportunity for Appurtenant rights applicants, those with legal interests in the claimed parcels,  
16 and those claiming to be adversely affected legally by an Application to provide information and  
17 evidence on the Application with regard to whether a given parcel of land had a claim to  
18 Appurtenant rights.” (Provisional Order, pp. 1-2.)
- 19 40. During the CCH, many appurtenant rights applicants who had submitted additional  
20 information presented themselves at the hearing, gave oral testimony, and were available for  
21 cross examination. For those who were not available for direct testimony and cross-examination,  
22 the Hearings Officer had ruled that their appurtenant rights claims were denied without prejudice  
23 and that they could refile at a later time.<sup>37</sup> (Tr., 7/11/16, p. 5, l. 9 to p.6, l. 13.)
- 24 41. Parties did not raise objections to—and cross-examined—witnesses who testified on  
25 appurtenant rights that went beyond additional information on approved LCAs for provisionally  
26 recognized TMKs. Only WWC raised an objection—not during the CCH but in its proposed  
27 Conclusions of Law and on a different issue; i.e., that the Commission should have deferred and  
28 stayed applications for appurtenant rights, pending adoption and publication of administrative  
29 rules, an assertion that the Commission has addressed in COL 31, *supra*.

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<sup>37</sup> SWUPA 4445N-SPV Trust’s written testimony was submitted for the record without objection.

1 42. The Commission therefore concludes that due process has been satisfied, and all claims  
2 for appurtenant rights presented during the course of this CCH shall be addressed.

3  
4 **2. TMKs Derived from Multiple LCAs**

5  
6 43. “(A)ppurtenant water rights are rights to the use of water utilized by parcels of land at the  
7 time of their original conversion into fee simple (*emphasis added*).” (*Reppun v Board of Water*  
8 *Supply* [hereinafter, “*Reppun*”], 65 Haw. 531, at 551; 656 P.2d 57, at 71 [1982].)

9 44. Present-day parcels of land, or TMKs, are often comprised of fractions of multiple LCAs,  
10 which often had uses of water of varying degrees at the time of the Māhele.

11 45. If the letter of the law is followed, such appurtenant rightsholders: a) would have to  
12 exercise their rights on their already small TMKs according to the water rights associated with  
13 each fraction of their TMKs, making their appurtenant rights practically unusable; or b) would  
14 ignore the letter of the law, in turn making enforcement of the law by the Commission extremely  
15 difficult or practically unenforceable.

16 46. For such TMKs, the Commission rules that:

17 a. appurtenant rights based on multiple LCAs for one TMK may be exercised on the  
18 entire TMK, subject to the following:

19 i. This exception applies only to a TMK or a TMK that has other TMKs  
20 entirely within it. In the latter case, the collective waters may be used anywhere  
21 on the TMKs. If an applicant has two or more TMKs, the exception applies only  
22 to the TMK at issue and the permitted water for that TMK cannot be distributed to  
23 the other TMKs. The Commission recognizes that there are applicants with small,  
24 adjacent TMKs who intend to use water across the TMKs, and enforcement of the  
25 rule against use on one TMK from water with appurtenant rights on an adjacent  
26 TMK may be difficult if not impossible to enforce.

27 ii. In the case of TMKs larger than a few acres, the Commission will make a  
28 case-by-case determination as to whether the appurtenant right is limited to those  
29 portions of the TMK that are derived from the relevant LCAs.

1                   **3.       Quantification of Appurtenant Rights**

2  
3 47.     Appurtenant rights are not personal rights of the owner but are attached to the land and  
4 for a specific quantity of water:

- 5           a.     “Whenever it has appeared that a *kuleana* or perhaps other piece of land was,  
6 immediately prior to the grant of an award by the Land Commission, enjoying the  
7 use of water for the cultivation of taro or for garden purposes or for domestic  
8 purposes, the land has been held to have had appurtenant to it the right to use the  
9 quantity of water which it had been customarily using at the time named  
10 (emphasis added).” (*Territory v Gay*, 31 Haw. 376, at 383 [1930]; *aff’d* 52 F.2d  
11 356 [9<sup>th</sup> Cir. 1931]; *cert. denied* 284 US. 677 [1931].)  
12           b.     “(A)ppurtenant water rights are rights to the use of water utilized by parcels of  
13 land at the time of their original conversion into fee simple (emphasis added).”  
14 (*Reppun*, 65 Haw., at 551; 656 P.2d, at 71.)

15 48.     “(R)equiring too great a degree of precision in proof would make it all but impossible to  
16 even establish such rights...(W)hen...the same parcel of land is being utilized to cultivate  
17 traditional products by means approximating those utilized at the time of the Māhele, there is  
18 sufficient evidence to give rise to a presumption that the amount of water diverted for such  
19 cultivation sufficiently approximates the quantity of the appurtenant water rights to which that  
20 land is entitled.” (*Reppun*, 65 Haw., at 554; 656 P.2d at 72.)

21 49.     In order to quantify the appurtenant water rights, two expert testimonies have been  
22 offered into evidence: 1) the proportion of the kuleana that may have been in wetland taro at the  
23 time of the Māhele; and 2) the amount of water needed for growing wetland taro. (FOF 150-  
24 199.)

25  
26                   **a.       Water Use at the Time of the Māhele**

27  
28 50.     Lilikalā Kame`eleihiwa, an expert on the Māhele and Māhele records, provided rebuttal  
29 presumptions and guiding principles that she stated are the best available evidence for: 1)  
30 whether a kuleana award included land for growing of wetland taro, unirrigated pasture or  
31 dryland crops (*kula*), and/or a house lot (*pahale*); and 2) an estimate of the proportion of the

1 kuleana that was in each of these three categories of land use. (FOF 150-171.) [Hui/MTF and  
2 OHA FOF B-24 - B-36.]

3 51. It is hard to say that there would be some quantification of water for a kula or a pahale. In  
4 the old days, generally you would wait for rain to fall from the sky. (FOF 170-171.)

5 52. Kame`eleihiwa states that Māhele records sometime provide the number of lo`i being  
6 cultivated on a kuleana or `āpana, but generally do not specify the size of the lo`i. Her opinion is  
7 that without knowing the size of the lo`i, which can vary among kuleana, the number of lo`i is  
8 not a useful guide for estimating the acres in cultivation, but it is useful to indicate the existence  
9 and general extent of wetland kalo cultivation within a kuleana or `āpana. (FOF 159.) [Hui/MTF  
10 and OHA FOF B-7.]

11 a. However, under her rebuttal presumptions and guiding principles, the mention of  
12 only a few or even a single lo`i in a kuleana award could lead to the conclusion that the  
13 entire kuleana was in wetland taro at the time of the Māhele. (FOF 161, 163-165.)

14 53. Despite its shortcomings, particularly its tendency to overestimate the acres in kalo lo`i at  
15 the time of the Māhele, Kame`eleihiwa's method will be applied in all cases in the interests of  
16 equitable determinations of appurtenant rights across all claimants.

17 54. One of Kame`eleihiwa's presumptions is that all pōalima should be presumed to be  
18 cultivated in kalo, but expressed opinions only on kuleana awards and not on konohiki awards  
19 and government grants. (FOF 151-154, 164.)

20 a. When a pōalima is included within a LCA but identified as part of a konohiki  
21 award or government grant, it will be excluded from the evaluation of the kuleana award.

22 b. When a pōalima is included within a LCA but not identified as part of a konohiki  
23 award or government grant, it will be included in the evaluation of the kuleana award.

24 c. Konohiki awards and government grants will be excluded from the evaluation of  
25 appurtenant rights, because Kame`eleihiwa had no opinion on their use of water at the  
26 time of the Māhele nor how to evaluate the proportion of the award or grant that might  
27 have been in kalo lo`i. (FOF 151-15.)

28 1. Moreover, without identification of lands in kalo lo`i versus the acreage of  
29 the entire parcel, it may not be possible to reach a conclusion of the percent of the  
30 award or grant that had water rights, or the amount of award might be miniscule.  
31 For example, the Spreckels grant can be identified as consisting of 24,000 acres,



1 but the amount of land in kalo lo`i in `Īao Valley along Īao and Kinihapai  
2 Streams, even though extensive, would comprise only a miniscule portion of the  
3 entire grant. (FOF 392 [SWUPA 2304—Division of State Parks].)

4  
5 **b. Current Irrigation Requirements**

6  
7 **i. Lo`i Complexes**

8  
9 55. Paul Reppun, an expert on wetland taro cultivation, was of the opinion that current  
10 wetland taro requirements are between 100,000 to 300,000 gallons per acre per day (gad) of  
11 “new” water, which is water than can still serve the essential function of maintaining  
12 temperatures low enough to prevent crop failure due to rot and pests, and which has not been  
13 rendered useless for this cooling function by previous use in upstream lo`i. In the warmer months  
14 of the year, and under a normal production system using lo`i complexes without excess fallowed  
15 land, the higher figure should be used. The lower end would apply, for example, if a farmer had  
16 only two lo`i and kept one fallow. (FOF 178.)

17 56. Reasonable use is “such a quantity as is necessary for economic and efficient utilization.”  
18 (HRS § 174C-3.) The public trust resource of surface water is not intended to maximize a  
19 farmer’s yields and income, nor to substitute for good farming practices by increased irrigation  
20 flows.

21 a. Reppun’s requirements at the upper end of his range—i.e., 300,000 gad—are  
22 based on maximum use of a taro complex to maximize yields and income. (FOF  
23 180.) 100,000 gad would apply when half of a complex’s lo`i are in use (FOF  
24 178), so the higher figure assumes a much greater proportion of lo`i in plantings.

25 b. Moreover, the reason for throughflows is to prevent crop failure due to rot and  
26 pests and to reduce the need for weeding. (FOF 178, 190.) But farmers have other  
27 ways to manage their crops, such as growing taro less intensively, resting their  
28 fields, fallowing the lo`i and planting grass and sorghum to help kill organisms,  
29 and changing varieties of taro. (FOF 198, 200.)

1 c. Increased yields of taro do not necessarily mean increased yields of good-quality  
2 taro. 100 pounds of good-quality taro may yield 90 pounds of poi, but 100 pounds  
3 of not-very-good-quality taro may yield only 60 pounds of poi. (FOF 180.)

4 57. Reppun also maintains that his requirements of 100,000 to 300,000 gad reflect flowing  
5 water throughout the 14-15 month period from planting to harvest, with inflow to the lo`i shut  
6 off only when applying fertilizer or performing tasks that would stir up mud and cause muddy  
7 water to run out of the lo`i. (FOF 191.) However, in his testimony on the various stages of the  
8 crop cycle, flowing water is not required for a month after planting, for 2 to 5 months when  
9 fertilizing,<sup>38</sup> plus additional time when weeding is required. (FOF 187-188, 190-191.) Moreover,  
10 his maximum requirements of 300,000 gad would apply for a maximum of four months (June  
11 through October) and only for crops in the mature stage, when the crop is maturing and the leaf  
12 cover is shrinking down. (FOF 178, 181, 202.)

13 58. In the Commission's June 10, 2010 D&O, actual irrigation estimated at 130,000 to  
14 150,000 gad were deemed adequate, if Reppun's upper requirements estimate of 300,000 gad  
15 was valid and that "(a)s a general average throughout Hawai`i no water is required to enter  
16 patches approximately 40-50 percent of the time, either because of cultural practices including  
17 planned resting or fallowing of patches." (CCH-MA06-01, June 2010, FOF 330, COL 56.) In  
18 this CCH, Reppun disputes the 40-50 percent estimate of no flows. (FOF 191.)

19 59. The Commission restates its estimate of kalo lo`i complex irrigation requirements as  
20 150,000 gad, for the following reasons:

21 a. From Reppun's own testimony, flowing water is not required for a month after  
22 planting, for 2 to 5 months when fertilizing, plus additional time when weeding is  
23 required (FOF 193.)

24 b. Reppun's requirements at the upper end of his range—i.e., 300,000 gad—are  
25 based on maximum use of a taro complex to maximize yields and income, at the  
26 hottest time of the year, and for a maturing crop with decreased leaf cover. (FOF  
27 180-181.)

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<sup>38</sup> From a minimum of two weeks every two months for eight months, or two weeks x 4 = 8 weeks, or two months;  
to a maximum of two weeks every month for ten months, or two weeks x 10 = 20 weeks, or five months.

- 1 c. Reppun’s requirements cover a large range—100,00 gad to 300,000 gad—yet the  
2 whole emphasis was on the highest estimate of 300,000 gad, with only passing  
3 reference to the lowest estimate of 100,000 gad. (FOF 178.)
- 4 d. The reason for throughflows is to prevent crop failure due to rot and pests and to  
5 reduce the need for weeding. (FOF 178, 190.) Farmers have additional methods to  
6 manage their crops, such as reducing excessive losses through leakage, growing  
7 taro less intensively and resting their fields, fallowing the lo`i and planting grass  
8 and sorghum to help kill organisms, and changing varieties of taro. (FOF 198,  
9 210.)
- 10 e. Increased yields of taro do not necessarily mean increased yields of good -quality  
11 taro. 100 pounds of good-quality taro may yield 90 pounds of poi, but 100 pounds  
12 of not-very-good-quality taro may yield only 60 pounds of poi. (FOF 180.)
- 13 f. Reasonable use is the use of irrigation water “in such a quantity as is necessary  
14 for economic and efficient utilization.” (HRS § 174C-3.) It is not reasonable to  
15 use public trust surface waters to maximize yields and profits, nor to substitute for  
16 good farming practices.

17 60. 200,000 gad is the mid-point of Reppun’s irrigation requirements of 100,000 to 300,000  
18 gad; however, minimum requirements for the 14-15 month growing season is not 100,000 gad,  
19 but essentially zero (0) for more than 3-6 months. (FOF 193.) Moreover, Reppun’s irrigation  
20 requirements are predicated on maximizing yields and substitute in part for other management  
21 practices that can reduce crop failure due to rot and pests and to reduce the need for weeding.  
22 (FOF 178, 180, 190, 198, 210.)

23 61. The Commission concludes that 150,000 gad as the current general irrigation requirement  
24 for taro lo`i complexes is a reasonable use, or the quantity that is necessary for economic and  
25 efficient utilization. 150,000 gad is the average irrigation requirement over the 14-15 month  
26 period from planting to harvest, and is not the maximum irrigation at any one time, which may  
27 be much higher, as long as the 12-month moving average (12-MAV) utilized by the Commission  
28 is not exceeded—in this case, 150,000 gad.

29 62. In its 2010 Decision and Order, the Commission had proposed using losses instead of  
30 inflows for the permitted amounts. Losses were estimated at 15,000 gad to 40,000 gad, and flow-

1 through requirements were estimated at 130,000 gad to 150,000 gad. (CCH-MA06-01, June  
2 2010, COL 54, 56.)

3 a. The Commission's reasoning was as follows: "(w)hile the larger amounts of flow-  
4 through are reasonable for proper kalo cultivation, water use permits effectively remove  
5 these large amounts from all other uses; i.e., maintaining/restoring stream flows and other  
6 reasonable-beneficial offstream uses." (CCH-MA06-01, June 2010, COL 59.)

7 b. However, the Commission now concludes that inflows instead of estimated losses  
8 should be used as the permitted amounts.

9 1. In the USGS study, two measured inflows and outflows were as follows:

10 i. loss of 166,000 gad or 75 percent of the inflow of 221,000 gad;

11 and

12 ii. loss of 114,000 gad or 58 percent of the inflow of 195,000 gad.

13 (FOF 208-210.)

14 2. Therefore, there is no basis to assume that losses would be about 10  
15 percent of inflows (15,000 gad for an inflow of 150,000 gad) or even up to  
16 approximately 25 percent (40,000/150,000).

17 3. Moreover, there is no consistent pattern of return flows into the source  
18 `auwai, ditch, or stream/river after flowing through lo`i complexes, so it is not  
19 known how much of outflows from lo`i complexes would actually be available to  
20 other permittees.

21 4. Finally, how much water will actually be available will only be known  
22 after implementation of the permit system, and the priority categories established  
23 for the permits, *infra*, COL 199-202, will determine how much water will be  
24 allocated among permittees.

25  
26 **ii. Individual Lo`i**

27  
28 63. In the USGS study, the average inflow value for the 17 windward lo`i complexes was  
29 270,000 gad, and the average inflow value for five individual windward lo`i was 370,000 gad,  
30 *supra*, FOF 204. Between individual lo`i and lo`i complexes, this translates into about one-third

1 more per acre for individual lo`i versus lo`i complexes. So for an irrigation requirement of  
2 150,000 gad for lo`i complexes, individual lo`i would require about 200,000 gad.

3 64. Similarly Reppun estimates that wetland taro needs between 100,000 to 300,000 gad and  
4 that the lower end would apply, for example, if a farmer had only two lo`i and kept one fallow,  
5 *supra*, FOF 178. With 100,000 gad required for a lo`i complex of two individual lo`i with one  
6 fallow, the irrigated lo`i would be receiving 200,000 gad.

7 65. Thus, the general irrigation requirement for individual lo`i would be 200,000 gad,  
8 compared to 150,000 gad for lo`i complexes.

9 66. The difference will be germane to the irrigation requirements of kalo lo`i for household  
10 uses, where as little as one or two lo`i may be under cultivation.

11

### 12 **c. Irrigation at the time of the Māhele**

13

14 67. As for irrigation at the time of the Māhele, Reppun provided two contrasting opinions:

15 a. Speculating on what the irrigation requirements might have been at the time of the  
16 Māhele, he arrived at a quantity similar to what he identified as current  
17 requirements. (FOF 173-174.)

18 b. However, Reppun also stated that “how much water taro needed at the time of the  
19 Māhele is almost an irrelevant question... We need more today than before to  
20 some degree... I think conditions for growing taro are different now than they  
21 were in ancient times... We have far more weeds than we used to have  
22 before... (s)o controlling the amount of water wasn't as important, because when  
23 your lo`i go dry, that's when weeds germinate. So now we have a situation where  
24 if we let lo`i go dry and those weeds germinate, we suffer enormously. We have  
25 had crops where we have to weed every couple of weeks... The other thing is our  
26 climate is changing... So the water in streams is declining naturally. As the flow  
27 of the streams declines, the temperature goes up a little bit. So our needs for  
28 flowing water is little bit higher than it used to be... water temperatures go up, air  
29 temperatures going to go up, soil temperatures going go up, and going to need to  
30 have more water to grow taro.” (FOF 175-177). [Hui/MTF and OHA FOF B-56.]

1 68. “(When) the same parcel of land is being utilized to cultivate traditional products by  
2 means approximating those utilized at the time of the Māhele, there is sufficient evidence to give  
3 rise to a presumption that the amount of water diverted for such cultivation sufficiently  
4 approximates the quantity of the appurtenant water rights to which that land is entitled (*emphasis*  
5 *added*).” (*Reppun*, 65 Haw. at 554; 656 P.2d at 72.)

6 a. The amount of water required to cultivate wetland taro by means approximating  
7 those utilized at the time of the Māhele now requires so much more water that  
8 Reppun has concluded that “how much water taro needed at the time of the  
9 Māhele is almost an irrelevant question... We need more today than before to  
10 some degree... I think conditions for growing taro are different now than they  
11 were in ancient times... We have far more weeds than we used to have  
12 before... (s)o controlling the amount of water wasn’t as important.” (FOF 175-  
13 177.)

14 b. Thus, the presumption that the amount of water required today sufficiently  
15 approximates the quantity of the appurtenant water rights to which that land is  
16 entitled is not supported. Even though the means of cultivation approximate those  
17 utilized at the time of the Māhele, requirements have significantly increased.

18 69. The amount of water attached to an appurtenant right is the amount utilized at the time of  
19 the Māhele. It does not change with changed circumstances. Thus, appurtenant rightsholders are  
20 not entitled to the amount of water required today to cultivate the same amount of lo`i that was  
21 being cultivated at the time of the Māhele.

22 70. So what quantity of water accompanies an appurtenant right?

23 a. “It does seem a bit quaint in this age to be determining water rights on the basis of  
24 what land happened to be in taro cultivation in 1848. Surely any other system  
25 must be more sensible. Nevertheless, this is the law in Hawaii, and we are bound  
26 to follow it.” (*McBryde v Robinson* [“*McBryde*”], 54 Haw. 174 at 189, n. 15; 504  
27 P.2d 1330, at 1340, n. 15 [1973]; *aff’d on rehearing*, 55 Haw. 260; 517 P.2d 26  
28 [1973]; *appeal dismissed for want of jurisdiction and cert. denied*, 417 U.S. 962  
29 [1974].)

1 b. “(R)equiring too great a degree of precision in proof would make it all but  
2 impossible to even establish such rights.” (*Reppun*, 65 Haw., at 554; 656 P.2d, at  
3 72.)

4 c. The amount of water utilized at the time of the Māhele was significantly less than  
5 what is required today, but there is no method to determine the specific quantity  
6 that reflects that difference.

7 1. The maximum amount of water utilized at the time of the Māhele would  
8 be just less than the minimum amount of current requirements; i.e.,  
9 100,000 gad.

10 71. The Commission concludes that 100,000 gallons per acre per day (gad) for lo`i  
11 complexes approximates the quantity of the appurtenant water rights to which that land is  
12 entitled. Appurtenant rightsholders are entitled to the amount of water in use at the time of the  
13 Māhele and not to the amount of water required today to cultivate the same amount of lo`i that  
14 was being cultivated at the time of the Māhele.

15  
16 **d. Water for Ponds**  
17

18 72. While Lilikalā Kame`eleihiwa, an expert on the Māhele and Māhele records, provided  
19 rebuttal presumptions and guiding principles for whether a kuleana award included land for  
20 growing of wetland taro, unirrigated pasture or dryland crops (kula), and/or a house lot (pahale),  
21 *supra*, FOF 150-171, she did not address water used for ponds at the time of the Māhele.

22 73. Ponds, as with kalo lo`i, have some flow-through requirements as well as leakage and  
23 evaporation. Some applicants—e.g., SWUPA 2706N-HILT, SWUPA 2275-Sevilla—referenced  
24 ponds in their appurtenant rights requests, estimating use at 36,000 gad by referencing the  
25 Commission’s 1990 Oahu Water Management Plan. That Plan estimated water consumption for  
26 growing freshwater prawns at 14,000 gad to 36,000 gad, with some types of aquaculture using  
27 seawater or brackish water. (Hawaii Water Plan, Oahu Water Management Plan, DLNR,  
28 CWRM, p. 3-28 [March 1990].)

29 74. The Commission estimates water consumption for fishponds at the time of the Māhele as  
30 14,000 gad, the low end of current estimated requirements for growing freshwater prawns.

1                   **4.       Extinguishment of Appurtenant Rights**

2  
3   75.     In *Reppun* both riparian and appurtenant rights were reserved for the grantor when title  
4   passed to the grantee. The Court ruled that riparian rights nevertheless passed with the title,  
5   because such rights had a statutory basis and were not subject to reservation by deed and were  
6   not the grantor’s to reserve. On the other hand, the Court ruled that there was nothing to prevent  
7   a transferor from preventing an appurtenant right to pass to the transferee, but appurtenant  
8   easements attach to the land and cannot exist or be utilized apart from that land. Therefore, the  
9   attempt to reserve the appurtenant right had the effect of extinguishing it. (*Reppun*, 65 Haw., at  
10  550-552; 656 P.2d, at 69-71.)

11  76.     The Commission has the duty to adhere to *Reppun* “until the decision has been reversed  
12  or overruled by the court of last resort or altered by legislative enactment (*emphasis added*).”  
13  (*State v Brantley*, 99 Haw. 463, at 483; 56 P.3d 1252, at 1272 [2002].)

14  77.     As explained below, the 1978 constitutional amendments and the 1987 State Water Code  
15  now provide appurtenant rights with constitutional and statutory bases, respectively, and  
16  appurtenant rights can no longer be extinguished. The remaining issue is whether the date from  
17  which they can no longer be extinguished is November 8, 1978, when the constitutional  
18  amendments were ratified, or July 1, 1987, when the Code became law.

19  78.     The State Water Code, which became law on July 1, 1987, expressly states that  
20  “(a)ppurtenant rights are preserved. Nothing in this part shall be construed to deny the exercise  
21  of an appurtenant right by the holder thereof at any time. A permit for water use based on an  
22  existing appurtenant right shall be issued upon application.” (HRS § 174C-63.)

23  79.     Therefore, at least since July 1, 1987, appurtenant rights have a statutory basis, are not  
24  subject to reservation by deed, are not the grantor’s to reserve, and pass with the title.

25  80.     Moreover, appurtenant rights have a constitutional basis and have been preserved since  
26  November 8, 1978, when article XI, § 7 of the Hawai`i Constitution was ratified, which stated  
27  that “(t)he State has an obligation to protect, control and regulate the use of Hawaii’s water  
28  resources for the benefit of the people,” and that “(t)he legislature shall provide for a water  
29  resources agency,” whose duties included “assuring appurtenant rights.”

30         a.     In *Waiāhole I*, two parties had argued that article XI, § 7, was not self-executing  
31         and required further legislative action. The Court ruled that the amendment did



1 two things: 1) create a fiduciary duty to regulate and control the water; and 2)  
2 establish a coordinating agency to regulate all water. “Article XI, section 7, is thus  
3 self-executing to the extent that it adopts the public trust doctrine (*emphasis*  
4 *added*.)” (*Waiāhole I*, 94 Haw., at 132 n. 30; 9 P.3d, at 444 n. 30.)

5 b. The public trust is “a retention of authority and the imposition of a concomitant  
6 duty to maintain the purity and flow of our waters for future generations and to  
7 assure that the waters of our land are put to reasonable and beneficial uses...(T)he  
8 nature of the State’s ownership (is) a retention of such authority to assure the  
9 continued existence and beneficial application of the resource for the common  
10 good.” (*Robinson v Ariyoshi*, 65 Haw. 641, at 674; 658 P.2d 287, at 310 [1982].)

11 81. “Appurtenant rights,” which is a reasonable and beneficial use, a beneficial application of  
12 water resources, and a part of the public trust doctrine, was therefore assured when article XI, § 7  
13 of the Hawai`i Constitution was ratified on November 8, 1978.

14 82. Appurtenant rights cannot be extinguished since November 8, 1978.

15 a. Article XI, § 7 of the Hawai`i Constitution was self-executing to the extent that it  
16 adopted the public trust doctrine. (*Waiāhole I*, 94 Haw. at 132 n. 30; 9 P.3d, at  
17 444 n. 30.)

18 b. If the intent or impact of the Water Code was to delay assurance of appurtenant  
19 rights from November 8, 1978, to July 1, 1987, “(t)he state has certain powers and duties  
20 which it cannot legislatively abdicate. This court has held that the (public trust) doctrine  
21 would invalidate such measures, sanctioned by statute but violative of the public trust  
22 (*reference omitted*).” (*Waiāhole I*, 94 Haw., at 130-131; 9 P.3d, at 442-443.)

23 83. A tangential issue is why the 1982 *Reppun* decision did not limit its holding to pre-1978  
24 deed reservations, as it was aware of the amendments, and had referred to Article XI, § 7 of the  
25 Hawai`i Constitution in a footnote to its discussion of “public use” as a “reasonable and  
26 beneficial use.” (*Reppun*, 65 Haw., at 560 n. 22; 656 P.2d, at 76 n. 22.)

27 a. In *Reppun*, taro farmers observed decreased flow in the Waihe`e Stream in  
28 windward O`ahu in 1975. They brought a lawsuit in 1976 to enjoin the Honolulu  
29 Board of Water Supply from diverting any of the stream’s waters. Thus, the  
30 situation before the trial court in *Reppun* occurred in 1975-1976—two years  
31 before the 1978 constitutional amendment. (Hearings Officer’s Findings &

1 Recommendations, Provisional Recognition of Appurtenant Rights, Nā Wai `Ehā  
2 Surface Water Management Area, Waihe`e, Waiehu, `Īao, Waikapū Streams,  
3 Maui, Hawaii, October 14, 2014. p. 6.)

- 4 b. The Hawai`i Supreme Court did not address the 1978 constitutional amendment,  
5 because the 1976 trial took place before the amendment. The Court addressed the  
6 law as it was understood at the time of the trial. In general, courts are reluctant to  
7 apply a new law retroactively to a trial court’s decision that occurred before the  
8 new law came into effect:

9 “The duty of this court, as of every other judicial tribunal, is to decide  
10 actual controversies by a judgment which can be carried into effect, and  
11 not to give opinions upon moot questions or abstract propositions, or to  
12 declare principles or rules of law which cannot affect the matter in issue in  
13 the case before it (*emphasis added*).” (*Wong v Board of Regents*, 62 Haw.  
14 391, at 394-395; 616 P.2d 201, at 204 [1980]; *Nā Wai `Ehā*, 128 Haw., at  
15 245; 287 P.3d, at 146.)

16 84. Thus, given the 1978 constitutional amendment preserving appurtenant rights, the  
17 Commission may not now treat post-1978 efforts to reserve water in the same manner as the  
18 *Reppun* decision did for pre-1978 cases. The 1978 constitutional amendment trumps ambiguous  
19 decisional law.

20 85. The Commission’s analysis and conclusion are in keeping with the directive by the  
21 Hawai`i Supreme Court in *Waiāhole I*:

22 “(T)he Commission must not relegate itself to the role of a mere umpire passively calling  
23 balls and strikes for adversaries appearing before it, but instead must take the initiative in  
24 considering, protecting, and advancing public rights in the resource in every stage of  
25 planning and decisionmaking process (*internal quotation marks and citations omitted*).”  
26 (*Waiāhole I*, 94 Haw., at 142; 9 P.3d, at 455.)

27 86. With a few exceptions, the applicants’ deed reservations were made after November 8,  
28 1978, with a few after November 8, 1978 but before July 1, 1987, *infra*.

29  
30 **5. Appurtenant Rights as Traditional and Customary Rights**  
31

1 87. The Court has stated in a footnote and without explanation that “(t)he (public) trust’s  
2 protection of traditional and customary rights also extends to the appurtenant right recognized in  
3 *Peck*.” (*Waiāhole I*, 94 Haw., at 137, n. 34; 9 P.3d 409, at 449, n. 34.)

4 88. However, *Peck* states that an appurtenant right “may be used for any purpose which the  
5 owner may deem for his interest, always taking care that any change does not affect injuriously  
6 the rights of others.” (*Peck v Bailey*, 8 Haw. 658, at 665 [1867].)

7 89. “(A)ppurtenant water rights are rights to the use of water utilized by parcels of land at the  
8 time of their original conversion into fee simple land (*emphasis added*).” (*Reppun*, 65 Haw., at  
9 551; 656 P.2d, at 71.) Native Hawaiian traditional and customary rights are personal rights of  
10 descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778. (Hawai`i  
11 State Constitution, Article 12, § 7.)

12 90. Therefore, in order for an appurtenant right to also be a native Hawaiian traditional and  
13 customary right:

- 14 a. The appurtenant right would have to be exercised by a native Hawaiian who can  
15 trace his/her current or prior ownership of, or tenancy on, the land which has the  
16 appurtenant right to a period prior to November 25, 1892. (*State v Zimring II*, 52  
17 Haw. 472, at 475; 479 P.2d 202, at 204 [1970].)
- 18 b. The exercise of the appurtenant right would have to be for subsistence, cultural, or  
19 religious purposes. (Hawai`i State Constitution, Article 12, § 7.)

## 20

### 21 **E. Water Duty for Diversified Agriculture**

## 22

23 91. “(W)ater use for diversified agriculture on land zoned for agriculture is consistent with  
24 the public interest. Such use fulfills state policies in favor of reasonable and beneficial water use,  
25 diversified agriculture, conservation of agriculture lands, and increased self-sufficiency of this  
26 state. See Haw. Const. art. XI, §§ 1 & 3; HRS § 174C-2(c).” (*Waiāhole I*, 94 Haw., at 162; 9  
27 P.3d, at 474.)

28 92. The conversion from sugarcane to diversified agriculture irrigation is similar to the  
29 conversion that was taking place in leeward O`ahu at the time of the Waiāhole Ditch Contested  
30 Case. Not only were IIFS to be determined but also water-use permit applications, including  
31 those for the fields that were being converted to diversified agriculture. One principal issue was

1 determining the sufficiency of evidence to meet the water-use permit requirements for what were  
2 embryonic agricultural operations.

3 93. “Although past water use is a good indication of actual water needs, it is not the only  
4 means of determining actual water needs. The Commission may issue permits based on  
5 approximate demand when there is uncertainty on actual uses in diversified agriculture. Any  
6 uncertainty in issuing permits for future actual water needs would be properly offset by the  
7 Water Commission’s condition that the applicant show actual use of the permitted amount within  
8 four years of the Decision and Order and the Water Commission’s mandate that any unused  
9 permitted water must be released into the streams.” (*Waiāhole I*, 94 Haw., at 162; 9 P.3d, at 473-  
10 474; *Waiāhole II*, 105 Haw., at 22, 93 P.3d, at 664.)

11 94. “(The Court in *Waiāhole II*) does not condone a blanket application of 2,500 gad to all  
12 future allotments of water for diversified agriculture. Instead, the Water Commission must  
13 continue making decisions based on the best information available.” (*Waiāhole II*, 105 Haw., at  
14 23; 93 P.3d, at 665.)

15 a. The 2,500 gad water duty for diversified agriculture in *Waiāhole I* was based on  
16 large commercial farming, with one-third of the cultivated acres being planted at any  
17 given time, or 7,500 gad per planted acre. (CCH-OA95-1 On Remand, December 28,  
18 2001, p. 77.)

19 b. In contrast, small farmers often have their land planted all year, with no fallowing  
20 when dealing with small acreages, and planting densities are much greater than the  
21 typical large farming operation. (CCH-OA95-1 On Remand, December 28, 2001, p. 84.)

22 95. However, in this CCH on Maui, water use is quite different from the contrast between  
23 large- and small-scale farming on O’ahu as reflected in *Waiāhole*, revealing no obvious  
24 differences between large- and small-scale farming, nor between types of crops. The least  
25 amounts in the examples of FOF 308, *supra*, are 300-400 gad for fruit trees, and the highest  
26 amounts are 4,000-18,000 gad for mixed uses, with the last amount, 18,000 gad, a clear outlier.

27 96. The Commission therefore does not adopt a higher amount for small farmers versus  
28 larger farmers but instead adopts the lesser amount, 2,500 gad, as the maximum irrigation  
29 requirement for both large- and small-scale agriculture of all types of crops, including nurseries  
30 and orchards. Applicants seeking lesser amounts will not have their permits increased to the  
31 maximum requirement of 2,500 gad, and applicants seeking larger amounts will be permitted at

1 2,500 gad, except when their larger requests are justified. Standards such as HDOA’s for specific  
2 crops will not be accepted in lieu of specific justifications for amounts larger than 2,500 gad,  
3 because they have been shown to generally over-estimate irrigation requirements. (FOF 307-  
4 308.)

5  
6 **F. Alternative Sources**

7  
8 97. Permit applicants must demonstrate the absence of practicable mitigating measures,  
9 including the use of alternative water sources. (*Waiāhole I*, 94 Haw., at 162; 9 P3d, at 473-474.)

10  
11 **1. Practicable Alternatives**

12  
13 98. An alternative source is practicable if it is available and capable of being utilized after  
14 taking into consideration cost, existing technology, and logistics. (*Waiahole II*, at 19; 93 P.3d, at  
15 661.)

16 a. Hui/MTF and OHA contend that “(a)n applicant’s inability to afford an  
17 alternative source of water, standing alone, does not render that alternative impracticable.  
18 *Waiahole II*, at 19, 93 P.3d, at 661.” (Hui/MTF and OHA, COL 95.)

19 i. This interpretation does not reflect the ruling in *Waiahole II*.

20 ii. An alternative identified by the applicant which the Commission had  
21 considered for a proposed golf course was desalinating Ewa Caprock water in the  
22 900 to 1,100 ppm chlorides range to below 200 ppm. The Commission found that  
23 it would cost \$6 million in capital costs, with operating costs of \$3.00 per 1,000  
24 gallons, exclusive of land and easement acquisitions. The applicant had contended  
25 that the operating costs of \$3.00 per 1,000 gallons was not economically feasible,  
26 to which the Court concluded: “(I)n the instant case, (the applicant’s) ability to  
27 afford \$3.00 per 1,000 gallons, alone, would not render the alternative practicable,  
28 just as (the applicant’s) inability to afford \$3.00 per 1,000 gallons, alone, would  
29 not render the alternative impracticable (*emphases added*).” The Court then went  
30 on to conclude that the Commission had properly concluded that this alternative  
31 was not practicably available after considering the costs of desalinating,

1 construction, and operation, and the availability of leases and easements.  
2 (*Waiahole II*, at 19; 93 P.3d, at 661.) In other words, the Commission had not  
3 based its decision solely on operating costs that the applicant had claimed were  
4 not affordable but on an assessment of costs, technology, and logistics.

5 iii. Moreover, an alternative is not “practical” if it is capable of achievement  
6 at any cost. The Commission has the duty “to protect public trust uses whenever  
7 feasible (*emphasis added*),” which the Court has stated does not mean “capable of  
8 achievement” but a “balancing of benefits and costs.” (*Waiahōle I*, at 141 and n.  
9 39; 9 P.3d, at 453 and n. 39.) Similarly, practicability must be determined after a  
10 balancing of benefits and costs after considering costs, technology, and logistics.  
11 So even if technology and logistics hurdles can be overcome, the Commission  
12 could still find the alternative not practicably available due to costs.

## 13 14 **2. Not Required for Exercised Appurtenant Rights**

15  
16 99. Permits under appurtenant rights are exempt from the requirement that there are no  
17 practical alternatives, because appurtenant rights are constitutional rights to use surface water  
18 from a specific surface water source. (Haw. Const., Art. XI, § 7.)

## 19 20 **3. Possible Alternative Sources Shared by Applicants**

21  
22 100. Many applicants who are subject to the alternative water source requirement, including  
23 applicants whose permit requests exceed the quantity of their appurtenant rights, are similarly  
24 situated in terms of both the identification and analysis of possible alternative sources. Thus, as  
25 in the case of the permit requirement that proposed uses are consistent with state and county  
26 plans and policies, *infra*, COL 174, once the identification and analysis are provided here, they  
27 are incorporated by reference in those SWUPAs. Applicants who have possible alternative  
28 sources not in common with other applicants will be addressed individually. These include  
29 SWUPAs 2178/2179N—Maui County Department of Water Supply, SWUPAs 2356, 2297N,  
30 3471N, and 3472N—Waikapu Properties, and SWUPAs 2298/2299N—Varel.

1                                   **a.       Other Public Trust Water Resources**

2  
3 101. “Considering whether alternative water resources are practicable innately requires  
4 prioritizing among public trust resources.” (*Waiāhole II*, 105 Haw., at 20; 93 P3d, at 662.)

5 102. “‘Water’ or ‘waters of the State’ means any and all water on or beneath the surface of the  
6 ground, including natural or artificial watercourses, lakes, ponds, or diffused surface water and  
7 water percolating, standing, or flowing beneath the surface of the ground.” (HRS § 174C-3.)

8 103. In *Waiāhole III*, the Intermediate Court of Appeals ruled that:

9       a.       the Commission’s decision-making in granting Campbell Estate’s permit  
10              application was consistent with the analytical framework established by the  
11              Hawai`i Supreme Court; and

12       b.       it was not arbitrary, capricious, or an abuse of discretion for the Commission to  
13              prioritize between trust resources and to allocate non-potable Waiāhole Ditch  
14              water for Campbell Estate’s agricultural needs instead of potable Waipahu-  
15              Waiawa Aquifer water, which could be used to satisfy the public’s future drinking  
16              water needs. (*In Re Water Use Permit Applications* [hereinafter, “*Waiāhole III*”],  
17              130 Haw. 346, 310 P. 3d 1047 [2010].)

18 104. In the *Waiāhole* contested case, the prioritizing was between potable and non-potable  
19 trust resources to be used for non-potable purposes. In this contested case, possible alternatives  
20 include both potable and non-potable groundwater sources, which, like the rivers and streams,  
21 are also public trust resources. Therefore, the Commission is faced with prioritizing among  
22 public trust resources:

23       a.       not only between potable and non-potable public trust water resources for non-  
24              potable purposes,

25       b.       but also between non-potable public trust water resources for non-potable  
26              purposes.

27 105. For prioritizing between potable and non-potable water for non-potable purposes:

28       a.       many applicants also have limited access to MDWS’s potable water; and

29       b.       at least two applicants may have access to potable groundwater, which will be  
30              addressed in those SWUPAs. (FOF 328 [SWUPAs 2298/2299N—Vare], 427 [SWUPAs  
31              2356, 2297N, 3471N, 3472N—Waikapu Properties].)

1 106. For prioritizing between non-potable water resources for non-potable purposes, at least  
2 one applicant has access to non-potable groundwater, and one applicant may have access, which  
3 will be addressed in those SWUPAs. (F [OF 480SWUPA 2206—HC&S], 427 [SWUPAs 2356,  
4 2297N, 3471N, 3472N—Waikapu Properties].)

5  
6 **i. Potable Water**  
7

8 107. The Commission has previously established the policy that when both potable and non-  
9 potable water is available for non-potable purposes, non-potable water should be used. Even  
10 when there is no immediate need to use the potable water source, “(t)he Water Commission was  
11 entitled to consider the future water needs of Hawai`i and its people in fulfilling the State of  
12 Hawai`i’s ‘obligation to protect, control and regulate the use of Hawai`i’s water resources for the  
13 benefit of its people.’ Haw. Const. Art. XI, § 7; see Haw. Const. Art. XI, § 1.” (*Waiāhole III*,  
14 130 Haw. 346, 310 P. 3d 1047 [2010].)

15 108. For the many applicants who have access to municipal water but are requesting surface  
16 water for domestic and small-scale agricultural uses, the Commission finds that the municipal  
17 water is not “practicably available” for such non-potable uses for the purpose of the SWUPA  
18 determinations.

19 109. For applicants who have developed their own potable groundwater wells (SWUPAs  
20 2298/2299N—Varel and SWUPAs 2356, 2297N, 3471N, 3472N—Waikapu Properties), the  
21 Commission also finds that those waters are not “practicably available” for their non-potable  
22 uses for the purposes of the SWUPA determinations and will address their SWUPAs on that  
23 basis.

24 a. However, depending on the priority category of their permitted uses, surface  
25 water may not be available. In those cases, there would be only one source for  
26 agricultural irrigation—the applicant’s potable water well(s). As such, there would be no  
27 practical alternative to using their potable water wells for agricultural irrigation, with the  
28 only “alternative” being not to irrigate their agricultural lands.

29 b. If these wells and agricultural activities are on lands owned by the applicant and  
30 the lands are not in a groundwater management area, then the common law applies, the  
31 applicant has correlative rights to use the potable well water for agricultural irrigation on



1 the overlying lands, and the Commission has no permitting authority to regulate that use  
2 other than the use must be reasonable. (*Ko`olau Agricultural Co., Ltd v Commission on*  
3 *Water Resource Management*, 83 Haw. 484, at 491; 927 P.2d 1367, at 1374 [1996].)  
4

5 **ii. Non-potable Water**  
6

7 110. The Commission finds that in prioritizing among non-potable trust resources, its choice is  
8 not limited to one or the other, but instead is based on a balancing of competing interests.

9 Operationally, this may mean the use of both non-potable resources, which can only be  
10 determined by an analysis of the specific circumstances of each case to determine the amount of  
11 each competing resource which is not “practicably available.”

12 111. “Where the Commission’s decisionmaking evinces a ‘high level of openness, diligence,  
13 and foresight commensurate with the high priority these rights command under the laws of our  
14 state,’ the decision satisfies close look review governing public trust resources.” (*Nā Wai `Ehā*,  
15 128 Haw., at 253; 287 P.3d at 154, citing *Wai`ola*, 103 Haw., at 422; 83 P.3d, at 685.)  
16

17 **b. Recycled Water**  
18

19 112. When costs, technology and logistics are resolved, the necessary infrastructure to make  
20 recycled wastewater available from MDWS’s Wailuku-Kahului Wastewater Reclamation  
21 Facility would take at least six years, and approximately 3 mgd of R-1 recycled would be  
22 reliably available for non-MDWS use. (FOF 317.)

23 113. “Practical” to this point in time has been limited by single-user analyses. Thus, while the  
24 costs of upgrading the Wailuku-Kahului WWRF from R-2 to R-1 production can be reliably  
25 estimated, the costs and availability of leases and easements to transport the recycled water to  
26 specific users are both uncertain and likely to fail a cost-benefit analysis for single users who are  
27 assumed to have to bear the entire costs as well as the logistics of acquiring easements and  
28 completing the delivery pipelines. Thus, the practicability and eventual use of recycled water  
29 from the Wailuku-Kahului WWRF requires a coordinated effort between MDWS and potential  
30 users.  
31



1 h. The conveyance of irrigation and domestic water supplies to downstream points  
2 of diversion; and

3 i. The protection of traditional and customary Hawaiian rights. (HRS § 174C-3.)

4 119. “Noninstream use” means the use of stream water that is diverted or removed from its  
5 stream channel and includes the use of stream water outside of the channel for domestic,  
6 agricultural, and industrial purposes. (HRS § 174C-3.)

7 120. “A petition to adopt an interim instream flow standard under this section shall set forth  
8 data and information concerning the need to protect and conserve beneficial instream uses of  
9 water and any other relevant and reasonable information required by the commission.” (HRS §  
10 174C-71(2)(C).)

## 11 12 **1. IIFS Under the Commission’s 2010 and 2014 Orders**

### 13 14 **a. Instream Values**

15  
16 121. Restoration of the four Nā Wai `Ehā rivers and streams would:

17 a. increase habitat for natural fauna, as well as provide passage benefits for upstream  
18 habitat of native amphidromous species;

19 b. provide positive effects and enhanced protection of Native Hawaiian traditional  
20 and customary practices in each of the rivers and streams, including but not limited to  
21 gathering, fishing, spiritual practices and values, and downstream kalo cultivation; and

22 c. support other beneficial instream use and values, including but not limited to  
23 aesthetic values and outdoor recreational activities, support of native non-amphidromous  
24 species, research and education, groundwater aquifer recharge, conveyance of irrigation  
25 and domestic water supplies to downstream points of diversion, and maintenance of  
26 ecosystems such as estuaries, wetlands, and stream vegetation.

27 (FOF 223-288; 2014 Mediated Agreement, COLs 8-10.)

28 122. Following the 2010 Decision and Order, the improved flows in Waihe`e River and  
29 Waiehu Stream resulted in large increases in combined species habitat. Waihe`e River gained  
30 over 2,400 habitat units, increasing from less than 1% to 11.1% of natural habitat units, and

1 Waiehu Stream gained over 3,500 habitat units, increasing from 6.1% to 55.5% of natural habitat  
2 units. (FOF 291.)

3 123. Because the North Waiehu Diversion has been closed, WWC is no longer diverting water  
4 from North Waiehu Stream, so the passage upstream and downstream of native stream species is  
5 not affected. (FOF 293.)

6 124. The flows of both Waihe`e River and Waiehu Stream have been consistent since their  
7 restorations. (FOF 290, 296.)

8 125. Near the mouth of Waihe`e River, the springs and wetlands that had dried up from the  
9 diversions have recently been returning and providing habitat for endangered native birds and a  
10 resource for cultural education. (FOF 297.)

11 126. The Wailuku River now has enough consistent flow that resident children have begun to  
12 swim in it, and the flow of Waiola Spring near the mouth of the river has become more  
13 consistent, remaining saturated throughout the hot summer months. (FOF 299-300.)

14 127. Since water has been returned to Waikapū Stream, water has returned to Kealia Pond,  
15 which previously “was mud flats,” despite its not flowing continuously in its lowest reaches.  
16 (FOF 85, 301.)

17 128. WWC was to provide water from the Waihe`e Ditch for kuleana property that were  
18 previously served from the North Waiehu Ditch, but WWC has not developed an engineering  
19 plan to be able to determine if it can take water out of the Waihe`e Ditch at that point. (FOF  
20 294.)

21 129. During periods when Wailuku River’s flow falls below the restoration of 10 mgd, 3.4  
22 mgd may still be diverted to accommodate MDWS’s 3.2 mgd for its water treatment plant and  
23 0.2 mgd for kuleana users served exclusively by the `Īao-Waikapū Ditch. (FOF 290.)

24

25 **b. Noninstream Uses**

26

27 130. At the time of the 2010 and 2014 restoration of the Nā Wai `Ehā rivers and streams,  
28 HC&S was still farming sugar, and reasonable use was determined to be 21.75 mgd on the  
29 Waihe`e-Hopoi Fields and 6.06 mgd on the `Īao-Waikapū Fields, with 2.15 mgd to 4.20 mgd in  
30 reasonable system losses, and the only reasonable alternative was 18.5 mgd from Well No. 7.  
31 (2014 Mediated Agreement, FOF 45, 50, 52, 57.)

1 131. Therefore, HC&S’s reasonable net use of surface waters was 11.46 mgd to 13.51 mgd.  
2 132. WWC’s reasonable losses were estimated at 2.73 mgd. (2014 Mediated Agreement, FOF  
3 65.)  
4 133. Kuleana users on WWC’s system was estimated at 6.84 mgd, not counting three known  
5 and other unknown direct diversions from Waiehu Stream, Wailuku River, and Waikapū Stream.  
6 (CCH-MA06-01, June 2010, FOF 227.)  
7 134. At the hearing for CCH-MA06-01, June 2010, nearly 50 persons testified for kuleana  
8 uses, involving about 135 acres, of which about 45 acres were or were intended to be cultivated,  
9 primarily in kalo lo`i but also for vegetables, trees, and plants for subsistence and cultural  
10 purposes. (CCH-MA06-01, June 2010, FOF 233.)  
11 135. WWC had water-delivery agreements with 34 entities, with maximum use under the  
12 agreements at 8.288 mgd. Actual use in 2005 was 1.42 mgd and in 2007, had increased to 2.37  
13 mgd. (CCH-MA06-01, June 2010, FOF 307.)  
14 136. Thus, at the time of the 2010 and 2014 IIFS amendments, there were 23.4 mgd to 25.45  
15 mgd of reasonable noninstream uses, plus an additional amount for kuleana purposes on the 45  
16 acres that were intended to be but not yet cultivated.

17  
18 **i. Economic Impact**  
19

20 137. For HC&S, the factor most important to its economic viability after sugar prices was  
21 sugar production, and the most significant driver of sugar production was the availability of  
22 water for irrigation. (2014 Mediated Agreement, COL 58.)  
23 138. For WWC, its business model is sensitive to the volume of water available for diversion  
24 from Wailuku River and Waikapū Stream, particularly from Wailuku River, and it is unable to  
25 add new users or change the rates it charges existing customers while its application for a  
26 certificate of convenience and necessity was pending before the Public Utilities Commission.  
27 (2014 Mediated Agreement, COL 67.)  
28 139. For MDWS, there was no challenge to its use of 3.2 mgd, which are “domestic uses of  
29 the general public,” a public trust purpose. (CCH-MA06-01, June 2010, COL 240; 2014  
30 Mediated Agreement, COLs 68-71.)

1 140. For the kuleana lands, there would be economic consequences if the amended IIFS are  
2 established at such levels that existing uses and recognized appurtenant rights, whether exercised  
3 for traditional and customary or commercial purposes, cannot be practiced because of shortages  
4 of available water. Traditional and customary practices are public trust purposes, and if  
5 appurtenant rights are not exercised for traditional and customary purposes, the exercise of  
6 appurtenant rights still have a higher priority over private commercial uses. (CCH-MA06-01,  
7 June 2010, COL 240.)  
8

9 **2. IIFS Under This Contested Case Hearing**  
10

11 141. Whether the IIFS established under the 2010 and 2014 amendments should remain the  
12 same or whether one or more stream flows should be increased further, or even reduced, depends  
13 on the evidence presented during the hearings of this contested case.  
14

15 **a. Instream Values**  
16

17 142. There has been a significant revival of instream values in all of Nā Wai `Ehā following  
18 the IIFS amendments of 2010 and 2014:

19 a. Waihe`e River has increased from 1% to 11.1% of natural habitat units, and near  
20 its mouth, the springs and wetlands have been returning.

21 b. Waiehu Stream has increased from 6.1% to 55.5% of natural habitat units.

22 c. Wailuku River has resulted in the river being deep enough in places for  
23 swimming and the revival of springs in its lower reaches.

24 d. Waikapū Stream's flows have increased enough that water has returned to Kealia  
25 Pond, despite the natural intermittent nature of flows in its lower reaches, *supra*, COL  
26 122-127.

27 143. From the perspective of historic, pre-diversion flows:

28 a. Waihe`e River's restoration of 10 mgd is less than its lowest flow of 14 mgd  
29 measured at the same elevation.

30 b. North Waiehu Stream's restoration of 1.6 mgd (equivalent to 1.0 mgd at its new,  
31 lower location after infiltration losses) is equivalent to its lowest flow of 1.6 mgd

1 measured at the same elevation. South Waiehu Stream's 2010 restoration of 0.9 mgd was  
2 less than the lowest flow of 1.5 mgd at a higher elevation, without accounting for  
3 possible infiltration losses.

4 c. Wailuku River's restoration of 10 mgd was greater than the lowest flow of 7.1  
5 mgd measured at the same elevation.

6 d. Waikapū Stream's restoration of 2.9 mgd was less than the lowest flow of 3.3  
7 mgd measured at the same elevation.

8 (FOF 17, 56, 62, 67-69, 74-75, 81-82.)

9 144. Waihe'e River's restoration of 10 mgd has resulted in springs and wetlands returning  
10 near its mouth. It also increased available habitat units from 1% to 11.1%, and increasing the  
11 restoration by an additional 4 mgd would result in further, undetermined increases in available  
12 habitat. (COL 142-143.)

13 145. North Waiehu Stream's restoration of 1.6 mgd<sup>39</sup> equals its lowest flow of 1.6 mgd. South  
14 Waiehu Stream's 2010 restoration of 0.9 mgd was just below the Spreckels Ditch at an elevation  
15 of 270 feet, and the lowest flow at elevation 870 feet was 1.5 mgd, with unknown infiltration  
16 losses between the two points. The additions resulted in increasing available habitat from 6.1%  
17 to 55.5%. (FOF 290, COL 142-143.)

18 146. Any further increases in habitat from increasing the restoration flows will not result in  
19 proportionate increases. The first amounts of increased flows in dry or very dry low-flow streams  
20 quickly result in large increases in wetted habitat, and the increases in wetted habitat from further  
21 increases in flow become less dramatic. (CCH-MA06-01, June 2010, FOF 589, COL 244.)

22 147. Wailuku River's restoration of 10 mgd is 2.9 mgd greater than its lowest flow of 7.1 mgd  
23 and has resulted in deep stretches of the river and the return of springs at the mouth. (COL 142-  
24 143.)

25 148. Waikapū Stream's restoration of 2.9 mgd is 0.4 mgd less than its lowest flow, and despite  
26 numerous users below the restoration point (See Figure 1 for the 2.9 mgd restoration just below  
27 the South Waikapū Ditch), it has resulted in flows that have increased enough to return water to  
28 Kealia Pond, despite its not flowing continuously in its lowest reaches under natural conditions.  
29 (COL 142-143.)  
30

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<sup>39</sup>Equivalent to 1.0 mgd now measured at a lower level and accounting for infiltration losses. (FOF 17.)

1                                   **b.     Noninstream Uses**

2  
3 149. Significant changes have occurred on the demand for water since the 2010 and 2014  
4 amendments.

5 150. HC&S has ceased sugar operations and is transitioning to a diversified agriculture  
6 operations with an emphasis on bioenergy tropical grasses:

7         a.         On July 25, 2016, HC&S gave notice that it will not pursue the SWUPA for the  
8         ʻĪao-Waikapū fields, because it would no longer lease those lands. Waikapu Properties,  
9         LLC, the owner of those fields, will continue to pursue SWUPA 2205 in place of HC&S.  
10         (FOF 25, 372.)

11 151. In contrast to the estimated 135 acres of kuleana lands, of which about 45 acres were or  
12 were intended to be cultivated, primarily in kalo lo`i but also for vegetables, trees, and plants for  
13 subsistence and cultural purposes, claims for appurtenant rights in this CCH were for a total of  
14 432.305 acres, of which 248.53 acres are being recognized by the Commission and of which  
15 24,618,299 gpd of the proposed exercise of those rights have been found to be reasonable and  
16 beneficial. (See Table 3.)

17 152. WWC’s non-kuleana, paying customers have increased their requests for water, and new  
18 customers applying for water have also significantly increased.

19 153. Under the 2010 and 2014 IIFS amendments, noninstream reasonable uses had been  
20 estimated at 23.4 mgd to 25.45 mgd. (COL 136.) In this CCH, SWUPAs that have been  
21 determined to meet the permitting requirements total 39,266,941 gpd, an increase of nearly 15  
22 mgd or over 60 percent of the estimated reasonable uses:

23	Waihe`e River:	8,327,070 gpd
24	Waiehu Stream:	832,930 gpd
25	Wailuku River:	6,428,297 gpd
26	Waikapū Stream:	2,957,252 gpd
27	Multiple Sources:	17,991,392 gpd
28	WWC system losses:	<u>2,730,000 gpd</u>
29	Total:	39,266,941 gpd

30         (See Table 2.)



- 1 154. By permit categories, discussed *infra*, COL 199-202, priorities are in descending order:  
2 a. Category 1: Uses exercising Native Hawaiian traditional and customary rights  
3 and domestic uses of the general public (MDWS’s public water system).  
4 b. Category 2: Existing uses and uses exercising appurtenant rights.  
5 c. Category 3: New uses not being exercised under appurtenant rights.

6 155. Domestic consumption of water by individual users is exempt from the permit  
7 requirements. (HRS §174C-3, -48.)

8 156. SWUPAs by categories are:

- 9 Category 1: 4,743,217 gpd  
10 Category 2: 27,750,676 gpd (plus 2.73 mgd in system losses for WWC)  
11 Category 3: 3,977,384 gpd  
12 Domestic: 65,664 gpd  
13 Total: 39,266,941 gpd

14 (See table 2.)

15  
16 **i. Economic Impact**  
17

18 157. The likelihood of negative economic consequences to kuleanas exercising recognized  
19 traditional and customary Native Hawaiian rights and to MDWS is low, as both are in Category  
20 1 and have the highest priority for noninstream uses. Their total reasonable uses are 4.743 mgd,  
21 most of which is MDWS’s 3.2 mgd.

22 158. Category 2 uses are the largest amount at 27.751 mgd, which include both existing uses  
23 and applicants exercising their appurtenant rights, whether for existing or new uses. Some of the  
24 Category 2 users also have new uses that do not fall under their appurtenant rights and  
25 consequently are in Category 3.

26 159. Category 3 uses are 3.977 mgd and would be issued permits only if there is water  
27 remaining after meeting domestic uses and categories 1 and 2 uses.

28 160. If, after the IIFS is amended, there is insufficient water for all noninstream uses, the  
29 Commission’s implementation plan would be to permit Category 1 users first, then Category 2,  
30 and lastly, Category 3. If there is insufficient water to meet all permits in the lowest category for

1 which water is still available, then each permittee would be reduced by the same percentage,  
2 *infra*, COL 202.

3 161. Alternatives to river/stream waters are limited:

4 a. Only a few applicants have access to wells, *supra*, FOF 328 (SWUPA  
5 2298/2299N—Varel), 427 (SWUPA 2205/2356/2297N, 3471N & 3472N—Waikapu  
6 Properties), and the Commission’s policy is that potable water is not a practical  
7 alternative to nonpotable surface water for irrigation. However, these wells are not in a  
8 designated groundwater management area, those applicants have common-law correlative  
9 water rights, and the Commission has no authority to prohibit them from using potable  
10 groundwater for irrigating their lands.

11 b. Recycled water from MDWS’s Kahului WWRF is potentially available, but only  
12 a maximum of about 3 mgd, and while the technology to upgrade R-2 to R-1 water exists,  
13 costs and logistics make it impractical for any one potential user to realize its potential,  
14 *supra*, COL 112-113.

15 c. MDWS’s potable water system is not available for irrigation beyond modest  
16 domestic uses because of insufficient supply and the Commission’s policy that potable  
17 water is not a practical alternative for irrigation purposes, *supra*, COL 107.

18 162. For commercial operations that would have no alternative water source for their current  
19 and/or planned irrigation activities, they may have to forego their operations partially or totally,  
20 with lost-opportunity costs associated with those decisions and decisions on how they could use  
21 their lands productively without the amounts of water needed for agricultural operations.

22 163. For the primary water deliverer, WWC, the economic consequences would be a direct  
23 correlation between available water and its revenues to deliver those waters, or even a cessation  
24 of its operations altogether.

25 164. If WWC ceases its operations, except for HC&S’s direct management of parts of the  
26 Spreckels Ditch, all other users, MDWS, kuleana, and private, would not have access to water,  
27 and even HC&S’s access would be significantly reduced. In that case, the County of Maui,  
28 perhaps through MDWS, would have to acquire and operate the system in the public interest of  
29 the County’s citizens.

30

31 c. **Conclusions**

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165. The flow that is reflective of typical flow conditions is the Q<sub>50</sub>, or the flow equal to or exceeded 50% of the time. (FOF 46.) Subtracting the current IIFS provides an estimate of water available for noninstream uses at least 50 percent of the time:

	<u>Q<sub>50</sub></u>	<u>2010/2014 IIFS</u>	<u>Remainder</u>
Waihe`e River:	34 mgd (FOF 56.)	10 mgd	24 mgd
N. Waiehu Stream:	3.1-3.6 mgd (FOF 62.)	1.6 mgd	1.5-2 mgd
S. Waiehu Stream:	2.4-4.2 mgd (FOF 67)	0.9 mgd	1.5-3.3 mgd
Wailuku River:	25 mgd (FOF 74.)	10 mgd	15 mgd
Waikapū Stream:	4.8-6.3 mgd (FOF 81.)	2.9 mgd	<u>1.9-3.4 mgd</u>
		Total:	43.9-47.7 mgd

(FOF 17, 56, 62, 74, 81.)

166. The total for SWUPAs is 39.3 mgd, *supra*, COL 156, leaving approximately 4.6-8.4 mgd after meeting the SWUPAs, at least for half of the time.

167. Adding 4 mgd to Waihe`e River’s current IIFS of 10 mgd would increase the IIFS to the level of its lowest flow, 14 mgd. This would raise the IIFS of Waihe`e River to similar comparative levels as for Waiehu Stream and Wailuku River. Waikapū Stream’s IIFS of 2.9 mgd is less than its lowest flow of 3.3 mgd, but flows have increased enough to return water to Kealia Pond, despite diversions below the location of the IIFS and its not flowing continuously in its lowest reaches under natural conditions.

168. While the addition of 4 mgd to the IIFS of Waihe`e River would seem to leave enough water to satisfy all of the SWUPAs, the comparisons are under conditions where the natural flow of the rivers and streams would be sufficient to meet noninstream requirements only 50 percent of the time; i.e., for half of the time, total irrigation requirements would not be met, the magnitude varying daily. Thus, there will be times when the Category 3 SWUPAs will have no water or insufficient water, and times when the Category 2 SWUPAs will have insufficient water and have proportionately lower deliveries.

169. Finally, available water from each river or stream will vary with stream flows. Thus, there will also be times when total available water would be sufficient to meet all requirements,

1 but the requirements from a particular source cannot be met because of a deficiency between  
2 water available and irrigation requirements.

## 3 4 **H. Surface Water-Use Permit Applications (SWUPAs)**

### 5 6 **1. Existing Uses**

7  
8 170. “An application for a permit to continue an existing use must be made within a period of  
9 one year from the effective date of designation. Except for appurtenant rights, failure to apply  
10 within this period creates a presumption of abandonment of use, and the user, if the user desires  
11 to revive the use, must apply for a permit under section 174C-51.” (HRS § 174C-50(c).)

12 171. The effective date of designation was April 30, 2008, and applications for existing-use  
13 permits had to be filed within a period of one year from the effective date of designation, or no  
14 later than April 30, 2009 (*supra*, FOF 8).

### 15 16 **2. New Uses**

17  
18 172. There is no deadline for new-use permit applications, but to be included in this CCH,  
19 new-use applications had to be submitted by July 1, 2016, ten days before the start of the CCH  
20 on July 11, 2016. (FOF 21; H.A.R. §13-167-54[d].)

21 173. Applications for new uses must establish that the proposed use of water:

- 22 a. Can be accommodated with the available water source;
- 23 b. Is a reasonable-beneficial use as defined in section 174C-3;
- 24 c. Will not interfere with any existing legal use of water;
- 25 d. is consistent with the public interest;
- 26 e. Is consistent with state and county general plans and land use designations;
- 27 f. Is consistent with county land use plans and policies; and
- 28 g. Will not interfere with the rights of the department of Hawaiian home lands as  
29 provided in section 221 of the Hawaiian Homes Commission Act.

30 (HRS § 174C-49(a).)

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**3. Shared Requirements**

174. Because of the large number of new-use SWUPAs and the redundancies that would be entailed by repeating each of the requirements listed above in COL 173, *supra*, for each SWUPA, the Commission addresses each requirement here, identifying which are shared by all and which will be addressed in each individual new-use SWUPA.

- a. Can be accommodated with the available water source:
  - 1. Prior to ruling on the existing and new-use SWUPAs, the Commission will determine the IIFS for the Nā Wai `Ehā rivers and streams, with the remaining flows available for noninstream uses. The Commission has also established a priority system among the SWUPAs, *infra*, COL 199-202.
- b. Is a reasonable-beneficial use as defined in section 174C-3:
  - 1. “Reasonable-beneficial use” means the use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and the public interest. (HRS § 174C-3.)
  - 2. This requirement is redundant with others listed; i.e., in the public interest and consistent with state and county plans and policies.
  - 3. “In such a quantity as is necessary for economic and efficient utilization” will be addressed for each SWUPA.” For the remainder of the definition, see *infra*.
- c. Will not interfere with any existing legal use of water;
  - 1. New-use SWUPAs are addressed after existing use determinations have been made. However, in the priority system adopted, *infra*, COL 199-202, those portions of new-use SWUPAs that fall under the applicant’s appurtenant rights are of equal priority as existing-use SWUPAs, because appurtenant rights are preserved under the Hawai`i Constitution, the Water Code does not supplant the public trust doctrine, and there are no absolute priorities among uses of the water resources trust, *supra*, COLs 2-3, 8-9.

1 d. Is consistent with the public interest, state and county general plans and land use  
2 designations, and county land use plans and policies.

3 1. The public interest “also encompasses a duty to promote the reasonable  
4 and beneficial use of water resources in order to maximize their social and  
5 economic benefits to the people of the state,” *supra*, COL 8. The “public interest”  
6 is satisfied by a showing that the proposed use is reasonable and beneficial.

7 2. All of the lands of Nā Wai `Ehā are either zoned agriculture or urban in  
8 the state and county general plans and land use designations, and therefore  
9 consistent with county land use plans and policies. (HRS § 205-4:5; Maui County  
10 Code Chapters 19:04 and 19:06.)

11 e. Will not interfere with the rights of the department of Hawaiian home lands as  
12 provided in section 221 of the Hawaiian Homes Commission Act. (HRS § 174C-  
13 49(a).)

14 1. All water-use permits issued by the Commission are subject to these  
15 rights.

#### 16 17 **4. Confounding of Existing- and New-Use Applications**

18  
19 175. Only a few applicants attempted to measure their existing use, and many applicants  
20 presented what they believed were their irrigation requirements rather than their measured or  
21 estimated actual use and used Reppun’s highest estimate of 300,000 gad for kalo lo`i.

22 a. For example, a few applicants who attempted to measure their existing use  
23 included SWUPAs 2324/2325N—La`a & Rodrigues and SWUPAs 2322/2323N—  
24 Barrett using the 5-gallon bucket method, *supra*, FOF 351, 348, and SWUPA 2283—  
25 Pang, *supra*, FOF 346, using the number of hours running a 1800 gph pump, and  
26 SWUPA 2155—Suzuki, *supra*, FOF 433 who had a metered use. Except for metered use,  
27 measurements were usually done once and not throughout the one-year period prior to  
28 April 30, 2008. (FOF 8.)

29 b. The great majority of applicants used Reppun’s highest estimate of 300,000 gad  
30 for lo`i complex requirements in place of their existing use, including SWUPAs

1 2309/2310N—Ayers & Freitas and SWUPAs 2225/2226N—Doherty, *supra*, FOF 345,  
2 360.

3 176. When existing uses cannot be verified:

4 a. “The quantity being consumed shall be determined and verified by the best  
5 available means not unduly burdensome on the applicant, as determined by the  
6 commission.” (HRS § 174C-50[f].)

7 b. “The commission shall also issue an interim permit for an estimated, initial  
8 allocation of water if the quantity of water consumed under the existing use is not  
9 immediately verifiable, but the existing use otherwise meets the conditions of a permit  
10 and is reasonable and beneficial.” (HRS § 174C-50[e].)

11 c. Even if not “immediately verifiable,” the existing use must still be “reasonable  
12 and beneficial.” But if the amount of existing use is not immediately verifiable, how can  
13 a determination be made that it is reasonable and beneficial?

14 177. It is now over 9 years since April 30, 2008, and some parties have had their water cut off  
15 since then when the North Waiehu Ditch was abandoned and no alternative source has been  
16 available, and it is unlikely that all or even the majority of applicants for existing uses can verify  
17 their uses as of April 30, 2008. (FOF 8, 136, 329-330.)

18 178. The Commission could adopt the policy that existing-uses that cannot be verified would  
19 be treated as new uses, but concludes that it would not be in keeping with the spirit of the Water  
20 Code’s directive that the determination is “not unduly burdensome on the applicant.” (HRS §  
21 174C-50[f].)

22 179. Permits for existing uses, as for all permitted uses, must only be for amounts necessary  
23 for economic and efficient utilization, for which the Commission has established standards for  
24 kalo lo`i, diversified agriculture, and domestic uses. Thus, existing uses, whether measured or  
25 not, cannot exceed those amounts. So there are limits to the amounts that would be recognized as  
26 existing uses.

27 180. Therefore, the Commission adopts the policy that, when uses as of April 30, 2008 cannot  
28 be verified, it will be assumed that the use was the amount required for economic and efficient  
29 utilization for those specific uses; e.g., 150,000 gad for kalo lo`i. The amount will also be limited  
30 to the acreage claimed in the original existing-use SWUPA and not to any subsequent  
31 amendments.

1 181. The Commission recognizes that such a policy likely will overestimate many of the  
2 existing uses for which verification is not possible, but concludes that such a policy meets the  
3 spirit of the Water Code’s directive that the determination is “not unduly burdensome on the  
4 applicant.” (HRS § 174C-50[f].)

5 182. In the Commission’s priority categories, *infra*, COL 199-202, existing-use and  
6 appurtenant rights permits are assigned the same priority Category 2. Many of the existing-use  
7 applicants also have applied for recognition of appurtenant rights, and many of those with  
8 appurtenant rights may well have their existing uses fall within those rights, therefore reducing  
9 the number of applicants who will have existing –use permits in excess of what they should have  
10 been permitted.

11 183. Some applicants were unsure what application to file and filed a new-use instead of an  
12 existing-use SWUPA.

13 a. For example, Kamasaki had filed a new-use SWUPA but before the application  
14 deadline for existing uses. (FOF 432.)

15 184. Many applicants either changed their existing-use requests in their SWUPA to higher  
16 amounts in their written and oral testimonies, or explicitly requested an increase over their  
17 existing uses, without filing new-use SWUPAs.

18 a. For example, SWUPA 2155—Suzuki changed his request from 17,379 gpd of  
19 metered use to 21,371 gpd, his use over the past five years after his acreage was fully  
20 planted; SWUPA 2171—Molina had an existing use of 20,000 gpd, using the bucket  
21 method, which she requested to be increased to 38,250 gpd; and SWUPA 2275—Sevilla,  
22 Smith & County of Maui had requested an existing use of 4,100 gpd for two 0.1 acre  
23 gardens and 1 acre of dryland taro, using Maui County standards, which they increased to  
24 6,101,200 gpd. (FOF 433, 390, 397 .)

25 185. The requirements for filing of a water-use permit specify the information that must be  
26 submitted, and “(t)he commission in its discretion may allow a person to apply for several related  
27 withdrawals in the same application for a water permit.” (HRS § 174C-51.)

28 186. The Administrative Rules mirror HRS § 174C-51 and also states that “(e)ach permit  
29 application shall be made on forms furnished by the Commission.” (HAR § 13-171-12.)



1 187. Finally, for new-use permit applications, they must have been made by July 1, 2016, ten  
2 days before the start of the CCH on July 11, 2016, in order to be included in this CCH. (FOF 21;  
3 H.A.R. §13-167-54[d].)

4 188. The Commission interprets these provisions as providing it the authority to address  
5 timely existing- and new-use requests even though the wrong form was submitted for an existing  
6 use or no additional form for a new use was submitted. The permit applications were made on  
7 forms provided by the Commission, and the applicant can request several related withdrawals in  
8 the same application.

9  
10 **5. Domestic Uses**

11  
12 189. “Domestic use” means any use of water for individual personal needs and for household  
13 purposes such as drinking, bathing, heating, cooking, noncommercial gardening, and sanitation.  
14 (H.R.S. §174C-3.)

15 190. “(N)o permit shall be required for domestic consumption of water by individual users.”  
16 (H.R.S. §174C-48(a).)

17 191. “Any person making a use of water in any area of the State shall file a declaration of the  
18 person’s use with the commission...If no declaration is filed, the commission, in its discretion,  
19 may conclusively determine the extent of the uses required of declaration.” (HRS § 174C-26(a)  
20 and (d).)

21 192. The Water Code does not quantify the amount of water that would qualify for “domestic  
22 use,” but:

23 a. 2002 State of Hawai`i Water System Standard for Maui County domestic  
24 cultivation is 3,000 gad, *supra*, FOF 311.

25 b. While no acreage is defined:

26 i. An “average typical residential customer” in Maui County uses 400 gpd to  
27 600 gpd of combined indoor and outdoor use, and as high as 1,500 to 2,000 gpd  
28 for irrigation of “lush tropical landscape treatment” in arid areas, *supra*, FOF 309.

29 ii. Maui County has accommodated agricultural development lots with 600 to  
30 1,200 gpd, but limits further allocations so as not to provide excessive amounts of  
31 water to developments not engaged in bona fide agriculture, *supra*, FOF 310.

1 193. Considering both the use of 400 gpd to 600 gpd for combined indoor and outdoor use by  
2 the Maui County average typical residential customer and the domestic cultivation standard of  
3 3,000 gad, it is reasonable to: a) assume that 0.1 acre would use 300 gpd; and b) apportion 0.2  
4 acre to the typical residential customer's indoor and outdoor use of 600 gpd (0.2 acre x 3,000 gad  
5 = 600 gpd).

6 194. Domestic cultivation will be capped at 3,000 gad. While 3,000 gad for domestic  
7 cultivation is higher than the 2,500 gad adopted for diversified agriculture, the Commission  
8 assumes that domestic cultivation typically has less land lying fallow and planting densities  
9 higher than in commercial operations.

10 195. The Commission also concludes that:

- 11 a. domestic cultivation will be limited to a maximum of 1.0 acre;
- 12 b. therefore, the maximum amount of water qualifying for domestic use will be  
13 3,000 gpd; and
- 14 c. such uses meet the Water Code's definitions of "domestic use" and "domestic  
15 consumption of water by individual users" and will be exempt from the permit  
16 requirements.

17

## 18 **6. Competing Applications**

19

20 196. "If two or more applications which otherwise comply with sections 174C-49 are pending  
21 for a quantity of water that is inadequate for both or all, or which for any other reason are in  
22 conflict, the commission shall first, seek to allocate water in such a manner as to accommodate  
23 both applications, if possible; second, if mutual sharing is not possible, then the commission  
24 shall approve that application which best serves the public interest. (HRS § 174C-54.)

25 197. The Commission may impose restrictions on some uses not shared by other uses, for  
26 "such measures lay squarely within the Commission's appointed function of weighing and  
27 negotiating competing interests in regulating the water resources of this state. See, e.g., HRS §  
28 174C-31 (d) (2), (k) – (m)."<sup>40</sup> (*Waiāhole I*, 94 Haw. at 169; 9 P.3d at 481.)

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<sup>40</sup> HRS § 174C-31 (d)(2) refers to "desirable uses worthy of preservation by permit, and undesirable uses for which permits may be denied"; (k) refers to "prohibit(ing) or restrict(ing) other future uses"; (l) refers to "certain uses...(which) would constitute an undesirable use for which the commission may deny a permit..."; and (m) refers to "designat(ing) certain uses...(which) shall be preferred over other uses."

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**a. Permit Categories**

198. After sufficient water is returned to the Nā Wai `Ehā rivers and streams to meet the IIFS, the variable nature of flows available for offstream uses makes it necessary: 1) to allocate water in such a manner as to accommodate all approved SWUPAs when possible; and 2) when accommodating all permit holders is not possible, to impose restrictions on some uses not shared by other uses.

199. The Commission therefore categorizes permits as follows, in descending order of priority:

- a. Category 1:
  - i. existing and new uses exercised under traditional and customary Native Hawaiian rights, and domestic uses of the general public, particularly drinking water—i.e. MDWS.
- b. Category 2:
  - i. existing and new uses exercised under appurtenant rights; and
  - ii. existing uses.
- c. Category 3:
  - i. new uses not based on appurtenant rights.

200. For Category 1, appurtenant rights must be traced back to the Māhele, but traditional and customary Native Hawaiian rights trace back to a later time, November 25, 1892. (*State v Zimring (I)*, 52 Haw. 472, at 475; 479 P.2d 202, at 204 (1970).

- a. Therefore, there could be Native Hawaiians who are not the original grantees but who settled on or owned the land by November 25, 1892. Whether or not they have occupied or owned the land continuously since that date, they would have traditional and customary rights on that land. Therefore, appurtenant rights and traditional and customary rights to the same land need not have been initiated concurrently.
- b. Moreover, while the quantity of appurtenant rights is the amount exercised at the time of the Māhele, there are no such explicit constraints on the exercise of traditional and customary rights. Therefore, if the quantity of water under the appurtenant right is insufficient to cultivate taro lo`i under current conditions, then the difference would still

1 fall under traditional rights. Hence, under Category 1, one acre of taro lo`i would have an  
2 appurtenant right of 100,000 gpd and current irrigation requirements of 150,000 gpd.  
3 There would be a traditional and customary right for 150,000 gpd, of which 100,000 gpd  
4 was also an appurtenant right.

5 201. For Category 2, if permits are approved for amounts that exceed the amounts recognized  
6 as appurtenant rights, the amounts exceeding the appurtenant rights will fall under Category 3,  
7 new uses not based on appurtenant rights.

8 202. When there is insufficient water to meet all approved permits, Category 1 has priority,  
9 followed by Category 2, then Category 3. When water is available for the lowest category but  
10 insufficient to meet all allocations, their allocations will be reduced by the same percentages,  
11 regardless of the quantities of water affected.<sup>41</sup>

### 13 I. Determination of Appurtenant Rights and Surface Water-Use Permits

14  
15 203. Because of the large number of SWUPAs—many of whom have also applied for  
16 recognition of appurtenant rights—as well as the complexity of many of the SWUPAs, the  
17 determination of appurtenant rights and SWUPAs for the applicants is preceded by a reiteration  
18 of their Findings of Fact (FOF) for easier reference. The title of each SWUPA is immediately  
19 followed by the supporting FOF in parentheses. The references for the FOF have been deleted  
20 here and can be found in the section on Findings of Fact at sections I.G.3.a-e.

21  
22 204. **SWUPA 2157—Wailuku Water Company** (FOF 322)

23 a. On April 22, 2009, WWC filed an existing-use application for system losses equal  
24 to 7.34 percent of total diversions as measured from seven stream diversions: the  
25 Waihe`e and Spreckels Ditch diversions on Waihe`e River, the North Waiehu Ditch  
26 diversion on North Waiehu Stream, the Īao diversion on Wailuku River, and the South  
27 Waikapū Ditch, Waihe`e Ditch, and Reservoir 6 diversions on Waikapū Stream.

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<sup>41</sup> If the percent reduction were 10%, 10,000 gpd would be reduced to 9,000 gpd, 50,000 gpd would be reduced to 45,000 gpd, etc.

1 b. System losses had been determined by a study conducted in 1988, at which time  
2 system losses were about 11.6% of total diversions. WWC had then repaired structures  
3 and ditches, resulting in a reduction of system losses to about 7.34% of total diversions.

4 c. After the Commission's Decision and Order on CCH-MA06-01, June 2010,  
5 WWC conducted further repairs and modifications, including repairing ditch and intake  
6 structures, as well as closing reservoirs and the North Waiehu Ditch, and minimized  
7 "flow-through" losses from unused water reaching the end of the ditch system.

8 1. In 2010, WWC made repairs to the Spreckels Ditch at Field 25, the Īao-  
9 Waikapū Ditch near Kukahi Drive, the Waihe`e Ditch at South Waiehu Stream,  
10 and Reservoir 10.

11 2. In 2011, the intakes on South Waikapū Stream, the Waihe`e Ditch at Field  
12 8 were repaired, and the North Waiehu Stream diversion was shut down.

13 3. In 2012, WWC repaired structures at the Spreckels Ditch intake on  
14 Waihe`e River, the Waihe`e Ditch where water is dropped at the Hopoi Chute to  
15 Spreckels Ditch, sealed the Reservoir 27 intake from Waihe`e Ditch, closed  
16 Reservoir 27, and made modifications to the intake and Reservoir 27 ditch.

17 4. In 2013, WWC repaired structures at the Waihe`e Ditch intake on Waihe`e  
18 River, the Waihe`e Ditch at Field 97, the Waihe`e Ditch at Maalaea, the Spreckels  
19 Ditch intake on the Waihe`e River, and the Reservoir 97 intake ditch.

20 5. Reservoirs 6, 8, 13, 14, and 29 were also closed.

21 d. In its prehearing filings, WWC reduced its request for system losses from 7.34%  
22 to 4.97% of water diverted for delivery to authorized users.

23 e. WWC's system losses of 4.97% are less than:

24 1. USDOA's Soil and Conservation Service's National Engineering  
25 Handbook, which indicates that a carefully managed, manually operated irrigation  
26 water delivery system should have losses of 10% or less.

27 2. The American Water Works Association's information and standards for  
28 potable water systems indicate that system losses for such a system should be  
29 10% or less.

30 3. MDWS's testimony that system losses for open distribution systems are  
31 typically 10 to 15%.

- 1 f. 4.97% equates to a system loss of 2.73 mgd.
- 2 g. System losses could be reduced further by about 400,000 gpd if portions of the
- 3 system that are open were converted to a cement gunite-lined ditch, but at a cost in excess
- 4 of \$5 million.
- 5 h. WWC is issued a permit for system losses of 2.73 mgd, or approximately 4.97%
- 6 of water diverted for delivery to authorized users.
- 7 1. There is no category assigned to WWC’s permit, as its losses accompany delivery
- 8 of water to permitted uses and cannot be prioritized.
- 9

10 **1. Waihe`e River**

11

12 **a. Waihe`e River**

13

14 205. **SWUPA 2365N—Diannah Lai Goo** (FOF 324)

15

- 16 a. Diannah Lai Goo filed a total of five SWUPAs for lands her `ohana owns mauka
- 17 and makai in Waihe`e, which receive water directly from Waihe`e River and two kuleana
- 18 `auwai—the “Waihe`e Valley North” and the “Waihe`e Valley South” `auwai: SWUPAs
- 19 2231, 2232N, 2233, 2234N, and 2365N. Diannah’s daughter April Goo testified in
- 20 support of all applications.
- 21 b. The Goos seek a new-use water permit for two parcels that would receive water
- 22 directly from the Waihe`e River: TMK Nos. (2) 3-2-004:008 (“Parcel 8”) and (2) 3-2-
- 23 004:010 (“Parcel 10”).
- 24 c. The Goo `ohana requests recognition of appurtenant rights for Parcels 8 and 10 of
- 25 315,000 gpd and a permit to grow kalo in the same amount, based on 1.05 acres and
- 26 Reppun’s high estimate of 300,000 gad.
- 27 d. The Goo `ohana’s maternal side has owned these lands since the time of the
- 28 Māhele and still possesses the original deeds.
- 29 e. The Commission provisionally approved appurtenant rights for LCA 3507:2.
- 30 f. Parcels 8 and 10 make up the entirety of LCA 3507:2, confirmed by RP 4114.
- 31 Parcel 8 is all of `āpana 2, mahele 1 and Parcel 10 is all of `āpana 3, mahele 2 of LCA

1 3507. The foreign testimony supporting LCA 3507 states that `āpana 2 was a “section of  
2 lois.” The LCA map for `āpana 2 depicts a pō`alima separating mahele 1 and mahele 2,  
3 and an `auwai adjacent to both mahele is further evidence that both parcels were  
4 cultivated in lo`i kalo.

5 d. The Goos are recognized as having appurtenant rights of 105,000 gpd (100,000  
6 gad x 1.05 acres) for Parcels 8 and 10, and issued a new-use permit of 157,500 gpd  
7 (150,000 gad x 1.05 acres). 105,000 gpd is based on both appurtenant rights and  
8 traditional and customary rights, and 52,500 gpd is based on traditional and customary  
9 rights.

10 e. The new-use permit of 157,500 gpd is in Category 1.

11  
12 206. **SWUPA 3617N—Joshua Chavez** (FOF 325)

13 a. Joshua Chavez filed a new-use SWUPA on July 26, 2012 for TMKs No. (2) 3-2-  
14 004:1 (“Parcel 1”) and No. (2) 3-2-004:21 (Parcel 21”), comprised of 21.89 acres and  
15 2.59 acres, respectively, which straddle Waihe`e River.

16 b. Chavez requested 300,000 gpd for lo`i kalo on 1.5 acres of Parcel 1 and 0.5 acres  
17 of Parcel 21, spread across an existing lo`i and four new lo`i in Parcel 1, and another new  
18 lo`i that straddled Parcels 1 and 21.

19 c. Chavez also requested recognition of appurtenant rights and was provisionally  
20 approved by the Commission.

21 d. However, Chavez provided no further information on his permit request and  
22 quantification of his provisionally recognized appurtenant rights and did not participate in  
23 the contested case hearing.

24 e. Both the new-use permit and recognition of appurtenant rights are denied without  
25 prejudice. Chavez may re-apply at any time, and if he wishes to do so, should contact  
26 Commission staff on what further documentation would be required.

27  
28 207. **SWUPA 3470N—John Varel (Emmanuel Lutheran Church)** (FOF 326)

29 a. John Varel owns four properties in Waihe`e and Waiehu for which he is seeking  
30 permits, three of which he acquired after the SWUPAs were filed and is thus pursuing in

1 place of the original applicants: SWUPAs 2262 and 2263N (Paleka), 2298 and 2299N  
2 (Varel), 2593N (Koolau Cattle Co.), and 3470N (Emmanuel Lutheran Church).

3 b. Emmanuel Lutheran Church of Maui filed SWUPA 3470N on February 3, 2012,  
4 for TMK No. (2) 3-2-004:005 (“Parcel 5”).

5 c. Varel stated that the Emmanuel Lutheran Church incorrectly filed a new-use  
6 application and actually had an existing use, because lo`i kalo was being grown on the  
7 property prior to 2008, although at the time of designation the lo`i were being fallowed  
8 (with the `auwai still flowing on the property) according to best management practice.

9 d. As submitted by the Church, SWUPA 3470N requested 6,000 gpd for 1 acre of  
10 taro using a “flood” irrigation system, which was based on a table of crop water  
11 requirements which apparently was not referring to wetland kalo. Also requested was  
12 3,600 gpd for two dwellings, based on a figure of 1,800 gpd for domestic use for each  
13 dwelling.

14 e. Varel requests recognition of appurtenant rights of 567,000 gpd for 1.89 acres and  
15 a permit for 300,000 gpd to irrigate 1.0 acres of lo`i kalo, both based on Reppun’s high  
16 estimate of 300,000 gad for taro lo`i.

17 f. Varel claims that water to irrigate 1.0 acres was for the amount of land that was  
18 being cultivated before and after the time of designation in 2008.

19 g. The Commission recognized provisional appurtenant rights for Parcel 5.

20 h. Parcel 5 is the entirety of LCA 11258, confirmed by RP 5348, and encircles a  
21 po`alima, which is not part of Parcel 5 and which Varel does not own. The LCA is  
22 described as “aina kalo.” This description, coupled with the presence of a po`alima inside  
23 the kuleana and ancient lo`i walls, is additional evidence that Parcel 5 was cultivated  
24 exclusively in lo`i kalo.

25 i. Excluding the po`alima, Parcel 5 is 1.89 acres. (Varel, WT, September 12, 2016, ¶  
26 157. [Hui/MTF and OHA, FOF B-78.]

27 j. Varel’s explanation of fallowing the entire 1-acre kalo lo`i complex as a “best  
28 management practice” and which just happened to take place before and after the time of  
29 designation is questionable. More importantly, the SWUPA was filed on February 3,  
30 2012, well past the existing-use SWUPA deadline of April 30, 2009.



1 k. Varel’s 1.89-acre TMK No. (2) 3-2-004:005 (“Parcel 5”) is recognized as having  
2 appurtenant rights of 189,000 gpd (100,000 gad x 1.89 acres), and a permit is granted for  
3 150,000 gpd (150,000 gad x 1.0 acres).

4 g. All of the permit falls under Category 2. Even though it is a new use, all fall  
5 within his appurtenant rights.

6  
7 208. **SWUPA 2362N—Joseph Alueta** (FOF 327)

8 a. Joseph Alueta filed a new-use SWUPA on April 23, 2009 for his 3.84-acre parcel  
9 TMK No. (2) 3-2-003:001 (“Parcel 1

10 b. Alueta requests a permit for the amount of water necessary for hydroelectricity  
11 generation, 2.0 acres of lo`i kalo, and 0.5 acre of diversified agriculture. He plans to  
12 divert water from the Waihe`e River using a pipe, first to generate hydroelectricity before  
13 the water flows into his lo`i kalo. After flowing through the lo`i, some of the water will  
14 then be piped to his other diversified agriculture crops like betelnut, ma`o (Hawaiian  
15 cotton), tobacco, sweet potato, fruit trees, and flowering trees, before flowing back to  
16 Waihe`e River.

17 c. Alueta requests 600,000 gpd for two acres of lo`i, using Reppun’s high estimate  
18 of 300,000 gad. He is not requesting the approximately 1,250 gpd that he estimates for  
19 his 0.5 acres of diversified agriculture, because it will be used after flowing through the  
20 lo`i kalo.

21 d. Wailuku Sugar Company reserved the water rights when it sold the property in  
22 1979. Alueta bought the property on July 28, 2003.

23 e. Alueta’s 3.84-acre parcel is comprised of a portion of LCA No. 7713:224, and the  
24 entirety of three kuleana parcels: LCA Nos. 2412, apana 3; 4405-P, apana 3, and 3770-B,  
25 apana 3. There are also ancient kalo lo`i on his land and an ancient `auwai that  
26 historically fed them. LCA No. 2412:3 was described as containing 4 lo`i kalo. LCA No.  
27 4405-P:3 was described as containing 8 lo`i kalo. LCA No. 3770-B:3 was described as  
28 containing 6 kalo lo`i.

29 f. The Commission recognized provisional appurtenant rights for Parcel 1 based on  
30 LCAs 2412:3 and 3770-B:3, but LCA 4405-P:3 was denied because of no mention of  
31 water use, and no documents were provided for LCA 7713:224.

1 g. Of Alueta's 3.84-acre parcel, 0.1 acre is covered by LCA No. 2412:3, 0.24 acre is  
2 covered by LCA No. 4405-P:3, and 0.06 acre is covered by LCA No. 3770-B:3, for a  
3 total of 0.4 acre.

4 h. Alueta requests appurtenant rights recognition of 120,000 gpd (0.4 acre x 300,000  
5 gad), based on Reppun's highest estimate, if his appurtenant rights have not been  
6 extinguished.

7 i. The constitutional amendment preserving appurtenant rights was ratified on  
8 November 8, 1978; hence, the reservation did not prevent the appurtenant right from  
9 passing with the title when the land was sold in 1979.

10 j. Alueta's appurtenant rights are recognized for 40,000 gpd (0.4 acre x 100,000  
11 gad).

12 k. Alueta's new-use SWUPA is approved for 300,000 gpd (150,000 gad x 2 acres).  
13 40,000 gpd in Category 2 under his appurtenant rights, and 260,000 gpd in Category 3.

14  
15 **b. Waihe`e Ditch**

16  
17 209. **SWUPA 2298/2299N—John Varel** (FOF 328)

18 a. John Varel owns four properties in Waihe`e and Waiehu for which he is seeking  
19 permits, three of which he acquired after the SWUPAs were filed and is thus pursuing in  
20 place of the original applicants: SWUPAs 2262 and 2263N (Paleka), 2298 and 2299N  
21 (Varel), 2593N (Koolau Cattle Co.), and 3470N (Emmanuel Lutheran Church).

22 b. On April 29, 2009, Varel filed SWUPA 2298 for an estimating existing use of  
23 25,500 gpd and SWUPA 2299N for a new use of 1,474,500 gpd on TMK No. (2) 3-2-  
24 001:001 ("Parcel 1").

25 c. Parcel 1 is 983.807 acres, of which 474 acres are designated Conservation lands,  
26 with Varel farming the remaining 509.807 acres, on which he lives and operates a  
27 commercial farm grossing about \$800,000 a year from macadamia nut and fruit trees and  
28 bananas and employing a minimum of 25 families consistently.

29 d. After he purchased the property from Wailuku Agribusiness in 2002, he did not  
30 agree to the terms of the offer for sale water to irrigate the Parcel, so Wailuku  
31 Agribusiness cut all the irrigation lines, stripping any water available to the existing

1 macnut trees sold to Varel. He lost over a thousand trees, and production was reduced by  
2 over two-thirds at its lowest point.

3 e. For the past 13 years, Varel has been getting all of his water from leaks in the  
4 Waihee Ditch System, corralling and redirecting the leaks, installing a drip irrigation  
5 system, and allowing the excess water to flow back into the lower Spreckels Ditch. At  
6 their peak, each of the three major leaks was 1,000,000 gpd, but a few years ago, WWC  
7 attempted repairs, and Varel now receives approximately 72,000 gpd from each leak, for  
8 a total of approximately 216,000 gpd. Two of the leaks feed his nursery and fruit trees,  
9 and the remaining leak feeds a portion of his macadamia nut orchard, which has no other  
10 source of water. Varel estimated the 72,000 gpd from each leak by estimating that three  
11 2-inch pipes run constantly off the leaks, a 2-inch pipe is 50 gallons per minute, and  
12 running 24 hours provides about 72,000 gpd per pipe.

13 f. The existing use request of 25,500 gpd was for 5 acres of diversified agriculture  
14 and fruit trees at 2,500 gad, or 12,500 gpd; 2 acres of a nursery at 5,000 gad, or 10,000  
15 gpd, and 5 households at 600 gpd, or 3,000 gpd.

16 g. The new use request was for 340 acres of existing macadamia trees at 4,400 gad,  
17 or 1,496,000 gpd (tabulated as 1,474,500 gpd in the SWUPA), based on the Water  
18 Commission's 1992 Hawai'i Water Plan, O'ahu Management Plan, standard of 4,400 gad  
19 for macadamia nuts.

20 h. In his written testimony of September 12, 2016, Varel amended his existing-use  
21 SWUPA 2298 to include the estimated 1,496,000 gpd for the 340 acres of macadamia  
22 trees he was using from the leaks, stating that he had mistakenly included that amount in  
23 new-use SWUPA 2299N, and that the narrative in SWUPA 2298 had stated this use. The  
24 narrative in SWUPA 2298 states: "The water diversions have supplied all of the water for  
25 550 acres of ag land since I have acquired the property 6 years ago. My existing needs for  
26 crops currently in production are: 1,474,500 gallons for 340 tree acres currently in  
27 macadamia nuts (4,400 gallons per acre per day) per the Water Commission's 1992  
28 Hawaii Water Plan, Oahu Water Management Plan."

29 i. While his request for 2 acres of nursery remain unchanged, his request for 5 acres  
30 of diversified agriculture and fruit trees has increased to 15 acres, and households have  
31 increased from 5 households to 23 households.

- 1           j.       Varel now requests:
- 2                   1.       Existing use: 1,500,000 gpd, based on the Water Commission’s 1992
- 3                   Hawai`i Water Plan, O`ahu Management Plan, standard of 4,400 gad for
- 4                   macadamia nuts.; and
- 5                   2.       New use: 57,300 gpd:
- 6                           i.       37,500 gpd: 15 acres of diversified agriculture and fruit trees at
- 7                           *Waiahōle*’s 2,500 gad for diversified agriculture;
- 8                           ii.      10,000 gpd: 2 acres of nursery plants at the Commission’s 1992
- 9                           Hawai`i Water Plan’s standard of 5,000 gad for foliage plants; and
- 10                          iii.     13,800 gpd: 23 houses at 600 per household for Maui County
- 11                          single-family homes, stating that because his farm grosses more than
- 12                          \$800,000 a year, he would be eligible to construct 23 houses for workers,
- 13                          in addition to the two homes his family occupies (which would be a total
- 14                          of 25, not 23 houses).
- 15           k.       With these changes, Varel’s existing-use and new-use requests should actually be:
- 16                   1.       Existing uses: 1,521,500 gpd
- 17                           i.       1,496,000 gpd for 340 acres of macadamia trees;
- 18                           ii.      12,500 gpd for 5 acres of diversified agriculture and fruit trees;
- 19                           iii.     10,000 gpd for 2 acres of nursery plants; and
- 20                           iv.     3,000 gpd for 5 homes.
- 21                   2.       New uses: 37,000 gpd
- 22                           i.       25,000 gpd for an additional 10 acres of diversified agriculture and
- 23                           fruit trees;
- 24                           ii.     12,000 gpd for an additional 20 homes.
- 25           l.       The deed to Parcel 1 contains a reservation of appurtenant rights when it was sold
- 26                   to Varel by Wailuku Agribusiness in 2002.
- 27           m.       Parcel 1 received provisional approval of appurtenant rights for LCA 4405-BB:1-
- 28                   4 by the Commission, which noted that: 1) LCA 780 referred to part under cultivation
- 29                   and remainder occupied by cattle; 2) LCA 4405-BB:1-4 referred to apana 1 as a house lot
- 30                   and apana 2 as 4 mo’o of kalo, but only a small portion of the LCA was in Parcel 1; 3)

1 LCA 4405-EE:1 was not shown on the map; and 4) LCA 7713:24 had no reference to  
2 water use.

3 n. Varel states that Parcel 1 is composed of portions of LCA 780, confirmed by RP  
4 4551, LCA 7713:24, confirmed by RP 4475, and Government Grant 10562 to Wailuku  
5 Sugar Company.

6 o. Parcel 1 contains approximately 133.88 acres of LCA 780, described as “partly  
7 under cultivation and the remainder occupied by cattle.” Varel assumes an equal division  
8 between pasture and lands in diversified agriculture, applies a feed and forage standard of  
9 7,700 gad for the amount of land in pasture land for cattle, and a diversified agriculture  
10 standard of 2,500 gad for the lands under cultivation, resulting in his claim that  
11 appurtenant rights would be 682,788 gpd for 133.88 acres of Parcel 1.

12 p. Parcel 1 contains 833.517 acres of LCA 7713:24, for which Varel states that the  
13 land use at the time of the Māhele is difficult to determine because what was in  
14 cultivation is not described due to the vast expanse of the award. He states that there is  
15 extensive historic irrigation and cultivation of land in Parcel 1 but also that the majority  
16 of ancient lo`i and `auwai were destroyed when the land was transformed into  
17 commercial agriculture. Judging by the remaining rock walls and lo`i, he conservatively  
18 estimates that at least 15 acres of LCA 7713:24 within Parcel 1 were in lo`i kalo at the  
19 time of the Māhele, and therefore claims that appurtenant rights for these 15 acres would  
20 be 4,500,000 gpd (using Reppun’s high estimate of 300,000 gad).

21 q. Parcel 1 contains 16.41 acres of Government Grant 10562, which was 40 acres in  
22 size and which consisted of 19.40 acres of sugar cane, 1.10 acres of pasture land, and  
23 19.50 acres of wasteland. Setting aside the small pasture land, Varel claimed half for  
24 sugar cane at 6,800 gad, or 55,794 gpd in appurtenant rights.

25 r. In total, Varel requested recognition of appurtenant rights in the amount of  
26 5,238,582 gpd. However, expert opinion is that only kalo lo`i were irrigated at the time  
27 of the Māhele, and appurtenant rights accrue to the entire LCA, not just to the portion that  
28 was using water at the time of the Māhele, *supra*, FOF 153, 170-171.

29 s. Alternate sources:

30 1. Potable water:

1 i. Varel has a temporary groundwater permit for a well drilled down  
2 to 290 feet, limited to 3,000 gpd, pending resolution of this CCH. His  
3 permit application was contested by both WWC and the County of Maui.  
4 His SWUPAs are alternatives to his groundwater application. Everything  
5 on his property is solar-powered and he is off the grid completely, and it  
6 wouldn't cost him a whole lot more to pump.

7 ii. Varel has two domestic water meters: one is a mile and a half from  
8 their homes, and the other does not have adequate pressure to make it up  
9 to their homes.

10 2. non-potable water:

11 i. Varel intends to recycle domestic effluent for use on their personal  
12 gardens but will not generate enough water to irrigate even 2 acres, much  
13 less 550 acres of agriculture.

14 ii. The County is not providing any new water meters for agricultural  
15 use in Waihee.

16 t. Both ground and surface waters are public trust resources. The Commission has  
17 previously ruled that when both potable ground water and non-potable surface water are  
18 available for agricultural irrigation, the ground water source is not a practicable  
19 alternative to surface water. Therefore, Varel has no practical alternatives to the use of  
20 surface waters. (In re Water Use Permit Applications [“Waiāhole II”], 105 Haw. 1, 20,  
21 93 P.3d 643, 662 [2004]; In re Water Use Permit Applications, 130 Haw. 346, 310 P.3d  
22 1047 [2010].)

23 u. Appurtenant rights to Parcel 1 wer not extinguished by the reservation in 2002,  
24 because appurtenant rights had been preserved under the constitutional amendment of  
25 November 8, 1978. However no such rights attached to the two LCAs that comprise most  
26 of Parcel 1, and a small part of the Government Grant makes up the rest of Parcel 1.

27 v. Varel is issued a Category 2 existing-use permit for 869,300 gpd, consisting of the  
28 following:

29 1. 850,000 gpd for 340 acres of macadamia trees at 2,500 gad;

30 2. 12,500 gpd for 5 acres of diversified agriculture and fruit trees at 2,500

31 gad;

1                   3. 5,000 gpd for 2 acres of nursery plants at 2,500 gad; and

2                   4. 1,800 gpd for 3 workers' houses at 600 gpd per house.

3           w.       Varel estimated that leaks from the Waihe`e Ditch that he was using equaled 3  
4           mgd, but his existing-use for macadamia trees and nursery plants were based on  
5           agricultural standards. Therefore, the Commission uses 2,500 gad for diversified  
6           agriculture for his commercial operations.

7           x.       Varel is also issued a Category 3 new-use permit for 25,000 gpd for 10 acres of  
8           diversified agriculture and fruit trees. The request is denied for 12,000 gpd for an  
9           additional 20 worker houses, which are speculative and non-existent at this time.

10          y.       Varel is also recognized as having 1,200 gpd for domestic uses for two houses,  
11          which are exempt from the permit requirements.

12  
13   210.   **SWUPA 2340—Rudy Fernandez** (FOF 331)

14          a.       On April 30, 2009, Rudy Fernandez filed an existing-use SWUPA for TMK No.  
15          (2) 3-2-018:006 (“Parcel 6”), a 2.1-acre property for which he claimed appurtenant rights  
16          and requested existing use of 125,000 gpd for 1 acre of bananas and 0.5 acre of  
17          vegetables.

18          b.       The Commission had granted provisional approval.

19          c.       Fernandez did not submit testimony nor participate in the CCH.

20          d.       No action is taken on recognizing appurtenant rights, for which Fernandez may  
21          refile.

22          e.       The permit request is denied, and he may submit a new-use SWUPA.

23  
24   211.   **SWUPA 2305/2306N—Douglas Myers & Alex Buttaro** (FOF 332)

25          a.       On April 30, 2009, Douglas Myers and his lessee, Alex Buttaro, filed existing-  
26          and new-use SWUPAs for TMK No.(2) 3-2-018:005 (“Parcel 5”), a 0.585-acre property,  
27          for which they requested 1,200 gpd for 0.19 acre of domestic use for two households, and  
28          111,000 gpd for 0.37 acre of proposed kalo lo`i for subsistence purposes.

29          b.       They stated that appurtenant rights were reserved but did not specify the date of  
30          the deed and were granted provisional approval without any notation of a reservation.

31          c.       Myers and Buttaro did not submit written testimony or appear at the CCH.

1 d. No action is taken on either the appurtenant rights or permit requests. A request  
2 for appurtenant rights may be filed at any time, and the Commission notes that the permit  
3 request for two households would be exempt from the permit requirements and that they  
4 should request recognition from the Commission.

5  
6 212. **SWUPA 2355—Fred Coffey** (FOF 333)

7 a. On April 30, 2009, Fred Coffey filed an existing-use SWUPA for TMK No. (2)  
8 3-2-018:003 (“Parcel 3”).

9 b. Parcel 3 is 0.61 acres. It was slightly enlarged from 0.55 acre to 0.61 acre with the  
10 purchase of a remnant parcel of land containing an area of approximately 2,765 square  
11 feet, more or less, identified as TMK No. (2) 3-2-017:018. No appurtenant right is being  
12 claimed for this parcel.

13 c. The Commission had given provisional approval, with the notation that water  
14 rights were reserved. Coffey stated in his SWUPA that the deed transferring the property  
15 reserved the water rights, but at the hearing, he said: “No reservation for the water.  
16 Everything is entirely good to go, no problems that way.” The only reference to a  
17 reservation in his documents is a description of the property, with the standard notation:  
18 “Reservation in favor of the State of Hawaii of all mineral and metallic mines.”

19 d. Parcel 3 is `āpana 2 of LCA 3275-L, confirmed by RP 3230, which was 1.2 acres  
20 and consisted of three `āpana. Coffey states that the leveled, entirely terraced area, the  
21 boundary lines of the LCA and his TMK, and kama`āina familiar with the area all suggest  
22 that all parts of the LCA and his TMK were using water at the time of the Māhele. Parcel  
23 3’s original 0.55 acre is `āpana 2, described as either a taro mo`o or 17 lo`i; `āpana 1 is  
24 described twice as a taro mo`o; and `āpana 3 is described as a kula, 18 lo`i, and 1 kula, or  
25 as a taro pasture.

26 e. Coffey’s documents include drawings from the time of the Māhele that show  
27 `āpana 1 and 2, but not `āpana 3. Those drawings show `āpana 1 with a small pō`alima  
28 within it, and about half the size of `āpana 2.

29 f. However, in the documents accompanying his written testimony, Exh. 2355-  
30 Coffey-1 contains two pages of English translation following this drawing that describes  
31 `āpana 1 as 0.55 acre, and `āpana 2 as 2/10 acre. (Exh. 2355-Coffey-1 [attached to written



1 testimony]. These descriptions must be inadvertently reversed, and `āpana 1 must be 0.2  
2 acre, not the 0.55 acre of `āpana 2. Therefore, of LCA3275-L's 1.2 acres, `āpana 1 was  
3 0.2 acre, `āpana 2 was 0.55 acre, and `āpana 3 was 0.45 acre.

4 g. As `āpana 3 was variously described as a kula, 18 lo`i, and 1 kula, or as a taro  
5 pasture, half should be ascribed to kalo lo`i, *supra*, FOF 168, so appurtenant rights would  
6 accrue to 81 percent, or 0.975 acre of LCA 3275-L's 1.2 acres.

7 h. Coffee claimed that all of the original 0.55 acre of Parcel 3 should have  
8 appurtenant rights, or 165,000 gpd (0.55 acre x 300,000 gad). However, his claim for  
9 Parcel 3 should be reduced to 0.446 acre (0.55 acre x 0.81).

10 i. Coffee also requests a permit for 600 gpd for a yard and garden of a two-family  
11 household, having an existing-use of 640 gpd.

12 j. Parcel 3 is recognized as having appurtenant rights of 44,600 gpd (0.446 acres x  
13 100,000 gad).

14 k. Coffee is recognized as having a domestic use of 600 gpd of domestic use, which  
15 is exempt from the permit requirements.

16  
17 213. **SWUPA 2342—Paul Higashino** (FOF 334)

18 a. Paul and Jennifer Higashino filed an existing-use SWUPA on April 30, 2009, for  
19 TMK No. (2) 3-2-016:017 (“Parcel 17”), a 5.75-acre parcel, for which they request  
20 recognition of appurtenant rights of 390,192 gpd and an existing-use permit for 692,700  
21 gpd.

22 b. They purchased the land from Wailuku Agribusiness in 2000, and the deed  
23 reserved the appurtenant rights. However, the constitutional amendments of November 8,  
24 1978 preserved appurtenant rights, and the reservation cannot prohibit the right from  
25 passing with the land.

26 c. The Commission had granted provisional approval of appurtenant rights but  
27 identified LCA 3275I, not 3275M, denied 3274:1 for lack of documentation, and did not  
28 mention any pō`alima.

29 d. Their claim of appurtenant rights is based on their 5.75 acres containing the  
30 entirety of 5 LCAs and one pō`alima, which collectively comprise 1.889 acres:

- 1 i. LCA 3440, confirmed by RP 7779, comprising 0.375 acres and described  
2 as a section of kalo;
- 3 ii. LCA 5454:2, confirmed by RP 5147, comprising 0.259 acres and  
4 described as containing 31 lo`i;
- 5 iii. LCA 3275M, no RP provided, comprising 0.346 acres, with the foreign  
6 testimony describing only lo`i;
- 7 iv. LCA 3274:1, confirmed by RP 5982, comprising 0.805 acres, described as  
8 taro pauka, pasture, and a house;
- 9 v. LCA 3528:1 confirmed by RP 3229, comprising 0.064 acres and  
10 described as being cultivated in lauhala; and
- 11 vi. a pō`alima of 0.04 acres.
- 12 e. The substitution of LCA 3275M for 3275I is allowed, as does the information  
13 provided on LCA 3274:1. However, there is no identification of the pō`alima, which is  
14 not recognized.
- 15 f. Appurtenant rights are therefore recognized for:
- 16 i. LCA 3440: 0.375 acres.
- 17 ii. LCA 5454:2: 0.259 acres.
- 18 iii. LCA 3275M: 0.346 acres.
- 19 iv. LCA 3274:1: 0.278 acres. Of the 0.805 acres, 0.25 acre is subtracted for  
20 the house lot, and the remaining 0.555 acres is divided equally between taro and  
21 pasture.
- 22 v. LCA 3528:1: 0.00 acres. The 0.064 acres was described as being  
23 cultivated in lauhala.
- 24 vi. Pō`alima: 0.00 acres. Insufficient documentation of the origin of this  
25 0.04 acres.
- 26 g. Total appurtenant rights recognition: 1.258 acres of Parcel 17's 5.75 acres.
- 27 h. The Higashinos' claim of appurtenant rights for 390,192 gpd consists of:
- 28 i. 389,250 gpd for 1.2975 acres of kalo lo`i at 300,000 gad;
- 29 ii. 750 gpd for 0.25 acre of the houselot;
- 30 iii. 192 gpd for 0.064 acre of lauhala at 3,000 gad; and
- 31 iv. no claim for 0.2775 acre of pasture.

1 i. Water use at the time of the Māhele is only recognized for kalo lo`i, and therefore  
2 the Higashinos have appurtenant rights of 125,800 gpd (1.258 acres x 100,000 gad).

3 j. The Higashinos' existing-use permit request of 692,700 gpd is comprised of:

4 i. 1,500 gpd for 0.5 acres of a non-commercial garden (principally bananas)  
5 at 3,000 gad; and

6 ii. 691,200 gpd for 2 acres of kalo lo`i (equivalent to 345,600 gad), measured  
7 by the 5-gallon bucket method.

8 k. Paul Higashino, who testified, stated that his wife did the measurements and he  
9 was not present, but he was sure it was several measurements done over a period of time.  
10 691,200 gpd is equivalent to taking only 0.6 seconds to fill a 5-gallon bucket, and Paul  
11 Higashino could not explain how the measurement was done or how reliable the  
12 measurements were.

13 l. The measurement results are not reliable or credible. Furthermore, even if they  
14 were credible, 345,600 gad are not necessary for economic and efficient utilization,  
15 which is 150,000 gad for kalo lo`i.

16 m. The Higashinos are granted a Category 2 permit for 300,000 gpd (2 acres x  
17 150,000 gad) of existing use, of which 125,800 gpd fall under their appurtenant rights.

18 n. The Commission also recognizes domestic use of 1,500 gpd (0.5 acre x 3,000  
19 gad), which are exempt from the permit requirements.

20  
21 214. **SWUPAs 2290N/3905N—Murray & Carol Smith** (FOF 335)

22 a. On January 22, 2014, Murray & Carol Smith filed a new-use SWUPA for TMK  
23 No. (2) 3-2-017:041 ("Parcel 41"), which they purchased in October 2013 and which was  
24 formerly part of TMK No. (2) 3-2-017:018 ("Parcel 18"), a 250-acre property for which  
25 Waiehu Aina, LLC (David Singer) had filed SWUPA 2290N on April 27, 2009.

26 b. SWUPA 3905N partially amends SWUPA 2290N and only concerns Parcel 41.

27 c. Parcel 41 is 2.75 acres, for which the Smiths in their new-use SWUPA of January  
28 2014 requested 247,350 gpd: 240,000 gpd for 0.8 acre of kalo lo`i, 6,600 gpd for 1.5  
29 acres of macadamia trees, and 750 gpd for 0.25 acre of domestic uses (the remaining 0.2  
30 acre was for a proposed dwelling and driveway).

- 1 d. On November 1, 2014, the Smiths leased the land to the Hafokas until October  
2 31, 2019. The Hafokas have planted nearly all of 1.84 acres in row crops: 70 percent  
3 dryland taro, 25 percent sweet potato, and 5 percent “other,” with banana and papaya  
4 interspersed between.
- 5 e. The Smiths now request 16,700 gpd:
- 6 1. 12,000 gpd for 1.84 acres of row crops.
  - 7 2. 2,200 gpd for 0.5 acre of macadamia trees.
  - 8 3. 1,500 gpd for domestic use on 0.42 acre.
- 9 f. Prior to leasing to the Hafokas, the Smiths had installed a water line—  
10 approximately one-quarter of a mile long—to transport potable County water to their  
11 property. Hafoka uses the minimum of water to keep the crops watered but finds the cost  
12 prohibitive to water the crops the way they should be, and therefore Smith requests the  
13 16,700 gpd which he estimates would be sufficient.
- 14 g. The quitclaim deed that conveyed Parcel 18 (which included Parcel 41) to Waiehu  
15 Aina, LLC in 2000 reserved water rights to Wailuku Agriculture.
- 16 h. The Commission had granted provisional approval.
- 17 i. Parcel 41 is the entirety of LCA 3431, confirmed by RP 6100, described as “kale  
18 and kula lands joined with a house lot in one piece,” and with 61 lo`i. The LCA is a long  
19 narrow piece of land, with a protrusion—the house lot—about one-fifth down from the  
20 upper end. The upper end is bordered by kula, and the lower, larger end is bordered by  
21 pō`alima on one side and pō`alima and kula on the bottom side. The upper section is  
22 about 0.71 acre, the house lot about 0.24 acre, and the bottom section about 1.8 acre.
- 23 j. The Smiths request recognition of appurtenant rights of 540,000 gpd for 1.8 of  
24 Parcel 41’s 2.75 acres, based on Reppun’s high estimate of 300,000 gad.
- 25 i. Appurtenant rights for Parcel 41 were not extinguished in 2000, because the  
26 November 8, 1978 constitutional amendment preserved appurtenant rights.
- 27 j. Parcel 41 is recognized as having appurtenant rights to 1.8 acres of its 2.75 acres,  
28 or 180,000 gpd (1.8 acre x 100,000 gad).
- 29 k. The Smiths are issued a permit for 5,850 gpd for 2.34 acres of diversified  
30 agriculture ([1.84 acres of row crops + 0.5 acre of macadamia trees] x 2,500 gad), which  
31 falls under their appurtenant rights and in Category 2.

1           l.       They are also recognized as having domestic uses of 1,260 gpd (0.42 acre x 3,000  
2 gad), which are exempt from the permit requirements.

3  
4 215. **SWUPAs 2326/2327N—Lester Nakama (Ciacci)** (FOF 336)

5           a.       Mary Ciacci and Lester Nakama filed existing- and new-use SWUPAs for TMKs  
6 No. (2) 3-2-018:021 (“Parcel 21”) and No. (2) 3-2-018:044 (“Parcel 44”) on April 30,  
7 2009. Nakama subsequently purchased Parcel 21 from Ciacci and is no longer requesting  
8 water for Parcel 44, which he no longer owns.

9           b.       Parcel 21 is 1.101 acres and is the entirety of LCA 3448:2, confirmed by RP  
10 6124. Provisional approval of appurtenant rights had been granted.

11           c.       LCA 3448 is described as “one piece of kalo and kula land.” Based on the  
12 presence of ancient rock walls, Nakama estimates that 1.0 acre of the 1.101 acres was in  
13 kalo cultivation.

14           d.       Nakama requests appurtenant rights of 300,000 gpd (1.0 acre x 300,000 gad).

15           e.       Parcel 21 is recognized as having appurtenant rights of 100,000 gpd (1.0 acres x  
16 100,000 gad).

17           f.       Nakama requests a permit for 330,000 gpd (1.1 acre x 300,000 gad), of which the  
18 existing use was an estimated 153,600 gpd, based on the 5-gallon bucket method.

19           g.       For the past six years, because North Waiehu `auwai has been in disrepair, Parcel  
20 21 has been totally dry.

21           h.       Nakama is granted a permit of 165,000 gpd (1.1 acres x 150,000 gad), of which  
22 153,600 gpd was his existing use and in Category 2, and the remainder, or 11,400 gpd, is  
23 in Category 3.

24           i.       His existing use was less than the 165,000 gpd necessary for economic and  
25 efficient utilization, so even though it was more than his appurtenant rights of 100,000  
26 gpd, his existing use of 153,400 gpd falls within Category 2.

27  
28 216. **SWUPAs 2288/2289N—Donnalee & David Singer** (FOF 337)

29           a.       On April 28, 2009, Donnalee and David Singer filed existing- and new-use  
30 SWUPAs for TMKs No. (2) 3-2-018:009 (“Parcel 9”), No. (2) 3-2-018:014 (“Parcel 14”),

1 No. (2) 3-2-018:015 (“Parcel 15”), No. (2) 3-2-018:017 (“Parcel 17”), and No. (2) 3-2-  
2 018:034 (“Parcel 34”).

3 b. Because the existing use of water as of April 30, 2008 was severely limited to the  
4 kuleana lands used to cultivate taro, the Singers submitted both existing- and new-use  
5 applications for the same acreage that they had had in kalo lo`i, requesting one-fourth in  
6 their existing-use SWUPA 2288, and three-quarters in their new-use SWUPA 2289N.

7 c. The Singers requested 430,626 gpd under SWUPA 2288 and 1,291,874 under  
8 SWUPA 2289N, for a total of 1,727,000 gpd to 1,756,800 gpd for 5.30 acres of kalo lo`i,  
9 or 325,850 gad to 331,470 gad.

10 d. Parcel 9 is 1.47 acre, on which they have 1.20 acres of kalo lo`i. Parcel 14 is 0.35  
11 acre, all in kalo lo`i. Parcel 15 is 0.7- acre, all in kalo lo`i. Parcel 17 is 0.65 acre, all in  
12 kalo lo`i. Parcel 34 is 2.94 acre, of which 2.40 acre is kalo lo`i. e. The Singers had  
13 claimed appurtenant rights and been granted provisional recognition for all five parcels  
14 without any mention of any reservations.

15 f. The Singers did not submit written testimony nor participate in the CCH.

16 g. The Singers request for appurtenant rights is denied without prejudice and may be  
17 resubmitted at any time.

18 h. The permit request is denied, and a new-use permit may be resubmitted.

19 i. The Singers should reapply for both appurtenant rights and a new-use permit,  
20 because any water issued under a new use would be in Category 3, unless all or part of  
21 the permit falls under appurtenant rights, in which case that amount would be in Category  
22 2.

23  
24 217. **SWUPAs 2328/2329N—Lester Nakama** (FOF 338)

25 a. Lester Nakama filed existing- and new-use SWUPAs for TMK No. (2) 3-2-  
26 018:015 (“Parcel 15”) on April 30, 2009, for which he requests recognition of  
27 appurtenant rights of 210,000 gpd and permit for 210,000 gpd (based on Reppun’s high  
28 estimate for kalo lo`i of 300,000 gad), of which the existing use was 122,880 gpd  
29 (measured by the 5-gallon bucket method). Parcel 15 has not been receiving water for  
30 over 6 years, because of disrepair of the North Waiehu `auwai.

1 b. Parcel 15 is 0.7 acre, all of which Nakama claims was a pō`alima at the time of  
2 the Māhele, stating that he has attached several documents, including the County tax map  
3 for TMK No. 3-2-018:015, which shows the word “poalima” in its center. He does not  
4 identify any LCA associated with Parcel 15. Moreover, Nakama submitted only one, not  
5 several, documents—a map that does not match his description, does not identify his  
6 TMK, and shows only various LCAs, none of which Nakama has identified as contained  
7 in Parcel 15.

8 c. In contrast, in the original new-use SWUPA 2328, there is a TMK Map with  
9 Parcel 15 outlined and with the word “poalima” in it. It crosses four LCAs and is not  
10 identified with a separate LCA number.

11 d. The Commission had granted provisional recognition, with the notation that TMK  
12 No. 3-2-018:015 was a poalima.

13 e. Appurtenant rights are denied at this time, because it is not clear whether the  
14 pō`alima identified with Parcel 15 was a separate Land Commission Award or was part  
15 of the awards of the four LCAs which it crosses. Nakama should submit further  
16 documentation that supports his claim.

17 g. With a water duty of 150,000 gad for kalo lo`i, Nakama’s 0.7 acre would be  
18 permitted 105,000 gpd. But his existing use of 122,880 gpd for 0.7 acres was 175,540 gad  
19 and excessive, and he is issued a permit for 105,000 gpd, which is in Category 2. If he is  
20 recognized as having appurtenant rights, it would be in the amount of 70,000 gpd (0.7  
21 acre x 100,000 gad), so appurtenant rights would not change the permitted amount or its  
22 classification as Category 2.

23  
24 218. **SWUPAs 2330/2331N—Peter Lee & Lester Nakama (339)**

25 a. Peter Lee and Lester Nakama filed existing- and new-use SWUPAs on April 30,  
26 2009, for TMK No. (2) 3-2-018:040 (“Parcel 40”), requesting recognition of appurtenant  
27 rights for 319,800 gpd and a permit for 319,800 gpd, based on Reppun’s high estimate of  
28 300,000 gad for kalo lo`i, with an existing use of 62,000 gpd, measured by the 5-gallon  
29 bucket method.

30 b. Parcel 40 is 2.132 acres and mainly comprised of three LCAs:

- 1           i.       all but a sliver of LCA 11256, confirmed by RP 7248, described as “aina  
2           kalo”;
- 3           ii.       a portion of LCA 2475:4, confirmed by RP 6528, with “13 loi”; and
- 4           iii.       a portion of the konohiki award to Lunalilo, LCA 8559:20:2 including a  
5           pō`alima which falls within Parcel 40.
- 6       c.       The Commission had provisionally approved appurtenant rights, based on LCAs  
7           11256, described as aina kalo, and 2475:3, described as containing 1 lo`i, and not  
8           2475:4, which Nakama describes as containing 13 lo`i. Only a small sliver of LCA  
9           3450.2 is contained in Parcel 40, for which no documentation was provided. LCA  
10          8559:20:2 was not mentioned in the Provisional Order. (Provisional Order, Attachment  
11          C, Revised Exh. 7, p. 16.) [Hui/MTF and OHA, FOF B-506.]
- 12       d.       Nakama states that although the TMK map shows LCA 2475:3, the shape of the  
13          drawn parcel map matches `āpana 4.
- 14       e.       Nakama states that the presence of ancient lo`i walls on approximately half of  
15          Parcel 40, the exclusive references to kalo in LCAs 11256 and 2475:4, and the presence  
16          of a pō`alima within Parcel 40 support a finding that the remaining portion of Parcel 40  
17          falling under the Lunalilo grant was also lo`i land.
- 18       f.       He requests appurtenant rights to 1.066 acres, or half of Parcel 40’s 2.132 acres.
- 19       g.       His existing use of 62,000 gpd was used to irrigate 1.066 acres of kalo lo`i, and he  
20          requests 319,800, the same amount of his appurtenant rights request, to irrigate the same  
21          acreage.
- 22       h.       Appurtenant rights to the portion of Parcel 40 that falls under the Lunalilo grant  
23          should not be based on what portion of the grant falls under Parcel 40 but on the total  
24          acreage of the Lunalilo grant.
- 25       i.       Nakama does not provide sufficient information on the proportions of Parcel 40  
26          attributable to each of the two LCAs and the konohiki award, but he requests appurtenant  
27          rights to only half of the 2.132 acres rather than claiming the entire acreage. Moreover,  
28          the overlay of LCAs 11256 and 2475:4 over the map of Parcel 40 is slightly larger than  
29          half of Parcel 40.
- 30       j.       Therefore, his request is sufficient justification that approximately half of Parcel  
31          40 has appurtenant rights.



1 k. Nakama is recognized as having appurtenant rights of 106,600 gpd (1.066 acres x  
2 100,000 gad).

3 l. His existing use of 62,000 gpd was used to irrigate 1.066 acres of kalo lo`i, and he  
4 requests 319,800, the same amount of his appurtenant rights request, to irrigate the same  
5 acreage.

6 m. Nakama is granted a permit for 159,900 gpd (1.066 acres x 150,000 gad), of  
7 which 106,600 gpd is in Category 2, and the remainder, or 53,300 gpd, is in Category 3.  
8 106,600 gpd is equal to his appurtenant rights, and also includes his existing use of  
9 62,000 gpd. 53,300 gpd is a new use.

10  
11  
12 **c. Spreckels Ditch**

13  
14 **i. North Waihe`e `Auwai**

15  
16 219. The following SWUPAs receive water from the Spreckels Ditch via the North Waihe`e  
17 `Auwai (See Figure 1).

18  
19 220. **SWUPAs 2233/2234N—Diannah Goo** (FOF 341)

20 a. Diannah Lai Goo filed for existing- and new-use SWUPAs on April 23, 2009 for  
21 TMK No. (2) 3-2-004:007 (“Parcel 7”). This is one of the mauka parcels the Goo `ohana  
22 owns; two other mauka parcels are addressed under SWUPA 2365N, and a number of  
23 makai parcels are addressed under SWUPAs 2231/2232N.

24 b. Parcel 7 is 0.724 acre, on which they estimate they were cultivating lo`i on 0.181  
25 acre on April 30, 2008.

26 c. They request recognition of appurtenant rights for all of Parcel 7, existing use for  
27 0.181 acre, and new use for the remainder of Parcel 7, or 0.543 acre.

28 d. Provisional recognition was denied without prejudice for Parcel 7. The Goos  
29 believe Parcel 7 was a pō`alima of LCA 7713:24 to Victoria Kamāmalu and state that  
30 there are ancient lo`i kalo terraces throughout the entire parcel, which they have used to  
31 grow kalo, and submitted photographs depicting these ancient lo`i kalo terraces. But

1 provisional recognition had been denied, with the following notation on LCA 7713:24:  
2 “No ref. to water use. Per attorney, property is on bank of Waihee River. Applicant states  
3 preexisting loi terraces have been restored.”

4 e. The Goos requested appurtenant rights for Parcel 7’s 0.724 acres of 217,200 gpd,  
5 existing use for 0.181 acres of 54,300 gpd, and new use for the remaining 0.543 acre of  
6 162,900 gpd, all based on Reppun’s high estimate of 300,000 gad.

7 f. Although Parcel 7 would meet the criterion for water use by being adjacent to a  
8 stream under presumption #5, *supra*, FOF 165, it is part of LCA 7713:24 to Victoria  
9 Kamāmalu, for which the total acreage is not provided. Therefore, no estimate of  
10 appurtenant rights, if any, can be made.

11 g. The request for recognition of appurtenant rights for Parcel 7 is denied, and  
12 additional information can be submitted at any time.

13 h. The existing use of 54,300 gpd on 0.181 acre was not a measured use but an  
14 estimate of required amounts under Reppun’s high estimate of 300,000 gad for kalo lo`i.

15 i. Assuming that the existing use was 150,000 gad, the requirement for kalo lo`i  
16 adopted by the Commission, existing use for 0.181 acre would be 27,150 gpd, for which  
17 an existing-use permit is issued in Category 2.

18 j. A new-use permit for 0.543 acre is issued in the amount of 81,450 gpd (0.543 acre  
19 x 150,000 gad) and is in Category 3.

20  
21 221. **SWUPA 2227—Richard Emoto** (FOF 342)

22 a. Richard Emoto and Roy Ellis filed existing-use SWUPA 2227 on April 23, 2009,  
23 for TMK Nos. (2) 3-2-004:011 (“Parcel 11”) and (2) 3-2-004:012 (“Parcel 12”), which  
24 Emoto owns and his business partner, Ellis, has lived on for over 20 years.

25 b. Parcel 11 is 0.8 acres and is the entirety of LCA 4405P:1, confirmed by RPs 4120  
26 and 6149; and Parcel 12 is 0.045 acre and situated within Parcel 11 and is the award to  
27 Victoria Kamāmalu, LCA 7713:24. LCA 4405P labels `āpana 1 as “aina kalo,” and the  
28 foreign testimony supporting the award describes `āpana 1 as containing “20 patches.”

29 c. Emoto and Ellis claim Parcel 12 is a pō`alima. The Commission provisionally  
30 approved appurtenant rights for Parcel 11, but no documents were submitted for Parcel  
31 12.

1 d. They request recognition of appurtenant rights for Parcels 11 and 12 in the  
2 amount of 253,500 gpd, based on Reppun's high estimate (0.845 acre x 300,000 gad) and  
3 a permit for 432,000 gpd, which they claim was their current use as of April 30, 2008, to  
4 operate a water wheel that generates electricity.

5 e. However, the 432,000 gpd to operate the water wheel is not a measured use, but  
6 their estimate of the amount of water needed to generate enough electricity to power the  
7 home, supplemented with solar panels. They calculate this by stating that it would take  
8 300 gallons per minute (300 gallons per minute x 1440 minutes per day = 432,000 gpd).

9 f. They state that 432,000 gpd "was the amount of water in use for these purposes  
10 on April 30, 2008," but they also state that "(w)e are currently using water from an  
11 existing `auwai, although water is not available consistently and in sufficient amounts to  
12 support the existing uses on our system, including our own uses."

13 g. Water enters their land through a pipe that directs the flow through the water  
14 wheel. From there, some of the water is used for domestic purposes such as showering  
15 and washing dishes and clothes, and the rest flows through lo'i kalo through an open  
16 ditch, and some water is taken by pipe and sprinkler system to water the lawn and non-  
17 commercial garden.

18 h. Emoto and Ellis estimate that of the 432,000 gpd they claim is run through the  
19 water wheel, they use about 1,200 gpd for domestic uses (0.4 acres x 3,000 gad, based on  
20 2002 State of Hawai'i Water System Standard for Maui County of 3,000 gad per single  
21 family home), and return about 430,800 gpd to the `auwai, less a small amount that seeps  
22 into the kalo lo'i.

23 i. They estimate that their existing use for 0.4 acres of kalo lo'i is 120,000 gpd,  
24 based on Reppun's high estimate (0.4 acre x 300,000 gad). However, they also state that  
25 approximately 430,800 gpd of the 432,000 gpd that runs through their water wheel enters  
26 the 0.4 acres of kalo lo'i before being returned to the `auwai.

27 j. Emoto and Ellis are requesting water to run their water wheel sufficient to provide  
28 electricity to the home, and after it passes through the water wheel, to run that amount  
29 through 0.4 acre of kalo lo'i, less an amount they estimate as 1,200 gpd for domestic use.  
30 Moreover, although they calculate their kalo lo'i use at 120,000 gpd, based on Reppun's

1 high estimate of 300,000 gad, in effect, the kalo lo`i would be receiving substantially  
2 higher amounts, or the amount they are diverting to run their water wheel at capacity.

3 k. The request for 432,000 gpd for hydroelectricity is denied. Their claimed use of  
4 432,000 gpd for hydroelectricity, with that amount also irrigating 0.4 acre of kalo lo`i, is  
5 not necessary for economic and efficient utilization. Moreover, Emoto and Ellis have the  
6 alternative of electricity from the County, and the Commission has no mandate to provide  
7 applicants with their desired alternative.

8 l. Emoto and Ellis have appurtenant rights to Parcel 11's 0.8 acres, or 80,000 gpd  
9 (0.8 acres x 100,000 gad).

10 m. The request for appurtenant rights to Parcel 12's 0.045 acre is denied without  
11 prejudice, as the acreage of the award to Victoria Kamāmalu, LCA 7713:24, as well as its  
12 description, is not known.

13 n. A permit for 60,000 gpd is granted for 0.4 acre of kalo lo`i (0.4 acre x 150,000  
14 gad). All of the 60,000 gpd is in Category 2, because it falls within their appurtenant  
15 rights. Although their claim of an existing use of 120,000 gpd is based on Reppun's high  
16 estimate of 300,000 gad for kalo lo`i, the permit of 60,000 gpd falls within their  
17 appurtenant rights of 80,000 gpd and therefore within Category 2, regardless of the lack  
18 of a measured existing use.

19 o. Domestic use of 1,200 gpd (0.4 acre x 3,000 gad for domestic cultivation) for  
20 both the home and garden are recognized, supra, FOF 311, for which no permit is  
21 required. (HRS 174C-48(a).)

22  
23 **222. SWUPA 2228/2229N—Stanley Faustino & Kanealoha Lovato-Rodrigues (FOF 343)**

24 a. Stanley Faustino filed SWUPAs for existing and new uses on April 23, 2009 for  
25 TMK No. (2) 3-2-004:013 ("Parcel 13") and later requested that his grandson be added to  
26 the SWUPAs.

27 b. Faustino/Lovato-Rodrigues request recognition of 210,000 gpd of appurtenant  
28 rights and a permit for 201,000 gpd, of which 21,000 gpd was the existing use, all,  
29 including the existing use, based on Reppun's high estimate of 300,000 gpd.

1 c. Parcel 13 is 0.7 acres and is the entirety of LCA 4405X, confirmed by RP 5319.  
2 LCA 4405X was described as “(o)ne taro parcel.” The Commission granted provisional  
3 approval for Parcel 13.

4 d. On April 8, 2008, the Faustinos were cultivating 0.07 acre in lo`i. They estimate  
5 water use as 21,000 gpd, using Reppun’s high estimate of 300,000 gad.

6 e. They request an additional 180,000 gpd to restore an additional 0.6 acre, using  
7 Reppun’s high estimate, for a total of 201,000 gpd (0.67 acre x 300,000 gad).

8 f. Appurtenant rights are recognized at 70,000 gpd for Parcel 13’s 0.7 acre.

9 g. For 0.67 acre of taro lo`i, a permit of 100,500 gpd is awarded (0.67 acre x  
10 150,000 gad). 70,000 gpd is in Category 2, and 30,500 gpd is in Category 3. Although  
11 their existing use of 21,000 gpd on 0.07 acre of lo`i was not measured and based instead  
12 on Reppun’s high estimate of 300,000 gad for kalo lo`i, the amount would fall within  
13 their appurtenant rights of 70,000 gpd and still be in Category 2.

14  
15 **223. SWUPAs 2269/2270N—Michael Rodrigues (FOF 344)**

16 a. On April 23, 2009, Michael Rodrigues filed existing-use SWUPAs for TMKs No.  
17 (2) 3-2-004:015 (“Parcel 15”), No. (2) 3-2-004:016 (“Parcel 16”), and No. (2) 3-2-  
18 004:017 (“Parcel 17”), and a new-use SWUPA for Parcel 17. Michael Rodrigues testified  
19 for Parcels 15 and 17, and Miki`ala Pua`a-Freitas, testified on his behalf for Parcel 16 and  
20 also for SWUPA 2364N, filed by her father.

21 b. Pua`a-Freitas’s grandpa was born in the 1920’s, and her great grandpa had started  
22 cultivating kalo on Parcel 16.

23 c. Parcel 15 is 0.15 acre, Parcel 16 is 0.33 acre, and Parcel 17 is 1.25 acres, for  
24 which Rodrigues requests recognition of appurtenant rights of 519,000 gpd and a permit  
25 for 780,245 gpd, of which 474,000 gpd was the estimated existing use.

26 d. Existing use of 474,000 gpd was estimated by the 5-gallon bucket method and  
27 consisted of all 0.15 acre of Parcel 15 for kalo lo`i, all 0.33 acre of Parcel 16 for kalo lo`i,  
28 and for Parcel 17’s 1.25 acres, 0.4 acre of kalo lo`i and 0.4 acre of diversified agriculture.

29 e. By his 5-gallon bucket measurements, he was using 472,800 gpd on 0.88 acre of  
30 lo`i across Parcels 15, 16, and 17, or 537,273 gad, which he believes he needs to grow  
31 healthy kalo, and 1,200 gpd for diversified agriculture.

1 f. The new-use request is for 400,000 gpd to run a water wheel to generate  
2 hydroelectricity, like his neighbor, Roy Ellis, which will include an estimated 214,910  
3 gpd, equivalent to 537,273 gad, for an additional 0.4 acre of kalo lo`i on Parcel 17,  
4 because the 400,000 gpd would run through the 0.4 acre of new kalo lo`i.

5 g. Parcel 15's 0.15 acre is wholly comprised of LCA 4405-R:2, confirmed by RP  
6 6459, refer to pō`alima as boundary and described as containing eight lo`i. The  
7 Commission had granted provisional recognition.

8 h. Pua`a-Freitas states that Parcel 16's 0.33 acre is all of a pō`alima of LCA 7713:24  
9 to Victoria Kamāmalu. The Commission had granted provisional recognition, but  
10 referenced LCA 4405-S, which Rodrigues now claims wholly comprises Parcel 17, *infra*.

11 i. Parcel 17's 1.25 acres is wholly comprised of LCA 4405-S, confirmed by RP  
12 2345, described as kalo, kula, and 3 pō`alima in it, of which Rodrigues states the majority  
13 must have been in kalo, based on the existence of ancient rock walls throughout much of  
14 the parcel. The Commission had granted provisional recognition.

15 j. Rodrigues claimed appurtenant rights for all of the three parcels, or 1.73 acres,  
16 for 519,000 gpd, using Reppun's high estimate of 300,000 gad for kalo lo`i (1.73 acre x  
17 300,000 gad).

18 k. The acreage qualifying for appurtenant rights is 0.90 acres out of 1.73 acres:

19 1. Parcel 15: 0.15 acre.

20 2. Parcel 16: 0.00 acre, because the acreage and contents of LCA  
21 7713:24 to Victoria Kamāmalu is unknown.

22 3. Parcel 17: 0.75 acre, or 60 percent of 1.25 acre, or a "majority" of  
23 unknown percentage.

24 l. Parcels 15 and 17 are recognized as having appurtenant rights of 90,000 gpd (0.90  
25 acre x 100,000 gad).

26 m. The testimony is insufficient to establish that the `ohana has traditional and  
27 customary rights on Parcel 16. The earliest date of the `ohana cultivating Parcel 16 is  
28 sometime before 1920, nearly 30 years after November 25, 1892, *supra*, COL 28.

29 n. Rodrigues's existing use of 472,800 gpd on 0.88 acre of kalo lo`i and his  
30 proposed use of 214,910 gpd on an additional 0.4 acre of lo`i are not necessary for

1 economic and efficient utilization, far exceeding 150,000 gad for kalo lo`i, supra, COL  
2 39.

3 o. The request for a new-use of 400,000 gpd for hydroelectricity is denied. His  
4 proposed use of 400,000 gpd for hydroelectricity, with that amount also irrigating the 0.4  
5 acre of kalo lo`i, is not necessary for economic and efficient utilization. Moreover,  
6 Rodrigues has the alternative of electricity from the County, and the Commission has no  
7 mandate to provide applicants with their desired alternative.

8 p. Rodrigues is issued permits as follows:

9 1. Category 2 permit for 132,000 gpd of his request for 472,800 gpd of  
10 existing use for 0.88 acres of kalo lo`i on Parcels 15, 16, and 17. 90,000 gpd falls  
11 within both his appurtenant rights and existing use, and the remainder of 42,000  
12 gpd falls under his existing use.

13 2. Category 3 permit for 60,000 gpd of his request for 214,910 gpd for a new  
14 use on 0.4 acre for kalo lo`i (0.4 acre x 150,000 gad).

15 q. Rodrigues is recognized as having a domestic use of 1,200 gpd for 0.4 acre of  
16 diversified agriculture (0.4 acre x 3,000), which is exempt from the permit requirements.

17  
18 224. **SWUPAs 2309/2310N—Alfred Ayers & William Freitas** (FOF 345)

19 a. On April 30, 2009, Alfred Ayers and his Lessee, Willaim Freitas, filed existing-  
20 and new-use SWUPAs for TMKs No. (2) 3-2-003:010 (“Parcel 10”) and No. (2) 3-2-  
21 003:011 (“Parcel 11”), claiming an existing use for an estimated 69,000 gpd for 0.23 acre  
22 of kalo lo`i, and a new use for an estimated 524,400 gpd for an additional 1.74 acres of  
23 kalo lo`i and 0.8 acre of two homes and their yards and gardens. They used Reppun’s  
24 high estimate of 300,000 gpd for kalo lo`i and Maui County’s standard of 3,000 gad for  
25 domestic agriculture.

26 b. Parcel 10 is 1.547 acres, for which existing use was on 0.11 acre and proposed  
27 new uses are on 1.26 acres. Parcel 11 is 2.5 acres, for which existing use was on 0.12  
28 acre, and proposed new uses are on 1.28 acres.

29 c. Ayers and Freitas had claimed appurtenant rights and were granted provisional  
30 approval for both parcels. Parcel 10 is derived from LCA 4405Q:3, confirmed by RP  
31 5331, and described as 6 lo`i kalo and a house lot or as 6 patches, pasture, and house.

1 Parcel 11 is derived from LCA 4405R:1, confirmed by RP 6459, and described as Ili of  
2 Waipae with two pō`alima in it and a pō`alima as boundary.

3 d. Ayers and Freitas did not submit written testimony and did not participate in the  
4 CCH.

5 e. No action is taken on the appurtenant rights request. Ayers and Freitas should  
6 reapply.

7 f. The existing- and new-use SWUPAs are denied. Ayers and Freitas can re-apply  
8 for a new-use SWUPA for both their existing- and new-use requests, and their priority  
9 will depend on whether appurtenant rights are recognized and in what amounts.

10  
11 225. **SWUPA 2283—Lorin Pang** (FOF 346)

12 a. Lorin Pang filed a SWUPA for existing use on April 24, 2009 for TMK No. (2) 3-  
13 2-003:016, consisting of 1.78 acres, for which he requests 10,800 gpd, 5,400 gpd each for  
14 1.5 acres of a non-commercial garden and fruit trees and 0.1 acre of fishponds.

15 b. On the other hand, in his SWUPA 2283, Pang listed only 0.76 acre of fruit trees,  
16 and only 0.02 acre of fishponds:

- 17 1. mango: 0.25 acres;
- 18 2. avocado: 0.10 acres;
- 19 3. coconut: 0.3 acres;
- 20 4. banana: 0.1 acre;
- 21 5. watercress: 0.01 acre; and
- 22 6. fishpond: 0.02 acre.

23 c. Pang's use to flush out the ponds is to prevent mosquito-breeding, which he does  
24 for three hours daily, using a 1800 gph pump. In SWUPA 2283, Pang also stated that he  
25 needed constant flow to aerate his ponds, in which he has opae, guppies, and swordtails.

26 d. Pictures submitted with SWUPA 2283 show grass with scattered trees and several  
27 small molded plastic ponds.

28 e. For the fruit trees, 5,400 gpd over 1.5 acres is 3,600 gad, and over 0.76 acre, it is  
29 more than 7,100 gpd. For the fishponds, 5,400 gpd for 0.1 acre of fishponds is 54,000  
30 gad, and over 0.02 acre, it is 270,000 gpd.



- 1 f. Pang's use for his fruit trees is domestic agriculture at 3,000 gad, so for 0.76  
2 acres, it would be 2,280 gpd.
- 3 g. Pang's use of 5,400 gpd on his small plastic container fishponds, using a 1,800  
4 gph pump for three hours daily, is excessive.
- 5 h. Moreover, his fishponds include guppies and swordtails, which should prevent  
6 mosquito breeding.
- 7 i. At most, 600 gpd should suffice to aerate his fishponds. That translates into 1,800  
8 gallons if done every three days.
- 9 j. Pang's use is 2,280 gpd for his fruit trees and 600 gpd for his fishponds, for a total  
10 of 2,880 gpd, and is a domestic use exempt from the permit requirement. If he seeks  
11 water for 1.5 acres of fruit trees instead of 0.76 acres, he would be issued an existing-use  
12 permit for 5,100 gpd (4,500 gpd for 1.5 acres x 3,000 gad, plus 600 gpd for the  
13 fishponds).
- 14 k. Pang states that he believes his deed contains a reservation of appurtenant rights  
15 but did not state when that reservation might have taken place nor provide documentation  
16 of the reservation.
- 17 l. Pang provided no documents during the provisional recognition process.  
18 Nevertheless, he now provided documentation of appurtenant rights in the event a legal  
19 determination is made that his right was not extinguished.
- 20 m. Parcel 16 is comprised of: 1) the entirety of LCA 2412:1, confirmed by RP 6147;  
21 2) approximately one-half of two other LCAs, 4405P:2 & 4, confirmed by RP 6149, and  
22 4405Q:1 confirmed by RP 5331; and 3) portions of two pō`alima within LCA 7713:24 to  
23 Victoria Kamāmalu, confirmed by RP 4475.
- 24 n. LCA 2412:1 is described as consisting of eight lo`i. LCA 4405P:2 is described as  
25 consisting of twenty lo`i and one kula, and LCA4405P:4 as consisting of three lo`i. LCA  
26 4405Q:1 is described as consisting of two pō`alima. A pō`alima of LCA 7713:24 to  
27 Victoria Kamāmalu is within Parcel 16.
- 28 o. Pang claims that approximately 80 percent of Parcel 16's 1.78 acres, or 1.42  
29 acres, was in kalo lo`i at the time of the Māhele, based on the existence of ancient lo`i  
30 kalo walls, the slope of the land, and the existence of pō`alima on the property. Using

1 Reppun's high estimate of 300,000 gad for kalo lo'i, Pang estimates his appurtenant  
2 rights at 426,000 gpd (1.42 acres x 300,000 gad).

3 p. On the OHA screen shot depicting the LCAs overlaid on Parcel 16, the  
4 approximate percentages of Parcel 16 are as follows: 1) LCA 2412:1: 10 percent ; 2)  
5 LCA 4405P:2 & 4: 30 percent ; 3) LCA 4405Q:1: 45 percent; and 4) two, not one,  
6 pō'alima of LCA 7713:24: 15 percent.

7 q. Therefore, the approximate acres of Parcel 16's 1.78 acres attributable to these  
8 LCAs are:

9 LCA 2412:1: 0.178 acres (0.10 x 1.78 acres)

10 LCA 4405P:2 & 4: 0.534 acres (0.30 x 1.78 acres)

11 LCA 4405Q:1: 0.801 acres (0.45 x 1.78 acres)

12 LCA 7713:24: 0.267 acres (0.15 x 1.78 acres)

13 r. The approximate acres in kalo lo'i at the Māhele are:

14 LCA 2412:1: 0.178 acres (described as containing 8 lo'i).

15 LCA 4405P:2 & 4: 0.481 acres (LCA 4405P:2 is described as consisting of  
16 twenty lo'i and one kula, and LCA4405P:4 as consisting of  
17 three lo'i. No apportionment between the two `āpana is  
18 provided, so it will be assumed that approximately 90  
19 percent of the two `āpana were in kalo lo'i).

20 LCA 4405:1: 0.801 acres (described as consisting of two pō'alima)

21 LCA 7713:24: 0.000 acres (no information on size or other contents)

22 Total: 1.46 acres

23 s. The estimate of 1.46 acres is close to Pang's estimate of 1.42 acres, so his  
24 estimate is accepted.

25 t. Parcel 16 is recognized as having appurtenant rights to 142,000 gpd (1.42 acres x  
26 100,000), contingent on submittal of his deed reservation showing that it was made after  
27 November 8, 1978.

28 u. As explained in *supra*, f-j, Pang's use is 2,280 gpd for his fruit trees and 600 gpd  
29 for his fishponds, for a total of 2,880 gpd and is a domestic use exempt from the permit  
30 requirements. If he seeks water for 1.5 acres of fruit trees instead of 0.76 acres, he would

1 be issued a Category 2 existing-use permit for 5,100 gpd (4,500 gpd for 1.5 acres x 3,000  
2 gad, plus 600 gpd for the fishponds).

3  
4 226. **SWUPAs 2254/2255N—David Lengkeek** (FOF 347)

5 a. On April 23, 2009, David and Katherine Lengkeek filed for existing- and new-use  
6 SWUPAs for TMK No. (2) 3-2-003:019 (“Parcel 19”) for seepage from the North  
7 Waihe`e kuleana `auwai onto their 0.501-acre property. They proposed to increase their  
8 existing 0.084-acre garden to 0.418 acre, with an estimated use of 1,254 gad, using Maui  
9 County’s standard of 3,000 gad (0.418 acre x 3,000 gad).

10 b. The Lengkeeks did not claim appurtenant rights nor provide documents during the  
11 provisional recognition process.

12 c. They provided no further information on their permit requests and did not  
13 participate in the contested hearing.

14 d. No action is taken on the Lengkeeks’ SWUPAs at this time.

15 e. However, it is noted that, based on the information provided, the Lengkeeks’  
16 domestic use would be exempt from the permit requirements. They should therefore  
17 register their domestic use with the Commission and request exemption from the permit  
18 requirements.

19  
20 227. **SWUPAs 2322/2323N—Robert Barrett (Aloha Poi)** (FOF 348)

21 a. Robert Barrett and Lester Nakama filed existing- and new-use SWUPAs for TMK  
22 Nos. (2) 3-2-003:023 (“Parcel 23”) and (2) 3-2-003:024 (“Parcel 24”) on April 30, 2009,  
23 which Aloha Poi has leased from the Barrett `ohana since the 1940s.

24 b. Parcel 23 is 0.045 acre, and Parcel 24 is 3.08 acres, for a total of 3.125 acres.

25 c. Using the bucket method, Nakama estimated that 72,000 gpd was the existing use  
26 to cultivate 1.045 acre of lo`i, which, because of insufficient water, was less than was  
27 historically cultivated over the entire 3.125 acres.

28 d. Parcel 23 is the entirety of LCA 3701, `āpana 3, mahele 1, confirmed by RP 5983  
29 and referred to as `āpana 2 in the native testimony in support of the award. The native  
30 testimony states this land consisted of six lo`i kalo without reference any other uses.

1 e. Parcel 24 is comprised of several LCAs: the entirety of LCA 4277:1, confirmed  
2 by RP 5988; the entirety of LCA 4416:1.1, confirmed by RP 4112; a large portion of  
3 LCA 4405E, confirmed by RP 5274; and the entirety of LCA 4405F, confirmed by RP  
4 4089. Parcel 24 also contains six pō`alima of the konohiki award to Kamāmalu, LCA  
5 7713:24. The records supporting these four LCAs describe them as lo`i kalo lands,  
6 without referencing any other use.

7 f. The Commission provisionally approved appurtenant rights for both Parcels, but  
8 for Parcel 24, LCA 4405P, confirmed by RP 6149, was referenced, not LCA 4405F,  
9 confirmed by RP 4089, and there was no reference to LCA 7713:24

10 g. Barrett and Nakama request appurtenant rights of 937,500 gpd (3.125 acres x  
11 300,000 gad), based on Reppun`'s high estimate.

12 h. However, approximately 10 percent of Parcel 24 is comprised of the six pō`alima  
13 of the konohiki award to Kamāmalu, LCA 7713:24, for which the total acreage and other  
14 uses are not described.

15 i. Therefore the acreage for appurtenant rights should be reduced from 3.125 acres  
16 to 2.813 acres.

17 j. They also request 937,500 gpd to irrigate the entire 3.125 acres of lo`i (3.125  
18 acres x 300,000 gad), using Reppun`'s high estimate.

19 k. Appurtenant rights of 281,300 gpd (2.813 acres x 100,000 gad) are recognized.

20 i. A permit of 468,750 gpd (3.125 acres x 150,000 gad) is granted, of which 72,000  
21 gpd is the existing use, and 396,750 gpd is the new use.

22 j. All of the existing use of 72,000 gpd and 209,300 gpd of the new use, or a total of  
23 281,300 gpd, are in Category 2, because they fall within the appurtenant rights. The  
24 remainder of the new use, or 187,450 gpd, is in Category 3.

25  
26 **228. SWUPAs 2252/2253N—Crystal Koki (FOF 349)**

27 a. Crystal and Clifford Koki filed existing- and new-use SWUPAs on April 23, 2009  
28 for TMK Nos. (2) 3-2-003:004 (“Parcel 4”), (2) 3-2-003:032 (“Parcel 32”), and (2) 3-2-  
29 003:037 (“Parcel 37”).

30 b. Parcel 4 is 0.5 acre, Parcel 32 is 0.16 acre, and Parcel 37 is 0.6 acre, for a total of  
31 1.26 acres.

1 c. The Kokis grow kalo on Parcel 32 (0.16 acres), attempt to grow kalo on Parcel 4  
2 (0.5 acre), and also use water for their yard, domestic plants, and fruit trees on  
3 approximately 0.46 (out of 0.6) acres of Parcel 37 and 0.0625 acre of Parcel 4. They have  
4 not measured all these uses, but estimate their domestic use at 1,568 gpd (0.46 acres +  
5 0.0625 acres x 3,000 gad), using the Maui County domestic cultivation standard.

6 d. When there is sufficient and consistent water flow, the Koki `ohana intends to  
7 restore their lo`i cultivation to historic levels, or a total of 0.736 acres (all of Parcels 4  
8 and 32, and about 1/8 of Parcel 37.) They request an additional 220,800 gpd for this  
9 purpose, using Reppun’s high estimate (0.736 acre x 300,000 gad

10 e. Parcel 4 is comprised of a portion of LCA 4377:1, confirmed by RP 4105. The  
11 native testimony states that `āpana 1 was a “section of loi.”

12 f. Parcel 32 is comprised of a portion of LCA 4405E:1, confirmed by RP 5274. The  
13 native and foreign testimonies state that `āpana 1 was “moo kalo.”

14 g. Parcel 37 is comprised of a portion of LCA 4377 (as does Parcel 4), as well as  
15 portions of LCAs 4426:1, confirmed by RP 4937, and LCA 425, confirmed by RP 3345.  
16 The foreign testimony for LCA 4426 states that `āpana 1 included “16 lois and one kula.”  
17 The foreign testimony for LCA 425 states that it consisted of “one piece on which his  
18 house is situated, and several kalo patches.”

19 h. The Commission provisionally approved appurtenant rights for Parcels 4, 32, and  
20 37. For Parcel 37, only documents for LCA 4377:1 were submitted and not for LCAs  
21 4426:1 and 425. (Provisional Order, Attachment C, Revised Exh. 7, pp. 5-6.) .)  
22 [Hui/MTF and OHA, FOF B-230.]

23 i. For Parcel 37’s LCA 4426:1, the high number of lo`i (16 lo`i and one kula),  
24 supports the finding that it was mostly lo`i and a ratio of 90-10% is a reasonable  
25 approximation. For LCA 425, which was 2.29 acres, setting aside 0.25 acre for the house  
26 leaves 2.04 acre in lo`i, or again an approximate ratio of 90-10%.

27 j. Although the LCA 4377:1 portion of Parcel 37 was all lo`i land, the record is  
28 unclear on how much of the Parcel is covered by each of the three LCAs (4377:1—all  
29 lo`i, 4426:1—90% lo`i, and 425—90% lo`i). Thus, 90% of Parcel 37 is deemed to have  
30 been in lo`i.

1 k. Ninety percent of Parcel 37's 0.6 acres is 0.54 acre; Parcel 4 is 0.5 acre; and  
2 Parcel 32 is 0.16 acre, for a total acreage with appurtenant rights of 1.2 acres out of 1.26  
3 acres.

4 l. The Kokis requested appurtenant rights of 378,000 gpd (1.26 acres x 300,000  
5 gad), using Reppun's high estimate. However, by their own evidence, they claim 1.2  
6 acres of their total 1.26 acres as having appurtenant rights. So their request should have  
7 been 360,000 gpd, still based on Reppun's high estimate.

8 m. The Kokis also requested permit totals of 222,368 gpd, an estimated 1,568 gpd in  
9 existing use for their 0.5225 acre domestic garden plus an additional 220,800 gpd for  
10 0.736 acre of new lo'i.

11 n. The Kokis' appurtenant rights are recognized as 120,000 gpd (1.2 acres x 100,000  
12 gad).

13 o. The Kokis are issued a new-use permit of 110,400 gpd for 0.736 acres of lo'i  
14 (0.736 acre x 150,000 gad), all of which are in Category 2, as it is within the Kokis'  
15 appurtenant rights.

16 q. The Kokis' domestic garden use of 1,568 gpd on 0.5225 acre is exempt from the  
17 permit requirements, as it is less than 1 acre, supra, COL 195.

18  
19 229. **SWUPA 2367N—Lawrence Koki** (FOF 350)

20 a. On April 23, 2009, Lawrence Koki filed a new-use SWUPA for TMK No. (2) 3-  
21 2-003-030 ("Parcel 30"), for which he claimed appurtenant rights and requested 2,400  
22 gpd for domestic use on 0.8 acre of Parcel 30's 0.93 acre.

23 b. The Commission had granted provisional recognition, noting an auwai as  
24 boundary and a house lot and several kalo patches.

25 c. Koki did not submit testimony for nor participate in the CCH.

26 d. No action is taken on Koki's SWUPA and recognition of appurtenant rights. The  
27 Commission notes that his request for domestic use would be exempt from the permit  
28 requirements and for the amount he requests, so he should file his use with the  
29 Commission. He may also file for recognition of appurtenant rights at any time.

30  
31 230. **SWUPAs 2324/2325N—William La'a & Emmett & Renette Rodrigues** (FOF 351)

1 a. William La`a and the Rodrigues filed SWUPAs for existing- and new-uses on  
2 April 30, 2009 for TMK No. (2) 3-2-003:002 (“Parcel 2”). They also maintain lo`i kalo  
3 on TMK No. (2) 3-2-003:003 (“Parcel 3”), which is completely enclosed by Parcel 2 and  
4 owned by the George Ezaki Trust. Although the Trust owns Parcel 3, the Rodrigues  
5 `ohana has always cultivated it along with their other lo`i in Parcel 2 and therefore claim  
6 appurtenant rights for Parcel 3 as well.

7 b. Parcel 2 is 2.053 acres. Parcel 3 is 0.107 acres.

8 c. Parcel 2 is a portion of LCA 4426:1, confirmed by RP 4937, the same LCA as  
9 discussed in SWUPAs 2252/2253N—Crystal Koki, described as containing “16 lois and  
10 one kula.”

11 d. Parcel 3 is a pō`alima of the konohiki award to Victoria Kamāmalu, LCA  
12 7713:24.

13 e. The Commission provisionally approved appurtenant rights for LCA 4426:1,  
14 noting the pō`alima within the `āpana.

15 f. The Rodrigues `ohana request recognition of appurtenant rights for Parcels 2 and  
16 3 in the amount of 524,100 gpd, based on Reppun’s high estimate of 300,000 gad for  
17 1.747 acres. The 1.747 acres include Parcel 3’s 0.107 acre plus their estimate that 1.64  
18 acres of Parcel 2’s 2.053 acres was in kalo at the time of the Māhele, based on ancient  
19 lo`i that they have restored.

20 g. There is no information of the acreage and other contents of of the konohiki  
21 award to Victoria Kamāmalu, LCA 7713:24, so Parcel 3’s 0.107 acre should be  
22 subtracted from the appurtenant rights claim to 1.747 acres, leaving 1.64 acres.

23 h. Parcel 2 is recognized as having appurtenant rights of 164,000 gpd (1.64 acre x  
24 100,000 gad).

25 i. They also request a permit for 492,000 gpd to irrigate 1.64 acre of lo`i, based on  
26 Reppun’s high estimate (1.64 acre x 300,000 gad). 54,000 gpd was their existing use for  
27 the 1.64 acres, based on the five-gallon bucket method.

28 j. A permit is issued for 246,000 gpd (1.64 acre x 150,000 gad), of which 164,000  
29 gpd is in Category 2 and includes their existing use of 54,000 gpd in their appurtenant  
30 rights to 164,000 gpd. The remaining 82,000 gpd is in Category 3.

31

1 231. **SWUPA 2364N—William Freitas** (FOF 352)

2 a. On April 23, 2009, William Freitas filed a new-use SWUPA for TMK No. (2) 3-  
3 2-002:037 (“Parcel 37”). His daughter, Miki`ala Pua`a-Freitas, testified on his behalf and  
4 also for SWUPAs 2269/2270N, filed by her father and Michael Rodrigues.

5 b. Parcel 37 is 0.775 acre, for which Freitas requests recognition of appurtenant  
6 rights for 232,500 gpd and a permit for 150,825 gpd for 0.5 acre of kalo lo`i and 0.275  
7 acre of fruits and vegetables and water for fowl, based on Reppun’s high estimate of  
8 300,000 gad for kalo lo`i and Maui County standard for diversified agriculture of 3,000  
9 gad.

10 c. There is a small house of 500 square feet, but Pua`a-Freitas maximizes use over  
11 the rest of the land.

12 d. Freitas had applied for a new- instead of an existing-use permit, because of lack  
13 of sufficient water in 2008, even though their kuleana had used water from the `auwai for  
14 generations. In 2012, they restored kuleana water to Parcel 37 and have been using water  
15 for six lo`i and their garden and fowl. They plan to restore 0.5 acre of kalo lo`i.

16 e. Freitas has also established Kapuna Farms on Parcel 37, which produces honey  
17 for both their family’s consumption and for sale.

18 f. Parcel 37 has been in the Freitas `ohana since the Māhele and had included all of  
19 LCA 4405EE:1, confirmed by RP 6207, although Parcel 37 now includes only a portion  
20 of the LCA. They have burials on the property.

21 g. LCA 4405EE:1 was described as “a section of kalo and kula land.” Based on the  
22 terracing and slope of the land and the existence of ancient lo`i walls throughout, Pua`a-  
23 Freitas believes the kalo portion was on their land.

24 h. The Commission had granted provisional approval, commenting that there were  
25 multiple references to pō`alima as boundary, that native testimony referred to 36 lo`i, one  
26 kula and one house lot, and that the native register referenced 13 pō`alima, patch pauku,  
27 and pasture.

28 i. The Freitas `ohana has traditional and customary rights on Parcel 37, because they  
29 can trace their practices on Parcel 37 to a period prior to November 25, 1892. Kapuna  
30 Farms is incidental to these rights, since the honey production does not require additional  
31 water.



1 j. Parcel 37 is recognized as having appurtenant rights equal to 0.388 acre, or  
2 38,800 gpd (0.388 acre x 100,000 gpd), because LCA 4405EE:1 was kalo and kula (half  
3 of 0.775 acres).

4 k. The Freitas are issued a permit for 75,000 gpd for 0.5 acre of kalo lo`i (0.5 acre x  
5 150,000 gpd), which is in Category 1. Even though the amount exceeds their appurtenant  
6 rights, their traditional and customary rights entitle them to the amount that is reasonable  
7 and beneficial.

8 l. The Freitas are also recognized as having domestic use on 0.264 acre (0.275 –  
9 0.011 acre for the 500 square foot house), or 790 gpd, which is exempt from the permit  
10 requirements.

11  
12 **ii. South Waihe`e `Auwai**

13 232. The following SWUPAs receive water from the Spreckels Ditch via the South Waihe`e  
14 `Auwai (See Figure 1).

15  
16 233. **SWUPA 2249—Kenneth Kahalekai** (354)

17 a. Kenneth Kahalekai filed existing-use SWUPAs for five parcels, two of which are  
18 now cared for by Kau`i Kahalekai, who has a separate application under SWUPA 2312.  
19 The remaining three SWUPAs are for TMKs No. (2) 3-2-004:002 (“Parcel 2”), No. (2) 3-  
20 2-004:003 (“Parcel 3”), and No. (2) 3-2-029 (“Parcel 29”).

21 b. Kahalekai requests appurtenant rights for these three parcels for 785,100 gpd and  
22 a permit for 578,100 gpd.

23 c. Parcel 2 is 0.957 acre and is comprised of the majority of LCA 3718, confirmed  
24 by RP 5452, and two pō`alima of the konohiki award to Kamāmalu, LCA 7713:24. Parcel  
25 3 is 1.44 acres and is comprised of all of LCA 4432:1, confirmed by RP 5361, and three  
26 pō`alima of LCA 7713:24. Parcel 29 is 0.44 acre and is comprised of a portion of LCA  
27 3718, and a portion of LCA 7713:24. Parcels 2 and 29 together comprise the entirety of  
28 LCA 3718.

29 d. The Commission provisionally approved appurtenant rights for Parcel 2 based on  
30 LCA 3718, for Parcel 3 based on LCA 4432:1, and and for Parcel 29 based on LCAs

1 3718 and 4440. Kahalekai's current information does not mention LCA 4440 and now  
2 identifies LCA 7713:24 for Parcels 2, 3, and 29.

3 e. LCA 3718 is described as containing 61 lo'i. LCA 4432:1 is described as  
4 containing 8 lo'i and 3 pō'alima.

5 f. Kahalekai estimates the amount of land cultivated in lo'i kalo at the time of the  
6 Māhele totaled 2.617 acres: all 0.957 acre of Parcel 2, all 1.44 acres of Parcel 3, and half,  
7 or 0.22 acre of Parcel 29. About half of Parcel 29 is comprised of the konohiki award  
8 7713:24, so without any description, Kahalekai attributed only half of Parcel 29 to kalo  
9 lo'i at the time of the Māhele.

10 g. However, the pō'alima in Parcels 2 and 3 were also part of the konohiki award to  
11 Kamāmulu, LCA 7713:24. A hand-drawn map of LCA 3718 shows two pō'alima  
12 comprising about 10 percent of the size of LCA 3718, and a similar map of LCA 4432:1  
13 shows three pō'alima comprising less than 10 percent of the size of LCA 4432:1.

14 h. A similar analysis as provided by Kahalekai for Parcel 29 would reduce Parcel 2's  
15 0.957 acres to 0.861 acres ( $0.957 \times 0.9$ ), and Parcel 3's 1.44 acres to 1.296 acres ( $1.44 \times$   
16  $0.9$ ).

17 i. Therefore, the estimate of the amount of land cultivated in lo'i kalo at the time of  
18 the Māhele would be 2.377 acres ( $0.861 + 1.296 + 0.22$ ).

19 j. On April 30, 2008, Kahalekai claims to have been cultivating 1.92 acres of lo'i on  
20 Parcels 2 and 3 and water for domestic purposes on 0.7 acre

21 k. Kahalekai's claim of 785,100 gpd and a permit for 578,100 gpd is based on  
22 Reppun's high estimate of 300,000 gad for kalo lo'i and Maui County domestic  
23 cultivation of 3,000 gad.

24 l. Kahalekai is recognized as having appurtenant rights of 237,700 gpd (2.377 acres  
25 x 100,000 gad).

26 m. He is issued permits for 288,000 gpd (1.92 acres x 150,000 gad), of which  
27 237,700 gpd is based on his appurtenant rights and is in Category 2.

28 n. Unless Kahalekai can show that his existing use for kalo lo'i was equal to or more  
29 than 288,000 gpd, the remainder, or 50,300 gpd, is a new-use permit and is in Category 3.

30 Kahalekai's claim of an existing use of 576,000 gpd for 1.92 acres of kalo lo'i was not

1 based on measurements or estimates but on Reppun’s high estimate of 300,000 gad for  
2 kalo lo`i; i.e., for what he wanted and not what he was using.

3 o. Kahalekai is recognized as having domestic cultivation of 2,100 gpd (0.7 acre x  
4 3,000 gad), which is exempt from the permit requirements.

5  
6 234. **SWUPA 2312—Kau`i Kahalekai** (FOF 355)

7 a. Kau`i Kahalekai testified in support of existing uses filed on April 23, 2009, for  
8 four parcels: TMKs No. (2) 3-2-005:023 (“Parcel 23”) and No.(2) 3-2-005:022 (“Parcel  
9 22”), as well as two parcels originally included in SWUPA 2249, TMKs No. (2) 3-2-  
10 004:019 (“Parcel 19”) and No. (2) 3-2-005:027 (“Parcel 27”).

11 b. Parcel 19 is 1.17 acres and Parcel 23 is 1.1 acres, both of which have been  
12 cultivated by the Kahalekai`s `ohana for several generations.

13 1. Parcel 19 is comprised of all of LCA 3866:3, confirmed by RP 5330, and  
14 all of LCA 4303 and 4304:1, confirmed by RP 5358. LCA 3866:3 was partly in  
15 lo`i kalo and partly in kula. LCAs 4303 and 4304:1 were entirely in kalo. Based  
16 on the existence of ancient lo`i walls on Parcel 19, Kahalekai concluded that 1  
17 acre was cultivated in lo`i kalo and the remaining 0.17 acre was kula. The  
18 Commission provisionally approved appurtenant rights for LCA 4303.

19 2. Parcel 23 is wholly comprised of LCA 4405-HH: 1 & 2, confirmed by RP  
20 4119. Both were partly in lo`i kalo and partly in kula. Based on the ancient lo`i  
21 walls, Kahalekai estimates that 75%, or 0.825 acre, was in lo`i kalo and 0.275  
22 acre was in kula.

23 c. Parcel 22 is 0.12 acre and Parcel 27 is 0.766 acre, both of which were pō`alima of  
24 the konohiki award to Kamāmalu, LCA 7713:24.

25 d. The Commission granted provisional recognition of appurtenant rights for Parcels  
26 19, 22, and 23 but not 27 because of illegible documents for LCA 7713:24. Parcel 19’s  
27 approval was based on LCA 4303, with no mention of LCAs 4304:1 or 3866:3. Parcel  
28 22’s approval was based on 4405HH:1 with no mention of 4405HH:2. Parcel 23’s  
29 approval was based on LCA 4405HH:1.

30 e. She requests appurtenant rights of 812,835 gpd and an existing-use permit for  
31 832,800 gpd for the four parcels, both of which were not measured but estimates using

1 Reppun's high estimate of 300,000 gad for kalo lo'i and Maui County's domestic  
2 cultivation standard of 3,000 gad.

3 1. The total acreage for which Kahalekai claims appurtenant rights is 2.705  
4 (should have been 2.711) acres for kalo lo'i and 0.445 acre for other diversified  
5 agriculture, resulting in her request for 812,835 gpd.

6 2. Her request of 832,800 gpd in existing use is comprised of 2.776 acres in  
7 lo'i kalo out of a total of 3.156 acres across her four parcels, using Reppun's high  
8 estimate (2.776 x 300,000 gad).

9 f. The 2.776 acres of existing use is comprised of:

10 1. All 1.17 acres of Parcel 19.

11 2. 0.076 of 0.12 acre of Parcel 22.

12 3. 0.77 of 1.11 acres of Parcel 23.

13 4. 0.76 of 0.766 acre of Parcel 27.

14 g. However, as in the case of her father's application (SWUPA 2249—Kenneth  
15 Kahalekai), Parcels 22 and 27 were both from the the konohiki award to Kamāmalu, LCA  
16 7713:24, for which there is no description of acreage or other contents.

17 h. Thus, she is recognized as having appurtenant rights to 1.0 acre of Parcel 19's  
18 1.17 acre and 0.825 acre of Parcel 23's 1.1 acres, for a total of 1.825 acres.

19 i. Kahalekai is recognized as having appurtenant rights of 182,500 gpd for Parcels  
20 19 and 23 (1.825 acres x 100,000 gad).

21 j. She also claims appurtenant rights for the remaining 0.445 acres for diversified  
22 agriculture, but there is no evidence of water use for kula lands at the time of the Māhele,  
23 *supra*, FOF 171.

24 k. Kahalekai is also recognized as having traditional and customary rights on Parcels  
25 19's and 23's total of 2.27 acres.

26 l. She is granted a permit for 416,400 gpd (2.776 acres x 150,000 gad). 1.94 acres of  
27 the total of 2.776 acres are on parcels 19 and 23, *supra*, f, for which Kahalekai has  
28 traditional and customary rights, so 291,000 gpd is in Category 1, and the remainder of  
29 125,400 gpd is in Category 3.

30 m. As in the other SWUPAs for which estimates of maximum irrigation was made  
31 instead of actual measurements, rather than issuing a temporary permit subject to

1 measurements of actual uses, *supra*, COL 180, the existing-use permit is issued up to the  
2 maximum appurtenant rights, with the remainder classified as a new use. In this case,  
3 appurtenant rights were greatly exceeded by traditional and customary rights, so 291,000  
4 gpd instead of 182,000 gpd are in Category 1. Existing uses that are not reasonable or  
5 necessary for economic and efficient utilization would be reduced to reasonable amounts;  
6 e.g., in the case of kalo lo`i, 150,000 gad, and not the 300,000 gad applied by Kahalekai.

7  
8 235. **SWUPAs 2320/2321N—Ramsay Anakalea (Aloha Poi)** (FOF 356)

9 a. Ramsay Anakalea filed for existing- and new-uses for TMK No. (2) 3-2-005:020  
10 (“Parcel 20”), which he leases to Aloha Poi, requesting appurtenant rights of 181,500 gpd  
11 and a permit for 150,000 gpd, of which 72,000 gpd was the existing use as of April 30,  
12 2008.

13 b. Parcel 20 is 1.2 acres and is the entirety of LCA 4405-V: 1 & 2, confirmed by RP  
14 4117. Some of the land was in kalo lo`i and some in `uala at the time of the Māhele.  
15 Based on the slope of the land and the existence of lo`i kalo walls, Nakama estimates half  
16 of the land was in lo`i kalo. The Commission provisionally recognized appurtenant rights.

17 c. The 72,000 gpd of existing use is to irrigate 0.5 acres was measured by the bucket  
18 method. The total permit request is based on using Reppun’s high estimate of 300,000  
19 gad for kalo lo`i (0.5 acre x 300,000 gad). The appurtenant rights recognition is based on  
20 Reppun for half of Parcel 20, or 0.6 acres (0.6 acres x 300,000 gad = 180,000 gpd) and  
21 the water duty for diversified agriculture in *Waiāhole* for 0.6 acres (0.6 acre x 2,500 gad  
22 = 1,500 gpd), for a total request of 181,500 gpd.

23 d. Appurtenant rights for Parcel 20 are recognized for 60,000 gpd (0.6 acres x  
24 100,000 gad). There is no evidence of water use for kula lands at the time of the Māhele,  
25 *supra*, FOF 171.

26 e. A permit is granted for 0.5 acre of kalo lo`i for a total of 75,000 gpd (0.5 acre x  
27 150,000 gad), of which 72,000 gpd is in Category 2 under existing use, including 60,000  
28 gpd of appurtenant rights, and 3,000 gpd is in Category 3 as a new use.

29  
30 236. **SWUPA 2406N—David & Anne Brown** (FOF 357)

1 a. On June 10, 2009, David and Anne Brown filed a new-use SWUPA for TMK No.  
2 (2) 3-2-005:028, a 11.74-acre property, for which they requested 10,000 gad, or 112,740  
3 gpd for 9.0 acres of fruit trees and 2.274 acres of aquaculture.

4 b. They claimed appurtenant rights but provided no documents nor participated in  
5 the provisional approval process.

6 c. The Browns did not submit any written testimony and did not participate in the  
7 CCH.

8 d. The permit request is denied. The Browns may file for a new use at any time.

9  
10 237. **SWUPAs 2262/2263N—John Varel (Kalani & Tera Paleka)** (FOF 358)

11 a. John Varel owns four properties in Waihe`e and Waiehu for which he is seeking  
12 permits, three of which he acquired after the SWUPAs were filed and is thus pursuing in  
13 place of the original applicants: SWUPAs 2262 and 2263N (Paleka), 2298 and 2299N  
14 (Varel), 2593N (Koolau Cattle Co.), and 3470N (Emmanuel Lutheran Church).

15 b. The Palekas filed for existing- and new-uses for TMKs No. (2) 3-2-005:035  
16 (“Parcel 35”) and No. (2) 3-2-041 (“Parcel 41”), on April 23 2009, which were bought by  
17 the John and Angelia Varel Trust in 2011.

18 c. Parcel 35 is 0.26 acres, and parcel 41 is 0.13 acres.

19 d. Varel seeks appurtenant rights for 117,000 gpd and permits for 82,200 gpd, of  
20 which 61,851 gpd is the existing use as of April 30, 2008.

21 e. The deeds to both parcels contain reservations of appurtenant rights when they  
22 were sold by Wailuku Sugar Co. in 1963.

23 f. The Palekas used the bucket method to estimate their existing use for their 0.074-  
24 acre lo`i at about 61,851 gpd, and applied the 600 gpd figure for a single-family home to  
25 estimate their domestic use for two homes on about 0.27 acre at 1,200 gpd.

26 g. Varel plans to irrigate 0.16 acre of lo`i on Parcel 35’s 0.26 acres and 0.11 acre of  
27 lo`i on Parcel 41’s 0.13 acres, for which he requests 81,000 gpd, using Reppun’s high  
28 estimate (0.27 acre x 300,000 gad). He also uses kuleana water to irrigate two small non-  
29 commercial gardens on both parcels and requests 1,200 gpd, applying 600 gpd for a  
30 single-family home.

1           h.       The appurtenant rights for both parcels were extinguished in 1963, before the  
2           November 8, 1978, adoption of the constitutional amendment preserving appurtenant  
3           rights.

4           i.       The measured use of 61,851 gpd by the Palekas for their 0.074-acre lo`i is  
5           equivalent to 835,800 gad, while the reasonable use would have been 11,100 gpd (0.074  
6           acre x 150,000 gad). Therefore, the existing use would be recognized as 11,100 gpd.

7           j.       A permit for 40,500 gpd for 0.27 acre of kalo lo`i (0.27 acre x 150,000 gad) is  
8           granted, of which 11,100 gpd was the existing use and in Category 2. The remainder, or  
9           29,400 gpd, is a new use and in Category 3.

10          k.       810 gpd (0.27 acre x 3,000 gad) of domestic use is also recognized and exempt  
11          from the permit requirements.

12  
13   238.   **SWUPAs 2334/2335N—Burt Sakata & Peter Fritz** (FOF 359)

14          a.       On April 30, 2009, Sakata and Fritz filed:

15               1.       an existing-use SWUPA for four parcels: TMKs No. (2) 3-2-005:011  
16               ("Parcel 11"), No. (2) 3-2-005:013 ("Parcel 13"), No. (2) 3-2-005:019 ("Parcel  
17               19"), and No. (2) 3-2-005:039 ("Parcel 39"); and

18               2.       a new-use SWUPA for three parcels: Parcel 13, TMK No. (2) 3-2-005:015  
19               ("Parcel 15"), and TMK No. (2) 3-2-005:017 ("Parcel 17").

20          b.       The deeds to Parcels 11, 15, 19 and 39 contain reservations of appurtenant rights  
21          in deeds dated 2001; Parcels 13 and 17 do not have reservations.

22          c.       Sakata requests recognition of appurtenant rights for all six parcels in the amount  
23          of 2,543,100 gpd and permits for existing and new uses for 384,354 gpd, of which 4,254  
24          gpd was the existing use.

25          d.       Parcel 11 is 0.07 acres; Parcel 13 is 0.61 acres, Parcel 15 is 0.03 acres, Parcel 17  
26          is 0.81 acres, Parcel 19 is 12.341 acres, and Parcel 39 is 0.11 acres, for a total of 13.971  
27          acres.

28          e.       Sakata requests recognition of appurtenant rights for 8.471 acres of kalo lo`i and  
29          three house lots, for a total of 2,543,100 gpd, based on Reppun's high estimate of  
30          300,000 gad (8.471 acres x 300,000 = 2, 541, 300) and Maui County standard for

1 domestic use of 600 gpd (3 households x 600 gpd = 1,800 gpd), resulting in the  
2 2,543,100 gpd total (2,541,300 + 1,800 = 2,543,100 gpd).

3 f. Appurtenant rights of 8.471 acres of kalo lo`i and three house lots are based on:

4 1. Parcel 11: is a pō`alima of LCA No. 7713:24 to Kamāmalu, confirmed by  
5 RP 4475. Thus, Sakata claims all 0.07 acres under appurtenant rights.

6 2. Parcel 13: is the entirety of LCA No. 7686:1, confirmed by RP 6284.  
7 Documents describe eleven lo`i kalo, some small kulas, and a house lot. Sakata  
8 concludes from the existence of rock walls and the high concentration of lo`i kalo  
9 in the area, that there were only small areas of dryland cultivation on the lo`i  
10 banks. He therefore estimates the amount of land in kalo as 0.36 acre (0.61 – 0.25  
11 houselot = 0.36 acre).

12 3. Parcel 15: is part of a pō`alima of LCA No. 7713:24 to Kamāmalu,  
13 confirmed by RP 4475. Thus, Sakata claims all 0.03 acres under appurtenant  
14 rights.

15 4. Parcel 17: is the entirety of LCA No. 3770-B:1, confirmed by RP 8066;  
16 the entirety of LCA No. 4444-B, confirmed by RP 8065; and the entirety of LCA  
17 4444:1, confirmed by RP 6380. Documents describe all three LCAs as only  
18 containing kalo lo`i. Thus, Sakata claims all 0.81 acres under appurtenant rights.

19 5. Parcel 19: includes:

20 i. the entirety of LCAs 3434:1 & 2, 3515, 3886-B:1, 3997,  
21 4284:2, 4303 & 4304:2 & 3, 4304-B:1, 4405-FF:1, 4405-LL:1 &  
22 2, 4417:1, 4438-B:1.1 & 1.2, and 8365-B:2, with all described as  
23 being in kalo lo`i, except 4303 & 4304:2 & 3 as having a section of  
24 kalo and houselot, 4304-B:1 as having kalo and kula land, and  
25 8365-B:2 as consisting of kalo and kula land;

26 ii. a portion of LCAs 3510:1 and 4440, with 4440 described as  
27 a piece of kalo and kula land; and

28 iii. a portion of LCA No. 7713:24 and eight pō`alima of LCA  
29 No. 7713:24.



1                   Sakata claims appurtenant rights for 7.091 acres for Parcel 19 after  
2                   subtracting 5 acres for the land attributed to LCA No. 7713:24 and  
3                   0.25 acres for the houselot from the total of 12.341 acres.

4           6.       Parcel 39: is a pō`alima of LCA No. 7713:24 to Kamāmalu, confirmed by  
5           RP 4475. Thus, Sakata claims all 0.11 acres under appurtenant rights.

6       g.       The Commission had granted provisional recognition. However: 1) For Parcel  
7       15, which they now claim was part of LCA 7713:24 to Kamāmalu, the LCA identified  
8       then was 4405-V:1&2, for which no documentation had been provided; 2) for Parcel 17,  
9       only LCA 3770-B:1 had been identified and not the other two; 3) and for Parcel 19, LCA  
10       4303 had no documentation, LCA 4417:4, not 4417:1, had been identified, and LCAs  
11       4304:2&3, 3510, and 4440 had not been identified.

12       h.       Sakata's request for recognition of appurtenant rights based on 8.471 acres of kalo  
13       lo`i and three house lots is not supported by his documentation:

14           1.       he does not reduce the acreage for the three LCAs in Parcel 19 that had a  
15           house lot or kula lands;

16           2.       he counts the pō`alima from LCA No. 7713:24 as though they were  
17           separate Māhele awards from LCA No. 7713:24 for Parcels 11, 15, 19, and 39,  
18           and therefore cannot claim that all of Parcels 11, 15, and 39 and the eight  
19           pō`alima from LCA No. 7713:24 in Parcel 19 count in quantifying appurtenant  
20           rights;

21           and

22           3.       his documentation counts two, not three house lots.

23       j.       The acres in question for appurtenant rights total 0.21 acres from Parcels 11 (0.07  
24       acre), 15 (0.03 acre), and 39 (0.11 acre), plus the eight pō`alima (acreage not specified)  
25       and kula on three LCAs in Parcel 19. In addition, Sakata claimed appurtenant rights for  
26       three houselots at 600 gpd each, for a total of 1,800 gpd. But no water duty is assigned  
27       for houselots to determine appurtenant rights, *supra*, FOF 170.

28       k.       Three of the sixteen LCAs other than 7713:24 in Parcel 19 had kula and kalo, and  
29       of the sixteen, 13 were wholly within Parcel 19, including two of the LCAs that  
30       contained kula. Without any information on the size of the LCAs in whole or in part  
31       contained in Parcel 19, the Commission will assume that three-sixteenths (3/16) of the

1 7.091 acres that Sakata claims has appurtenant rights should have been reduced by half  
2 because of the presence of kula. This will also be assumed to account for the eight  
3 pō`alima of LCA 7713:24 that Sakata had included in his total. Therefore, the 7.091  
4 acres of Parcel 19 will be reduced by 0.665 acres ( $7.091 \times \frac{3}{16} \times \frac{1}{2}$ ), or a net of 6.426  
5 acres of appurtenant rights for Parcel 19.

6 l. Thus, Sakata has appurtenant rights to 0.36 acres for Parcel 13, 0.81 acres for  
7 Parcel 17, and 6.426 acres for Parcel 19, for a total of 7.596 acres.

8 m. Parcels 13, 17, and 19 have appurtenant rights of 759,600 gpd (7.596 acres x  
9 100,000 gad). If Sakata does not agree with the estimate of acreage, he may submit  
10 documentation supporting his alternative claim.

11 n. The reservation in 2001 did not extinguish the appurtenant rights for Parcels 11,  
12 15, 19, and 39, and Parcels 13 and 17 did not have reservations.

13 o. Sakata estimates his existing use was about 4,254 gpd for a non-commercial  
14 garden on about 1.218 acres on Parcels 11, 13, 19, and 39, using Maui County domestic  
15 cultivation standard of 3,000 gad ( $1.218 \text{ acres} \times 3,000 \text{ gad} = 3,654 \text{ gpd}$ ). He then added  
16 600 gpd, base on Maui County single-family home use, to account for the water he uses  
17 outside his home on Parcel 13 for gardening, to arrive at 4,254 gpd.

18 p. He also requests 380,100 gpd to restore 1.267 acres of lo`i, using Reppun's high  
19 estimate ( $1.267 \text{ acres} \times 300,000 \text{ gad}$ ).

20 q. He does not seek a separate allocation for his other agricultural uses but intends to  
21 use some of the water that passes through his lo`i to irrigate 12 acres of macadamia trees.  
22 Using the diversified agriculture water duty in *Waiāhole*, he estimates that 30,000 gpd  
23 ( $12 \text{ acres} \times 2,500 \text{ gad}$ ) of his 380,100 request for lo`i would be used to irrigate his trees.

24 r. He is issued a Category 2 existing-use permit for 4,250 gpd for his 1.218-acre  
25 non-commercial garden and home use, rather than exempting it from the permit  
26 requirements, because it is in excess of one acre and within his appurtenant rights of  
27 759,600 gpd.

28 s. He is also issued a Category 2 permit of 190,050 gpd (1.267 acres x 150,000 gad),  
29 because it falls entirely within his appurtenant rights of 759,600 gpd even though it is a  
30 new use, which will include 30,000 gpd for 12 acres of macadamia trees, at the

1 diversified agriculture rate of 2,500 gad instead of the domestic agriculture rate of 3,000  
2 gad.

3  
4 239. **SWUPAs 2225/2226N—Michael Doherty** (FOF 360)

5 a. On April 23, 2009, Michael Doherty filed existing- and new-use SWUPAs for  
6 TMKs No. (2) 3-2-005:006 (“Parcel 6”), No. (2) 3-2-005:007 (“Parcel 7”), and No. (2) 3-  
7 2-005:008 (“Parcel 8”),s for which he requests recognition of appurtenant rights for  
8 470,850 gpd and a permit for 602,550 gpd, of which 302,250 gpd is the existing use. All  
9 of these amounts were not measured but calculated by using Reppun’s high estimate of  
10 300,000 gad for kalo lo`i and Maui County domestic cultivation standard of 3,000 gad.

11 b. Parcel 6 is 0.07 acres, Parcel 7 is 2.825 acres, and Parcel 8 is 0.05 acres, for a total  
12 of 2.945 acres. Parcels 6 and 8 are located within Parcel 7 and were pō`alima of the  
13 konohiki award to Kamāmalu, LCA 7713:24.

14 c. The Commission had provisionally approved appurtenant rights. Parcel 6 was  
15 described as derived from LCA 4295.1, confirmed by RP 5401 and not from 7713:24 to  
16 Kamāmalu; Parcel 8 was described as derived from LCA 3995:3, confirmed by RP 5360  
17 and not shown on the map, with applicant’s attorney describing it as a pō`alima but with  
18 no documentation; and Parcel 7 did not include LCA 4295:1, which was ascribed to  
19 Parcel 6, nor LCA 4424:1, and LCA 4405-NN was described as “2 pieces of kalo and  
20 kula lands,” and not nine lo`i. However, on the latter, the applicant provided a document  
21 of Native Testimony that stated that “I saw 1 piece of 9 lo`i inside...”

22 d. Doherty estimates the acreage of land in Parcel 7 that was in kalo lo`i at the time  
23 of the Māhele was 2.325 acres out of a total of 2.825 acres, arrived by subtracting 0.5  
24 acre for a pāhale and dryland cultivation from 2.825 acres.

25 e. Adding Parcel 6’s 0.07 acre and Parcel 8’s 0.05 acre to 2.325 acres of Parcel 7,  
26 Doherty claims appurtenant rights for 2.445 acres of kalo lo`i.

27 f. However, Parcels 6 and 8’s total of 0.12 acres were part of LCA 7713:24, for  
28 which other contents and acreage are not known.

29 g. He also claims appurtenant rights to 0.25 acre of aouselot (pāhale) and an  
30 additional 0.25 acre for dryland cultivation, but there is no evidence of water use on  
31 either at the time of the Māhele, *supra*, FOF 170 - 171.

1 h. Doherty is recognized as having appurtenant rights of 232,500 gpd (2.325 acres x  
2 100,000 gad).

3 i. Doherty claims existing uses for one acre in lo`i cultivation and 0.75 acre in  
4 domestic agriculture, neither of which were measurements but were estimates, and also  
5 requests new uses for an additional acre of kalo lo`i and 0.1 acre of citrus trees.

6 j. He is issued an existing-use permit for 150,000 gpd for 1 acre of kalo lo`i (1 acre  
7 x 150,000 gad), which is in Category 2. He is also issued a new-use permit for 150,000  
8 for an additional acre of kalo lo`i, of which 82,500 gpd is also in Category 2 as it falls  
9 under his remaining appurtenant rights. The remaining 82,500 gpd falls under Category  
10 3.

11 k. The 0.75 acre in existing domestic agriculture use and the proposed 0.1 acre for  
12 citrus trees fall within the 1-acre limit for domestic use and are exempt from the permit  
13 requirements. The Commission recognizes 2,550 gpd (0.85 x 3,000 gad) for this use.

14  
15 240. **SWUPAs 2280/2281N—Thomas Texeira & Denise Texeira** (FOF 361)

16 a. The Texeiras filed for existing- and new-use SWUPAs on April 23, 2009 for  
17 TMKs No. (2) 3-2-005:031 (“Parcel 31”) and No. (2) 3-2-005:032 (“Parcel 32”), seeking  
18 recognition of appurtenant rights of 98,100 gpd and a permit for 45,165 gpd, of which  
19 4,845 gpd was the existing use, using Reppun’s high estimate of 300,000 gad for kalo  
20 lo`i, a water duty for aquaculture of 36,000 gad, and Maui County’s domestic agriculture  
21 standard of 3,000 gad. The Commission had given provisional approval of appurtenant  
22 rights.

23 b. Parcel 31 is 0.607 acre and all of LCA 4405U:2, confirmed by RP 5990, and a  
24 portion of the konohiki award to Kamāmalu, LCA 7713:24. LCA 4405U:2 is 0.27 acre,  
25 and described as consisting of 10 lo`i kalo, leaving the LCA 7713:24 portion at 0.337  
26 acre.

27 c. The Texeiras state that Parcel 32 is 0.06 acres and all of LCA 3721:2, confirmed  
28 by RP 6439, and was in lo`i and dryland cultivation at the time of the Māhele. Ancient  
29 rock walls still exist on approximately 95% of Parcel 32, or approximately 0.057 acres.  
30 However, there is a slight discrepancy with their existing-use application, which lists the  
31 acreage at 0.057, not 0.06 acre.

1 d. The Texeiras estimate that 0.327 acre was in lo`i kalo at the time of the Māhele:  
2 0.27 acre of Parcel 31's 0.607 acre, plus 0.057 of Parcel 32. They did not include any  
3 acreage derived from LCA 7713:24 in Parcel 31.

4 e. The Texeiras have appurtenant rights to 32,700 gpd (0.327 acre x 100,000 gad).

5 f. The Texeiras also had existing domestic uses on approximately 0.535 acre of  
6 their two parcels, and were also using water to maintain four koi ponds on about 0.09  
7 acre, but the koi died in early 2016 due to contamination of river water. They intend to  
8 restore 0.15 acre of lo`i kalo (0.06 acre stated in the SWUPA plus 0.09 acre previously in  
9 koi ponds.)

10 h. They had existing uses of 1,605 gpd (0.535 acre x 3,000 gad) for domestic  
11 agriculture and 3,240 gpd (0.09 acre x 36,000 gad) for the koi ponds.

12 i. They are issued a Category 2 permit for 22,500 gpd (0.15 acre x 150,000 gad) for  
13 kalo lo`i, which falls within their appurtenant rights of 32,700 gpd.

14 j. Domestic uses of 1,605 gpd is recognized (0.535 acre x 3,000 gad) and exempt  
15 from the permit requirements.

16  
17 241. **SWUPAs 2264/2265N—Piko Ao** (FOF 362)

18 a. Piko A`o, LLC filed existing- and new-use SWUPAs for TMKs No. (2) 3-2-  
19 006:008 ("Parcel 8") and No. (2) 3-2-006:019 ("Parcel 19") on April 23, 2009.

20 b. Piko A`o, or "center of learning," operates a Hawaiian learning center on Parcels  
21 8 and 19, which they purchased from Wailuku Agribusiness in 2002. The deed contains a  
22 reservation of appurtenant rights.

23 c. The Commission had given provisional approval of appurtenant rights.

24 d. Piko A`o requests appurtenant rights for Parcels 8 and 19 of an estimated  
25 5,622,925 gpd and a permit for an estimated 1,451,675 gpd, of which 61,175 gpd was the  
26 estimated existing use.

27 e. Existing use consists of:

28 i. 0.17 acre of lo`i on Parcel 8, estimated at 51,000 gpd, using Reppun's high  
29 estimate (0.17 acre x 300,000 gad);

30 ii. 3.83 ares of diversified agriculture on Parcel 8, estimated at 9,575 gpd,  
31 using the diversified agriculture irrigation amount of 2,500 gad in **Waiāhole**; and

- 1           iii.     domestic use for dish- and hand-washing, using the Maui County single-  
2           family home amount of 600 gpd.
- 3           f.     Its new-use request consists of:
- 4           i.     4.61 acres of lo`i, estimated at 1,383,000 gpd using Reppun` s high  
5           estimate (4.61 acres x 300,000 gad);
- 6           ii.    3 acres of diversified agriculture, estimated at 7,500 gpd (3 acres x 2,500  
7           gad).
- 8           **(Id., ¶¶ 66-67.) [Hui/MTF and OHA, FOF B-379 to B-380.]**
- 9           g.     Parcel 8 is 32.42 acres, and Parcel 19 is 0.61 acres.
- 10          h.     Parcel 19 consists of LCA 4405U:1, confirmed by RP 5990, and is described as  
11          “21 loi.”
- 12          i.     Parcel 8 consists of a portion of the konohiki LCA No. 7713:24 to Kamāmalu,  
13          confirmed by RP 4475, within which seventeen kuleana LCAs were awarded. Of Parcel  
14          8` s 32.42 acres, 11.5 acres were estimated as comprising LCA 7713:24, with the rest  
15          consisting of fourouselots (1.0 acre), 1.81 acre kula (dryland agriculture), and 18.11  
16          kalo lo`i.
- 17          j.     Piko A`o` s appurtenant rights request consists of:
- 18           1.     183,000 gpd for Parcel 19` s 0.61 acre (0.61 acre x 300,000 gad); and
- 19           2.     5,439,925 gpd for Parcel 8` s 32.42 acres:
- 20           a.     5,433,000 gpd for 18.11 acres of kalo lo`i (18.11 acres x 300,000  
21           gad);
- 22           b.     2,400 gpd for fourouselots (4 x 600 gpd);
- 23           c.     4,525 gpd for dryland crops (1.81 acres x 2,500 gad); and
- 24           d.     none for 11.5 acres of the Kamāmalu konohiki LCA No. 7713:24.
- 25          k.     Piko A`o` s appurtenant rights request should be based on 18.72 acres of kalo lo`i  
26          (Parcel 19` s 0.61 acres plus 18.11 acres of Parcel 8).
- 27          l.     The constitutional amendments of November 8, 1978 preserved appurtenant  
28          rights, and such rights could not be extinguished by the 2002 deed.
- 29          m.     Parcels 8 and 19 are recognized as having appurtenant rights of 1,872,000 gpd  
30          (18.72 acres x 100,000 gad).

1 n. Piko A`o is granted a permit for 737,490 gpd: 717,000 gpd (4.78 acres x 150,000  
2 gad) for existing- and new-use kalo lo`i and 20, 490 gpd (6.83 acres x 3,000 gad) for  
3 existing- and new-use diversified agriculture.

4 o. All of the permitted amounts are in Category 2, because they fall within Piko  
5 A`o`s appurtenant rights of 2,447,000 gpd.

6 p. It is also recognized as using 600 gpd for domestic use, which is exempt from the  
7 permit requirements.

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9 242. **SWUPAs 2316/2317N—Gordon Apo (Aloha Poi)** (FOF 363)

10 a. Gordon Apo and Lester Nakama filed existing- and new-use SWUPAs for TMK  
11 Nos. (2) 3-2-006:010 (“Parcel 10”) and (2) 3-2-006:011 (“Parcel 11”) on April 30, 2009.  
12 Nakama has leased the land from the Apo `ohana, which also cultivates some kalo for  
13 their own use.

14 b. Parcel 10 is 1.34 acre, and Parcel 11 is 0.06 acre, for a combined total of 1.40  
15 acre. Parcel 10 includes approximately one fourth of LCA 4063, confirmed by RP 3429,  
16 and the land was described as “apana kalo.” Parcel 11 is a small tract of land within  
17 Parcel 10 and was a pō`alima of the konohiki award to Kamāmalu, LCA 7713:24.  
18 The Commission provisionally approved appurtenant rights for Parcels 10 and 11.

19 c. They request recognition of appurtenant rights for Parcels 10 and 11 for 420,000  
20 gpd, and a permit for 219,000 gpd, of which 62,000 gpd is the existing use. The 62,000  
21 gpd of existing use was measured by the bucket method for 0.73 acres, of which 0.67  
22 acre was on Parcel 10 and 0.06 acre was on Parcel 11. The appurtenant right and permit  
23 requests were based on Reppun’s high estimates of 300,000 gad.

24 d. There is no information on the acreage and other contents of the konohiki award  
25 to Kamāmalu, LCA 7713:24, so only appurtenant rights for Parcel 10 is recognized.

26 d. Appurtenant rights of 134,000 gpd are recognized for 1.34 acres (1.34 acres x  
27 100,000 gad).

28 e. A permit for 109,500 gpd is granted for 0.73 acre of kalo lo`i (0.73 acre x 150,000  
29 gad), of which 62,000 gpd was the existing use.

30 f. All of the 109,500 gpd of permitted use is in Category 2, as it is within the  
31 appurtenant right of 134,000 gpd.

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243. **SWUPA 2187—Milla Puliatch** (FOF 364)

- a. On April 9, 2009, Milla Puliatch filed an existing-use SWUPA for TMK No. (2) 3-2-006:010 (“Parcel 10”), a 1.75-acre property with active kalo lo`i on 1.25 acres for 98 years, claiming an estimated existing use of 8,640 gpd.
- b. Puliatch had claimed appurtenant rights and had been granted provisional approval based on LCA 4063, confirmed by RP 3429, with the Native Register describing 28 lo`i and one house, the Foreign Testimony describing one large piece of kalo, and the Native Testimony describing 1 taro section with 8 pō`alima in it.
- c. Puliatch did not submit written testimony nor participate in the CCH.
- d. No action is taken on her appurtenant rights request, and the SWUPA is denied
- e. Puliatch should apply for a new-use permit and reapply for appurtenant rights, which would determine the priority category of her use.

244. **SWUPAs 2221/2222N—Cordell Chang** (FOF 365)

- a. Cordell Chang filed SWUPAs for existing- and new-uses for TMK No. (2) 3-2-006:004 (“Parcel 4”).
- b. Parcel 4 is 1.29 acres, of which Chang is farming 0.45 acres in bananas, tī leaf, `ulu, coconut, papaya, and other fruits and vegetables for his family, farmworkers, church, and the homeless, and some of which he sells. Applying the water duty in the *Waiāhole* case, he estimates his existing use as 1,125 gpd (0.45 acre x 2,500 gad).
- c. Chang requests an additional amount to grow 0.5 acre of lo`i kalo, which he estimates would require 150,000 gpd, using Reppun’s high estimate (0.5 acre x 300,000 gad).
- d. Parcel 4 includes all of LCA 3805, confirmed by RP 5352. The native register states that the land included “forty two wetland taro patches, and a patch of pandanus (lauhala).” Ancient lo`i walls still exist on a majority of Parcel 4. Therefore, Chang estimates 1.25 acres of the 1.29 total acreage was cultivated in lo`i kalo, with the remainder cultivated in lauhala. The Commission provisionally approved Parcel 4.
- e. Parcel 4 is recognized as having appurtenant rights of 125,000 gpd (1.25 acres x 100,000 gad).



1 f. Although he sells some of his produce, which requires a permit, his 0.45 acres of  
2 fruits and vegetables are compatible with domestic cultivation of 3,000 gad, or 1,350 gpd  
3 (0.45 acre x 3,000 gad).

4 g. The new use for 0.5 acre of lo`i kalo is permitted at 75,000 gpd (0.5 acre x  
5 150,000 gad).

6 h. The total permitted amount of 76,350 gpd is in Category 2, as it all falls within his  
7 appurtenant rights of 125,000 gpd.

8  
9 245. **SWUPAs 2313/2314N—Charlene & Jacob Kana** (FOF 366)

10 a. The Kanas filed for existing- and new-use SWUPAs for TMKs No. (2) 3-2-  
11 006:001 (“Parcel 1”) and No. (2) 3-2-006:018 (“Parcel 18”) on April 30, 2009, requesting  
12 recognition of appurtenant rights for 471,000 gpd and permits for 345,999 gpd, of which  
13 25,200 gpd was their claimed existing use on 0.084 acre of lo`i as of April 30, 2008, all  
14 of which were based on Reppun’s high estimate of 300,000 gad.

15 b. Parcel 1 is comprised of a portion of LCA 3963, confirmed by RP 6457; and  
16 Parcel 18 is comprised of a portion of LCA 3963, a portion of LCA 4296:1, confirmed  
17 by RP 5357, and four pō`alima of the konohiki award to Kamāmalu, LCA 7713:24.  
18 Together, Parcels 1 and 18 include the majority of LCA 3963, a portion of LCA 4296:1,  
19 and the four pō`alima.

20 c. The two LCAs are described as cultivated in numerous lo`i without referencing  
21 any other use. The maps for LCA 3963 depict the four pō`alima, which are part of Parcel  
22 18, and comprise approximately 10 percent of Parcel 18.

23 d. The Commission had granted provisional approval for Parcels 1 and 18, but only  
24 LCA 3963 was mentioned.

25 e. Parcel 1 is 0.315 acre and Parcel 18 is 1.251 acres, for a total of 1.57 acres.

26 f. The Kanas were cultivating 0.084 acre of lo`i as of April 30, 2008, reflecting a  
27 reduction in the amount they used to grow due to the lack of sufficient water. They intend  
28 to restore 1.06933 acres to lo`i cultivation, for a total of 1.153 acres.

29 g. The Kanas claim appurtenant rights for all 1.57 acres of Parcels 1 and 18, but part  
30 of Parcel 18’s 1.251 acres is comprised of four pō`alima of the konohiki award to  
31 Kamāmalu, LCA 7713:24, for which the acreage and other contents are not known.

1 h. Approximately 10 percent of Parcel 18 is derived from LCA 7713:24, so the  
2 acreage for Parcel 18's 1.251 acres should be reduced by 0.125 acre to 1.126 acre.

3 i. Parcels 1 and 18 have appurtenant rights to 1.441 acres, or 144,100 gpd (1.441  
4 acre x 100,000 gad).

5 j. A permit is granted for 172,950 gpd (1.153 acres x 150,000 gad), of which  
6 144,100 gpd is in Category 2 (existing and new uses based on appurtenant rights), and the  
7 remainder, or 28,850 gpd, is in Category 3 (new uses not based on appurtenant rights).  
8

9 246. **SWUPA 2353—Hiolani Ranch** (FOF 367)

10 a. On May 1, 2009, Hiolani Ranch filed an existing-use SWUPA for TMKs No. (2)  
11 3-2-007:001 ("Parcel 1") and No. (2) 3-2-007:005 ("Parcel 5"). The request was for an  
12 estimated 108,000 gpd for macadamia nut trees: 29.0 acres on Parcel 1's 39.96 acres, and  
13 all of Parcel 5's 0.39 acres.

14 b. Hiolani Ranch had requested recognition of appurtenant rights, and the  
15 Commission had granted provisional approval for 2 of 21 LCAs in Parcel 1, and no  
16 approval for one LCA in Parcel 5.

17 c. Hiolani Ranch did not submit written testimony nor participate in the CCH.

18 d. The existing-use SWUPA is denied, and Hiolani Ranch may file a new-use  
19 SWUPA as well as refile for recognition of appurtenant rights.  
20

21 247. **SWUPAs 2278/2279N—Noel & Katherine Texeira** (FOF 368)

22 a. On April 23, 2009, Noel and Katherine Texeira filed existing- and new-use  
23 SWUPAs for TMK No. (2) 3-2-007:010, a 0.83-acre property for which they requested  
24 an existing use of an estimated 990 gpd for 0.33 acre of their yard and plants, and a new  
25 use of 1,050 gpd for 0.42 acre of grass for their goats.

26 b. The Teixeiras had claimed appurtenant rights and had been provisionally approved  
27 by the Commission for LCA 4389B:2, confirmed by RP 5404, described as pō`alima as  
28 boundary and 1 lo`i kalo, and for LCA 10550, confirmed by RP 5329, described as with  
29 multiple references to pō`alima as boundary, pauku kalo and 4 pō`alima, and "loi he 26."

30 c. The Teixeiras did not submit written testimony and did not participate in the CCH.

31 d. The Teixeiras should refile for recognition of appurtenant rights.

1 e. The Teixeiras should also request recognition for domestic uses. The Commission  
2 notes that the request for their yard and plants would qualify as a domestic use, exempt  
3 from the permit requirements, and the 0.42 acre for grass might also qualify, as both  
4 together are less than 1 acre.

5  
6 248. **SWUPA 2294—Bryan Sarasin, Sr.** (FOF 369)

7 a. Bryan Sarasin Sr. filed for an existing-use SWUPA on April 29, 2009, for TMK  
8 No. (2) 3-2-007:016 (“Parcel 16”). Parcel 16 is 0.99 acres and is the entirety of LCA  
9 44050:1.

10 b. The native and foreign testimonies describe LCA 44050:1 as 42 lo`i with five  
11 pō`alima. Provisional recognition was granted by the Commission, noting LCA 4005-o,  
12 but Sarasin later provided an explanation and documents that the correct LCA was  
13 44050:1.

14 c. They request recognition of appurtenant rights of 297,000 gpd, based on  
15 Reppun’s high estimate of 300,000 gad, and a permit for 1,035,040 gpd.

16 d. Appurtenant rights for their 0.99 acres are recognized as 99,000 gpd (0.99 acres x  
17 100,000 gad).

18 e. The 1,035,040 gpd permit request consists of:

- 19 1. 1,031,040 gpd for 0.4 acres of aquaculture (catfish);
- 20 2. 2,700 gpd for 0.009 acre of kalo lo`i;
- 21 3. 1,000 gpd for 0.4 acre of their nursery; and
- 22 4. 300 gpd for 0.1 acre of their non-commercial garden.

23 f. Their estimates for aquaculture requirements are not supported by their evidence,  
24 and even if the estimates were reasonable and accurate, they never correlated these  
25 flows—which are only estimates of flows from specified pipe sizes and the length of the  
26 exiting flow—with requirements for specified stocking densities for catfish.

27 g. The Sarasins’ existing-uses for their kalo lo`i, nursery, and home garden are also  
28 estimates and not actual measurements, with the lo`i estimate based on Reppun’s high  
29 estimate of 300,000 gad, the nursery estimate based on the Commission’s *Waiahōle I*

1 duty for diversified agriculture of 2,500 gad,<sup>42</sup> and their home garden estimate based on  
2 the 2002 State of Hawai`i Water System Standard for Maui County domestic cultivation  
3 of 3,000 gad (0.1 acre x 3000 gad).

4 1. 0.009 acre of kalo lo`i would require 1,350 gpd (0.009 acre x 150,000  
5 gad);

6 2. 0.4 acre of nursery and 0.1 acre of home garden would be compatible with  
7 the domestic cultivation standard of 3,000 gad, or 1,500 gpd (0.4 acre x 3,000 gad  
8 and 0.1 acre x 3,000 gad).

9 h. The home garden's 300 gpd is exempt from the permit requirement, leaving a  
10 permit for 2,550 gpd for the kalo lo`i and nursery.

11 i. The aquaculture operations is granted a permit for 96,450 gpd, or the remainder of  
12 their appurtenant rights of 99,000 gpd minus the 2,550 gpd permit for the lo`i and  
13 nursery.

14 j. All 99,000 gpd fall within Category 2, and the 300 gpd for the home garden is  
15 exempted from the permit requirements.

16 k. If the Sarasins seek more than 96,450 gpd for their aquaculture operations, they  
17 must submit additional evidence of: 1) the amount in use as of April 30, 2008; and 2) that  
18 the amount was necessary for economic and efficient utilization for the amount of catfish  
19 they had in their ponds at the time. In the alternative, they may submit a new-use  
20 SWUPA with additional evidence of the requirements for the specific amounts of catfish  
21 they wish to raise.

22  
23 249. **SWUPA 2361N—Kathleen DeHart** (FOF 370)

24 a. Kathleen DeHart filed for a new-use SWUPA on April 23, 2009 for TMK No. (2)  
25 3-2-011:004 ("Parcel 4"), on which she has lived since 1984 and which her family has  
26 owned since the Māhele.

27 b. Parcel 4 is 0.5 acre and comprised of a portion of LCA 3887B (but see, infra),  
28 confirmed by RP 6150.

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<sup>42</sup> The 2,500 gad water duty for diversified agriculture in *Waiāhole I* is not applicable in this SWUPA. It was based on large-scale farming operations having one-third of the cultivated acres being planted at any given time, with 7,500 gad per planted acre. (CCH-OA95-1, December 28, 2001, p. 77.)

1 c. DeHart requests recognition of appurtenant rights for 150,000 gpd and a permit  
2 for 7,350 gpd—6,000 gpd for a 30 ft. x 30 ft. kalo lo`i and 1,350 gpd for 0.45 acre of her  
3 yard and garden, based on Reppun’s high estimate for kalo lo`i and Maui County  
4 domestic cultivation standards of 3,000 gad

5 d. The native register supporting LCA 3887B describes the land as containing 33  
6 lo`i, one hala tree, and a pond. DeHart states that the high number of lo`i, compared to a  
7 single hala tree, indicates this kuleana was lo`i land at the time of the Mahele. DeHart did  
8 not address the presence of a pond.

9 e. The Commission had granted provisional recognition, noting the 33 lo`i and also  
10 that there were multiple references to pō`alima as survey boundaries.

11 f. However, copies of the original documents submitted by DeHart have the “B” and  
12 “C” on LCAs 3887B and 3887C crossed out and reversed, making 3887B into 3887C and  
13 vice-versa. The English translation provided by DeHart refers to 3887C by Mahoe, which  
14 was 3887B before it was hand-corrected to 3887C. Clarification needs to be provided as  
15 to whether the LCA granted to Mahoe is the LCA from which DeHart’s Parcel 4 is  
16 derived.

17 g. Subject to verification that Parcel 4 is derived from the LCA granted to Mahoe,  
18 the single hala tree is inconsequential, but there is no indication of the size of the single  
19 pond in relation to the 33 lo`i. Nevertheless, it will be assumed that substantially all of  
20 LCA 3887C (corrected in the original from 3887B) was in kalo lo`i.

21 h. Therefore, DeHart is recognized as having appurtenant rights for Parcel 4’s 0.5  
22 acres of 50,000 gpd (0.5 acre x 100,000 gad).

23 i. DeHart is also recognized as having traditional and customary rights on Parcel 4.

24 j. The 30 ft. x 30 ft. (0.02 acre) proposed lo`i is granted a new-use permit of 3,000  
25 gpd (0.02 acre x 150,000 gad), which is in Category 1 under her traditional and  
26 customary rights.

27 j. DeHart’s irrigation of her yard and garden of approximately 0.45 acre is a  
28 domestic use of 1,350 gpd (0.45 acre x 3,000 gad) for which a permit is not required.

29  
30 250. **SWUPAs 2231/2232N—Diannah Lai Goo** (FOF 371)

1 a. On April 29, 2009, the Goos filed an existing-use SWUPA for six parcels and a  
2 new-use SWUPA for one of these parcels and another parcel. Collectively, these parcels  
3 are referred to as the “makai parcels,” which have been in the Goo `ohana on Diannah  
4 Goo’s husband’s side for generations. SWUPAs for the “mauka parcels” have been filed  
5 under SWUPAs 2233/2234N and 2365N.

6 b. The existing-use SWUPA included TMK Nos. (2) 3-2-011:006 (“Parcel 6”), (2)  
7 3-2-011:019 (“Parcel 19”), (2) 3-2-011:065 (“Parcel 65”), (2) 3-2-011:066 (“Parcel 66”),  
8 (2) 3-2-011:067 (“Parcel 67”), and (2) 3-2-011:079 (“Parcel 79”). The new-use SWUPA  
9 included Parcel 79 and TMK No. (2) 3-2-011:078 (“Parcel 78”). Parcels 78 and 79 are  
10 subdivisions of Parcels 66 and 67.

11 c. Parcel 6 is 0.27 acre, Parcel 19 is 0.15 acre, Parcel 65 is 0.28 acre, Parcel 66 is  
12 0.22 acre, Parcel 67 is 0.07 acre, Parcel 78 is 0.23 acre, and Parcel 79 is 0.23 acre, for a  
13 total of 1.45 acres.

14 d. The Goo `ohana requests recognition of appurtenant rights to these makai parcels  
15 which they estimate at 435,000 gpd, and a permit for existing and future uses estimated at  
16 141,600 gpd, of which 3,600 gpd was the estimated existing use as of April 30, 2008 for  
17 six households, and the remainder for kalo lo`I on 0.46 acres on Parcels 78 and 79. No  
18 actual measurements were taken, and estimates were based on Reppun’s high estimate of  
19 300,000 gad (1.45 acres x 300,000 gad), and on 2002 State of Hawai`i Water System  
20 Standard for Maui County single-family homes of 600 gpd (6 households x 600 gpd).

21 e. All of these parcels derive from LCA 8366:1 and 2, confirmed by RP 5327. The  
22 Goos state that the foreign testimony supporting LCA 8366:1 and 2 describe each `āpana  
23 as a “section of kalo and kula land,” and that `āpana 1 contained two pō`alima and `āpana  
24 2 contained five pō`alima. The Goos believe a majority of these `āpana were cultivated in  
25 wetland kalo at the time of the Māhele, given the existence of the seven pō`alima and the  
26 high concentration of lo`i kalo in the Waihe`e area generally. In addition, an `auwai runs  
27 across these parcels, furthering their conclusion that most of the LCA was in lo`i kalo, as  
28 opposed to kula.

29 f. Documents provided under SWUPAs 2231/2232N contain descriptions of  
30 sections 1 and 2 as being “taro pauku and pasture,” and section 2 as containing two

1 pō`alima, not five, with no mention of pō`alima in section 1. But the petitioner stated that  
2 he had 22 lo`i and two kula for a total of 24 parcels.

3 g. Provisional recognition was granted by the Commission. The commentary  
4 included: “LCA ref. to polima as boundary. NR ref. to 25 loi. NT refer to sections 1 and 2  
5 as taro pauku and pasture. FT ref. to sections of lois for Sections 1 and 2.”

6 h. Without further information, a description of “taro pauku and pasture” would be  
7 assessed as half kalo and half kula, but the existence of pō`alima—although the exact  
8 numbers and locations in the two `āpana are not definitive—and the description of 24  
9 parcels comprised of 22 lo`i and two kula, lead to the conclusion that more than half of  
10 the land was in lo`i at the time of the Māhele. If the size of the 22 lo`i and two kula were  
11 the same, that would mean about a 90-10% split between kalo and kula (22:2).

12 i. Ninety percent of 1.45 acres is 1.305 acres, so appurtenant rights are 130,500 gpd  
13 (1.305 acres x 100,000 gad).

14 j. The Goos also have traditional and customary rights on all of the parcels.

15 k. A new-use permit for irrigation of kalo lo`i on all of Parcels 78 and 79, a total of  
16 0.46 acres, is granted for 69,000 gpd (0.46 acres x 150,000 gad). This is a Category 1  
17 permit under their traditional and customary rights.

18 l. Six households at 600 gpd, the average residential customer use for indoor and  
19 outdoor use in Maui County, is 3,600 gpd. These domestic uses are exempt from the  
20 permit requirements.

21  
22 251. **SWUPA 2706N—Hawaiian Islands Land Trust** (FOF 372)

23 a. Hawaiian Islands Land Trust (“HILT”), predecessor to Maui Coastal Land Trust  
24 (“MCLT”), stated that it filed a SWUPA for a new use on August 3, 2010, for the  
25 Waihe`e Coastal Dunes and Wetlands Refuge at TMK Nos. (2) 3-2-010:001 (“Parcel 1”)  
26 and (2) 3-2-010:002 (“Parcel 2”).

27 b. However, SWUPA 2706N was filed only for Parcel 1, and Parcel 2 was first  
28 mentioned in HILT’s written testimony, dated February 3, 2016.

29 c. Similarly, HILT offered documentation in the appurtenant rights provisional  
30 recognition process only for Parcel 1, for which, after supplementary documentation, its  
31 application was approved.

1 d. During the contested case hearing, HILT sought quantification of appurtenant  
2 rights and water-use permits for both Parcel 1 and the newly identified Parcel 2.

3 e. For Parcel 1, in the ili of Maka`aka on the mauka side, HILT currently has about  
4 one acre in kalo lo`i, using only about 30,000 gpd coming from a kuleana `auwai on the  
5 south side of Waihe`e River, receiving water from a pipe in the Spreckels Ditch between  
6 Waihe`e River and Waiehu Stream (See Figure 1). Its permit request is for 600,000 gpd  
7 for two acres.<sup>43</sup>

8 f. Ancient Hawaiians founded Kapoho Village no later than 1464 C.E., and around  
9 this time, Native Hawaiians built an extensive loko kalo i`a system in and around the  
10 wetlands with an `auwai to supply this area with freshwater from Waihe`e River. A loko  
11 kalo i`a is a system that utilizes water flowing throughout taro patches in order to raise  
12 fish. Both the loko kalo i`a system and `auwai are registered as historic sites (State  
13 Inventory Site Nos. 2405 and 2464 respectively), highlighting their importance for native  
14 culture and practices.

15 g. The Waihe`e Refuge includes over 7,000 feet of marine shoreline, 103 acres of  
16 dune ecosystem, 27 acres of marsh wetlands, and more than 10 acres of riparian wetlands  
17 along Waihe`e River and Kalepa Gulch between Waiehu and Waihe`e. Important cultural  
18 resources are located throughout the Refuge, including the ancient sites of Kapoho  
19 Village and several heiau. The Refuge features the seven-acre loko kalo i`a and `auwai  
20 connecting the loko kalo i`a to Waihe`e River. The loko kalo i`a was used for hundreds of  
21 years for fish and wetland taro production and rice cultivation in the early 20<sup>th</sup> century.  
22 The `auwai continued to run until the 1920s.

23 h. The deed to the Refuge contains a reservation of water rights, with the exception  
24 of six kuleana within Parcel 1 and one kuleana that is the entirety of Parcel 2. All the  
25 deeds came from the same party, Wailuku Agribusiness (predecessor to WWC) in  
26 February 1988 to an intervening party, from which MCLT purchased them. The portions  
27 that were not reserved had clouded titles and could not be reserved.

28 i. The six kuleana in Parcel 1, with the corresponding acreage in Parcel 1, were:

- 29 1. LCA 4296B:2, confirmed by RP 5357, was a fishpond (0.95 acres);
- 30 2. LCA 4389D:2.1 & 2.2, confirmed by RP 6752,

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<sup>43</sup> HILT filed on August 3, 2010, well past the existing-use deadline of April 30, 2009.



- 1 i. 2.1 was a house lot (0.52 acres)
- 2 ii. 2.2 was a fishpond (0.15 acres)
- 3 3. LCA 3886B:2 & 3, confirmed by RP 5991 were bothouselots (0.34 acres
- 4 and 0.55 acres);
- 5 4. LCA 4405B:2, confirmed by RP 2163, was aouselot (0.28 acres);
- 6 5. LCA 4405C:2, confirmed by RP 6145, consisted of 5 lo`i (0.2 acres); and
- 7 6. LCA 4405N:2, confirmed by RP 5260, was a fishpond (0.17 acres).
- 8 j. Collectively, the six kuleana totaled 2.98 acres and were comprised of:
  - 9 1. 0.2 acre of kalo lo`i,
  - 10 2. 1.27 acres of fishponds, and
  - 11 3. 1.69 acres ofouselots.
- 12 k. The original request under SWUPA 2706N was for wetland taro on 2 of 3 acres,
- 13 or on the 2.98 acres which did not have water reservations, less than one-tenth of which
- 14 was in kalo lo`i at the time of the Māhele.
- 15 l. HILT then sought appurtenant rights of 108,120 gpd:
  - 16 1. Reppun’s 300,000 gad for 0.2 acre of kalo lo`i (or 60,000 gad);
  - 17 2. State of Hawai`i Water System Standard for Maui County single-family
  - 18 homes of 600 gpd per household for each of the fourouselots (or 2400 gpd); and
  - 19 3. the Commission’s 1992 Oahu Water Management Plan of 36,000 gad for
  - 20 1.27 acres of fishponds (44,720 gpd).<sup>44</sup>
- 21 m. For the hearing, HILT offered documentation of appurtenant rights on the rest of
- 22 the kuleana that comprised Parcel 1, the corresponding deeds of which had water
- 23 reservations when titles passed in February 1988. A large portion of Parcel 1 is covered
- 24 by LCA 7713:24 to Victoria Kamāmalu, but within it, many kuleana were awarded to
- 25 maka`āinana. Including the six kuleana, Parcel 1’s kuleana awards totaled 15.49 acres
- 26 and was comprised of:
  - 27 1. 5.86 acres of kalo lo`i.
  - 28 2. 6.28 acres of fishponds.
  - 29 3. 0.2 acres of dryland crops.
  - 30 4. 8ouselots.

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<sup>44</sup> The total should be 107,120 gpd, not 108,120 gpd.

1 n. HILT nows seeks recognition of appurtenant rights for 1,989,380 gpd, based on  
2 300,000 gad for the 5.86 acres of kalo lo`i; 36,000 gad for the 6.28 acres of fishponds;  
3 2,500 gad for the 0.2 acres of dryland crops; and 600 gpd for each of the 8ouselots.

4 o. The kuleana that is Parcel 2 is LCA 3775:1, confirmed by RP 5360, and was in  
5 “loi and lauhala” at the time of the Māhele. Based on the lo`i walls that still exist on  
6 Parcel 2, which is a total of 3.47 acres, Fisher estimates that about 3 acres was in lo`i kalo  
7 cultivation and 0.47 acres was used for lauhala.

8 p. HILT’s request for appurtenant rights for Parcel 2 is for 901,175 gpd, based on  
9 Reppun’s 300,000 gad for three acres of lo`i kalo and 2,500 gad—the water duty for  
10 diversified agriculture the Commission used in *Waiāhole I*—for 0.47 acres.

11 q. HILT’s new-use permit request is for 2.7 mgd:

12 1. 600,000 gpd for Parcel 1 from the South Waihe`e kuleana `auwai, based  
13 on Reppun’s high estimate of requirements of 300,000 gad on two acres; and

14 2. 2.1 mgd for the seven-acre loko kalo i`a, with water from Waihe`e River,  
15 based on Reppun’s high estimate of requirements of 300,000 gad on seven acres,  
16 of which 3 acres is Parcel 2.

17 r. HILT’s inclusion of Parcel 2 and its new-use request for a seven-acre loko kalo  
18 lo`i was timely, as testimony was filed in February 2016, and the deadline for new-use  
19 submittals was July 1, 2016, ten days before the beginning of the hearings, supra, FOF  
20 26. (HAR § 13-167-54(d)).

21 s. The February 1988 water reservation did not extinguish the appurtenant rights on  
22 Parcel 1, because appurtenant rights were preserved by a constitutional amendment in  
23 1978.

24 t. The Commission finds that, at the time of the Māhele, water was being used for  
25 fishponds, at an approximate rate of 14,000 gad supra, COL 74. Appurtenant rights for  
26 kalo lo`i are 100,000 gad and none for ouselots and kula. Expert testimony did not  
27 address water use for fishponds at the time of the Māhele. HILT claimed 44,720 gad for  
28 1.27 acres of fishponds, based on 36,000 gad from the Commission’s 1990 Oahu Water  
29 Management Plan. However, that water budget was for raising freshwater prawns, with a  
30 range of 14,000 gad to 36,000 gad.

- 1 u. Appurtenant rights for Parcel 1 are 673,920 gpd: 586,000 gpd (5.86 acres x  
2 100,000 gad) for kalo lo`i plus 87,920 gpd (6.28 acres x 14,000 gad) for fishponds.
- 3 v. Appurtenant rights for Parcel 2 are 300,000 gpd (3 acres x 100,000 gad).
- 4 w. HILT is granted new-use permits of 1,350,000 gpd for 2 acres of wetland taro and  
5 a seven-acre loko kalo i`a.
- 6 1. All of the permitted 300,000 gpd for the two acres of kalo lo`i on Parcel 1  
7 is in Category 2 under appurtenant rights.
- 8 2. 673,920 gpd of the permitted 1,050,000 gpd (7 acres x 150,000 gad) for  
9 the seven-acre loko kalo i`a are also in Category 2 under appurtenant rights, and  
10 the remaining 376,080 gpd is in Category 3.
- 11 x. The two acres of kalo lo`i encompass six kuleana awards, ranging in size from  
12 0.17 to 0.95 acres, with kalo lo`i comprising only 0.2 acres and fishponds comprising  
13 1.27 acres, spread across 3 LCAs. Including the kuleana with reserved rights, the 5.86  
14 acres of lo`i were still spread among 8 LCAs. Furthermore, the seven-acre loko kalo i`a is  
15 more than twice the size of Parcel 2. Appurtenant rights can only be exercised on that  
16 part of the TMK corresponding to the LCA from which the appurtenant right is derived.  
17 It would be practically difficult here, if not functionally impossible, as it would also be in  
18 other cases where a present-day TMK is comprised of multiple, small LCAs, to exercise  
19 those rights. Moreover, the ruling that appurtenant rights cannot be extinguished after  
20 November 1978 will be subject to challenge on appeal.
- 21 y. The Commission's finds that equitable considerations give the use of appurtenant  
22 rights on one TMK that is derived from several LCAs the same priority as TMKs that are  
23 derived from one LCA, supra, COL 46.

24  
25 **iii. Field 4 `Auwai**

26  
27 252. The following SWUPAs receive water from the Spreckels Ditch via the Field 4 `Auwai  
28 (See Figure 1).

29  
30 253. **SWUPA 2185N—Na Mala O Waihee** (FOF 374)

- 1 a. On April 15, 2009, Na Mala O Waihee Private Water Company, Inc. filed a new-  
2 use SWUPA for TMK (2) 3-2-013:008 (“Parcel 8”), a 25.86-acre property, for which it  
3 requested 29,570 gpd for use on all 25.86 acres for macadamia nut trees and truck crops,  
4 at a rate of 1,143.9 gad.
- 5 b. Parcel 8 was subsequently subdivided into Parcels 13 and 62-67.
- 6 c. The applicant did not claim appurtenant rights nor participate in the Provisional  
7 Approval process.
- 8 d. Na Mala O Waihee did not submit written testimony nor participate in the CCH.
- 9 e. The applicant’s new-use permit request is denied.

10  
11 254. **SWUPAs 2250/2251N—Alfred Kailiehu, Jr. & Ina Kailiehu** (FOF 375)

- 12 a. Alfred Kailiehu, Jr. filed SWUPAs for existing and new uses on April 23, 2009,  
13 for TMK No. (2) 3-2-007:017 (“Parcel 17”), which has been in the Kailiehu family from  
14 about the Māhele.
- 15 b. Parcel 17 is 0.51 acre, for which they seek appurtenant rights of 153,000 gpd, and  
16 a permit for 76,425 gpd, of which 1,425 gpd is the existing use as of April 30, 2008,  
17 based on Reppun’s high estimate for kalo and Maui County single-family home use
- 18 c. Parcel 17 is a portion of LCA 3299B, confirmed by RP 6206. Native testimony  
19 supporting LCA 3299B states that it was “kalo and kula land, and 3 poalima loi within.”  
20 The Commission provisionally approved appurtenant rights, noting that there were  
21 “(m)ultiple references to poalima as survey boundary. NT refer to kalo and kula land.”
- 22 d. The Kailiehus believe that all of Parcel 17 was cultivated in lo`i kalo at the time  
23 of the Māhele, because it has a gentle slope and ancient rock walls and three pō`alima  
24 within, indicating that their parcel was within the lo`i portion of the LCA, as opposed to  
25 the kula portion.
- 26 e. Appurtenant rights attach to the entire LCA, and Parcel 17’s appurtenant right  
27 derives from the amount of water being used at the time of the Māhele on LCA 3299B,  
28 and not just from the part of the LCA on which Parcel 17 now stands.
- 29 f. Without further specificity, a description of “kalo and kula land” would reflect a  
30 50:50 split between kalo and kula, or 50 percent kalo lo`i, *supra*, FOF 168. Therefore, the

1 appurtenant right for Parcel 17's 0.51 acres is 25,500 gpd (0.51 acre x 0.5 x 100,000 gad  
2 = 25,500 gpd).

3 g. The Kailiehus have about 0.00275 acre in lo`i kalo, estimating their use at 825  
4 gpd, based on Reppun's high estimate (0.00275 acre x 300,000 gad), and request  
5 additional water for an additional 0.25 acre of lo`i, which is the amount their `ohana  
6 historically cultivated on their land, and for which they request an additional 75,000 gpd  
7 (0.25 acre x 300,000 gad).

8 h. The existing use is estimated at 415 gpd (0.00275 acre x 150,000 gad = 413 gpd),  
9 and the new use is estimated at 37,500 gpd (0.25 acre x 150,000 gad = 37,500 gpd), for a  
10 permitted total of 37,915 gpd.

11 i. The Kailiehus have traditional and customary rights on Parcel 17.

12 j. All of the permitted amounts of 37,915 gpd are in Category 1. 25,500 gpd of the  
13 permitted use is under both their appurtenant rights and traditional and customary rights,  
14 and the remainder, or 12,415 gpd, is under their traditional and customary rights.

15  
16 255. **SWUPAs 2318/2319N—Nolan Ideoka and Lester Nakama** (FOF 376)

17 a. The Ideokas and Lester Nakama filed existing- and new-use SWUPAs for TMK  
18 No. (2) 3-2-007:018 ("Parcel 18") on April 30, 2009. Parcel 18 is 1.1 acres and is the  
19 entirety of LCA 4284D, confirmed by RP 5984, which was comprised of "34 lois and one  
20 small kula." Ancient lo`i walls still exist throughout Parcel 18, and they estimate about 1  
21 acre of the 1.1 acre was in lo`i cultivation at the time of the Māhele. The Commission had  
22 granted provisional approval.

23 b. They estimate appurtenant rights as 300,000 gpd (1.0 acre x 300,000 gad), and  
24 estimated use as of April 30, 2008 at 96,425 gpd to irrigate 0.55 acres of kalo lo`i. The  
25 estimate was arrived by subtracting the estimated 1,425 gpd used by the Kailiehus from  
26 the 97,850 gpd metered flow in the `auwai by Wailuku Water Company. After the water  
27 flows through the lo`i, some is used to irrigate 0.5 acre of the yard and garden. They  
28 claim the water is insufficient and causes problems such small corms, taro rot, and  
29 uncontrollable weeds.

30 e. Current cultivation would be expanded by 0.22 acre, from 0.55 acre to 0.77 acre,  
31 which they estimate would require 231,000 gpd (0.77 acres x 300,000 gad).

- 1 d. Appurtenant rights are recognized at 100,000 gpd (1.0 acre x 100,000 gad).  
2 e. Permits are granted for a total of 115,500 gpd (0.77 acre x 150,000 gad): existing  
3 use of 96,425 gpd and new use of 19,075 gpd.  
4 f. All of the existing use and 3,575 gpd of the new use fall within appurtenant rights  
5 and are in Category 2, and the remainder of the new use, or 15,500 gpd, is in Category 3.  
6

7 **iv. Reservoir 25/WWC Line**  
8

9 256. The following SWUPAs receive water from the Spreckels Ditch via Reservoir 25/WWC  
10 Line.  
11

12 257. **SWUPA 2144—Living Waters Foundation, LLC** (FOF 378(  
13

14 a. On April 29, 2009, Living Waters filed an existing-use SWUPA for TMK. No. (2)  
15 3-2-013:015 (“Parcel 15”), a 550-acre property for which it requested a metered 22, 938  
16 gpd for bananas, tapioca, beans, okra, dryland taro, and eggplant on 22 acres, an average  
17 of 1,043 gad.

18 b. Because Living Waters did not submit written testimony in support of its  
19 SWUPA, two lessees, Noel Baloaloe and Justina Evangelista, provided written and oral  
20 testimony. At the time the SWUPA was submitted, there were eight farmers but now  
21 there are four farmers in all, with Baloaloe farming 4 acres, Evangelista farming 6 acres,  
22 and two others farming the rest.

23 c. No appurtenant rights were claimed on the SWUPA, but documents were  
24 submitted during the provisional approval process, and 6 of 15 LCAs were approved as  
25 referencing water use. Of the LCAs listed on the provisional approval order, LCA 781:2  
26 is not shown, and cross-examination attempted to show that this LCA was where the 22-  
27 acre agricultural activities take place, but Baloaloe was not sure where the 22-acre parcel  
28 was on the map he was shown.

29 d. Appurtenant rights are denied without prejudice. No information was presented  
30 on the acreage within Parcel 15 that was derived from the provisionally approved LCAs,  
so no quantifiable estimate could be made.

1 f. A permit for 22,938 gpd is approved, which is in Category 2 as existing uses.  
2 This represents 1,043 gad, which is well below the 3,000 gad for diversified agriculture.

3  
4 258. **SWUPA 2153—Robert Hanusa** (FOF 379)

5 a. On April 23, 2009, Robert Hanusa filed an existing-use SWUPA for TMK No. (2)  
6 3-2-016:025 (“Parcel 25”) for a metered use of 900 gpd for 0.25 acre of household  
7 landscape irrigation on his 0.5 acre property.

8 b. Hanusa bought Parcel 25 in 1973 from Jim Stinson Realty, and is half of LCA  
9 3434, confirmed by RP 6166, described as kalo and kula with 3 pō`alima within it and a  
10 pō`alima on one boundary.

11 c. With a description of kalo and kula, one-half, or 0.25 acre of Hanusa’s 0.5 acre  
12 property has appurtenant rights, *supra*, FOF 168.

13 d. The Commission had granted provisional approval.

14 e. Parcel 25 is recognized as having appurtenant rights of 25,000 gpd (0.25 acre x  
15 100,000 gad).

16 f. Hanusa is recognized as having 900 gpd of domestic use, which is exempt from  
17 the permit requirements.

18  
19 259. **SWUPA 2348—Michael Bailie** (FOF 380)

20 a. On April 28, 2009, Michael Bailie filed an existing-use SWUPA for TMK No. (2)  
21 3-2-006:004, a 5.2-acre he purchased from Wailuku Agribusiness in 2000 and on which  
22 he uses a metered use of 1,840 gpd to irrigate 2 acres of landscape, 2.3 acres of bamboo,  
23 and 1 acre of macadamia nuts.

24 b. Bailie did not claim appurtenant rights nor participate in the provisional approval  
25 process.

26 c. Bailie did not participate in the contested case hearing.

27 d. No action is taken on SWUPA 2348. Bailie may apply for a new-use permit.

28  
29 260. **SWUPA 2182—Cecilia Chang (Jung)** (FOF 381)

1 a. Cecilia Chang and Heinz Jung, her husband who has since passed away, filed a  
2 SWUPA for an existing use on April 21, 2009, for TMK No. (2) 3-2-016:001 (“Parcel  
3 1”).

4 b. Chang requests recognition of appurtenant rights in the estimated amount of  
5 150,000 gpd, based on Reppun’s high estimate for 0.5 acre of Parcel 1’s 0.683 acre.(0.5  
6 acres x 300,000 gad), and 684 gpd from meter readings for 0.34 acre of a lawn and non-  
7 commercial garden.

8 c. Review of her deed from 1933 shows no reservations of water rights. The  
9 Commission granted provisional approval.

10 d. Parcel 1 is 0.683 acres and comprised of portions of two LCAs, No. 3446,  
11 confirmed by RP 3938, and No. 8559B:20.1, with approximately 0.624 acre or 91 percent  
12 falling under LCA 3446 and 2,252 square feet or 9 percent within LCA 8559B:20.1 to  
13 Lunalilo.

14 e. LCA 3446 is described as “one piece of kalo and kula land,” with “5 poalima loi  
15 in it;” “1 taro section and pasture” with “5 poalima there;” and “aina lo`i,” specifying  
16 “lo`i 16” and “10 lo`i.” Based on LCA 3446 being largely described as containing lo`i,  
17 Chang estimates that 80 percent, or 0.499 acre (0.624 acre x 0.8) of the LCA was in  
18 wetland kalo cultivation at the time of the Māhele. She therefore estimates that she has  
19 appurtenant rights to 0.5 acre of Parcel 1’s 0.683 acre.

20 f. Appurtenant rights are recognized for 0.5 acre, or 50,000 gpd (0.5 acre x 100,000  
21 gad).

22 g. Her domestic use of 684 gpd for her lawn and garden is recognized and exempt  
23 from the permitting requirements.

24  
25 261. **SWUPA 2593N—John Varel (Koolau Cattle Co.)** (FOF 382)

26 a. John Varel, an organic farmer who has been farming in Waihe`e and Waiehu  
27 since 2002, owns four properties in Waihe`e and Waiehu for which he is seeking  
28 permits, three of which he acquired after the SWUPAs were filed and is thus pursuing in  
29 place of the original applicants: SWUPAs 2262 and 2263N (Paleka), 2298 and 2299N  
30 (Varel), 2593N (Koolau Cattle Co.), and 3470N (Emmanuel Lutheran Church). All



1 except the previous Paleka property are under 20-year agriculture designation and in his  
2 personal trust to preserve them as conservation and agricultural lands in perpetuity.

3 b. Koolau Cattle Co. filed a SWUPA for a new use on February 22, 2010 for TMK  
4 Nos. (2) 3-2-009-001 through -005 (“Parcels 1-5”), a cluster property where all the  
5 TMKs are contiguous and comprise 113.589 acres.

6 c. Water rights were reserved by Wailuku Ag. when it was sold to Dwayne Betsill of  
7 Koolau Cattle Co. in 2004. Varel bought these properties from Veda Das, who had  
8 previously subdivided TMK 3-2-009-001 into Parcels 1-5. Varel bought Parcel 1 in 2013  
9 and the other four parcels in 2015.

10 d. Varel states that the previous owners incorrectly filed a new use permit although  
11 they were existing users. They had a contract with WWC, water was on the mac nut  
12 orchards and on the adjacent pasture lands that was being put into dryland taro. The 73-  
13 acre macadamia nut orchard and 20 acres of dryland taro on Parcel 1 was being irrigated  
14 at the time of designation in 2008.

15 e. SWUPA 2593N, which was filed on February 22, 2010, before Vedas subdivided  
16 TMK (2) 3-2-009-001 into five parcels, was filed for TMK (2) 3-2-009-001 and ten other  
17 TMKs: (2) 3-013-013 and -035 to -043.

18 f. Parcel 1 was listed at 113 acres, of which 15 acres of pasture was irrigated at  
19 21,135 gpd and 26 acres of vegetables and macnuts were irrigated at 295,000 gpd. Varel  
20 identifies the cluster of Parcels 1-5 as 113.589 acres.

21 g. The acreage of the current Parcels 1-5 are as follows:

- 22 1. Parcel 1: 73.09 acres.
- 23 2. Parcel 2: 20.969 acres.
- 24 3. Parcel 3: 9.034 acres.
- 25 4. Parcel 4: 5.393 acres.
- 26 5. Parcel 5: 5.103 acres.

27 h. Varel requested a water-use permit for 551,477 gpd as follows:

- 28 1. Parcel 1: 321,596 gpd
  - 29 a. 73.09 acres of macadamia nuts at 4,400 gad.
- 30 2. Parcel 2: 59,400 gpd
  - 31 a. 17,500 gpd for 7 acres of fruit trees at 2,500 gad.

- 1                                    b.        2,500 gpd for 1 acre of organic garden at 2,500 gad.
- 2                                    c.        35,200 gpd for 8 acres of macadamia nuts at 4,400 gad.
- 3                                    d.        4,200 gpd for the domestic needs of 7 houses at 600 gpd for each.
- 4                                    3.        Parcel 3:        69,561 gpd
- 5    a.        9.034 acres for feed and forage pasture at 7,700 gad.
- 6                                    4.        Parcel 4:        83,325 gpd
- 7    a.        3,333 gpd for each of 25 aquaponic greenhouses to produce 80,000
- 8    pounds of tomatoes annually.
- 9                                    5.        Parcel 5:        17,595 gpd
- 10    a.        6,375 gpd for 2.55 acres of fruit trees.
- 11    b.        11,220 gpd for 2.55 acres of macadamia nuts at 4,400 gad.
- 12                                    i.        Of the 113 acres, 73 acres are in macnuts and have no water. Of the remaining 40
- 13    acres: 1) nine acres are still in pasture; 2) Varel plans to put the 25 aquaponic
- 14    greenhouses on five acres, with the water coming out at the end going to additional fruit
- 15    trees that he will be planting on the perimeter; 3) five acres currently split between
- 16    macnuts and pasture will be put into fruit trees or hydroponic greenhouses, whichever is
- 17    the more cost-effective measure; and 4) 20 acres are for the seven houses for his workers
- 18    on which he has also planted 300 fruit trees. Water there is a 6,000 gallon tank for the
- 19    fruit trees, trucked in from what he can access from his well or from leaks from the
- 20    Waihe`e Ditch (See FOF 328, COL 209 [SWUPA 2298/2299N—Varel ].)
- 21                                    j.        On the pasture land, Varel has a tenant, Alan Mendez from the previous owner,
- 22    who has 15-20 head of cattle on it. Since Varel has owned it, there has been enough rain
- 23    that the grass is thick without irrigation.
- 24                                    k.        Varel states that he currently uses a combination of cachement water, water that
- 25    he trucks in, and a reliance on rain for the agricultural uses on the property, but it is not
- 26    enough water for his needs.
- 27                                    l.        In the original SWUPA, Koolau Cattle Company had claimed appurtenant rights,
- 28    but in the provisional approval process, no documentation was provided.
- 29                                    m.        In his written testimony of September 12, 2016, Varel claimed appurtenant rights
- 30    as follows:

- 1           1.       It was not possible to quantify appurtenant rights on Parcels 2-5, because  
2 they are parts of LCAs or grants which do not describe what was cultivated on  
3 them during the Māhele.
- 4           2.       Parcel 1 is composed of several LCAs, including all of LCA 2654,  
5 confirmed by RP 5995, and all of LCA 2413, confirmed by RP 5349. The  
6 remaining 64.59 acres consist of LCA 7713:24, confirmed by RP 4475.
- 7           a.       LCA 7713:24 does not describe what was in cultivation at the time  
8 of the Māhele, due to the vast expanse of the award.
- 9           b.       LCA 2654 was 2.98 acres and entirely cultivated in kalo.
- 10          c.       LCA 2413 was 5.52 acres and contained kalo, kula, and a hale.
- 11          n.       Varel then concluded that Parcel 1 has appurtenant rights of 1,451,200 gpd, based  
12 on the following:
- 13           1.       LCA 2654:   894,000 gpd, based on 2.98 acres times Reppun’s high  
14 estimate of 300,000 gad.
- 15           2.       LCA 2413:   557,200 gpd, based on:
- 16           a.       dividing 5.52 acres equally between kalo, kula, and a hale, so that:
- 17           i.       kalo:   552,000 gpd, based on 1.84 acres x 300,000 gad.
- 18           ii.      kula:   4,600 gpd, based on 1.84 acres x 2,500 gad for  
19 diversified agriculture.
- 20           iii.     hale:   600 gpd, based on 600 gpd for a single-family  
21 home.
- 22          o.       Appurtenant rights were not extinguished by the 2004 reservation, because they  
23 were preserved by the November 8, 1978 constitutional amendments.
- 24          p.       Parcel 1’s 73.09 acres has appurtenant rights equivalent to 5.62 acres, or 562,000  
25 gpd, based as follows:
- 26           1.       LCA 2654: 2.98 acres of kalo, or 298,000 gpd (2.98 acres x 100,000 gad);
- 27           2.       LCA 2413: 2.64 acres of kalo, or 264,000 gpd (2.64 acres x 100,000 gad):
- 28           a.       5.52 acres – 0.25 acres for a houselot = 5.27 acres.
- 29           b.       5.27 acres are half kalo and half kula, or 2.64 acres of kalo.
- 30           3.       These appurtenant rights pertain to the 8.50 acres of Parcel 1 that are  
31 derived from these two LCAs.

- 1 q. Varel is issued a permit as follows:
- 2 1. Parcel 1: 73.09 acres of macadamia nuts.
- 3 a. Category 2 permit for 21,250 gpd (8.50 acres x 2,500 gad) of new
- 4 use under appurtenant rights.
- 5 b. Category 3 new-use permit for 161, 475 gpd (64.59 acres x 2,500
- 6 gad).
- 7 2. Parcel 2: Category 3 new-use permit for 44,200 gpd.
- 8 a. 17,500 gpd for 7 acres of fruit trees at 2,500 gad.
- 9 b. 2,500 gpd for 1 acre of organic garden at 2,500 gad.
- 10 c. 20,000 gpd for 8 acres of macadamia nuts at 2,500 gad.
- 11 d. 4,200 gpd for the domestic needs of 7 houses at 600 gpd for each.
- 12 3. Parcel 3: Category 3 new-use permit for 22,585 gpd.
- 13 a. 9.034 acres of feed and forage pasture at 2,500 gad.
- 14 4. Parcel 4: Category 3 new-use permit for 83,325 gpd.
- 15 a. 3,333 gpd for each of 25 aquaponic greenhouses to produce 80,000
- 16 pounds of tomatoes annually.
- 17 5. Parcel 5: Category 3 new-use permit for 17,595 gpd.
- 18 a. 6,375 gpd for 2.55 acres of fruit trees.
- 19 b. 6,375 gpd for 2.55 acres of macadamia nuts at 2,500 gad.
- 20 r. In sum, Varel is issued a Category 2 permit under his appurtenant rights for
- 21 21,250 gpd, and a Category 3 new-use permit for 329,180 gpd.
- 22

23 **2. Waiehu Stream**

24

25 **a. North Waiehu Stream**

26

27 **262. SWUPA 2363N—Natalie Hashimoto & Carl Hashimoto (FOF 383)**

- 28 a. On April 23, 2009, Natalie Hashimoto and her aunt, Yoshie Suehiro, filed a new-
- 29 use SWUPA for TMK No. (2) 3-2-016:021 (“Parcel 21”). Suehiro no longer lives on the
- 30 parcel, and Hashimoto and her brother Carl are the current owners and request that the
- 31 permit be issued in both of their names.

1 b. For years, the Hashimoto `ohana pumped water from Waiehu Stream for domestic  
2 uses, but the pump broke in April 2008, which is why they filed a SWUPA for new use.  
3 They intend to fix the pump and draw water again.

4 c. The Hashimotos request recognition of 60,000 gpd in appurtenant rights, based on  
5 Reppun's high estimate of 300,000 gad, and a permit for future use of 600 gpd for a  
6 garden, based on Maui County's single-family home.

7 d. The Commission provisionally approved appurtenant rights.

8 e. Parcel 21 is 0.2 acre and nearly all is part of LCA 3434, confirmed by RP 6166,  
9 which was described as "1 taro section at pasture" and "3 Poalimas there." The survey  
10 boundary shows the kula section to be located above and to the right of the LCA's  
11 boundary. LCA 3434 also abuts Waiehu Stream, and the old `auwai runs through the  
12 kuleana on Hashimotos's parcel.

13 f. The Hashimotos conclude that "nearly our entire parcel is covered by LCA 3434  
14 and was cultivated in lo'i," and therefore all 0.2 acre has appurtenant rights. However, a  
15 figure in which Parcel 21 is superimposed over LCA 3434 (mislabeled "3433," but its  
16 shape and other figures confirm that it is LCA 3434), shows that approximately one-tenth  
17 of Parcel 21 falls into an adjacent LCA, which is not identified.

18 g. There is sufficient descriptions to conclude that all of LCA 3434 was in kalo lo'i,  
19 but approximately one-tenth of Parcel 21 includes an unidentified LCA adjacent to LCA  
20 3434. Therefore, 90% of Parcel 21's 0.2 acre, or 0.18 acre, is recognized as having  
21 appurtenant rights.

22 h. The Hashimotos are recognized as having appurtenant rights of 18,000 gpd (0.18  
23 acre x 100,000 gad).

24 i. They are also recognized as having 600 gpd in domestic use, which is exempt  
25 from the permit requirements.

26  
27 **b. South Waiehu Stream**

28  
29 **263. SWUPAs 2266/2267N—Isabelle Rivera (FOF 384)**

30 a. On April 23, 2009, Isabelle Rivera filed existing- and new-use SWUPAs for TMK  
31 No. (2) 3-2-017:012 ("Parcel 12"), for which she requests recognition of appurtenant

1 rights of 765,000 gpd and a permit for current and future uses of 726,600 gpd, of which  
2 600 gpd is her estimated domestic existing use and the remainder estimated by using  
3 Reppun’s high estimate of 300,000 gad for kalo lo`i.

4 b. The Commission had granted provisional recognition of appurtenant rights.

5 c. Parcel 12 is 2.55 acres and is the entirety of LCA 3443:1 & 2, confirmed by RP  
6 6283, which was described as containing 17 lo`i kalo, including two pō`alima, without  
7 referencing any other land use.

8 d. Rivera requests an additional 726,000 gpd (2.42 acres x 300,000 gad) to restore  
9 2.42 acres of kalo lo`i, for a total of 726,600 gpd.

10 e. Rivera is recognized as having appurtenant rights of 255,000 gpd (2.55 acres x  
11 100,000 gad).

12 f. She is issued a permit for 363,000 gpd (2.42 acres x 150,000 gpd), of which  
13 255,000 gpd (equivalent to her appurtenant rights) is in Category 2, and the remainder, or  
14 108,000 gpd, is in Category 3.

15 g. She is also recognized as having 600 gpd for domestic uses, which are exempt  
16 from the permit requirements.

17  
18 264. **SWUPAs 2219/2220N—Regino Cabacungan & Kathy Alves** (FOF 385)

19 a. On April 23, 2009, Regino Cabacungan filed existing- and new-use SWUPAs for  
20 TMK No. (2) 3-2-017:023 (“Parcel 23”), which is a combination of TMKs No. (2) 3-2-  
21 017:023 (“old Parcel 23”) and (2) 3-2-017:27 (“Parcel 27”). He requests that his  
22 daughter, Kathy Alves, be added to the SWUPAs.

23 b. They request appurtenant rights of 102,000 gpd, based on Reppun’s high estimate  
24 of 300,000 gad for kalo lo`i applied to 0.34 acres, and a permit for 66,600 gpd, of which  
25 66,000 gpd is for 0.22 acre of kalo lo`i and 600 gpd was the estimated existing use to  
26 irrigate various garden crops and flowering trees.

27 c. Mr. Cabacungan received Parcel 27 from his mother-in-law in 1963, and  
28 purchased old Parcel 23 from Wailuku Water Company in 1977 with the deed containing  
29 a reservation of appurtenant rights.

30 d. No documentation of appurtenant rights was provided during the provisional  
31 approval process.

1 e. Parcel 23 is 0.34 acres: Parcel 27 was 0.21 acres and old Parcel 23 was 0.13 acres.

2 f. Because there was a reservation of appurtenant rights for old Parcel 23's 0.13  
3 acres in 1977, before the constitutional amendment of November 8, 1978, there are no  
4 longer appurtenant rights for 0.13 acres of Parcel 23's total of 0.34 acres.

5 g. Old Parcel 23 and Parcel 27 were both part of the konohiki award to Lunalilo,  
6 LCA 8559:20. They claim that the presence of lo`i on Parcel 27, the close proximity to  
7 the `auwai, and documents supporting a kuleana adjacent to the Parcel 27 portion of the  
8 Lunalilo grant—LCA 2625:5—indicate that Parcel 27 was a pō`alima.

9 h. There is insufficient evidence that Parcel 23 has appurtenant rights. For any  
10 appurtenant rights that may attach to the remaining 0.21 acres, any such rights would  
11 attach to the LCA and not to specific parts of that LCA. Therefore, whether Parcel 27 was  
12 a pō`alima of LCA 2625:5 does not qualify the entirety of Parcel 27 to appurtenant rights,  
13 and there is no information on the acreage and other contents of LCA8559:20.

14 i. A new-use permit is issued for 33,000 gpd for 0.22 acre of kalo lo`i (0.22 acre x  
15 150,000 gad), which is in Category 3.

16 j. Their domestic use is recognized at 600 gpd and is exempt from the permit  
17 requirements.

18  
19 265. **SWUPA 2369N—Jeff Smith** (FOF 386)

20 a. Jeff and Ramona Lei Waiwaiole Smith filed a new-use SWUPA on April 23,  
21 2009, for TMK No. (2) 3-2-017:033 (“Parcel 33”), requesting appurtenant rights for  
22 558,000 gpd and a permit for 153,050 gpd, based on Reppun’s high estimate of 300,000  
23 gad for kalo lo`i and domestic uses based on *Waiāhole’s* 2,500 gad.

24 b. Parcel 33 is 1.86 acres, which the Smiths purchased in 2001, with a deed that  
25 reserved appurtenant rights. The Commission had granted provisional recognition of  
26 appurtenant rights.

27 c. Parcel 33 is comprised of LCA 3459:2, confirmed by RP 6753, described as “a  
28 section of kalo.”

29 d. The constitutional amendments of November 8, 1978 preserved appurtenant  
30 rights, so the deed reservation is nullified.

1 e. The Smiths are recognized as having appurtenant rights of 186,000 gpd (1.86  
2 acres x 100,000 gad).

3 f. The Smiths seek water directly from the stream for 0.5 acre of kalo lo`i, a small  
4 aquaculture pond, and to supplement rain water for domestic purposes, including  
5 watering their 1.22-acre yard and non-commercial garden.

6 g. The Smiths are awarded ;

7 i. 75,000 gpd for 0.5 acre of kalo lo`i (0.5 acre x 150,000 gad); and

8 ii. 3,660 gpd for their domestic uses, which is permitted instead of exempted,  
9 because it exceeds 1.0 acres (1.22 acres x 3,000 gad).

10 h. All 78,660 gpd of the permits are in Category 2, because they are less than the  
11 Smiths' appurtenant rights.

12  
13 266. **SWUPAs 2307/2308N—Francisco Cerizo** (FOF 387)

14 a. On April 30, 2009, Francisco Cerizo filed existing- and new-use SWUPAs for  
15 TMK No. (2) 3-2-002:012 (“Parcel 12”) for the Modesta F. Cerizo Trust, for which he is  
16 a trustee.

17 b. For Parcel 12’s 1.2 acres, Cerizo requests recognition of appurtenant rights for  
18 360,000 gpd and a permit for 139,850 gpd, of which 20,850 gpd was the existing use,  
19 using Reppun’s high estimate of 300,000 gad for kalo lo`i and *Waiāhole*’s 2,500 gad for  
20 diversified agriculture.

21 c. The Commission was unable to make a determination in the provisional  
22 recognition process, even after supplemental information was provided.

23 d. Cerizo nevertheless submitted documents and testimony for the CCH:

24 i. Parcel 12 is a portion of the konohiki award to Lunalilo, LCA 8559:20:1;

25 ii. Parcel 12 abuts South Waiehu stream, has eight terraced lo`i fed by the  
26 `auwai, and was likely cultivated in lo`i kalo from records supporting two  
27 neighboring LCAs.

28 e. Cerizo appurtenant rights request is denied, and he may reapply. Parcel 12 is a  
29 portion of the konohiki award, for which the acreage and other contents are not known.



1 f. Cerizo has 0.06 acre in lo`i kalo and 1.14 acre in domestic uses/diversified  
2 agriculture, with the estimated use at 9,000 gpd (0.06 acre x 150,000 gad) plus 3,400 gpd  
3 (1.14 acres x 3,000 gad), or a total of 12,400 gpd.

4 g. He intends to restore a 0.4-acre portion of his garden back to lo`i kalo, resulting in  
5 0.46 acre in lo`i kalo and 0.74 acre of domestic uses/diversified agriculture.

6 h. He is issued a permit for 69,000 gpd (0.46 acre x 150,000 gad), of which 12,400  
7 gpd (his existing use) is in Category 2, and the remainder, or 56,600 gpd, is in Category  
8 3.

9 i. He is also recognized as having 2,200 gpd in domestic use (0.74 acre x 3,000  
10 gad), which is exempt from the permit requirements.

11  
12 267. **SWUPA 2343N—Thomas Cerizo** (FOF 388)

13 a. On April 30, 2009, Thomas Cerizo filed a new-use SWUPA for TMK. No. (2) 3-  
14 3-002:014 (“Parcel 14”), described as a 0.4 acre property for which he requested 120,000  
15 gpd to place all the land into kalo lo`i, based on Reppun’s high estimate of 300,000 gad  
16 for kalo lo`i. However, Exhibit D describes Parcel 14 as 1.245 acres.

17 b. Cerizo did not provide written testimony. During oral testimony at the CCH,  
18 Cerizo described the property as 1.245 acres, for which he is now requesting  
19 approximately 300,000 gpd to place the entire property into kalo lo`i if he could find a  
20 young farmer or young farmer family to develop the taro land once again. Cerizo owns  
21 the property with another person, who is growing some taro on it now, which he  
22 estimates as using maybe 30,000 gpd over the past four or five years.

23 c. Parcel 14 is part of LCA 2468:1, described as kalo and kula land. The  
24 Commission had granted provisional approval.

25 d. Appurtenant rights would be equivalent to half of Parcel 14’s 1.245 acres, or  
26 0.623 acre.

27 e. Parcel 14 is recognized as having 62,300 gpd (0.623 acre x 100,000 gad) in  
28 appurtenant rights.

29 f. Cerizo is granted a permit for 186,750 gpd (1.245 acre x 150,000 gad), of which  
30 62,300 gpd is in Category 2 under appurtenant rights, and the remainder, or 124,450 gpd,  
31 is in Category 3 as a new use.

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268. **SWUPA 2258—Jason Miyahira** (FOF 389)

a. On April 23, 2009, Lawrence and his son Jason Miyahira filed an existing-use SWUPA for TMKs No. (2) 3-3-002:009 (“Parcel 9”), No. (2) 3-3-002:021 (“Parcel 21”), and No. (2) 3-3-002:010 (“Parcel 10”).

b. Parcel 9 is 3.38 acres and owned in a hui with the Smith, Alexander, and Molina `ohana. The Miyahiras’s application for Parcel 9 is limited to the 2.08-acre portion (“Lot A”), with Renee Molina applying for the remaining 1.3 acres (“Lot B”) under SWUPA 2171.

c. Parcel 10 is 0.08 acre and Parcel 21 is 0.06 acre. Both were purchased in 1999, and the deeds contain reservations of appurtenant rights.

d. The Miyahiras irrigate 0.5 acre of kalo lo`i and 1.34 acres of a yard and garden.

e. They request appurtenant rights for Lot A in the amount of 624,000 gpd and a permit for Lot A and Parcels 10 and 21 for 154,020 gpd, which they estimate was their existing use, based on Reppun’s high estimate of 300,000 gad for kalo lo`i (0.5 acre x 300,000 gad = 150,000 gpd), and Maui County domestic cultivation standard of 3,000 gad (1.34 acres x 3,000 gad = 4,020 gpd). If the deeds to Parcels 10 and 21 survive the reservations, they request a total of 666,000 gpd in appurtenant rights for all three parcels.

f. The Commission had granted provisional approval of appurtenant rights.

g. Parcel 9 is the entirety of LCA 2572:1, confirmed by RP 8051, described variously as consisting of 33 lo`i, a section of lo`i, 5 pō`alima, taro pauku, and the boundaries of two pō`alima within `āpana 1.

h. Parcels 10 and 21 are located within Parcel 9’s Lot A and were both part of LCA 8559B:20.1, a konohiki grant to William C. Lunalilo.

i. Because Parcels 10 and 21 are wholly within Lot A and described as pō`alima, the Miyahiras conclude that all 2.22 acres of Lot A (2.08 acres), Parcel 10 (0.08 acre) and Parcel 21 (0.06 acre) were in kalo lo`i at the time of the Māhele.

j. The constitutional amendment of November 8, 1978 that preserved appurtenant rights nullifies the deed reservations of 1999 for Parcels 10 and 21.

1 k. However, Parcels 10 and 21 both derive from the konohiki grant to Lunalilo, and  
2 even though these specific subsections of that grant were pō`alima, its total acreage and  
3 other contents are not known.

4 l. Therefore, the Miyahiras have appurtenant rights to 2.08 acre for Lot A of Parcel  
5 9), or 208,000 gpd (2.08 acres x 100,000 gad).

6 m. They also are granted a permit for 79,020 gpd:

7 1. 75,000 gpd for 0.5 acre of kalo lo`i (0.5 acre x 150,000 gad), and

8 2. 4,020 gpd for 1.34 acres of their yard and garden (1.34 acres x 3,000 gad).

9 This domestic use is subject to the permit requirements because they exceed 1  
10 acre, supra, COL 195.

11 n. All of the permitted amounts are in Category 2, as they fall within the Miyahiras`  
12 appurtenant rights of 208,000 gpd. Although their existing use was not measured, the  
13 permit falls within their appurtenant rights.

14  
15 269. **SWUPA 2171—Renee Molina** (FOF 390)

16 a. On April 29, 2009, Renee Molina filed an existing-use SWUPA for TMK No. (2)  
17 3-3-002:009 (“Parcel 9”), which her `ohana has owned in a hui with the Smith,  
18 Alexander, and Miyahira `ohana. Her request is limited to “Lot B,” the 1.3-acre portion  
19 of Parcel 9’s 3.38 acres. The Miyahiras have filed their own SWUPA 2258 for the  
20 remaining 2.08 acres.

21 b. Molina requests recognition of appurtenant rights for 390,000 gpd and a permit  
22 for 38,250 gpd, of which 20,000 gpd is the existing use, using Reppun’s high estimate of  
23 300,000 gad for lo`i kalo and the 5-gallon bucket method.

24 c. Parcel 9 is the entirety of LCA 2572:1, confirmed by RP 8051, described as  
25 consisting of 33 lo`i.

26 d. The Commission provisionally approved appurtenant rights.

27 e. Her existing use consisted of a 0.125 acre kalo lo`i and 0.25 acre garden, for  
28 which she requests an increase from 20,000 gpd to 38,250 gpd.

29 f. Lot B of Parcel 9 is recognized as having appurtenant rights of 130,000 gpd (1.3  
30 acres x 100,000 gad).

1 g. She is issued an existing-use permit for 18,750 gpd (0.125 acre x 150,000 gad) for  
2 her kalo lo`i, which is in Category 2 (within her appurtenant rights of 130,000 gpd).

3 h. She is recognized as having domestic uses of 750 gpd (0.25 acre x 3,000 gad),  
4 which is exempt from the permit requirements.

5  
6 270. **SWUPA 3465N—Pauline Curry, Maile Gomes & Jane Laimana** (FOF 391)

7 a. In July 2, 2012, Pauline Curry, Maile Gomes and Jane Laimana filed a new-use  
8 SWUPA for TMK No. (2) 3-3-002:007, a 1.59-acres property, for 152,700 gpd for 0.5  
9 acre of kalo lo`i, and 0.9 acre of a yard and garden.

10 b. Curry, Gomes and Laimana stated that the land has been in their family since the  
11 Māhele and their land is a portion of LCA 2447:1, confirmed by RP 6164.

12 c. The applicants had claimed appurtenant rights and were granted provisional  
13 approval by the Commission, which noted that LCA 2447, `āpana 1 was described as a  
14 section of lo`i and a pō`alima, and as pauku kalo and 1 pō`alima.

15 d. Curry, Gomes, and Laimana did not submit written testimony and did not  
16 participate in the CCH.

17 e. No decision is made on their appurtenant rights request, and the permit  
18 application is denied.

19 f. Curry, Gomes, and Laimana should re-apply for a new-use permit and a ruling by  
20 the Commission on whether or not they have traditional and customary rights and/or  
21 appurtenant rights, which would determine the priority category of any permit they may  
22 be issued.

23  
24 **3. Wailuku River**

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26 **a. Wailuku River**

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28 271. **SWUPA 2304—Division of State Parks** (FOF 392)

29 a. On April 27, 2009, the State Department of Land and Natural Resources, Division  
30 of State Parks (“State Parks”), filed an existing-use SWUPA for TMK No. (2) 3-3-

1 003:012 (“Parcel 12”), a 6.185-acre parcel, for 5,000 gpd for approximately 500 square  
2 feet of kalo lo`i.

3 b. `Īao Valley State Monument, commonly referred to as `Īao Valley State Park, is  
4 located at the confluence of two streams, `Īao Stream and Kinihapai Stream, which merge  
5 to form the Wailuku River. Water from Kinihapai Stream is used to irrigate kalo lo`i in  
6 the Park’s “garden” area to offer educational and viewing features for the general public.  
7 The water is then returned back into the Wailuku River.

8 c. SWUPA 2304 originally described the existing use as an estimated 5,000 gpd on  
9 about four lo`i totaling approximately 500 square feet, but the lo`i were more precisely  
10 and individually mapped in April 2016 for a total area of 1,243.19 square feet (0.028  
11 acres), and measurements of flow in May 2016 ranged from 3,000 gpd to 39,000 gpd,  
12 depending on whether water was flowing or not to parts of the lo`i.

13 d. State Parks planner Russell Kumabe testified that 3,000 gpd to 39,000 gpd would  
14 suffice for growing kalo as a demonstration project instead of for sustenance, and that  
15 5,000 gpd would suffice if the 5,000 gpd were switched off between the upper and lower  
16 lo`i. Kinihapai Stream is also intermittent throughout the season, and they would want to  
17 manage what they can get from the stream, but more would be okay too and would  
18 provide flexibility to demonstrate more of the areas to be cultivated.

19 e. Parcel 12’s 6.185 acres is comprised of:

20 1. LCA 3529:1, confirmed by RP 4059, which had two other `āpana, and  
21 consisted of 1.45 acres; and

22 2. the remaining 4.735 acres, which is derived from portions of the 24,000-  
23 acre ahupua`a of Wailuku, granted in fee simple to Claus Spreckels in 1882 under Royal  
24 Patent Grant No. 3343.

25 f. The 1854 award of LCA 3529 included 3 `āpana.

26 1. `āpana 1 was 1.45 acres, described as kalo;

27 2. `āpana 2 was 2.53 acres, described as `aina kalo; and

28 3. `āpana 3 was 0.46 acres, described as `aina kalo.

29 g. `Āpana 1, which had eventually been conveyed to John Kalua, was conveyed to  
30 the Hawaiian government in 1899, and was set aside, along with portions of the Spreckels  
31 grant, by the State for `Īao Valley State Park in 1978.

1 h. The 24,000-acre Spreckels grant ran from the ocean to the ridges forming the  
2 heads of Olowalu, Wailuku, Waihe`e, and Waiehu valleys.

3 i. A 1961 “gift deed” from Wailuku Sugar Company to the State of Hawai`i of the  
4 Spreckels grant’s portion reserved water rights to Wailuku Sugar Company.

5 j. In the resubmitted application for provisional recognition, the tax map key  
6 number is (2) 3-3-03:012 (“Parcel 12”), but the prior tax map key was (2) 3-3-03:013  
7 (“Parcel 13”). In Executive Order 2926 setting aside the land for the Park, the  
8 accompanying map showed LCA 3529:1 and the portions from the Spreckels grant as a  
9 unified whole. However, a survey done in 1892 located LCA 3529:1 as a separate, stand-  
10 alone parcel, the 1892 survey depicts `āpana 1 in a very different position than in EO  
11 2926, and another map from Wailuku Sugar Company based on the 1892 survey place a  
12 portion of `āpana 1 outside the boundaries of the Spreckels grants from Wailuku Sugar  
13 Company. State Survey Division employees also agree that the map in EO 2926 does not  
14 appear to accurately represent placement of `āpana 1 in relation to the Spreckels deeds  
15 mentioned in EO 2926. None of the deeds which purport to overlap `āpana 1 ever mention  
16 the LCA. This means there was no agreement or disclosure that the LCA would somehow  
17 be assumed, relinquished, or superseded by the deeds of the 1960s and 1970s, and  
18 Wailuku Sugar Company could not reserve water rights it never had to LCA 3529:1.  
19 Finally, the tax map plat also depicts `āpana 1 as a separate parcel from the grants for the  
20 Park and gives each separate parcel numbers. If the tax map is relied on, then the parcel  
21 numbers should be Parcel 12 for LCA 3529:1 and Parcel 13 for the State Parks property  
22 that was conveyed as part of the Spreckels grant. Until the question is resolved by a State  
23 Survey, either or both TMK parcel numbers 012 and 013 appear to be correct.

24 k. The Commission had granted provisional approval after State Parks identified the  
25 park lands as Parcel 12 instead of as Parcel 13, and supplemental documentation of LCA  
26 3529 `āpana 1 described it as taro land.

27 l. State Parks claimed appurtenant rights to at least 75 percent of LCA 3529:1,  
28 assuming the whole area was in kalo lo`i at the time of the Māhele, with a floor of 75  
29 percent because in 1908, the land in kalo lo`i was “about three-fourths of an acre.”

30 m. State Parks therefore requests appurtenant rights recognition for at least three-  
31 fourths of an acre, or 75,000 gpd to 225,000 gpd, based on Reppun’s estimate of 100,000

1 gad to 300,000 gpd for kalo lo`i, and as high as 262,500 gpd if treated as individual lo`i,  
2 based on 350,000 gad for individual lo`i.

3 n. Parcel 12, wholly derived from LCA 3529:1, is recognized as having appurtenant  
4 rights to its entire 1.45 acres, or 145,000 gpd (1.45 acres x 100,000 gad). Not only `āpana  
5 1, but also `āpana 2 and `āpana 3, were described as containing only kalo, and the fact  
6 that 75 percent of `āpana 1 was still in kalo in 1908 is not germane to the water use at the  
7 time of the Māhele.

8 o. State Parks is issued a permit for 5,600 gpd (0.028 acres x 150,000 gad), which is  
9 in Category 2, under either an existing use or within its appurtenant rights of 145,000  
10 gpd.

11  
12 272. **SWUPAs 2243/2244N—Ho`oululāhui, LLC (John & Rose Marie Dewey)** (FOF 393)

13 a. On April 23, 2009, Ho`oululāhui, LLC filed existing- and new-use SWUPAs for  
14 TMK No. (2) 3-5-003:018 (“Parcel 18”).

15 b. `Īao Valley is the birthplace of Rose Marie Duey’s grandmother, and what they  
16 own now is part of her ancestral home.

17 c. The deed to Parcel 18 contained a reservation of appurtenant rights when the  
18 Dueys purchased the land from Wailuku Agribusiness in 2001.

19 d. In their SWUPAs, the Dueys did not claim appurtenant rights because of the deed  
20 restriction but participated in the provisional approval process, and the Commission had  
21 granted provisional recognition after additional information was provided.

22 e. Parcel 18 is 18.146 acres and consists of LCA 2610, confirmed by RP 494, LCA  
23 3529:3, confirmed by RP 4059, and Royal Grant No. 3343 to Lunalilo:

24 1. 72% of LCA 2610 comprised 4.712 acres of Parcel 18.

25 2. 33% of LCA 3529:3 comprised 0.1271 acres of Parcel 18.

26 3. Royal Grant No. 3343 comprised the remainder of Parcel 18, or 13.307  
27 acres.

28 f. LCA 2610 was described as containing 15 lo`i kalo and wauke. The 15 lo`i are the  
29 same lo`i the Dueys have found and begun to restore, which they had estimated at 1.42  
30 acres in their new-use SWUPA but now describe as covering about 3 acres.

- 1 g. The total acreage of LCA 2610 was 6.544 acres. Seventy-two percent of LCA  
2 2610 was 4.712 acres, so LCA 2610 was 6.544 acres.
- 3 g. LCA 3529:3 was described as aina kalo, without any other use mentioned.
- 4 h. While the Dueys are not claiming appurtenant rights for the portion of land  
5 comprised of Royal Grant No. 3343, there is evidence of ancient terraces and springs  
6 throughout the 18.146 acres, and the site topography, slope, proximity to the river, and  
7 the presence of an ancient `auwai on the property give further evidence that the entire  
8 property might have been in kalo at the time of the Māhele.
- 9 i. The Dueys request recognition of appurtenant rights for at least 1,451,700 gpd,  
10 and a permit for 836,600 gpd, of which 26,600 gpd is the existing use.
- 11 j. The appurtenant rights request is based on the 4.839 acres derived from LCA  
12 2610 (4.712 acres) and LCA 3529:3 (0.1271 acre), using Reppun's high estimate of  
13 300,000 gad.
- 14 k. Currently, two of fifteen ancient lo'i on approximately 0.08 acre have been  
15 restored, and they also irrigate 3 acres of a domestic, non-commercial garden. Using a  
16 1.5-inch valve to control irrigation flow, they estimate their use at 21,600 gpd for the  
17 0.08-acre and 5,000 gpd for the garden, for a total existing use of 26,600 gpd.
- 18 l. They intend to restore the remaining lo'i of approximately 3 acres, but the amount  
19 of `auwai water is enough for only two lo'i. Based on their site-specific experience with  
20 the two lo'i, they estimate 270,000 gad would be sufficient and therefore request an  
21 additional 810,000 gpd (3 acres x 270,000 gad). In their original request, they had  
22 requested water for 1.42 acres but later changed the request to 3 acres.
- 23 m. The Dueys have appurtenant rights for 2.287 acres:
- 24 1. LCA 2610: 2.160 acres. 3 acres of 6.544 acres was in kalo lo'i, and  
25  $3/6.544 \times 4.712$  acres = 2.160 acres.
- 26 2. LCA 3529:3: 0.1271 acres.
- 27 n. The Dueys are recognized as having appurtenant rights of 228,700 gpd (2.287  
28 acres x 100,000 gad).
- 29 o. They are also recognized as having traditional and customary rights on their land.
- 30 p. However in exercising those rights, the practice must meet six essential elements,  
31 *supra*, COL 18. The Dueys meet four of these elements. The remaining two are: 1) the



1 purpose is to fulfill a responsibility related to subsistence, cultural or religious needs of  
2 the practitioner's family; and 2) the practice is not for a commercial purpose. They plan  
3 to expand their lo`i kalo from 0.08 acre to 3 acres, which greatly exceeds the acreage for  
4 subsistence of other applicants.

5 q. Although no evidence was submitted in this CCH on productivity levels of kalo  
6 lo`i and average consumption of poi, expert testimony did state that "the highest and best  
7 use of the land (is) in lo`i kalo, and you can make ten to 15 times more food per acre,"  
8 *supra*, FOF 164.

9 r. Therefore, a liberal allocation of kalo lo`i for `ohana uses would be 1 acre.

10 s. The Dueys are issued a permit for 455,000 gpd: 3 acres of lo`i, or 450,000 gpd (3  
11 acres x 150,000 gad), plus 5,000 gpd of measured use for their 3-acre garden.

12 1. 151,667 gpd (150,000 gpd for one acre of kalo lo`i plus 1,667 gpd for one  
13 acre of their garden) are in Category 1 as an exercise of traditional and customary  
14 rights;

15 2. 77,033 gpd, or the remainder of their appurtenant rights of 228,700 gpd, is  
16 in Category 2; and

17 3. the remaining 226,300 gpd is in Category 3 as a new use.

18  
19 **273. SWUPA 2370N—Francis Ornellas (FOF 394)**

20 a. On April 30, 2009, Francis Ornellas filed a new-use SWUPA for TMKs No. (2)  
21 3-5-001:002 ("Parcel 2"), No. (2) 3-5-001:003 ("Parcel 3"), No. (2) 3-5-001:004 ("Parcel  
22 4"), and No. (2) 3-5-001:005 ("Parcel 5").

23 b. The land had been in the Ornellas `ohana since "time immemorial" but a part had  
24 been sold, when one of Ornellas's wife's relatives sold his interest. Ornellas purchased  
25 this interest from Wailuku Agribusiness in 2002 via a quitclaim deed in which the water  
26 rights were reserved.

27 c. The parcels with reservations are a one-third interest in Parcel 2, and Parcels 3, 4,  
28 and 5, which are pō`alima within the one-third interest of Parcel 2:

29 1. Parcel 2 is 1.27 acres.

30 2. Parcel 3 is 0.18 acre.

31 3. Parcel 4 is 0.03 acre.

- 1           4.       Parcel 5 is 0.03 acre.
- 2           d.       The Commission had granted provisional approval for all four parcels.
- 3           e.       Parcel 2 is the entirety of LCA 2414, confirmed by RP 6863. The LCA is  
4 described as containing 23 lo`i kalo, a wauke field, and a house lot. Ornellas also  
5 provided photographs depicting the ancient `auwai and lo`i features still visible on his  
6 lands, and the map of LCA 2414 also shows that the river used to flow right through this  
7 kuleana. Ornellas concludes that these facts, the presence of the three pō`alima within the  
8 kuleana, and information passed down from `ohana elders, confirm that Parcel 2 was  
9 cultivated mainly in lo`i kalo.
- 10          f.       Ornellas estimates his appurtenant rights for Parcel 2's 1.27 acres as 103,572 gpd,  
11 consisting of the following:
- 12           1.       750 gpd for pāhale (0.24 acre x 3,000 gad).
- 13           2.       153,000 gpd for lo`i kalo (0.51 acre x Reppun's 300,000 gad).
- 14           3.       1,530 gpd for wauke (0.51 acre x 3,000 gad).
- 15           4.       Reducing the resulting 155,280 gpd by one-third for the appurtenant rights  
16 reservation on one-third of Parcel 2.
- 17          g.       If appurtenant rights survive the deeds's reservations, Ornellas requests  
18 recognition of the one-third of Parcel 2 and of Parcels 3, 4, and 5, for a total of 227,280  
19 gpd:
- 20           1.       Parcel 2: 155,280 gpd.
- 21           2.       Parcel 3: 54,000 gpd (0.18 acre x 300,000 gad).
- 22           3.       Parcel 4: 9,000 gpd (0.03 acre x 300,000 gad).
- 23           4.       Parcel 5: 9,000 gpd (0.03 acre x 300,000 gad).
- 24          h.       Ornellas requests a permit for 426,567 gpd:
- 25           1.       426,300 gpd for 1.421 acres of kalo lo`i using Reppun's high estimate of  
26 300,000 gad.
- 27           2.       267 gpd for 0.089 acre for their home and non-commercial garden, based  
28 on Maui County domestic cultivation standard of 3000 gad.
- 29          i.       The November 8, 1978 constitutional amendment preserving appurtenant rights  
30 nullifies the 2002 deed reservations.

1 j. Appurtenant rights do not accrue to houselots or dryland crops, *supra*, FOF 170-  
2 171.

3 k. There is no indication that the pō`alima that are Parcels 3, 4, and 5 are part of a  
4 larger konohiki or government grant.

5 k. Ornellas has appurtenant rights to 0.75 acres, or 75,000 gpd (0.75 acre x 100,000  
6 gad):

7 1. Parcel 2: 0.51 acres (1.27 acres – 0.25 acre for the houselot, divided  
8 by two for lo`i kalo and wauke).

9 2. Parcels 3, 4, 5: 0.24 acre (0.18 + 0.03 + 0.03 acres)

10 l. He is also issued a permit for 213,150 gpd for 1.421 acres of kalo lo`i. Even  
11 though the total exceeds his appurtenant rights, he has traditional and customary rights to  
12 grow kalo on his property, and therefore his permit is in Category 1, *supra*, COL 19-202.

13 m. Ornellas is also recognized as having a domestic use of 600 gpd for a single-  
14 family home and garden, which is exempt from the permit requirements.

15  
16 274. **SWUPA 2360N—Anthony Manoukian** (FOF 395)

17 a. On May 4, 2009, Anthony Manoukian filed a new-use SWUPA for TMK No. (2)  
18 3-5-001-019 (“Parcel 19”), a 1.8-acre property for which he claimed appurtenant rights  
19 and requested a permit for 540,000 gpd, applying Reppun’s high estimate for kalo lo`i  
20 (1.8 acres x 300,000 gad). However, in an Attachment to his SWUPA, Manoukian stated  
21 he was planning to cultivate 1.428 acres of kalo lo`i and 0.089 acre of a native Hawaiian  
22 plant garden, for a total of 428,667 gpd.

23 b. Manoukian stated that the land has been in his wife’s family “since time  
24 immemorial.” Wailuku Agribusiness came to own three pō`alima on their land, a total of  
25 0.24 acres and designated TMK Nos. (2) 3-5-001:003, -004, and -005, as well as an  
26 undivided 33.33% interest in TMK No. (2) 3-5-001:002, which Manoukian purchased via  
27 quitclaim deed in 2002, in which Wailuku Agribusiness reserved the water rights.

28 c. Provisional recognition was denied without prejudice, with the notation: “TMK  
29 map shows LCA 2452. Docs provided for LCA 2414. Wailuku Agribusiness reserved  
30 water rights.”

31 d. Manoukian did not submit written testimony nor participate in the CCH.

1 e. Manoukian’s request for recognition of appurtenant rights is denied without  
2 prejudice, and his permit request is also denied. He may reapply for recognition of  
3 appurtenant rights as well as for a new-use permit.  
4

5 275. **SWUPA 2371N—Kimberly Lozano** (FOF 396)

6 a. On April 30, 2009, Kimberly Lozano filed a new-use SWUPA for TMKs No. (2)  
7 3-4-036:001 (“Parcel 1”) and No. (2) 3-4-036:010 (“Parcel 10”). She had been using  
8 water on Parcel 1 when she filed but filed for a new use, because she wasn’t sure what  
9 the process was.

10 b. The deeds to both parcels contained a reservation of appurtenant rights when her  
11 parents purchased them for her from Wailuku Agribusiness in 2000.

12 c. The November 8, 1978 constitutional amendment preserving appurtenant rights  
13 nullifies the reservations.

14 d. Lozano is the great, great, granddaughter of Naka` ahiki Kawi, who was the  
15 konohiki of `Īao Valley, and she now resides on land that was her ancestors.

16 e. The source of her water is a spring which flows through an open ditch to Wailuku  
17 River.

18 f. Parcel 1 is 1.14 acres, and Parcel 10 is 0.1836 acres, and both derive from LCA  
19 2435, confirmed by RP 6397, and LCA 2458, confirmed by RP 6066. Parcel 1 also  
20 includes a pō`alima.

21 g. The Commission had granted provisional recognition for Parcel 1, based on LCA  
22 2435 but not for Parcel 10, based on LCA 2458, described as having a pō`alima as a  
23 boundary. There is also a reference to 4405MM and that it was not shown on the TMK  
24 map.

25 h. Lozano explained in her written testimony that LCA 2435 had been mistakenly  
26 labeled as 2434, with “2434” initially written in RP 6397 and then “2435” written over,  
27 but “2434” still mistakenly used in the foreign testimony, translation of native testimony,  
28 and survey boundary. “2438” had been mistakenly used in the native testimony and  
29 native register for LCA 2458. Lozano then pointed out that the survey boundary for LCA  
30 No. 2434 matched those of LCA 2435; and that the same is true for LCAs 2438 and  
31 2458.

- 1 i. LCA 2435 was described as kalo land with three pō`alima in it; and LCA 2458  
2 was variously described as 6 lo`i, 6 taro patches, or taro land.
- 3 j. Lozano requests appurtenant rights for Parcels 1 and 10 for 402,000 gpd, based on  
4 Reppun’s high estimate (1.34 acre x 300,000 gad). (However, even using Reppun’s  
5 estimate, her request should have been for 1.324 acres, or for 397,200 gpd.)
- 6 k. Lozano is granted appurtenant rights of 132,400 gpd (1.324 acres x 100,000 gad).
- 7 m. Lozano has traditional and customary rights on her land.
- 8 n. She also requests a permit for 57,218 gpd:
- 9 1. 2,138 gpd for 0.855 acre of Parcel 1 for her yard and garden, using  
10 *Waiāhole*’s irrigation requirements for diversified agriculture (0.855 x 2,500 gad).
- 11 2. 55,080 gpd for 0.1836 acre of Parcel 10 for kalo lo`i (0.1836 acre x  
12 300,000 gad).
- 13 o. She is granted a permit for 27,540 gpd (0.1836 acres x 150,000 gad) for her kalo  
14 lo`i, which is in Category 1 whether an existing- or new-use, because it is based on  
15 traditional and customary rights.
- 16 p. She is recognized as having a domestic use of 2,565 gpd (0.855 acre x 3,000 gad),  
17 which is exempt from the permit requirements.

18  
19 276. **SWUPA 2275—Duke & Jean Sevilla, Christina Smith, & County of Maui** (FOF  
20 397)

- 21 a. On April 23, 2009, Duke & Jean Sevilla and Christina Smith filed an existing-use  
22 SWUPA for TMKs No. (2) 3-3-001:001 (“Parcel 1”), No. (2) 3-3-001:041 (“Parcel 41”),  
23 and No. (2) 3-3-001:054 (“Parcel 54”), requesting 4,200 gpd for 1.2 acres of diversified  
24 agriculture.
- 25 b. Parcel 41 is 0.933 acre and Parcel 54 is 0.488 acre, on which they have a garden  
26 on 0.1 acre of each parcel. The Sevillas own Parcel 41, and Christina and Lorin Smith  
27 own Parcel 54, but they manage their parcels collectively.
- 28 c. Parcel 1 is 63.7 acres, which their nonprofit Neighborhood Place of Wailuku  
29 leased from North Shore at Waiehu, LLC, on which they cultivated about 1.0 acre of  
30 dryland kalo. In May 2012, the County of Maui purchased the property, and on February  
31 4, 2016, the community nonprofit Ke Ao I Ka Makani Ho`eha`ili (“Ke Ao”) secured a

1 right of entry through Duke Sevilla, the President of Ke Ao's Board of Directors. The  
2 County of Maui is now a co-applicant for Parcel 1.

3 d. The parcels are watered from springs and wetlands in Paukūkalo, including  
4 Waiola Spring, which is on their land about 200 yards from the mouth of Wailuku River.  
5 They do not divert water from Wailuku River but utilize the naturally occurring springs  
6 and seeps on their land. Sevilla reports that with the partial restoration of Wailuku River,  
7 the flow in Waiola Spring on his `ohana's land has increased and become more  
8 consistent, remaining saturated throughout the hot summer months.

9 e. Their use is not gauged and the general estimate of 600 gpd was used for each of  
10 the two 0.1 acre gardens, using Maui County's single-family standard, and 3,000 gpd for  
11 the 1.0 acre of dryland kalo, using Maui County's standard for domestic agriculture.

12 f. In his March 18, 2016 written testimony, Sevilla:

13 1. requested an additional 100,000 gpd for a new use of 0.33 acre of kalo lo`i  
14 on Parcels 41 and 54, using Reppun's high estimate of 300,000 gad);

15 2. stated that, in addition to the 1.0 acre of dryland kalo he was cultivating on  
16 Parcel 1 on the date of designation in 2008, Wes Wong was also cultivating 2  
17 acres of spring-fed lo`i; and

18 3. Ke Ao would like to restore and maintain a total of 20 acres of kalo lo`i on  
19 Parcel 1, which Sevilla estimates would require 6,000,000 gpd, using Reppun's  
20 high estimate (20 acres x 300,000 gad), of which he also estimates that eight acres  
21 would be spring-fed lo`i and 12 acres would need water from either Wailuku  
22 River or Waiehu Stream.

23 g. If any water for Parcel 1 is allocated from the Wailuku River, Sevilla stated that  
24 "we're fine with making that subject to the County's Water Use Permit from the Wailuku  
25 River as well."

26 h. Therefore, Sevilla now requests:

27 1. Parcels 41 and 54: 101,200 gpd, compared to the existing-use SWUPA  
28 request for 1,200 gpd for two gardens; and

29 2. Parcel 1: 6,000,000 gpd for 20 acres of kalo lo`i, compared to 3,000  
30 gpd for an estimated existing use on 1 acre of dryland kalo, which he now has

1 increased to 600,000 gpd, claiming that 2 acres of kalo lo'i had also been an  
2 existing use.

3 i. Sevilla did not and has not submitted a new-use SWUPA.

4 j. The Sevillas and Smith claimed appurtenant rights but did not provide  
5 documentation and were therefore denied provisional recognition.

6 k. Sevilla now has submitted documents for all three parcels and claims appurtenant  
7 rights of 414,300<sup>45</sup> gpd for all of Parcel 41's 0.933 acre and Parcel 54's 0.488 acre, and  
8 1,771,680 gpd for Parcel 1, using Reppun's high estimate of 300,000 gad for kalo lo'i.

9 l. Parcels 41 and 54 are a portion of the same Royal Patent Grant No. 3343 to Claus  
10 Spreckels as in Parcel 1, which included 24,000 acres of former crown lands with no  
11 description of land use at the time of the Māhele but for which Sevilla described current  
12 land features on their portion of the Grant, and for which he claimed appurtenant rights  
13 for all of Parcels 41 and 54.

14 m. Parcel 1's deed has a reservation of appurtenant rights in 2004, and Sevilla  
15 contends it is derived from multiple LCAs and a 24,000-acre Royal Patent Grant to Claus  
16 Spreckels. His claim for 1,771,680 gpd does not include the Grant to Spreckels or another  
17 large grant to Lunalilo, because he could not confirm what was cultivated on Parcel 1's  
18 portions of this property.

19 n. His claim of appurtenant rights of 1,771,680 gpd is for 9.87 acres of Parcel 1's  
20 63.7 acres:

21 domestic use

22 600 gpd: house lot on one-half of LCA 2447:9's 0.18 acres.

23 wetland kalo cultivation

24 1,002,000 gpd: (3.34 acres x 300,000 gad) on LCA 1759:9.

25 610,500 gpd: (1/2 x 4.07 acre x 300,000 gad) on LCA 11171.

26 fishpond cultivation

27 3,240 gpd: (1/2 x 0.18 acre x 36,000 gad) on LCA 2447:9.

28 10,440 gpd: (0.29 acre x 36,000 gad) on LCA 3441:3.

29 73,260 gpd: (1/2 x 4/07 acre x 36,000 gad) on LCA 11171.

30 49,680 gpd: (1.38 acre x 36,000 gad) on portion of LCA 7742:4.

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<sup>45</sup> Sevilla added 0.933 and 0.488 as 1.381, but it should have been 1.421 acres.

1 21,960 gpd: (0.61 acre x 36,000 gad) on portion of CA 3253.

2 o. Parcel 1 has appurtenant rights, because the reservation in 2004 was nullified by  
3 the constitutional amendment of November 8, 1978, preserving appurtenant rights.

4 p. Parcel 1 is recognized as having appurtenant rights of 599,170 gpd, based on the  
5 following:

6 1. 537,500 gpd (5.375 [3.34 + 2.035] acres x 100,000 gad) for kalo lo`i.

7 2. 61,670 gpd (4.405 [0.09 + 0.29 + 2.035 + 1.38 + 0.61] acres x 14,000  
8 gad<sup>46</sup>) for fishponds.

9 q. The request for appurtenant rights for Parcels 41 and 54 is denied, as there is no  
10 information on the proportion that was in kalo lo`i of Royal Patent Grant No. 3343 to  
11 Claus Spreckels's 24,000 acres.

12 r. The Sevillas and Smiths are issued a Category 3 new-use permit of 49,500 gpd for  
13 0.33 acre of kalo lo`i (0.33 acre x 150,000 gad) on Parcels 41 and 54.

14 s. Ke Ao and the County of Maui are issued new-use permits of 1,200,000 gpd for  
15 20 acres of kalo lo`i (20 acres x 150,000 gad) on Parcel 1, comprised of the following  
16 permits:

17 1. 1,200,000 gpd for 8 acres (8 acres x 150,000 gad) will be provided by the  
18 springs on Parcel 1, of which 599,170 gpd are a Category 2 permit under Parcel  
19 1's appurtenant rights, and the remaining 600,830 gpd is under a Category 3  
20 permit.

21 i. The amount under the Category 2 permit, or approximately 4 acres,  
22 must be exercised on the LCAs for which Parcel 1 has been recognized  
23 with appurtenant rights, because Parcel 1 is 63.7 acres, and the portion  
24 with appurtenant rights is 9.87 acres.

25 ii. The two acres of kalo lo`i that Sevilla contends were being  
26 irrigated by springs at the time of designation was not in their existing-use  
27 SWUPA filed on April 23, 2009 and was first mentioned in his written  
28 testimony that was filed on February 5, 2016, and revised on March 18,  
29 2016. This unmeasured and unverified use is included in the 599,170 gpd  
30 Category 2 permit under appurtenant rights.

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<sup>46</sup> The Commission has adopted 14,000 gad as the appurtenant right for ponds at the time of the Māhele.



1           2.     Per the applicants' request, 1,800,000 gpd for 12 acres (12 acres x  
2           150,000 gad), which would be under a Category 3 permit from Wailuku River, are  
3           offset by the permits issued under MDWS's SWUPAs 2179/2179N's total of 3.2  
4           mgd (1.784 + 1.416).

5           t.     The Sevillas and Smiths are recognized as having domestic uses of 1,200 gpd for  
6           two domestic gardens, which are exempt from the permit requirements.

7  
8   277.   **SWUPA 3623N—Noelani & Allan Almeida & Gordon Almeida** (FOF 398)

9           a.     On July 16, 2012, Noelani and Allan Almeida and Gordon Almeida filed a new-  
10          use SWUPA for TMKs No. (2) 3-3-001:022 (“Parcel 22”) and No. (2) 3-3-001:023  
11          (“Parcel 23”). Noelani and Allan own Parcel 23 and their cousin Gordon owns the  
12          adjacent Parcel 22, and they manage the parcels together as an `ohana.

13          b.     The water they are requesting is from springs on their land that are fed by the  
14          Wailuku River and formerly supplied water for lo`i. They do not divert water from the  
15          River but the existence of their spring is dependent upon a consistent flow in the River.

16          c.     Noelani and Gordon are both direct lineal descendants of Kaianui, the original  
17          claimant of LCA 3234C:2, confirmed by RP 4256, and their `ohana has lived  
18          continuously on this land since the Māhele.

19          d.     Parcel 22 is 1.92 acres, and Parcel 23 is 0.445 acre, for a combined total of 2.365  
20          acres, and both parcels fall within LCA 3234C:2.

21          e.     The native testimony describes this kuleana as kalo land with two ponds (“aina  
22          kalo and elua loko”) and also contains a pō`alima. Sketches of LCA 3234C:2 depict the  
23          pō`alima but not the two ponds. Based on the documents and the slope of the land, they  
24          estimate that both parcels were entirely in kalo at the time of the Māhele.

25          f.     The Commission had granted provisional recognition.

26          g.     They request recognition of appurtenant rights for 709,500 gpd (2.365 acre x  
27          Reppun's high estimate of 300,000 gad).

28          h.     On the Almeidas's appurtenant rights, they concluded that both parcels were  
29          entirely in kalo at the time of the Māhele, but they did not explain the description of the  
30          land as containing not just kalo land, but also two ponds.

1 i. LCA 3234C:2 was 2.365 acres, and the ponds are only mentioned in one  
2 document, while the Provisional Order review and a sketch of LCA 3234C:2 do not  
3 identify any ponds.

4 j. The Almeidas have appurtenant rights of 236,500 gpd (2.365 acre x 100,000 gad).

5 k. The Almeidas also have traditional and customary rights on their land.

6 l. At the time they filed their SWUPA, they had intended to grow lo`i kalo but  
7 subsequently decided to grow dryland kalo in addition to other crops in their domestic  
8 garden and therefore amend their SWUPA to use spring water on 1.091 acres for  
9 subsistence crops and to water their yard. They request 3,273 gpd (1.091 acres x Maui  
10 County domestic cultivation of 3,000 gad).

11 m. The Almeidas are granted a permit for 3,270 gpd for their domestic garden, which  
12 is not exempt from the permit requirements because the land exceeds 1.0 acre, *supra*,  
13 COL 195. Their permit is in Category 1, as within their traditional and customary rights.

14  
15 **b. `Īao-Maniania Ditch**

16  
17 278. **SWUPAs 2189/2190N & 2196—Wailuku Country Estates Irrigation Company** (FOF  
18 399)

19 a. On April 24, 2009, Wailuku Country Estates Irrigation Company (“WCEIC”)  
20 filed existing- and new-use SWUPAs on behalf of Wailuku Country Estates Community  
21 Association’s (“WCECA”) 184 lot owners and an existing-use SWUPA for the common  
22 areas of TMK (2) 3-003-017.

23 1. The Wailuku Country Estates subdivision is comprised of 207 lots over  
24 470 acres:

25 a. 184 owner lots comprise 420.709 acres;

26 b. lots 185-189 comprise the common areas of approximately 32.5  
27 acres; and

28 c. lots 190-207 comprise the remaining acres of unspecified uses  
29 which appear from the subdivision map to consist of miscellaneous small  
30 areas; e.g., lot 203 is 0.048 acres, lot 204 is 0.145 acres, and lot 205 is  
31 0.006 acres.

1 b. The 184 lot owners filed individual SWUPAs (See Table 4), which collectively  
2 equaled:

3 1. 120 owners with metered existing uses of 210,890 gpd for agricultural  
4 activities on 98.75 acres, or approximately 2,135 gad:

5 a. 12 acres of vegetables, 8.0 acres of orchard, 14.25 acres of  
6 bananas, 3.25 acres of papayas, 9.5 acres of macadamia nuts, 1.0 acre of  
7 dryland taro, 7.75 acres of nursery plants, 2.25 acres of turf grass, 38.75  
8 acres of landscape, and 2 acres of livestock.

9 2. 118 of 120 existing-use owners plus the remaining 64 owners with  
10 proposed new uses of 511,700 gpd for agricultural activities on 220.5 acres, or  
11 approximately 2321 gad:

12 a. 47.25 acres of vegetables, 39 acres of orchard, 42.75 acres of  
13 bananas, 12.25 acres of papayas, 33.5 acres of macadamia nuts, 6.0 acres  
14 of dryland taro, 13.75 acres of nursery plants, 0.25 acre of turf grass, 24.5  
15 acres of landscape, and 1.25 acres of livestock.

16 3. Most of the agricultural activities take place year-round, with the  
17 exception of certain seasonal crops. Many of the homeowners sell their produce at  
18 farmers markets or to local businesses and restaurants, and a number of  
19 homeowners rely on their crops as their sole or majority income for their families.

20 c. The existing use for the 32.5 acres of common areas equaled 158,768 gpd,  
21 calculated by subtracting the lot owners' use from total deliveries by WWC and taking  
22 into account water that is delivered to the kuleana users, who are not charged.

23 1. 158,768 gpd for 32.5 acres equals 4,885 gad.

24 2. The common areas are described somewhat differently in WCEIC's  
25 documents:

26 a. 2.26 acres for a community park, 20 acres of roadside setbacks  
27 along six miles of roads (24-foot setback on the mauka side and 9.5-foot  
28 setback on the makai side), 9 acres of lot drainage swales (not including  
29 3.1 acres of swales in lots 52 to 62), and 1 acre of retention basins.

30 b. 2.262 acres for a community park (lot 185), 6.726 acres for Waihee  
31 Ditch (lot 186), 0.224 acres for access off Maika Place for owners/John

1 Russell (lot 187), 0.758 acres for County of Maui Water Tank site (lot  
2 188), and 23.028 acres for Roads and Shoulders (lot 189).

3 c. Photos of the lot and road drainage swales show spotty grass  
4 coverage on the roadside shoulders and tall weeds in some of the drainage  
5 swales.

6 d. Wailuku Country Estates is subject to a Declaration of Covenants, Conditions,  
7 and Restrictions (“CC&Rs”):

8 1. Each lot is designated for, and restricted to, agricultural use as defined in  
9 the zoning laws, and two water systems provide water: a potable water system and  
10 a non-potable system for agricultural use.

11 e. WCEIC receives up to a maximum of 1 mgd from WWC and is charged a  
12 minimum charge of 500,000 gpd at the County rate:

13 1. The Maui County rate is \$1.90/1000gallons from 0-5,000 gallons,  
14 \$3.60/1000 gallons for the next 5001-15,000 gallons, and \$1.00/1000 gallons for  
15 anything over 15,000; however, the current rate has been set by the Public  
16 Utilities Commission at \$0.90/1000 gallons.

17 2. In addition to the minimum charge, an additional amount is paid by which  
18 the delivery charge for each quarter exceeds the minimum charge, defined as the  
19 County Rate times the gallons delivered each month plus general excise tax.

20 f. Each lot owner is charged \$100/month for 2,666 gpd or 80,000 gallons per month.  
21 Any water used in excess is charged at \$2.00/1000 gallons, higher than the County of  
22 Maui agricultural rate of \$1.00/thousand gallons to encourage water conservation.

23 g. Appurtenant rights. Although no appurtenant rights were claimed when the  
24 SWUPAs were filed in 2009, WCEIC and WCECA participated in the Provisional  
25 Approval process, with many lots given provisional recognition.

26 h. Based on area maps and other information provided by Title Guaranty, WCEIC  
27 calculated the proportion of each lot derived from the various LCAs that encompass the  
28 development. 27 LCAs were identified, overlapping 93 lots. The percent of each lot  
29 derived from the overlapping LCA(s) was then calculated.

30 1. For example:

- 1 a. LCA 2502:1, which was approximately 15,320 square feet (0.35  
2 acres), is almost entirely in lot 45 (15,108 square feet), which is 2.584  
3 acres, and with the remaining 212 square feet in lot 42, which is 2.212  
4 acres. Therefore, essentially zero percent of lot 42 and 13 percent of lot 45  
5 are derived from LCA 2502:1.
- 6 b. LCA 3275-E was approximately 6,232 square feet (0.14 acres) and  
7 is entirely in lot 31, which is 2.399 acres. Therefore, about 6 percent of lot  
8 31 is derived from LCA 3275-E.
- 9 c. LCA 3225 was approximately 650,053 square feet (14.92 acres), of  
10 which only 226 square feet (0.005 acre) was in the subdivision, in lot 186,  
11 which is 6.726 acres and part of the Waihe`e Ditch, *supra*. Therefore,  
12 essentially zero percent of lot 186 was derived from LCA 3225.
- 13 i. WCEIC claimed appurtenant rights for the subdivision by summarizing the  
14 percent of each LCA that was in the subdivision and multiplying by 150,000 gad, which  
15 it stated the Commission had previously applied and which is the median of the figures  
16 testified to by Paul Reppun.
- 17 1. The claimed appurtenant rights were based on 30 LCAs, which were  
18 essentially the same as the 27 identified as overlapping 93 lots, *supra*.
- 19 a. LCA 4452:9, which was 1,767,370 square feet (40.57 acres) and  
20 claimed to be overlapping 31 lots, was later withdrawn, as it was described  
21 as house or lots in Honolulu and Lahaina.
- 22 b. LCA 2436:1 & 3 were listed separately (‘āpana 3 was mislabeled  
23 earlier as ‘āpana 2 in Exh. 2189-WCEIC-243-A, but there was already an  
24 LCA 2436:2 listed separately.)
- 25 c. LCA 2495:1-4 was listed separately as ‘āpana 1, ‘āpana 2,3, and  
26 ‘āpana 4.
- 27 d. LCA 4461:1&2 were listed as separate ‘āpana.
- 28 e. The revised list of LCAs from 27 to 30 included LCA 2502:3,  
29 listed as 7,437 square feet, or 0.17 acres. However, the original list of 27  
30 LCAs included LCA 2502:1, which was approximately 15,320 square feet

1 (0.35 acres). Thus, `āpana 1 and not `āpana 3 will be used in the  
2 calculation of appurtenant rights.

3 2. Adding the gallons per day claimed for each LCA, WCEIC claimed  
4 appurtenant rights of 8,263,555 gpd for the Wailuku Country Estates subdivision.

5 j. However, the appurtenant rights were calculated on the entire acreage of each  
6 LCA, whereas WCEIC had explicitly identified nine LCAs with acreage that should be  
7 reduced for appurtenant rights because of a houselot or unirrigated land.

8 1. LCA 3335: pahale (houselot).

9 2. LCA 377: pahale (houselot).

10 3. LCA 3294-B:1:M:1: pahale (houselot).

11 4. LCA 2495:2&3: pahale (houselot).

12 5. LCA 3292: dryland taro; 54 loi, 26 dry loi, and a kula.

13 6. LCA 2503:2: 23 lo`i, 2 sweet potato kula, 2 hala trees, one housesite.

14 7. LCA 453:1: 93 patches and an unirrigated kula; 11 taro patches and a  
15 small kula.

16 8. LCA 3330: 9 loi and 4 kula.

17 9. LCA 3294-B:1:M:2: pahale (houselot).

18 k. In addition, of the 21 remaining LCAs that WCEIC claimed were cultivated  
19 entirely in kalo, 4 were described in the LCA documents as having part of the land in  
20 other than kalo lo`i.

21 1. LCA 3498: 4 mo`o, a portion are weed grown and a portion have taro.

22 2. LCA 2495:4: taro mo`o and kula.

23 3. LCA 406:1: house, taro in the patches and potato and sugar cane in the  
24 fields.

25 4. LCA 2434 (misabeled as 2435): land, houselot, and kula; 3 pō`alima  
26 in it.

27 1. Therefore, the portions of the LCAs that were in kalo irrigation at the time of the  
28 Māhele are as follows:

	<u>Acres</u>	<u>Kalo Irrigation</u>
29 1. LCA 3335	0.98	0.73 (0.98-.25)
30 2. LCA 3388	0.54	0.54
31		

1	3.	LCA 3294-B:2	0.56	0.56
2	4.	LCA 3488	3.67	3.67
3	5.	LCA 377	3.86	3.61 (3.86-.25)
4	6.	LCA 3498	1.55	0.775 (1.55/2)
5	7.	LCA 3294-B:1:M:1	0.53	0.28 (0.53-.25)
6	8.	LCA 2495:1	0.19	0.19
7	9.	LCA 2495:2&3	1.33	1.08 (1.33-.25)
8	10.	LCA 2495:4	1.06	0.53 (1.06/2)
9	11.	LCA 406:1	2.78	1.39 (2.78/2)
10	12.	LCA 3292	3.04	1.52 (3.04/2)
11	13.	LCA 453:2	1.04	1.04
12	14.	LCA 3275-E	0.14	0.14
13	15.	LCA 4461:1	2.48	2.48
14	16.	LCA 4461:2	1.29	1.29
15	17.	LCA 2436:1	0.23	0.23
16	18.	LCA 2436:3	0.17	0.17
17	19.	LCA 2502:1	0.35	0.35
18	20.	LCA 3225	14.92	14.92
19	21.	LCA 3237:	4.79	4.79
20	22.	LCA 2503:2	1.08	0.415 ([1.08-.25]/2)
21	23.	LCA 2436:2	2.40	2.40
22	24.	LCA 2533:1	3.40	3.40
23	25.	LCA 453:1	13.69	12.32 (90%)
24	26.	LCA 2434	3.06	1.405 ([3.06-.25]/2) (misabeled as
25		LCA 2435.)		
26	27.	LCA 3387	0.68	0.68
27	28.	LCA 3330	8.87	4.435 (8.87/2)
28	29.	LCA 3294-B:1:M:2	0.77	0.52 (0.77-.25)
29	30.	LCA 2502:3	0.17	0.17

1 m. Sixty-one (61) lots have some land derived from one or more of these LCAs,  
2 down from an initial ninety-three (93) lots because of the elimination of LCA 4452:9.<sup>47</sup>

3 n. The acreage qualifying for appurtenant rights for each of these 61 lots is  
4 calculated through the following steps:

5 1. The percent of the lot derived from the LCA is calculated by dividing the  
6 square feet of the LCA that is in the lot by the square feet of the LCA.

7 2. The acreage in the lot that has appurtenant rights is calculated by  
8 multiplying the acreage in the LCA qualifying for appurtenant rights by the  
9 percent of the lot derived from the LCA.

10 3. Note that the acreage of the LCA may be greater than the acreage used to  
11 calculate appurtenant rights, because of the presence ofouselots and/or  
12 unirrigated lands. Therefore, the acreage within each lot that has appurtenant  
13 rights may also be equal to or more than the acreage that is used to calculate  
14 appurtenant rights.

15 4. Examples:

16 a. Lot 10 contains 23,364 square feet of LCA 406:1's 121,078 square  
17 feet (2.78 acres), or 19 percent of the LCA. The LCA has appurtenant  
18 rights for 1.39 acres. Thus, Lot 10 has appurtenant rights for 0.264 acres  
19 (0.19x1.39).

20 i. Lot 10 is 2.504 acres, or 109,074 square feet. Thus 21  
21 percent (23,364/109,074), or 0.52 acres, of lot 10 has appurtenant  
22 rights for 0.264 acres.

23 b. Lot 11 contains 56,793 square feet of LCA 406:1's 121,078 square  
24 feet (2.78 acres), or 47 percent of the LCA. The LCA has appurtenant  
25 rights for 1.39 acres, so Lot 11 has appurtenant rights for 0.653 acres  
26 (0.47x1.39).

27 i. Lot 11 is 2.636 acres, or 114,824 square feet. Thus, 49  
28 percent (56,793/114,824), or 1.29 acres (0.49x2.636), of Lot 11 has  
29 appurtenant rights from LCA 406:1 for 0.653 acres.

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<sup>47</sup> LCA 4452:9 was 40.57 acres and claimed to be overlapping 31 lots, but it was later withdrawn, because it was described as house or lots in Honolulu and Lahaina, *supra*.



1 Lot 11 also contains 2,061 square feet of LCA 453:2's 45,145  
 2 square feet (1.04 acres), or 5 percent of the LCA. The LCA has  
 3 appurtenant rights for its entire 1.04 acres, so lot 11 has appurtenant rights  
 4 for 0.052 acres (0.05x1.04).

5 The total acreage to calculate appurtenant rights from the two  
 6 LCAs is 0.705 acres (0.653 + 0.052) of Lot 11's total acreage of 2.636  
 7 acres.

8 The total acreage with appurtenant rights is 1.342 acres (1.29 +  
 9 0.052), and the appurtenant right is calculated for 0.705 acre of the 1.342  
 10 acres.

11 o. Appurtenant rights for each of the 61 lots are calculated in Table 5, with the  
 12 results as follows:

13	Lot 10:	0.26 acres	Lot 107	0.61 acres	Lot 198	0.91 acres
14	Lot 11:	0.70 acres	Lot 108	0.56 acres		
15	Lot 29:	0.00 acres <sup>48</sup>	Lot 109	1.87 acres		
16	Lot 30:	0.92 acres	Lot 110	1.16 acres		
17	Lot 31:	1.31 acres	Lot 111	0.37 acres		
18	Lot 32	0.92 acres	Lot 112	0.00 acres		
19	Lot 37	0.74 acres	Lot 113	0.04 acres		
20	Lot 41	0.64 acres	Lot 114	0.62 acres		
21	Lot 42	1.61 acres	Lot 115	0.96 acres		
22	Lot 43	0.69 acres	Lot 116	1.34 acres		
23	Lot 44	1.30 acres	Lot117	0.40 acres		
24	Lot 46	0.51 acres	Lot 118	0.26 acres		
25	Lot 47	0.56 acres	Lot 119	1.25 acres		
26	Lot 49	0.10 acres	Lo 120	1.11 acres		
27	Lot 50	0.08 acres	Lot 121	0.58 acres		
28	Lot 51	0.21 acres	Lot 122	1.64 acres		
29	Lot 54	0.00 acres	Lot 123	1.10 acres		

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<sup>48</sup> No acreage means the lot contains less than 1% of an LCA. Lot 29 contains only 16 square feet of LCA 2436:2's 2.40 acres.

1	Lot 55	0.00 acres	Lot 124	1.12 acres
2	Lot 56	1.60 acres	Lot 125	0.75 acres
3	Lot 57	1.85 acres	Lot 170	1.79 acres
4	Lot 58	1.85 acres	Lot 171	1.04 acres
5	Lot 59	1.85 acres	Lot 172	0.65 acres
6	Lot 60	1.11 acres	Lot 184	0.01 acres
7	Lot 61	0.25 acres	Lot 185	1.14 acres
8	Lot 64	0.00 acres	Lot 186	0.00 acres
9	Lot 65	0.00 acres	Lot 187	0.00 acres
10	Lot 68	0.07 acres	Lot 190	0.86 acres
11	Lot 104	0.12 acres	Lot 193	0.01 acres
12	Lot 105	0.74 acres	Lot 196	0.00 acres
13	Lot 106	0.11 acres	Lot 197	0.43 acres

14 p. The total appurtenant rights acreage for the 61/207 lots in the subdivision is 43.79  
15 acres, compared to WCEIC’s claim for 55.09 acres (8,263,555 gpd, *supra*, divided by  
16 150,000 gad).

17 1. Note that 53 of the 184 homeowner lots (Lots 1-184) include some land  
18 derived from LCAs with appurtenant rights, but 6 essentially have no appurtenant  
19 rights because the portions are so small (lots, 29, 54, 55, 64, 65, 112), and 3 have  
20 claims to less than 0.1 acre of appurtenant rights (lots 68, 113, 184).

21 2. Note also that 3.65 acres are on lands that are not homeowner lots: a) 1.44  
22 appurtenant acres on the county park (lot 185), and 2.21 acres on miscellaneous  
23 pieces of land within the subdivision (lots 186, 187, 190, 193, 196, 197, and 198).

24 q. Practical alternatives. WCEIC commissioned a consultant’s report on alternative  
25 irrigation supplies for Wailuku Country Estates. Based on use prior to and after the filing  
26 of SWUPAs in 2009, it concluded that an alternative source should be able to supply up  
27 to 0.7 mgd during short-term periods of peak use and at least 0.3 mgd on a long-term  
28 average basis. Cost estimates were provided for identified alternatives that could be  
29 realistically implemented.

30 1. Onsite groundwater.

- 1 i. When the subdivision lands were purchased by the developer from  
2 WWC, it gave up the right to drill a well on the property.
- 3 ii. All of the subdivision is within the `Īao Aquifer Water  
4 Management System, which is already over-allocated, with MDWS  
5 having 11 wells with permitted use of 20.998 mgd.
- 6 2. Waikapū Aquifer System, with a sustainable yield of 3 mgd, has a number  
7 of wells developed with the intention to fully use the sustainable yield.
- 8 i. Waikapu Properties' three potable wells with a combined pump  
9 capacity that exceeds 3 mgd, and two other exploratory wells for non-  
10 potable irrigation use.
- 11 ii. Three completed wells with a combined pump capacity of 1.7 mgd  
12 and projected use between 0.4 mgd to 0.5 mgd to supply the Maalaea  
13 Plantation project by Spencer Homes Maui.
- 14 iii. Well construction and pump installation permits for two wells for  
15 A&B with a combined pumping capacity of 3 mgd.
- 16 iv. Pending use of these wells will exceed the aquifer's 3 mgd  
17 sustainable yield, and no landowner or developer in the aquifer system  
18 would give land and easements for another well that would adversely  
19 impact its ability to develop groundwater for its project. A transmission  
20 pipeline would have to cross land owned by others as well as across  
21 Wailuku River.
- 22 3. HC&S's Well No. 7 or any other HC&S wells in the Kahului Aquifer.
- 23 i. They are many miles away and transmission pipeline costs would  
24 be prohibitive even if easements could be obtained. With HC&S's closure  
25 and recharge from irrigation in question, it will take many years to  
26 determine the long-term viability of the aquifer as a source of supply. In  
27 view of these circumstances, A&B would not supply water from one of its  
28 existing wells or provide land for a new well.
- 29 4. The Waihe`e Aquifer System on the north side of the `Īao Aquifer is not a  
30 groundwater management area and has a sustainable yield of 4 mgd.

1 i. Current pumpage is about 4.3 mgd and had peaked at 6.0 mgd in  
2 May 2010. (See 2178/2179N—MDWS.) WCEIC would have to acquire  
3 land and/or easements for a well site and a six-mile long transmission  
4 pipe. Based on specific assumptions of the well’s elevation, location, and  
5 depth, the transmission pipeline’s size and locations, and the storage tank  
6 at the head of WCEIC’s distribution system, costs would be \$9.08 million,  
7 not including the costs of acquiring land and easements and whether such  
8 lands and easements could be acquired. Operating costs would be  
9 approximately \$1.75 per 1,000 gallons, compared to \$1.40 per 1,000  
10 gallons from WWC.

11 5. Potable water from MDWS, which provides 540 gpd for each lot. MDWS  
12 does not have adequate resources to provide for irrigation, which on average, is  
13 three times greater than the potable supply MDWS is providing.

14 6. Reclaimed wastewater. Maui County’s Wastewater Reclamation Division  
15 is actively pursuing the reuse of reclaimed wastewater from its Kihei and Lahaina  
16 plants, which produce R-1 quality wastewater which has few limitations on its  
17 reuse. However, both plants are far too distant to serve the subdivision. The  
18 nearest plant is in Kahului, which produces R-2 quality wastewater, which is not  
19 suitable for the subdivision due to setback requirements and other use limitations.  
20 The County also has no plans to convert to R-1, and even if it did, transmission  
21 costs would be prohibitive.

22 7. Desalination of onsite groundwater would require: a) a deep well to  
23 exclusively draw saline groundwater from beneath the ʻĪao basal groundwater  
24 lens at between 900 to 1100 feet below sea level and a salt-water pump capacity  
25 of 1.75 mgd; b) a reverse osmosis plant; c) deep wells to dispose of the  
26 hypersaline concentrate from the reverse osmosis process, located at least 1000  
27 feet away from the saltwater supply well and delivering the hypersaline  
28 concentrate between 1300 to 1500 feet below sea level, to avoid recirculation  
29 back to the saltwater supply well; and d) booster pumps at the plant, 6000 feet of  
30 8-inch transmission pipeline, and a 200,000 gallon steel tank at the head of the

1 irrigation delivery system. Costs are estimated at \$10.2 million, with operating  
2 costs estimated at \$12.05 per thousand gallons.

3 r. Lots with appurtenant rights are summarized in Table 5: Calculation of  
4 Appurtenant Rights Acreage for WCEIC Lots. Appurtenant rights are equivalent to 43.79  
5 acres, or 4.379 mgd (43.79 acres x 100,000 gad). As summarized, *supra*, 53 homeowner  
6 lots have appurtenant rights, but 6 lots contain acreage so small that the right is  
7 functionally non-existent, and 3 have appurtenant rights pertaining to less than 0.1 acre.  
8 3.35 acres of appurtenant rights, or 335,000 mgd, also pertain to 1.14 acres (114,000 gpd)  
9 of the 2.26-acre community park and 7 other none-homeowner lots.

10 s. Permits for the homeowner lots are summarized in Table 4: Summary of WCEIC  
11 Appurtenant Rights and Permits. Each lot is identified by acreage, existing- and new-use  
12 requests, appurtenant rights, and permitted amounts by Category (2 or 3). All uses are for  
13 agriculture, and amounts less than 2,600 gad are considered within the 2,500 gad  
14 recognized as reasonable uses for agricultural activities. Category 2 permits are issued for  
15 existing uses and new uses that fall within a lot's appurtenant rights, which total 307,440  
16 gpd. Category 3 permits are issued for new uses without appurtenant rights, which total  
17 372,560 gpd.

18 t. The permit for the common area is also summarized in Table 4 and explained as  
19 follows:

20 1. Existing use was 158,768 gpd for 32.5 acres, or 4,885 gad. This use was  
21 calculated after subtracting the metered homeowners' use from total deliveries  
22 from WWC:  $369,658 - 210,890 = 158,768$  gpd, or 43 percent of total use for 32.5  
23 acres, versus 57 percent of total use for 95.75 acres of homeowner's agricultural  
24 uses. This is clearly excessive and probably includes significant system losses, but  
25 there was no claim nor explanation for such losses.

26 2. Of the 32.5 acres of common area: 2.262 acres is for a community park  
27 (lot 185), 6.726 acres for Waihee Ditch (lot 186), 0.224 acres for access off Maika  
28 Place for owners/John Russell (lot 187), 0.758 acres for County of Maui Water  
29 Tank site (lot 188), and 23.028 acres for Roads and Shoulders (lot 189).

30 i. Thus, of the common areas, the only lots that require irrigation are  
31 the community park and roads and shoulders. From the photos, about one-

1 third of lot 189 is the road itself, leaving about 15 acres of shoulders. At a  
2 rate of 2,500 gad, the community park (2.262 acres) and shoulders (15  
3 acres) would require 43,155 gpd, versus the reported use of 158,658 gpd.

4 3. The alternative description of the common area was: 2.26 acres for  
5 a community park, 20 acres of roadside setbacks along six miles of roads (24-foot  
6 setback on the mauka side and 9.5-foot setback on the makai side), 9 acres of lot  
7 drainage swales (not including 3.1 acres in lots 52 to 62), and 1 acre of retention  
8 basins.

9 i. The “common area” by this description would be the acreage for  
10 which the irrigation company is responsible for maintaining, and not the  
11 common area described by the lot descriptions.

12 i. If the roadside setbacks and drainage swales require irrigation,  
13 along with the 2.262-acre community park, irrigation requirements for the  
14 common areas is for 31.262 acres, or 78,155 gpd (31.262 acres x 2,500  
15 gpd), which is in Category 2 as an existing use.

16 t. At this time, WCEIC has no practical alternative water sources. Future  
17 alternatives that are common to other applicants have been addressed in Section II.F.2.

18  
19 279. **SWUPAs 2215/2216N—Gary & Evelyn Brito** (FOF 400)

20 a. On April 23, 2009, the Britos filed existing- and new-use SWUPAs for TMK No.  
21 (2) 3-3-002:029 (“Parcel 29”). The Britos have lived on this land “forever. My wife’s  
22 family has lived on that property for over 100 years.”

23 b. Parcel 29 is 0.248 acre and is comprised of LCA 3387, confirmed by RP 6065, as  
24 well as a portion of a pō`alima:

25 1. LCA 3387 is described as 9 lo`i.

26 2. The award in which the pō`alima was located is not described, but is  
27 approximately one-quarter of Parcel 29.

28 c. The Commission had granted provisional recognition.

29 d. The Britos request appurtenant rights of 74,400 gpd, based on Reppun’s high  
30 estimate of 300,000 gad and 0.248 acres, and a permit for 15,196 gpd, of which 8,490  
31 gpd was the existing use.

1 e. Their existing use of 8,490 gpd consisted of 7,890 gpd of metered use for 0.022  
2 acre of lo`i and an estimated 600 gpd for their 0.197-acre yard and garden.

3 f. They wish to expand their lo`i to 0.037 acre. Due to the slope and shape of their  
4 lo`i and the way they are “terraced down,” along with their experience for many years,  
5 they believe their kalo require slightly more water than the standard water duty to avoid  
6 warmer temperatures in the bottom lo`i and therefore request 394,500 gad (versus  
7 Reppun’s high estimate of 300,000 gad), for a total of 14,596 gpd.

8 g. They also request 600 gpd for their 0.197-acre yard and garden. Although they  
9 have 3 houses, river water is used only for the yard. .

10 h. Appurtenant rights are recognized for three-quarters of the Britos’s 0.248 acres, or  
11 0.186 acres, or 18,600 gpd (0.186 acre x 100,000 gad).

12 i. The Britos are awarded an existing-use permit for 0.037 kalo lo`i of 7,400 gpd,  
13 based on the water requirement for lo`i instead of lo`i complexes (0.037 acre x 200,000  
14 gad), supra, COL 65. It should be noted that their present irrigation of 7,890 gpd for  
15 0.022 acre of kalo lo`i already equals 358,636 gad, which they contend is still inadequate  
16 and therefore requested 394,500 gad, or 14,596 gpd for their proposed 0.037 acres. In  
17 contrast, the water duty the Commission has adopted is 200,000 gad for individual lo`i  
18 and 150,000 gad for lo`i complexes, and even Reppun’s highest estimate is 300,000 gad.

19 j. The Britos’s permit for 7,400 gpd is in Category 1, as it is based on both  
20 traditional and customary and appurtenant rights.

21 k. The Britos are also recognized as having a domestic use of 600 gpd, which are  
22 exempt from the permit requirements.

23  
24 280. **SWUPA 2236—Valentine Haleakala** (FOF 401)

25 a. On April 23, 2009, Valentine Haleakala filed an existing-use SWUPA for TMK  
26 No. (2) 3-3-002:003, a 0.29 acre property for which he requested 600 gpd of the 9,690  
27 gpd of metered use provided by Wailuku Country Estate’s Irrigation Company to him  
28 and his two neighbors, his sister, Evelyn Brito and her husband Gary (SWUPAs  
29 2215/2216N), and Kenneth Mendoza (SWUPAs 2256/2257N).

30 b. Haleakala’s estimated use of 600 gpd, based on Maui County standard for a  
31 single-family home, was being used on 0.25 acre of his yard and domestic plants.

- 1 c. Haleakala had claimed appurtenant rights and had been provisionally approved.
- 2 d. Haleakala claimed that his land has been in his `ohana “since time immemorial,”
- 3 and had no indication that its appurtenant rights have been extinguished.
- 4 e. However, Haleakala claimed that his land was granted to Ka`awa by LCA 3488,
- 5 confirmed by R.P. 5289, but provisional approval referred to LCAs 3387 and 3294-B:1,
- 6 M:1, and that LCA 3387 was shared by the properties of Haleakala, the Britos, and
- 7 Mendoza. Gary Brito confirmed that all three properties were part of LCA 3387.
- 8 f. Haleakala did not submit written testimony and did not participate in the CCH.
- 9 g. No action is taken on Haleakala’s request for appurtenant rights.
- 10 h. His request for a permit of 600 gpd is denied. He may file for recognition of
- 11 domestic use of 600 gpd, which would be exempt from the permit requirements.
- 12

13 281. **SWUPAs 2256/2257N—Kenneth Mendoza** (FOF 402)

- 14 a. On April 23, 2009, Kenneth Mendoza filed existing- and new-use SWUPAs for
- 15 TMK No. (2) 3-2-002:025 (“Parcel 25”), for whom Gerald Mendoza was to testify.
- 16 b. The Commission had provisionally recognized appurtenant rights.
- 17 c. Although Gerald Mendoza submitted written testimony, he did not appear for the
- 18 CCH.
- 19 d. No action is taken on the appurtenant rights request.
- 20 e. No action is taken on the permit requests.
- 21

22 c. **‘Īao-Waikapū Ditch**

23

24 282. **SWUPAs 2178/2179N—Maui County Department of Water Supply** (FOF 403)

- 25 a. On April 3, 2009, Maui County Department of Water Supply (“MDWS”) filed
- 26 SWUPAs for 1.784 gpd of existing use and 1.416 gpd of proposed new use, for a total 3.2
- 27 mgd.
- 28 b. Water from Wailuku River is diverted by WWC into the ‘Īao-Waikapū Ditch and
- 29 delivered to MDWS’s ‘Īao Water Treatment Plant (“‘Īao WTP”), where it is treated and
- 30 distributed throughout the Central Maui System. The Central Maui System receives water
- 31 from a variety of sources, including the ‘Īao WTP and Kepaniwai Well, ‘Īao Tunnel,



1 Mokuhou Wells 1 and 3, Waiehu Heights Wells 1 and 2, Waihe`e Wells 1, 2 and 3, North  
2 Waihe`e Wells 1 and 2, Kanoa Wells 1 and 2, and Maui Lani Wells 5, 6, and 7.

3 1. The North Waihe`e Wells 1 and 2 and the Kanoa Wells 1 and 2 draw 4.00  
4 mgd from the Waihe`e Aquifer, the recommended limit by CWRM.

5 2. The Maui Lani Wells 1, 2, and 3 draw 2.00 mgd from the Kahului  
6 Aquifer, the recommended limit by CWRM.

7 3. The other sources have water-use permits from CWRM for the High-Level  
8 Diked or Basal `Īao Aquifer.

9 c. The Central Maui System is the largest water system in the County and serves the  
10 communities of Kuau, Paia, Sprecklesville, Kahului, Puunene, Kihei, Wailea, Makena,  
11 Waikapū, Wailuku, Waiehi, and Waihe`e as well as the Hawaiian Homelands at  
12 Paukukalo and Waiehu Kou.

13 d. The population served by the Central Maui System was approximately 101,525 as  
14 of 2015 and expected to grow by 24,464 through 2030 to approximately 125,789.

15 e. Currently, the Central Maui System's total peak available source is 25.696 mgd,  
16 with an average daily use of 20.5 mgd. By 2030, the growth of the population is projected  
17 to increase the demand between 7.7 mgd and 19.4 mgd, with a baseline of 13.6 mgd used  
18 for water-planning purposes. While the current peak available source of 25.696 mgd can  
19 meet the needs of the Central Maui population, MDWS will need to develop new sources  
20 of water to meet future needs.

21 f. Single- and multi-families represent the highest percentage of current and  
22 projected water use at 63-64 percent, with agriculture and private irrigation at only 2  
23 percent, and most of the remainder used by commercial (11-12 percent), hotels (8-9  
24 percent), government (9 percent), and industrial (4 percent).

25 g. Efficiency and conservation are increased by:

26 1. Supply side: increased staffing for leak detection and repair,  
27 preventative and predictive maintenance of the system, and back-up sources.

28 2. Demand side: water conservation pricing, low-flow fixture distribution,  
29 direct fixture retrofits, water auditing, regulations related to water conservation,  
30 and public education and outreach activities.

1                   3.     Watershed partnerships:       partnered with and provided funding for  
2                   seven watershed partnerships on Maui and Molokai to educate the public on water  
3                   use, as well as to ensure that upland watersheds are fully functioning.

4           h.     MDWS has commissioned studies to look at sources of water for the Central  
5           Maui System for both current and future demands, including an engineering and cost  
6           analysis report and the Maui County Water Use and Development Plan, Central DWS  
7           District Plan Update:

8                   1.     Northward basal groundwater development, adding new wells in the north  
9                   side of the Waihe`e Aquifer and in the Kahakuloa Aquifer, adding sixteen wells,  
10                  plus transmission pipelines, storage tanks, and booster pump stations:

11                   i.     the sustainable yield is 4 mgd, which MDWS currently pumps and  
12                   which CWRM has asked MDWS to limit further withdrawals.

13                   ii.    USGS has indicated that new wells in the northern portion of the  
14                   Waihe`e and Kahakuloa Aquifers may not be as productive or cost-  
15                   effective as hoped.

16                  2.     Eastward basal groundwater development, with a series of wells at  
17                  elevation 1000 feet, transmission pipelines, storage tanks, and booster pump  
18                  stations:

19                   i.     Estimated life cycle costs would be \$604 million.<sup>49</sup>

20                   ii.    MDWS’s ability to utilize this option is restricted by a Consent  
21                  Decree which was recently used to prevent MDWS from even developing test  
22                  wells.

23                  3.     Desalination of brackish groundwater, developing a 5 mgd reverse  
24                  osmosis desalination facility in the Kahului aquifer and operational costs  
25                  associated with the high intensity energy needs of the desalination process.

26                   i.     The Īao WTP that treats water from the Īao-Waikapū Ditch is  
27                   located at an elevation that allows the membrane filtration system to be  
28                   pressurized without pumping. Electricity costs to pressurize membrane

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<sup>49</sup> Life cycle costs incorporate capital, operating, and maintenance costs over a defined planning period, including inflationary costs. It allows evaluation of different alternatives on an equal basis. It is expressed as the net present value (NPV) of all costs incurred during the planning period or the amount of money that would need to be set aside today at a defined interest (discount) rate to fund the project or strategy. (Exh. 2178-County-11, p. 11.)

1 processes are typically significant if the water must be pumped, but at the  
2 Īao WTP, the membranes are pressurized by gravity. In contrast, for  
3 desalination, brackish groundwater must be pumped up to the treatment  
4 plant, reverse osmosis would remove salt and other minerals to create  
5 potable water, and the residual brine liquid must be disposed via deep  
6 injection wells into salt water below the source of brackish groundwater.

7 ii. Dependence on imported energy and uncertainty associated with  
8 future energy prices adds a significant implementation risk.

9 iii. Estimated life cycle costs of \$598 million.

10 iv. This option, which would use brackish water from the Kahului  
11 aquifer, does not address the current withdrawal of 2.00 mgd of potable  
12 water from the aquifer, and how the potability of that water might be  
13 affected by withdrawing an additional 5 mgd of brackish water.

14 4. Maximization of recycled wastewater and conservation.

15 i. The amount of water that could be replaced by treated water is  
16 limited, with an estimated maximum of 0.601 mgd and average annual  
17 demand of 0.38 mgd from the Wailuku-Kahului WTP.

18 2. It would require significant capital expenses, including the  
19 expansion of existing WTPs, construction of storage tanks, and extended  
20 transmission lines. Costs would be \$37.60 million, with \$5.37 million to  
21 upgrade the WTP from R-2 to R-1, \$25.94 million to deliver 0.191 mgd to  
22 the Maui Lani area, \$4.29 million to deliver 0.225 mgd to Kahului Airport  
23 and Kanaha Beach Park, and \$2.00 million to deliver 0.185 mgd to  
24 distribute from Queen Kahamanu Center to existing HC&S pipelines  
25 formerly used for pineapple cannery wastewater to what was HC&S's seed  
26 cane fields, Maui High School, Kahului Community College and Park,  
27 Kahului Elementary, and Hale Mahaolu.

28 3. This assessment is limited to current users of MDWS's potable  
29 water system. For example, most of the large users in the Maui Lani area  
30 currently use brackish groundwater for irrigation, so only 0.191 mgd is  
31 projected to replace potable water at a cost of \$25.94 million.

1                   4.       The total production of the Wailuku-Kahului WTP is 4 mgd, of  
2                   which only 0.2 mgd is currently used. So the projected estimated  
3                   maximum of 0.601 mgd and average annual demand of 0.38 mgd reflects  
4                   current use of potable water that might be replaced by recycled water and  
5                   not the water that is available.

6                   i.       USGS had also previously indicated that the Waikapū Aquifer may be a possible  
7                   source of new water, but the sustainable yield is only 2 mgd, and MDWS expected  
8                   competition from private landowners for the available water. Waikapu Properties have  
9                   five (5) wells, three shown to be potable and two in final testing for potability at the time  
10                  of the CCH.

11                 j.       MDWS did not claim appurtenant rights nor participate in the provisional  
12                  approval process.

13                 k.       MDWS is issued a Category 1 permit for 3.2 mgd: 1.784 gpd for existing use and  
14                  1.416 gpd for new use. Nearly two-thirds of MDWS’s customers are single- or multi-  
15                  family households, or “domestic uses of the general public,” one of the purposes of the  
16                  water resources trust. Therefore, as with permit applicants with native Hawaiian  
17                  traditional and customary rights, MDWS’s permit falls within Category 1.

18                 l.       None of the other possible sources of potable water are alternatives to surface  
19                  water from Wailuku River but are additional sources to meet MDWS’s future demands.  
20                  Even if recycled water from the Wailuku-Kahului WTP could eventually replace a  
21                  estimated maximum of 0.601 mgd of current potable water use, there will still remain  
22                  over 3 mgd of the WTP’s output of 4 mgd to be available to other, non-MDWS users if  
23                  the logistics, costs, and apportionment of costs and water among users can be be  
24                  resolved.

25  
26   283.   **SWUPA 2339—Roger Yamaoka and Kevin Yamaoka (FOF 404)**

27                 a.       On April 30, 2009, Roger Yamaoka and Kevin Yamaoka filed an existing-use  
28                  SWUPA for TMKs No. (2) 3-5-004:038 (“Parcel 38”) and No. (2) 3-5-004:039 (“Parcel  
29                  39”), for 1,950 gpd on 0.89 acre of apple bananas and 0.46 acre of vegetables and fruits.

1 b. Parcel 38 is 1.78 acres, on which they grow the 0.89 acre of apple bananas and  
2 0.30 acre of the vegetables and fruits, and Parcel 39 is 0.628 acre, on which they grow the  
3 remaining 0.16 acre of vegetables and fruits.

4 c. Parcel 38 is owned by the Yamaokas' two sisters, and Parcel 39 is owned by  
5 Roger and Kevin.

6 d. Their grandparents bought the land in the 1930's, their deed is all in Hawaiian,  
7 and their dad said that the water rights were reserved. Roger Yamaoka does not know  
8 anything else about the reservation, except that it was sometime in the past.

9 e. The Yamaokas claimed appurtenant rights in their SWUPA but did not participate  
10 in the provisional approval process and were denied without prejudice.

11 f. The Yamaokas have started 10,000 square feet of "wet taro," but still only request  
12 the 1,950 gpd they originally requested, because "we don't let the water just continue to  
13 run. We use what we need, and, you know, during the winter months of course with rain,  
14 we don't have to access water if that's the case. So we're not here to be greedy in any  
15 way, we just want to sustain our agricultural use."

16 g. The Yamaokas are issued a Category 2 existing-use permit for 1,950 gpd on  
17 Parcels 38 and 39. The Commission notes that 1,950 gpd is within the domestic  
18 agriculture standard of 3,000 gad. The Commission is issuing a permit instead of  
19 exempting their use from the permit requirements, because total acreage is just above the  
20 maximum of 1.0 acre that the Commission has determined to qualify as domestic use.  
21 The Commission could also have exempted Parcel 39's 0.16 acre garden from the permit  
22 requirements.

23  
24 284. **SWUPA 2188—Leslie Vida, Jr. (FOF 405)**

25 a. On April 9, 2009, Leslie Vida, Jr. filed existing-use SWUPA for TMK No. (2) 3-  
26 5-004:091 ("Parcel 91").

27 b. Parcel 91 is 0.36 acre and a portion of LCA 76 to William Shaw, confirmed by  
28 RP 7694, a 10.34-acre farm.

29 c. Today, Shaw's descendants, including the Vida `ohana, reside on separate parcels  
30 following subdivision. In addition to Leslie Vida, Jr., others filing SWUPAs are his sister  
31 Donna Vida (SWUPAs 2292 & 2293), and his aunt and uncle, Claire and Robert Pinto

1 (SWUPA 2303).

2 d. Waikapū Stream was historically the source for their `āina and surrounding  
3 kuleanas, but changes by Wailuku Sugar Company and Wailuku Water Company has  
4 resulted in Wailuku Water Company delivering water from Wailuku River via the `Īao-  
5 Waikapū Ditch system.

6 e. The records supporting LCA 76 describe the kuleana as a “farm” and refer to lo`i  
7 kalo terracing down along to Pilipili, a house, and a stone wall. The records include a  
8 survey and a map of the 3.43-acre portion near the stream name Haaua, and the “water  
9 run” that brought water to this kuleana.

10 f. Given these descriptions and the lo`i terracing that still exists, the Vida `ohana  
11 estimated that the majority of the 10.34 acres, including all of their parcels, was  
12 cultivated in lo`i kalo at the time of the Māhele.

13 g. The Commission had provisionally approved appurtenant rights for LCA 76.

14 h. Because Vida concluded that his parcel was in the majority of LCA 76 that was  
15 cultivated in lo`i kalo at the time of the Māhele, he requested appurtenant rights for his  
16 entire parcel, or 108,000 gpd, applying Reppun’s high estimate of 300,000 gad for kalo  
17 lo`i to his entire 0.36 acres.

18 i. The map included in Vida’s documents show the stone wall to split the 10.34  
19 acres roughly 60:40. This, along with the 3.43-acre portion near the stream, would mean  
20 that the most reasonable interpretation is LCA 76, described as a farm with kalo lo`i, a  
21 house and a stone wall, was 40% in kalo lo`i, with 60% in farm and a house. Thus,  
22 appurtenant rights to LCA 76 attached to 40% of 10.34 acres.

23 j. Therefore, L. Vida’s 0.36 acres has appurtenant rights to 0.144 acres (0.36 acres x  
24 0.4), or 14,400 gpd (0.144 acres x 100,000 gad).

25 k. Vida requested a permit for 11,725 gpd:

26 1. 0.0365 acre of kalo lo`i: existing use on 0.025 acre, with estimated use of  
27 7,500 gpd, which he intends to increase by 0.0115 acre, with an estimated use of  
28 3,450 gpd, all based on Reppun’s high estimate of 300,000 gad for lo`i kalo.

29 2. 0.31 acre of crops and medicinal plants, estimated at 775 gpd, using  
30 *Waiāhole*’s diversified agriculture rate of 2,500 gad.

1 l. Vida is issued a permit for 5,475 gpd (0.0365 acre x 150,000 gad), which is in  
2 Category 1, because he has traditional and customary rights, and the amount is also  
3 within his appurtenant rights of 14,400 gpd.

4 m. Vida is also recognized as having domestic use on 0.31 acres of crops and  
5 medicinal plants of 930 gpd, which is exempt from the permit requirements.

6  
7 285. **SWUPAs 2292 & 2293—Donna Vida** (FOF 406)

8 a. On April 29, 2009, Leslie Vida, Sr. filed existing-use SWUPAs for TMKs No. (2)  
9 3-5-004:045 (“Parcel 45”) and No. (2) 3-5-004:056 (“Parcel 56”). Donna Vida inherited  
10 Parcel 56 from her father, Leslie Vida, Sr., after he passed away. Parcel 45 is the family  
11 cemetery.

12 b. Parcel 56 is 0.9 acre and Parcel 45 is 0.07 acres, and both derive from LCA 76 to  
13 William Shaw, confirmed by RP 7694, from which SWUPAs for her brother, Leslie Vida  
14 (SWUPA 2188), and her aunt and uncle, Claire and Robert Pinto (SWUPA 2303), are  
15 also derived. Today, Shaw’s descendants, including the Vida `ohana, reside on separate  
16 parcels following subdivision of LCA 76.

17 c. Waikapū Stream was historically the source for their `āina and surrounding  
18 kuleanas, but changes by Wailuku Sugar Company and Wailuku Water Company has  
19 resulted in Wailuku Water Company delivering water from Wailuku River via the `Īao-  
20 Waikapū Ditch system.

21 d. As discussed in SWUPA 2188—Leslie Vida, Jr., the records supporting LCA 76  
22 describe the kuleana as a “farm” and refer to lo`i kalo terracing down along to Pilipili, a  
23 house, and a stone wall. The records include a survey and a map of the 3.43-acre portion  
24 near the stream name Haaua, and the “water run” that brought water to this kuleana.

25 e. Given these descriptions and the lo`i terracing that still exists, the Vida `ohana  
26 estimated that the majority of the 10.34 acres, including all of their parcels, was  
27 cultivated in lo`i kalo at the time of the Māhele.

28 f. The Commission had provisionally approved appurtenant rights for LCA 76.

29 g. Because Donna Vida concluded that her parcels were in the majority of LCA 76  
30 that was cultivated in lo`i kalo at the time of the Māhele, she requested appurtenant rights  
31 for the entirety of both parcels. However, while she applied Reppun’s high estimate of

1 300,000 gad for kalo lo`i to all of Parcel 56's 0.9 acres, she used Maui County standard  
2 for single-family homes of 600 gpd to estimate the use on Parcel 45's 0.07 acres,  
3 resulting in a request for appurtenant rights of 270,600 gpd.

4 h. The map included in Vida's documents show the stone wall to split the 10.34  
5 acres roughly 60:40. This, along with the 3.43-acre portion near the stream, would mean  
6 that the most reasonable interpretation is LCA 76, described as a farm with kalo lo`i, a  
7 house and a stone wall, was 40% in kalo lo`i, with 60% in farm and a house. Thus,  
8 appurtenant rights to LCA 76 attached to 40% of 10.34 acres.

9 i. D. Vida's appurtenant rights attach to 40% of Parcel 56's 0.9 acres and Parcel  
10 45's 0.07 acres, or 0.36 acres and 0.03 acres, respectively, for a total of 0.39 acres.

11 j. D. Vida's appurtenant rights are:

12 1. Parcel 56: 36,000 gpd (0.36 acre x 100,000 gad).

13 2. Parcel 45: 3,000 gpd (0.03 acre x 100,000 gad).

14 k. Donna Vida also has traditional and customary rights on her property.

15 l. She requests existing-use permits of 175 gpd for Parcel 45's 0.07 acre and 2,225  
16 gpd for Parcel 56's 0.9 acres, using *Waiāhole's* diversified agriculture duty of 2,500 gad  
17 as follows:

18 1. 175 gpd for Parcel 45's 0.07 acres for watering of grass.

19 2. 0.89 acre of Parcel 56's 0.9 acre for landscaping, fruit and medicinal trees  
20 and plants, and livestock.

21 l. Both of the parcels are exempt from the permit requirements:

22 1. Parcel 56 is recognized as using 2,670 gpd for domestic use (0.89 acre x  
23 3000 gad).

24 2. Parcel 45 is recognized as using 210 gpd for watering the cemetery's  
25 grass. While strictly not a "domestic use," the amount is minimal and well below  
26 the usual minimum domestic use of 600 gpd.

27  
28 286. **SWUPA 2303—Claire Pinto** (FOF 407)

29 a. On April 9, 2009, Robert and Claire Pinto filed an existing-use SWUPA for  
30 TMKs No. (2) 3-5-004:041 ("Parcel 41") and No. (2) 3-5-004:051 ("Parcel 51"). Robert  
31 Pinto has since passed away.



- 1 b. Parcel 41 is 0.48 acre and Parcel 51 is 0.66 acres, and both derive from LCA 76 to  
2 William Shaw, confirmed by RP 7694, from which SWUPAs for Leslie Vida (SWUPA  
3 2188) and Donna Vida (SWUPAs 2292 and 2293), are also derived.
- 4 c. Today, Shaw’s descendants, including the Vida `ohana, reside on separate parcels  
5 following subdivision of LCA 76.
- 6 d. Waikapū Stream was historically the source for their `āina and surrounding  
7 kuleanas, but changes by Wailuku Sugar Company and Wailuku Water Company has  
8 resulted in Wailuku Water Company delivering water from Wailuku River via the `Īao-  
9 Waikapū Ditch system.
- 10 e. As discussed in SWUPA 2188—Leslie Vida, Jr., the records supporting LCA 76  
11 describe the kuleana as a “farm” and refer to lo`i kalo terracing down along to Pilipili, a  
12 house, and a stone wall. The records include a survey and a map of the 3.43-acre portion  
13 near the stream name Haaua, and the “water run” that brought water to this kuleana.
- 14 f. Given these descriptions and the lo`i terracing that still exists, the Vida `ohana  
15 estimated that the majority of the 10.34 acres, including all of their parcels, was  
16 cultivated in lo`i kalo at the time of the Māhele.
- 17 g. The Commission had provisionally approved appurtenant rights for LCA 76.
- 18 h. Because Claire Pinto concluded that her parcels were in the majority of LCA 76  
19 that was cultivated in lo`i kalo at the time of the Māhele, she requested appurtenant rights  
20 for the entirety of both parcels, or 342,000 gpd (1.14 acres x Reppun’s high estimate of  
21 300,000 gad for kalo lo`i).
- 22 i. The map included in Vida’s documents show the stone wall to split the 10.34  
23 acres roughly 60:40. This, along with the 3.43-acre portion near the stream, would mean  
24 that the most reasonable interpretation is LCA 76, described as a farm with kalo lo`i, a  
25 house and a stone wall, was 40% in kalo lo`i, with 60% in farm and a house. Thus,  
26 appurtenant rights to LCA 76 attached to 40% of 10.34 acres.
- 27 j. Pinto has appurtenant rights to 40% of her 1.14 acres, or 45,600 gpd (0.456 acre x  
28 100,000 gad).
- 29 k. Pinto also has traditional and customary rights on her property.

1 l. Pinto also requested a permit for 2,750 gpd for 1.1 acres, applying *Waiāhole's*  
2 diversified agriculture duty of 2,500 gad, for domestic uses such as washing, landscaping,  
3 and watering fruit trees, Native Hawaiian/medicinal plants, and for animals.

4 m. Pinto is issued a permit for 3,300 gpd (1.1 acres x 3,000 gad) instead of being  
5 exempt as a domestic use, because it is for more than 1 acre. The permit is in Category 1,  
6 under both appurtenant and traditional and customary rights.

7  
8 287. **SWUPAs 2350/2546N—Towne Realty/Wailuku Kuakahi, LLC** (FOF 408)

9 a. On April 30, 2009, Towne Realty of Hawaii, Inc./Wailuku Kuakahi, LLC filed an  
10 existing-use SWUPA for TMK No. (2) 3-5-002:003 (“Parcel 3”) and on December 9,  
11 2009, filed a new-use SWUPA for the same Parcel 3 of 150 acres.

12 b. The existing-use SWUPA requested 21,301 gpd of metered use for 0.75 acre of  
13 fruit and vegetable crops, and the new-use SWUPA requested an estimated 675,000 gpd  
14 for 20 acres of fruit and vegetable crops and 113 acres of pasture for goats, cows, and  
15 other animals.

16 c. No appurtenant rights were claimed, and the applicant did not participate in the  
17 provisional approval process.

18 d. No written testimony was submitted nor did the applicant participate in the CCH.

19 e. Both the existing- and new-use SWUPAs are denied. Applicant may file for a new  
20 use at any time

21  
22 288. **SWUPA 2345—Stanford Carr Development, LLC** (FOF 409)

23 a. On April 30, 2009, Stanford Carr Development, LLC filed an existing-use  
24 SWUPA for TMK No. (2) 3-5-001:067 for 63,902 gpd of metered use for dust control on  
25 200 acres.

26 b. The applicant did not claim appurtenant rights nor participate in the provisional  
27 approval process

28 c. The applicant did not submit written testimony nor participate in the CCH.

29 d. The existing-use SWUPA is denied, and the applicant may file for a new-use.

30  
31 289. **SWUPAs 2349/2495N—Endurance Ii Wai Hui** (FOF 410)

1 a. On April 30, 2009, Endurance Investors, LLC and Association of Ii Wai Hui, LP,  
2 filed existing- and new-use SWUPAs for TMK No. (2) 3-5-002:002 (“Parcel 2”),  
3 requesting 357 gpd of metered existing use on 2 acres of their 50-acre property for “feed  
4 & forage” and 260,000 gpd of new use on 60.08 acres of the same property.

5 b. The 260,000 gpd on 60.08 acres was for 49.08 acres of “Agrili” and 11 acres of  
6 “Agron.” The proposed water duty was 5,000 gad, but 7-8 acres were to be for other than  
7 agriculture use but necessary for the operation of the agriculture activity, so the net  
8 request was for 260,000 gpd and not 300,000 gpd.

9 c. No other documents were filed, including any explanation of the discrepancy  
10 between 50 acres in SWUPA 2349 and 60.08 acres in SWUPA 2495N for the same  
11 TMK. No appurtenant rights were claimed, and the applicant did not participate in the  
12 provisional approval process.

13 d. The applicant did not participate in the CCH.

14 e. Both applications are denied, and the applicant may re-apply under new-use  
15 SWUPAs.

16  
17 290. **SWUPA 2164—Waiolani Mauka Community Association** (FOF 411)

18 a. On April 22, 2009, Waiolani Mauka Community Association filed an existing-use  
19 SWUPA for TMKs No. (2) 3-5-032:106 and No. (2) 3-5-032:various for 2 acres of turf  
20 grass and 0.5 acre of landscape for common areas. (SWUPA 2164, p. 2, table 1, p. 4,  
21 table 3.)

22 b. The applicant did not claim appurtenant rights nor participate in the provisional  
23 approval process. (Provisional Order, Exhibits, p. 84, Exh. 7.)

24 c. The applicant did not submit written testimony nor participate in the CCH.

25 d. The existing-use SWUPA is denied and the applicant may file a new-use  
26 SWUPA.

27  
28 291. **SWUPA 2200N—Emmanuel Lutheran Church & School** (FOF 412)

29 a. On April 23, 2009, Emmanuel Lutheran Church & School filed a new-use  
30 SWUPA for TMK No. (2) 3-5-002:011 for 25.263 acres, on which it planned to irrigate  
31 30,000 gpd on 20+ acres of landscape and playing fields.

- 1 b. The applicant did not claim appurtenant rights nor participate in the provisional  
2 approval process.
- 3 c. The applicant did not submit written testimony nor participate in the CCH.
- 4 d. The new-use SWUPA is denied.

5

6 292. **SWUPA 2183—Kihei Garden & Landscaping Company, LLP** (FOF 413)

7 a. On April 15, 2009, Kihei Garden & Landscaping Company, LLP filed an  
8 existing-use SWUPA for TMK No. (2) 3-5-02:017 (“Parcel 17”), a 24.982-acre property,  
9 which Kihei Garden has occupied since 1988 under a lease agreement and which it  
10 bought in 2005.

11 b. Kihei Garden has an average of 60 full-time employees and an annual payroll of  
12 \$2.5 to \$3 million, and its activities are consistent with both State and County uses on  
13 agricultural zoned land and is consistent with County community plans.

14 c. Kihei Garden requests 33,261 gpd of metered use on 15 acres of various  
15 landscape plants, both in the ground and on nursery benches, for propagation of plant  
16 starts such as shrubs, groundcovers and trees.

17 d. In 2008, during testimony in the previous round of this contested case, Kihei  
18 Garden had projected that its usage was going to decrease over time as more and more  
19 native plants and less water-consuming plants were being use. But John Okamura, the  
20 managing partner, has not found this to be the case. Native plants are not using water in  
21 the amount that had been projected, and more ornamentals, which use more water, are  
22 still being used for the tourist industry, primarily, hotels.

23 e. Kihei Garden did not claim appurtenant rights nor participate in the provisional  
24 approval process.

25 f. Kihei Garden obtains its water from WWC.

26 Alternative sources:

27 1. MDWS has said it can only supply a single, three-quarter inch water  
28 meter, which is not large enough to support their current nursery operation.

29 2. Reclaimed water was considered but because no pipeline exists from the  
30 Kahului treatment plant to anywhere close to its location, Kihei Garden would  
31 have to install a transmission pipeline from existing plants or pipes to its property.

1 The cost of running that pipeline would be several million dollars, which is not  
2 economically feasible for Kihei Garden. In addition, obtaining all the necessary  
3 easements over the land between the existing plant and its land would be nearly  
4 impossible.

5 3. As for drilling a well, its property deed reserved the ground water to the  
6 seller, and even if it could drill a well, the property is above the `Īao aquifer, and  
7 obtain a permit would not be possible.

8 g. Kihei Garden's existing use of 33,261 gpd over 15 acres of nursery plants is  
9 equivalent to 2,217 gad, within the reasonable use for diversified agriculture of 3,000  
10 gad.

11 h. Kihei Garden is issued a Category 2 existing-use permit for 33,261 gpd.

12  
13 293. **Waikapu Ranch Applicants**

14 The following six applicants are owners of 6 of the 8 lots in the Waikapu Ranch  
15 subdivision and have applied for recognition of appurtenant rights and new-use permits.  
16 Waikapu Ranch had filed an existing-use SWUPA but was instructed by the Commission to file  
17 a new-use SWUPA after the existing-use SWUPA was found to be incomplete and not accepted.  
18 Subsequently, the 6 owners filed individual new-use SWUPAs and claims for appurtenant rights.

19  
20 294. **SWUPA 3671N—Kurt & Betsy Sloan** (FOF 415)

21 a. On October 9, 2012, the Sloans filed a new-use SWUPA for TMK No. (2) 3-5-  
22 004:111 ("lot 5"), a 5.511-acre parcel, for which they requested 25,600 gpd on 4 acres of  
23 fruit orchard.

24 b. On July 5, 2016, Sloan filed an amended new-use SWUPA, changing his request  
25 to 65,000 gpm (2,167 gpd) for the same 4 acres of fruit orchard.

26 c. The Sloans bought the property in April 2008, when it was pretty much a cane  
27 field. When the property closed, they started planting what are now approximately 500  
28 trees, which now provides income to pay their mortgage.

29 d. Sloan states that his request is for about 2,000 gpd, but his current use is 1,000  
30 gpd for his 9-year-old trees. However, "2,000 gallons per day is really small," "real

1 conservative for our farm,” is based on “best uses,” and figures that “maybe right now is  
2 using about a third of what it will when they’re full grown.”

3 e. Although the Sloans claimed appurtenant rights in their SWUPAs, they did not  
4 participate in the provisional approval process. Kurt Sloan states that he filed the  
5 SWUPA in 2012 because Avery Chumbley told him that they stood a chance of losing  
6 their water and helped him get started on the paperwork.

7 f. The deed to Lot 5 contains a reservation of water rights made in May 2004.

8 g. In his February 29, 2016 written testimony, Sloan requested recognition of  
9 appurtenant rights for 2,167 gpd, the same amount as for his amended new-use SWUPA  
10 request of 2,167 gpd.

11 h. Lot 5 is derived from all of LCA 2203, confirmed by RP 3131, and portions of  
12 LCA 8875, confirmed by RP 5926, and LCA 3702, confirmed by RP 6338, and other  
13 LCAs within the subdivision that were not documented.

14 i. LCA 2203 was 0.97 acres and referred to as “taro lands” and a “section of loi.”  
15 All 0.97 acre is part of Lot 5.

16 j. LCA 8875 was 0.96 acres, and referred to as house lot and four taro lo`i.  
17 Approximately 90 percent (0.864 acre) is part of Lot 5.

18 k. LCA 3702 was 2.21 acres, and described as taro, dryland, and a house lot and that  
19 there was a pō`alima in it. Approximately 25 percent (0.5525 acres) is part of Lot 5.

20 l. Of LCA 2203’s 0.97 acre, all 0.97 acre is presumed to have been in kalo lo`i,  
21 *supra*, FOF 163.

22 m. Of LCA 8875’s 0.96 acres, the house lot is presumed to have been 0.25 acre, with  
23 the remainder of 0.71 acre presumed to be in kalo lo`i, *supra*, FOF 162. Therefore, the  
24 house lot was 26 percent and kalo lo`i was 74 percent. 74 percent of Lot 5’s share of  
25 0.864 acre is 0.639 acre.

26 n. Of LCA 3702’s 2.21 acres, the house lot is presumed to have been 0.25 acre, and  
27 the remaining 1.96 acre equally divided into dryland and taro, or 0.98 acre in kalo lo`i,  
28 *supra*, FOF 162, 168. 0.98 acre of kalo lo`i out of 2.21 acres is 44 percent, and 44 percent  
29 of Lot 5’s share of 0.553 acre is 0.243 acre.

30 o. Therefore, of Lot 5’s 5.511 acres, appurtenant rights would attach to 1.852 acres  
31  $(0.97 + 0.639 + 0.243 = 1.852)$ .

1 p. Lot 5's appurtenant rights are not extinguished by the reservation made in 2004,  
2 because the constitutional amendment of November 8, 1978 preserved appurtenant rights.

3 q. Lot 5 has appurtenant rights of 185,200 gpd (1.852 acres x 100,000 gad).

4 r. The Sloans are granted a new-use permit for 2,167 gpd for their 4-acre fruit  
5 orchard, which is a Category 2 permit, because it all falls within their appurtenant rights.

6  
7 295. **SWUPA 3665N—Ken & Saedene Ota** (FOF 416)

8 a. On September 27, 2012, the Otas filed a new-use SWUPA for TMK No. (2) 3-5-  
9 004:109 ("lot 3"), a 5.2-acre property for which they requested 25,600 gpd for 4 acres of  
10 Hawaiian landscape tree nursery.

11 b. On July 5, 2016, Ota filed an amended new-use SWUPA, changing his request to  
12 5,667 gpd for the same 4 acres and same use.

13 c. The Otas bought the property in April 2008, which was all grass. About 75  
14 percent of his planned four acres, or three acres, are currently planted with landscape and  
15 fruit trees. He uses about 1,100 gad, for a total of about 3,300 gpd for the currently  
16 planted acres and is requesting a little over 5,000 gpd.

17 d. Although the Otas claimed appurtenant rights in their SWUPAs, they did not  
18 participate in the provisional approval process and submitted documentation on February  
19 29, 2016.

20 e. The deed to Lot 3 contains a reservation of water rights made in May 2004.

21 f. In his February 29, 2016 written testimony, Ota requested recognition of  
22 appurtenant rights for 5,667 gpd, the same amount as for his amended new-use SWUPA  
23 request of 5,667 gpd.

24 g. In his written testimony, Ota stated that Lot 3 was comprised of a portion of  
25 multiple LCAs that made up the eight-lot subdivision, but the property description stated  
26 that Lot 3 derives from only one of the LCAs, "a portion of Grant 2007, Apana 3 to John  
27 Richardson."

28 h. Ota stated that Grant 2007 includes a description of an irrigated patch, but the  
29 reference to an irrigated patch was to `āpana 2 and not to `āpana 3.

30 i. Ota was unable to identify any evidence he submitted that established water use  
31 on Lot 3 at the time of the Māhele.

1 j. The request for appurtenant rights recognition is denied. The Otas may refile at  
2 any time.

3 k. The Otas are issued a Category 3 new-use permit for 5,667 gpd, or 1,417 gad for  
4 4 acres of a tree nursery.

5  
6 296. **SWUPA 4442N—Gerald Lau Hee** (FOF 417)

7 a. On February 29, 2016, Gerald Lau Hee filed testimony in support of a new-use  
8 SWUPA that he would be filing. On July 5, 2016, Gerald Lau Hee filed a new-use  
9 SWUPA for TMK No. (2) 3-5-004:023 (“Lot 1”), a 5.973-acre property, for 1,667 gpd on  
10 a proposed 4 acres of fruit trees.

11 b. The Hees bought the property in 2015 and intend to build a home on it. There are  
12 plans for a main house, a cottage, and a barn. Since they bought the property they have  
13 fenced the perimeter of the lot and planted some bananas and citrus and will have 4 acres  
14 of fruit and nut trees and do not intend on selling anything

15 c. The deed to the property has a reservation of water rights dated May 2004.

16 d. Hee claimed appurtenant rights in his SWUPA of July 5, 2016 and requested  
17 1,667 gpd in appurtenant rights, the same amount of his permit request, and provided  
18 documentation in his written testimony of February 29, 2016.

19 e. In his written testimony, Lau Hee claimed that Lot 1 was comprised of multiple  
20 LCAs that made up the eight-lot subdivision, but the property description only identifies  
21 Grant 2007, apana 3; Grant 1714, apana 2; LCA 8672, apana 1, confirmed by RP 6483;  
22 and LCA 2225, confirmed by RP 3116.

23 f. The description of an irrigated patch ascribed to Grant 2007, apana 3, was to  
24 `āpana 2 and not to `āpana 3.

25 g. Lau Hee did not submit any evidence of water use on Grant 1714, apana 2 at the  
26 time of the Māhele.

27 h. Nor did Lau Hee submit any evidence of water use on LCA 8672, apana 1.

28 i. As for LCA 2225, if any is in Lot 1, it might be a few square feet.

29 j. There is no evidence of water use on Lot 1 at the time of the Māhele, so  
30 recognition of appurtenant rights is denied. The Lau Hees may resubmit additional  
31 documents at any time.



1 k. A Category 3, new-use permit for 1,667 gpd, or 417 gad for 4 acres of fruit trees  
2 is granted. Although the request is less than 3,000 gad, the acreage exceeds 1 acre and  
3 does not qualify for a permit exemption for domestic use.  
4

5 297. **SWUPA 4443N—Roy Kitagawa** (FOF 418)

6 a. On July 5, 2016, Roy Kitagawa filed a new-use SWUPA for TMK No. (2) 3-5-  
7 004:110, consisting of 4 acres, on which he proposed to grow ornamental and fruit trees,  
8 using 416.7 gad, for a total of 1,166.7 gpd.

9 b. On February 24, 2016, Kitagawa had submitted written testimony in support of  
10 the SWUPA that he would be filing and for appurtenant rights that he would be claiming.

11 c. Kitagawa did not participate in the hearings on provisional approval of  
12 appurtenant rights, which had a deadline of February 6, 2012 for applications to be filed  
13 and which had concluded on December 31, 2014, *supra*, FOF 19-20.

14 d. Kitagawa subsequently withdrew his SWUPA during the hearings.

15 e. No action is taken on Kitagawa’s appurtenant rights claim and permit application.  
16 He may refile at any time.  
17

18 298. **SWUPA 4444N—Anthony Takitani** (FOF 419)

19 a. On February 29, 2016, Anthony Takitani filed testimony in support of a new-use  
20 SWUPA that he would be filing. On July 5, 2016, Takitani filed a new-use SWUPA for  
21 TMK No. (2) 3-5-004:113 (“Lot 7”), a 5.121-acre property, for which he requested 2,833  
22 gpd for 3.5 acre of fruit and ornamental trees at 769 gad, and 0.5 acre of pasture for goats  
23 at 283 gad. He started in 2013 with 1.0 acre of trees and the 0.5 acre pasture.

24 b. Takitani bought the property in May 2008 and uses it mostly now for his  
25 residence and the pasture for his goats.

26 c. The deed to Lot 7 has a reservation of water rights that date to May 2004.

27 d. Takitani also requested recognition of appurtenant rights, and in both his  
28 appurtenant rights claim and water-use permit requests, Takitani requested 85,000 gpm,  
29 or 2,833 gpd. Takitani stated that he didn’t know what was used at the time of the Māhele  
30 and was requesting what he would need for potential future agricultural use.

1 e. Lot 7 is a portion of Grant 2007, `āpana 3; LCA 3702, confirmed by RP 6338;  
2 LCA 2225, confirmed by RP 3116; and LCA 443, confirmed by RP 497.

3 f. Takitani states that Grant 2007 includes a description of an irrigated patch, but the  
4 description of an irrigated patch ascribed to Grant 2007, apana 3, was to `āpana 2 and not  
5 to `āpana 3.

6 g. LCA 3702 was 2.21 acres, and described as taro, dryland, and a house lot and that  
7 there was a pō`alima in it.

8 h. LCA 2225 was described as three “taro pauku” and one “Wauke kula.”

9 i. Takitani also referenced LCA 2203 as “taro” and a “section of loi,” but the LCA  
10 is not part of Lot 7.

11 j. Takitani did not provide any documentation of LCA 443, but in Ota’s documents,  
12 which Takitani and the others relied on, LCA 443 is described as containing “6 acres, 1  
13 rood, 29 rods,” but no (translated) description of its uses.

14 k. Takitani did not provide any documentation of the acreage of the LCAs that are  
15 contained in Lot 7.

16 l. Lot 7’s appurtenant rights were preserved by the November 8, 1978 constitutional  
17 amendments, so the reservation in 2004 was not valid. However, Takitani’s request for  
18 appurtenant rights is denied because of insufficient documentation of the quantity  
19 associated with those rights. Takitani may submit additional information at any time.

20 j. Takitani is issued a Category 3 new-use permit for 2,833 gpd for 3.5 acre of fruit  
21 and ornamental trees at 769 gad, and 0.5 acre of pasture for goats at 283 gad.

22  
23 299. **SWUPA 4445N—SPV Trust (Shane Victorino)** (FOF 420)

24 a. The written direct testimony of Michael Victorino, for applicant SPV Trust, was  
25 submitted in the hearing on September 20, 2016.

26 b. On March 3, 2016, Michael Victorino filed testimony on behalf of his son, Shane  
27 Victorino, investment trustee of SPV Trust, in support of a SWUPA that they would be  
28 filing. The new-use SWUPA was filed on July 5, 2016, for TMK No. (2) 3-5-004:112  
29 (“Lot 6”), a 6.062-acre property, for 1,667 gpd for 4 acres of fruit trees at a rate of 417  
30 gad.

1 c. SPV Trust purchased the property in 2014, after the Provisional Approval  
2 hearings, on which Shane Victorino intends to build a home. The property is subject to a  
3 reservation of water rights made in May 2004.

4 d. SPV Trust requests appurtenant rights in the same amount as the SWUPA request,  
5 1,667 gpd.

6 e. Lot 6 is comprised of a portion of LCA 9202, `āpana 2 (*sic*-920:2?), confirmed by  
7 RP 2004; LCA 3702, confirmed by RP 6338; and LCA 443, confirmed by RP 497.

8 f. LCA 920:2 was 8 acres and described as “kula.”

9 g. LCA 3702 was 2.21 acres, and described as taro, dryland, and a house lot and that  
10 there was a pō`alima in it. A small portion is part of the flag/driveway of Lot 6.

11 h. LCA 443 was described as containing “6 acres, 1 rood, 29 rods,” but no  
12 (translated) description of its uses.

13 i. Apart from the reference to a small portion of LCA 3702 being part of Lot 6’s  
14 flag/driveway, there is no information of how much of these LCAs presently comprise  
15 Lot 6.

16 j. Lot 6’s appurtenant rights were preserved by the November 8, 1978 constitutional  
17 amendments, so the reservation in 2004 was not valid. However, SPV Trust’s request for  
18 appurtenant rights is denied because of insufficient documentation of the quantity  
19 associated with those rights. Additional information may be submitted at any time.

20 k. SPV Trust is issued a Category 3 new-use permit of 1,667 gpd for 4 acres of fruit  
21 trees at a rate of 417 gad.

22  
23 300. **SWUPAs 2207/2208N—Makani Olu Partners** (FOF 421)

24 a. On April 23, 2009, Makani Olu filed an existing-use SWUPA for TMKs (2) 3-5-  
25 004-014 (“Parcel 14”) and (2) 3-5-004-018 (“Parcel 18”), and a new-use SWUPA for  
26 Parcel 18.

27 1. Parcel 14 is 1.2 acres and Parcel 18 is 67.4 acres.

28 2. The existing-use request was for 17,948 gpd in metered use:

29 a. Parcel 14:

30 i. 2,900 gpd for 0.75 acre of agriculture crops (fruit trees), at  
31 a rate of 3,867 gad (2,900/0.75);

- 1                                   ii.       1,000 gpd for 0.25 acre of ornamental plants and a nursery  
2                                   greenhouse, at a rate of 4,000 gad (1,000/0.25); and  
3                                   iii.       1,200 gpd for 0.20 acre of cemetery landscape, at a rate of  
4                                   6,000 gad (1,200/0.20).
- 5                                   b.       Parcel 18:
- 6                                   i.        1,200 gpd for 0.25 acres of bananas and papayas, at a rate  
7                                   of 4,800 gad (1,200/0.25);  
8                                   ii.       8,348 gpd for 4.0 acres of livestock consumption feed,  
9                                   forage pasture, at a rate of 2,087 gad(8348/4.0);  
10                                  iii.       1,000 gpd for 0.25 acre of tree field stock nursery, at a rate  
11                                  of 4,000 gad (1,000/0.25); and  
12                                  iv.       2,500 gpd for 1.0 acre of home site landscape.
- 13                                  3.        The new-use request was for 453,530 gpd for 58.9 acres of feed  
14                                  and forage pastures for livestock, at a rate of 7,700 gad.
- 15                                  4.        All of Parcel 14's 1.2 acres were included in the existing-use request, and  
16                                  of Parcel 18's 67.4 acres, 64.4 acres were covered: 5.5 acres in existing  
17                                  use and 58.9 acres for a new use.
- 18                                  b.        Makani Olu filed for provisional recognition of appurtenant rights for Parcel 18's  
19                                  67.4 acres, submitting documentation for 26 LCAs, 23 of which were approved by the  
20                                  Commission.
- 21                                  c.        Makani Olu requested recognition of appurtenant rights for Parcel 18 for 2.235  
22                                  mgd, based on the following:
- 23                                    1.        There were a total of 404 lo`i in the 23 LCAs recognized as having water  
24                                    use at the time of the Māhele.
- 25                                    2.        Using a historical description of lo`i as measuring 40 x 40 feet, or 1,600  
26                                    square feet, 404 lo`i would equal 14.9 acres of lo`i.
- 27                                    3.        The Commission had estimated water requirements for lo`i complexes of  
28                                    130,000 to 150,000 gad in its 2010 D&O.
- 29                                    4.        Multiplying 14.9 acres by 150,000 gad, results in 2.235 mgd.
- 30                                  d.        Makani Olu had claimed that 100 percent of the LCAs with appurtenant rights  
31                                  were within the lands owned by it, but when it looked at greater detail, some LCAs were

1 shared with other TMKs. OHA then introduced into evidence a list of 21 LCAs, of which  
2 7 were solely owned by Makani Olu, and 14 were shared with other TMKs.

3 e. OHA's list of 21 was in fact complete and contained all 26 LCAs on which the  
4 Commission had provisionally ruled. The Commission had separately addressed LCA  
5 5742's two `āpana and LCA 11022's four `āpana, in addition to separately addressing  
6 LCA 11022's `āpana 1 for both Parcels 14 and 18.

7 f. Makani Olu was the sole owner of 7 LCAs:

8 1. One LCA had been denied:

9 a. LCA 3539:1 was 2.17 acres but the Commission found that no  
10 water use was documented.

11 b. However, LCA 3539:1 was described as mo`o with 48 lo`i and also  
12 a kula and a house site.

13 c. Therefore, LCA 3539:1 had water use on 0.96 acres ( $2.17 - 0.25 =$   
14  $1.92/2 = 0.96$ ).

15 2. Makani Olu claimed that the other six LCAs had water use:

16 a. LCA 2208 was claimed to be 0.12 acre of lo`i.

17 i. There was no `āpana 1.

18 ii. `Āpana 2 was 0.12 acre and described as a small mo`o and  
19 2 other lo`i, or as 4 lo`i.

20 b. LCA 3343 was claimed to be 0.98 acre of kalo land.

21 i. On the other hand, there is no description of the contents of  
22 the 0.98 acres.

23 c. LCA 3402 was claimed to be 2.83 acres of lo`i.

24 i. Lots 1 & 6 were 1.94 acres of taro and kula land.

25 ii. Lot 3 was 0.58 acres of taro.

26 iii. Lot 5 was 0.31 acre of a house lot and taro.

27 iv. There were no lots 2 or 4.

28 v. Therefore, water use was 1.61 acres: lots 1&6 was 0.97  
29 acres ( $1.94/2 = 0.97$ ), lot 3 was 0.58 acre, and lot 5 was 0.06 acre  
30 ( $0.31 - 0.25 = 0.06$ ).

31 d. LCA 3525 was claimed to be 0.24 acre of lo`i.

- 1 i. LCA 3525 `āpana 3 was described as a houselot on 0.24  
2 acres, so there was no water use. `Āpana 1 had been given to  
3 someone else, and `āpana 2 was not cultivated.
- 4 e. LCA 3547 was claimed to be 2.19 acres of lo`i.  
5 i. The description was for 219 acres of a mo`o with 33 lo`i, or  
6 a taro pauku.
- 7 f. LCA 8586 was claimed to be 1.15 acres of lo`i.  
8 i. `Āpana 1:1 was described as 0.38 acre of a taro mo`o with  
9 one pō`alima, `āpana 2:2 as 0.76 acre of a taro pauku, and `āpana 3  
10 as 0.01 acre with no description.
- 11 g. These seven LCAs comprised 9.68 acres of Parcel 18's 67.4 acres, leaving 57.72  
12 acres.
- 13 h. Of the 14 LCAs shared with other TMKs, the proportion of four (4) LCAs  
14 between Parcel 18 and other TMKs can be determined as follows:
- 15 1. LCA 205 was 13.61 acres of approximately 7/8s kalo patches and 1/8  
16 coffee grounds.
- 17 a. SWUPA 2276—Ione Shimizu's parcel 31 is 0.53 acre and a  
18 portion of LCA 205.
- 19 b. Therefore, Parcel 18 contains 13.08 acres of LCA 205, 7/8s of  
20 which was in kalo, or 11.45 acres.
- 21 2. LCA 434 was 5.2 acres with 41 lo`i.
- 22 a. SWUPA 2268—Katherine Riyu's parcel 28 is 0.61 acre, all of  
23 which are in LCA 434.
- 24 b. SWUPA 2338—Judith Yamanoue's parcels 27 and 41 total 1 acre  
25 (0.71 + 0.29), about 3/5s, or 0.6 acre, is in LCA 434.
- 26 c. Therefore, Parcel 18 contains about 3.99 acres of LCA 434.
- 27 3. LCA 8672 was claimed to be 1.86 acres of lo`i.
- 28 a. LCA 8672 consisted of three `āpana:  
29 i. `Āpana 1 was 1.55 acres in taro and kula.  
30 ii. `Āpana 2 was 0.25 acre in taro.  
31 iii. `Āpana 3 was 0.06 acre with one patch.

- 1                   iv.     Some testimony states that `āpana 2, and not `āpana 1, was  
2                   in kalo and kula, but the claimant describes `āpana 1 as a mo`o with  
3                   11 lo`i and a kula adjoining the west side of the mo`o.
- 4                   v.     Therefore, 1.09 acres was in kalo ( $1.55/2 + 0.25 + 0.06$ ).
- 5                   b.     SWUPA 4442N—Gerald Lau Hee’s Lot 1 is 5.973 acres and  
6                   comprised of portions of Grant 2007:3, Grant 1714:2, LCA 2225, and  
7                   LCA 8672:1.
- 8                   i.     Lot 1’s description largely consists of descriptions of the  
9                   two grants, with the LCAs identified at the end of the boundary  
10                  descriptions, and LCA 2225 described as maybe a few feet of Lot  
11                  1. Therefore, Hee’s Lot 1 likely also contained only a very small  
12                  portion of LCA 8672:1.
- 13                  4.     LCA 11022 was claimed to be 4.44 acres and consisting of four `āpana,  
14                  with 1-3 described as taro mo`o, and no reference to water use in `āpana 4.
- 15                  a.     `Āpana 1 was 0.48 acre, `āpana 2 and 3 were 3.29 acres, and  
16                  `āpana 4 was 0.67 acres.
- 17                  b.     Therefore, water use was 3.77 acres ( $4.44 - 0.67$ ).
- 18                  c.     LCA 11022 consisted of 4 other `āpana in Waikapū: `āpana 5-7  
19                  were pō`alima—sizes not specified, and `āpana 8 was a houselot of 0.6  
20                  acre.
- 21                  i.     Waikapu Properties’ Parcel 3 contains `āpana 6.
- 22                  i.     The preceding four (4) LCAs comprise 23.37 acres of Parcel 18. The seven LCAs  
23                  that are wholly within Parcel 18’s 67.4 acres comprised 9.68 acres, leaving 57.72 acres.  
24                  Subtracting 23.37 acres from 57.72 acres leaves 34.35 acres.
- 25                  j.     The following four (4) LCAs have acreage remaining after accounting for their  
26                  inclusion in Parcel 18:
- 27                  1.     LCA 3201 was 3.85 acres of pasture and had been denied.
- 28                  a.     However, the reference to pasture was in a second `āpana, where  
29                  the pasture was adjacent to it:
- 30                  i.     `Āpana 1 was 3.85 acres, bordered by `auwai, and  
31                  uncultivated land on the western side.

- 1                   ii.       `Āpana 2 was 1.6 acres, bordered by walls and kula land,  
2                   and a road and pasture to the east.
- 3                   iii.       Thus, there was 1.6 acres more of LCA 3201 than was  
4                   claimed by Makani Olu.
- 5                   b.       By the description that `āpana 1 abuts `auwai and that uncultivated  
6                   land was on the western side, it can be presumed that the 3.85 acres was  
7                   being cultivated in kalo lo`i, *supra*, FOF 165.
- 8                   2.       LCA 492 was claimed to be 10.26 acres of taro.
- 9                   a.       However, `āpana 1 was 10.26 acres, but described as taro pauku  
10                  and kula with 1 pō`alima, with 51 taro patches.
- 11                  b.       Therefore, water use was 5.13 acres.
- 12                  c.       There were other lots totaling 1.23 acres in LCA 492: a kaina of  
13                  0.1 acre, a pō`alima of 0.8 acre, `āpana 2 had been exchanged, `āpana 3  
14                  was 0.08 acre of a taro patch, `āpana 4 was 0.25 acre of a houseslot.
- 15                  3.       LCA 3549 was claimed to be 2.62 acres of lo`i.
- 16                  a.       `Āpana 1 was described as 2.62 acres of taro pauku with 1 lo`i  
17                  pō`alima and 1 lo`i paahao within it.
- 18                  b.       There were other `āpana totaling 3.64 acres: `āpana 2 was 2.12  
19                  acres of taro pauku, and `āpana 3 was 1.52 acres of taro pauku.
- 20                  4.       LCA 5742 was claimed to be 1.2 acres with 17 lo`i, a house lot, and some  
21                  dry land.
- 22                  a.       `Āpana 1:1 was 0.72 acre and 1:2 was 0.36 acre, for a total of 1.2  
23                  acre of taro pauku with 31 lo`i and 1 pō`alima.
- 24                  b.       There was an additional 0.12 acre of a houseslot and a dry lo`i in  
25                  `āpana 2.
- 26                  k.       The preceding four (4) LCAs comprised 17.93 acres of Parcel 18 and had  
27                  additional acreage not accounted for in Parcel 18's shares and which would be in other  
28                  LCAs. Subtracting 17.93 acres from the 34.35 acres remaining after subtracting the  
29                  acreage from eleven (11) LCAs that were previously described from Parcel 18's 67.4  
30                  acres, leaves 16.42 acres.



1           1.       Makani Olu claims 17.56 acres from the remaining six (6) LCAs, meaning that it  
2           claims 1.14 acres more than is remaining in Parcel 18 after the previous 15 LCAs were  
3           accounted for. Because the exact proportions for each of the six (6) remaining LCAs are  
4           not known, each will be reduced by 16.42/17.56, or by 9 percent.

5           1.       LCA 3104 was claimed to be 1.67 acres of taro and kula.

6           a.       LCA 3104 was 1.83 acres, minus 0.16 acre of a pō`alima that was  
7           exchanged, or a net of 1.67 acres. It was described as kalo and kula, and  
8           with 33 lo`i.

9           b.       The acreage is reduced by 9 percent, or from 1.67 acres to 1.52  
10          acres.

11          c.       Water use would be on 0.76 acres (1.52/2), or half taro, half kula.

12          2.       LCA 3107 was claimed to be 3.62 acres of taro.

13          a.       However, `āpana 1 was 0.8 acres of taro pauku, `āpana 2 was 1.27  
14          acres of taro pauku, `āpana 3 and 4 were included in other LCAs, `āpana 5  
15          was 0.9 acre of taro pauku, `āpana 6 was 0.12 are of 3 lo`i, and `āpana 7  
16          was 0.53 acre of a houselot.

17          b.       3.62 acres are reduced by 9 percent, or from 3.62 acres to 3.29  
18          acres.

19          c.       Therefore, water use was for 2.76 acres (3.29 – 0.53 for the  
20          houselot).

21          3.       LCA 3508 was claimed to be 3.21 acres of taro.

22          a.       However, `āpana 1 was 0.69 acre of a houselot and kula, āpana 2  
23          was 1.87 acres of taro pauku, and `āpana 3 was 0.65 acre of taro mo`o.

24          b.       3.21 acres are reduced by 9 percent, or from 3.21 acres to 2.92  
25          acres.

26          c.       Therefore, water use was for 2.23 acres (2.92 – 0.69 for the  
27          houselot and kula).

28          4.       LCA 3538 was claimed to be 1.91 acre of taro and kula.

29          a.       However, `āpana 1 was 1.64 acres of taro land plus 0.12 acre for a  
30          houselot, and `āpana 2 was 0.25 acre of a taro patch.

- 1                   b.       1.91 acres are reduced by 9 percent, or from 1.91 acres to 1.74  
2                   acres.
- 3                   c.       Therefore, water use was for 1.62 acres (1.74 – 0.12 for the  
4                   houselot).
- 5           5.       LCA 3545 was claimed to be 2.08 acre of lo`i.
- 6                   a.       However, it was described as 2.08 acres of a mo`o of 36 lo`i and a  
7                   kula, with 3 pō`alima within it.
- 8                   b.       2.08 acres are reduced by 9 percent, or from 2.08 acres to 1.89  
9                   acres.
- 10                  c.       Therefore, water use was for 0.95 acres (1.89/2).
- 11           6.       LCA 3548k was claimed to be 5.07 acres of a paahao patch, which the  
12                  Commission provisionally approved as water use.
- 13                  a.       However, it was described as 5.07 acres of a mo`o with 49 lo`i,  
14                  less 1.5 acres of a paahao patch, for a net of 3.57 acres (5.07- 1.5).
- 15                  b.       3.57 acres are reduced by 9 percent, from 3.57 acres to 3.25 acres.
- 16       m.       From the foregoing analysis of the 21 LCAs, there were 50.69 acres in kalo lo`i  
17       at the time of the Māhele, out of a total of 65.54 acres of Parcel 18’s 67.4 acres. Out of  
18       the 65.54 acres, two LCAs were determined not to have any kalo lo`i at the time of the  
19       Māhele: LCA 3343’s 0.98 acre, and LCA 3525’s 0.24 acres, leaving 64.32 (65.54 – 1.22)  
20       acres of Parcel 18’s 67.4 acres with all or part of the acreage in kalo lo`i at the time of  
21       the Māhele.
- 22       n.       The acreage claimed by Makani Olu for appurtenant rights on Parcel 18’s 67.4  
23       acres was 14.9 acres, based on assumptions of the size of kalo lo`i at the time of the  
24       Māhele and a count of lo`i among the 23 provisionally approved LCAs.
- 25       o.       The different methods employed by Makani Olu and Kame`eleihiwa lead to  
26       vastly different results. For example, LCA 434 was 5.2 acres and described as containing  
27       41 lo`i. Kame`eleihiwa’s method would ascribe the entire 5.2 acres to kalo lo`i, *supra*,  
28       FOF 163. Makani Olu’s method counted the 41 lo`i and multiplied by 1,600 square feet,  
29       assuming a lo`i size of 40x40 feet, resulting in 1.51 acres.
- 30       p.       For consistency and equal treatment of all appurtenant rights claims,  
31       Kame`eleihiwa’s method has been employed here and on all other appurtenant rights

1 claims. By Kame`eleihiwa's method, water use at the time of the Māhele on Parcel 18  
2 was on 50.69 acres, *supra*, f-1.

3 q. Parcel 18 has appurtenant rights of 5,069,000 gpd (50.69 acres x 100,000 gad).

4 r. Makani Olu is issued permits as follows:

5 Parcel 14: Category 2 existing-use permit for 3,000 gpd:

- 6 1. 2,500 gad for 0.75 acre of fruit trees, 0.25 acre of ornamental  
7 plants and a nursery greenhouse, and 0.20 acre of a cemetery landscape.
- 8 2. The requested amounts were excessive and equivalent to 3,867  
9 gad, 4,000 gad, and 6,000 gad, respectively.

10 Parcel 18: Category 2 existing –use permit for 9,600 gpd:

- 11 1. 1,250 gpd at 2,500 gad for 0.25 acre of bananas and  
12 papayas and 0.25 acres of a tree stock nursery.
- 13 2. 8,350 gpd for 4.0 acre of livestock feed and forage pasture.
- 14 3. The requested amounts for the 0.25 acres of  
15 bananas/papayas and 0.25 acre of a tree stock nursery were  
16 excessive and equivalent to 4,800 gad and 4,000 gad, respectively.
- 17 4. The request of 8,350 for 4.0 acres of pasture was less than  
18 2,500 gad.
- 19 5. The existing use also falls within Parcel 18's appurtenant  
20 rights.

21 Category 2 new-use permit for 123,100 gpd:

- 22 1. 58.9 acres for feed/forage pasture at 2,090 gad, the rate of  
23 current use for 4.0 acres of pasture.
- 24 2. The requested amount of 453,530 gpd was excessive and  
25 equivalent to 7,700 gad.
- 26 3. The new-use permit is in Category 2, because it falls under  
27 Parcel 18's appurtenant rights.

28 s. 2,500 gpd for 1.0 acre of a housesite landscape is recognized and exempt from the  
29 permit requirements.

30  
31 301. **SWUPA 2204—Luke McLean** (FOF 422)

1 a. On April 22, 2009, Glenn McLean filed an existing-use SWUPA for TMK No. (2)  
2 3-5-004:057 (“Parcel 57”). His son, Luke McLean, testified on his behalf that the permit  
3 be issued to his son.

4 b. Parcel 57 is 1.14 acres, for which Glenn McLean estimated existing use as 500  
5 gpd in the SWUPA, but Luke now estimates it at 16,000 gpd for lo`i kalo, Hawaiian food  
6 crops, a large vegetable garden, fruit orchard and a collection of native plants. Luke  
7 explained that, when the 500 gpd was listed, his father was representing the family at the  
8 time, lives in Hana, and hadn’t been on the land in probably the last 15 years. They have  
9 never had a water meter, and Luke believes his father “just made the humble assumption  
10 that that was all we were using.”

11 c. Current use was listed for 1.25 acres, even though the property is only 1.14 acres:  
12 0.5 acre of fruit trees, 0.25 acre of dryland taro, 0.25 acre of vegetables, and 0.25 acre of  
13 a native plant nursery. But the SWUPA had estimated only 500 gpd for all these uses and  
14 had requested another 500 gpd to open lo`i.

15 d. McLean now requests a permit for 300,000 gpd “to expand cultivation of  
16 historical lo`i kalo, Hawaiian food crops, vegetable gardens, fruit orchards, and native  
17 plants.”

18 e. McLean also requests recognition of appurtenant rights for 342,000 gpd for his  
19 1.14 acres, applying Reppun’s high estimate of 300,000 gad, so presumably the 300,000  
20 gpd permit request is for 1.0 acres of kalo lo`i, but he does not explain how the remaining  
21 0.14 acres will maintain his other crops, since they presumably cover the entire parcel  
22 currently.

23 f. McLean is the direct lineal descendant of the original claimant to Parcel 57,  
24 Kuamu, who was awarded LCA 2225:1-4, confirmed by RP 3116. `Āpana 1-3 consisted  
25 of sections of kalo, and `āpana 4 was wauke kula.

26 g. LCA 2225:1-4 was 3.31 acres, of which the McLeans now own only Parcel 57’s  
27 1.14 acres. Three-quarters of LCA 2225:1-4 was in kalo lo`i, or 2.48 acres, so  
28 appurtenant rights attach to three-quarters of Parcel 57, or 0.855 acre (1.14 acre x 0.75).  
29 The Commission had granted provisional approval.

30 h. The McLeans’ have traditional and customary rights on Parcel 57, because they  
31 are direct lineal descendants of the original LCA claimant, and can trace their ownership

1 prior to November 25, 1892, and are exercising that right for subsistence purposes, *supra*,  
2 COL 64.

3 i. Parcel 57 has appurtenant rights of 85,500 gpd (0.855 acre x 100,000 gad).

4 j. McLean does not explain how he plans to open one acre of kalo lo`i and still  
5 maintain his current plantings on the entire 1.14 acres. Therefore, he is issued a permit for  
6 1 acre of kalo lo`i for 150,000 gpd ( 1 acre x 150,000 gad), and recognized for 420 gpd of  
7 domestic use (0.114 acre x 3,000 gad):

8 1. All of the 150,000 gpd is in Category 1. Although only 85,500 gpd falls  
9 under his appurtenant rights, there is no such limitation for traditional and  
10 customary rights, as long as those rights are exercised in a reasonable and  
11 beneficial manner. McLean’s proposed use also falls within the 1-acre limitation  
12 for subsistence.

13 2. The domestic use of 420 gpd is exempt from the permit requirements.  
14

15 302. **SWUPA 2440N—Spencer Homes** (FOF 423)

16 a. On July 20, 2009, Spencer Homes Inc./Waikapu Gardens Subdivision filed a new-  
17 use SWUPA for TMKs No. (2) 3-5-028:062, No. (2) 3-5-031:121, No. (2) 3-5-002:016,  
18 and No. (2) 3-5-029:098, for 115,446 gpd on 14.65 acres of 16.25 acres of common area  
19 and 2.3 acres of 16.53 acres of sod farms.

20 b. Spencer Homes did not claim appurtenant rights nor participate in the provisional  
21 approval process.

22 c. Spencer Homes did not submit written testimony nor participate in the CCH.

23 d. Spencer Homes’s new-use SWUPA is denied and may refile for a new use.  
24

25 303. **SWUPA 2191—Charles Dando Sr** (FOF 424)

26 a. On April 20, 2009, Charles Dando Sr. filed separate existing-use SWUPAs for  
27 TMKs No. (2) 3-5-030:116 (“Parcel 116”), situated in Waikapu, and (2) 3-4-033:014  
28 (“Parcel 14”), situated in Wailuku, for home landscape irrigation.

29 b. SWUPA 2191 is for Parcel 116’s 0.113 acre, for which he is requesting 1,749 gpd  
30 on 0.1 acre.

1 c. When it was pointed out that 1,743<sup>50</sup> gpd over 0.1 acre was 17,430 gad, Dando  
2 replied that when he averaged the meter readings over a year in 2007 to 2008, he “was  
3 establishing the yard and everything, so it should be way down from that.”

4 d. Dando did not participate in the provisional approval process and does not request  
5 recognition of appurtenant rights.

6 e. Dando is recognized as having a domestic use of 300 gpd (0.1 acre x 3,000 gad),  
7 which is exempt from the permit requirements.

8  
9 304. **SWUPA 2154—Rojac Trucking, Inc.** (FOF 425)

10 a. On April 24, 2009, Rojac Trucking, Inc., filed an existing-use SWUPA for TMKs  
11 No. (2) 3-5-027:017, No. (2) 3-5-027:018, and No. (2) 3-5-027:019, for a metered use of  
12 5,145 gpd for 0.35 acre of 0.88 acre for landscaping, and 2.0 acres of 3.09 acres for dust  
13 control and cleaning/washing of trucks and maintenance areas.

14 b. No claim was made for appurtenant rights, and Rojac Trucking did not participate  
15 in the provisional approval process.

16 c. Rojac Trucking did not submit written testimony nor participate in the CCH.

17 d. Rojack Trucking’s existing-use SWUPA is denied and may reapply for a new-use  
18 permit.

19  
20 **4. Waikapū Stream**

21  
22 **a. South Waikapū Ditch**

23  
24 305. The surface water sources for the following multiple SWUPAs from Waikapu Properties  
25 are Waikapū Stream and Waihe`e Ditch, which contains waters from all of the streams and  
26 rivers. They are included here under South Waikapū Ditch, because Waikapu Properties’ original  
27 SWUPAs received water from Waikapū Stream through the South Waikapū Ditch’s Reservoir 1.  
28 When HC&S closed its sugar cane operations and returned the leased `Īao-Waikapū fields,  
29 Waikapu Properties amended its SWUPAs, which now includes HC&S’s former SWUPA 2205

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<sup>50</sup> The actual quantity was 1,749 gpd, not 1,743 gpd.

1 for the ʻĀao-Waikapū fields, and intends to move its operations largely to the ʻĀao-Waikapū  
2 fields.

3  
4 306. **SWUPAs 2205, 2356/2297N, 3471N, and 3472N—Waikapu Properties** (FOF 427)

5 a. In 2005, through various entities, Michael Atherton, the managing general partner  
6 of several related entities, including but not limited to Waikapu Properties, Maui Tropical  
7 Plantation (“MTP”), and Waiale 905 Partners, LLC, acquired in excess of 1,600 acres  
8 involving four parcels of land from Wailuku Agribusiness. This includes the addition of  
9 organic row crop cultivation by Kumu Farms, as well as large-scale dryland taro, banana,  
10 and other row crop production by Ho`aloha Farms.

11 b. In 2006, again through various entities, Mr. Atherton acquired MTP, which is  
12 addressed in SWUPA 2203—Maui Tropical Plantation.

13 c. On April 22, 2009, HC&S had filed existing-use SWUPA 2205 for its leased ʻĀao-  
14 Waikapū fields, for which it requested 8.97 mgd, and which it subsequently returned to  
15 Waikapu Properties, *supra*, FOF 25.

16 1. However, in the narrative accompanying its SWUPA, HC&S claimed that  
17 its daily use was 10.58 mgd, or 7,098 gad over 1,491 acres.

18 2. In its 2010 proposed D&O and reiterated in the 2014 mediated agreement,  
19 the Commission had found that reasonable use was 6.06 mgd, or 541 gad over  
20 1,120 cultivated acres.

21 d. On April 30, 2009, Waikapu Properties filed:

22 1. Existing-use SWUPA 2356 for TMK (2) 3-6-004:003 (“Parcel 3”), for  
23 which it requested a metered use of 516,714 gpd for 61.1 acres of Parcel 3’s  
24 657.2 acres, at a rate of 8,457 gad. The metered use was for sugar cane. Parcel 3  
25 was planted in sugar cane by HC&S, and was not planned to continue in sugar  
26 cane but to be partially planted in coffee.

27 2. New-use SWUPA 2297N for the same Parcel 3, for which it requested  
28 1,340,000 gpd for 200 acres: a) 100 acres for livestock feed and forage at a rate of  
29 7,700 gad (770,000 gpd); b) 30 acres of coffee, wind breaks, and ground cover at  
30 a rate of 10,000 gad (300,000 gpd); and c) 70 acres for reforestation of native and  
31 endemic trees and shrubs at a rate of 3,857 gad (270,000 gpd).

1 e. On February 6, 2012, Waikapu Properties filed new-use SWUPA 3471N for  
2 TMK (2) 3-6-004-006 (“Parcel 6”), for which it requested 109,048 gpd on 52.98 acres for  
3 herbs at a drip irrigation rate of 2,058 gad.

4 1. Parcel 6 is elbow-shaped, with the long arm running along the west  
5 (mauka) side of MTP, above Waihe`e Ditch, and the short arm running along the  
6 south side of MTP, below the Waihe`e Ditch. Parcel 6 comprises parts of three  
7 fields:

8 a. The portion mauka of MTP is within field 733.

9 b. The “elbow,” above the Waihe`e Ditch, is a portion of field 735.

10 c. The portion below the Waihe`e Ditch is within field 737.

11 f. On February 6, 2012, Waikapu Properties filed another new-use SWUPA 3472N  
12 for TMK (2) 3-6-006-036 (“Parcel 36”), for which it requested 5,544 gpd on 0.72 acres  
13 for livestock feed and forage at a sprinkler rate of 7,700 gad.

14 1. Parcel 36 is a sliver of land between fields 761 and 763, below the  
15 Waihe`e Ditch.

16 2. The September 24, 2003 deed contained a reservation of water rights.

17 g. Excluding SWUPA 2205, which was transferred from HC&S to Waikapu  
18 Properties in July 2016 while the CCH was being conducted, Waikapu Properties’ total  
19 request was:

20 1. SWUPA 2356: 516,714 gpd.

21 2. SWUPA 2297N: 1,300,000 gpd.

22 3. SWUPA 3471N: 109,048 gpd.

23 4. SWUPA 3472N: 5,544 gpd.

24 Total: 1,931,306 gpd

25 h. SWUPAs 2356 and 2297N were both for Parcel 3, which was in sugar cane under  
26 HC&S. Waikapu Properties did not explain why they applied for an existing-use under  
27 SWUPA 2356 for converting sugar cane to coffee but filed a new-use under SWUPA  
28 2297N for converting the same sugar fields to other agricultural uses, when all uses could  
29 have been filed under existing-use SWUPA(s).<sup>51</sup>

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<sup>51</sup> HRS 174C-3 defines “agricultural use” as “the use of water for the growing, processing, and treating of crops, livestock, aquatic plants and animals, and ornamental flowers or similar foliage,” and defines “existing agricultural



1 i. Following the transfer of SWUPA 2205 from HC&S to Waikapu Properties  
2 during the CCH, Waikapu Properties submitted additional testimony on expanding its  
3 current agricultural operations onto the `Īao-Waikapū fields.

4 1. Grant Schule is founder and owner of Kumu Farms and farms over 80  
5 acres in Waikapū, producing over 25 fruit and vegetables along with a handful of  
6 specialty crops and markets directly to customers on Maui, ships inter-island to  
7 O`ahu, and exports SunRise papaya to the U.S. mainland.

8 2. Bobby Pahia of Ho`aloha Farms is the largest producer of dryland kalo in  
9 the state and currently farms 61 acres, primarily in dryland kalo, and allows other  
10 farmers to farm, who grow bananas, sweet potato, and various vegetable crops.

11 3. William Jacintho is owner of Na`alae Beef Company and Beef and  
12 Blooms and leases about 100 acres of pasture in Waikapū on which he raises  
13 about 50 head of Angus, Brangus, and Wagyu cattle, as part of his ranching  
14 business throughout Maui. Na`alae Beef Company carries about 60 head  
15 conventionally, and has been raising some Wagyu cattle for the past 10 years.  
16 Beef and Blooms has about 80 head of certified organic cattle.

17 j. Counsel for Waikapu Properties subsequently entered into discussions with  
18 counsels for OHA and Hui/MTF to modify and clarify Waikapu Properties' water  
19 request. Following those negotiations and in light of Waikapu Properties' abilities to re-  
20 allocate field usage because of the return of the `Īao-Waikapū fields, it filed a first  
21 amendment to SWUPAs 2356/2297N, 3471N, and 3472N as follows:

22 1. Reduction in the request to 81,794 gpd, from Waikapū Stream, a 96  
23 percent decrease.

24 2. Change in the types of crops being grown from coffee to organic produce  
25 and row crops.

26 3. Water requested from Waikapu Stream for Kumu Farms' 18 acres for  
27 organic row crops will continue only until such time as substitute fields are  
28 certified organic, at which time the water allocation for those 18 acres will be  
29 reduced to that necessary for drinking water for cattle at 250 gad.

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use" as "replacing, or alternating the cultivation of any agricultural crop with any other agricultural crop, which shall not be construed as a change in use."

1 4. Water requested for feed and forage for cattle to be replaced by drinking  
2 water only.

3 5. All farming operations will be relocated to areas makai of the Waihe`e  
4 Ditch such that no surface water is needed from Waikapū Stream other than 250  
5 gad for drinking water for cattle.

6 6. Hoaloha Farms will be entitled to water and harvest crops that are  
7 currently in-ground above Waihe`e Ditch and which utilize water from Waikapū  
8 Stream, and will transition to lands below Waihe`e Ditch and off of Waikapū  
9 Stream as such crops are harvested.

10 k. This amendment to the SWUPAs addressed Fields 731 and 733. Field 731 is 86.5  
11 acres currently leased to Makani Olu for cattle. Field 733 is 110.5 acres, of which Kumu  
12 Farms leases 18 acres and Beef and Blooms leases 86.5 acres.

13 l. At the same time, a first amendment to SWUPA 2205 addressed the fields  
14 formerly leased by HC&S for sugar cane and addressed Fields 735, 737 (portion), 747,  
15 749, 751, 753, 757, 761, 763, 765, and 767.

16 m. The combined amendments resulted in SWUPA 3471N's Parcel 6's 52.98 acres  
17 combined and subsumed in fields 731, 733, and 735, and SWUPA 3472N's Parcel 36's  
18 0.72 acres apparently omitted.

19 n. The resulting modifications requested 100,169 gpd from Waikapū Stream and  
20 3,315,130 gpd from the Waihe`e Ditch, for a total of 3,415,299 gpd.

21 o. The combined modified water request was as follows:

<u>Field</u>	<u>Acres</u>	<u>User</u>	<u>Use</u>	<u>gpd/acre</u>	<u>Total gpd</u>	<u>Source</u>
23 731	86.5	Makani Olu	Cattle	250	21,625	Waikapū Stream
24 733	18	Kumu Farms	Row Crop	2058	37,044	Waikapū Stream
25 733	92.5	Beef & Blooms	Cattle	250	23,125	Waikapū Stream
26 735	73.5	Beef & Blooms	Cattle	250	18,375	Waikapū Stream
27 737*	77.3	Beef & Blooms	Cattle	250	19,325	Waihe`e Ditch
28 737*	66.5	Kumu Farms	Row Crop	3000	199,500	Waihe`e Ditch
29 747	91.8	Kumu Farms	Row Crop	3000	275,400	Waihe`e Ditch
30 749	119	Kumu Farms	Row Crop	3000	357,000	Waihe`e Ditch
31 751	154.5	Ho`aloha Farms	Taro/Row Crop	5400	834,300	Waihe`e Ditch
32 753	155.3	Ho`aloha Farms	Taro/Row Crop	5400	838,620	Waihe`e Ditch
33 757	73.4	Ho`aloha Farms	Taro/Row Crop	5400	396,360	Waihe`e Ditch

1	761	40.5	Kumu Farms	Row Crop	3000	121,500	Waihe`e Ditch
2	763	51.1	Beef & Blooms	Cattle	250	12,775	Waihe`e Ditch
3	765	63.5	Beef & Blooms	Cattle	250	15,875	Waihe`e Ditch
4	767 <sup>1</sup>	81.5	Beef & Blooms	Cattle	250	20,375	Waihe`e Ditch
5	767 <sup>2</sup>	<u>41.5</u>	Ho`aloha Farms	Taro/Row Crop	5400	<u>224,100</u>	Waihe`e Ditch
6	Totals: 1,286.4						3,415,299
7	*portion of field 737; <sup>1</sup> above highway; <sup>2</sup> below highway						(100,169 Waikapū Stream
8							3,315,130 Waihe`e Ditch)

p. Waikapu Properties also stated that metered use over 140 acres over the past four years was 540,000 gpd, or an average of about 3,860 gad, and extrapolating 3,860 gad over 760.5 acres of crops resulted in 2,935,530 gpd. The amount they are asking for, 3,315,130 gpd, is a little higher because there is less rain on the lower `Īao-Waikapū fields to which they would be relocating their crop plantings.

1. However, their current use was overestimated. Over the past four years, the largest delivery to Waikapu Properties from WWC was 15.81 million gallons, or 527,000 gpd, in April 2016, and in May 2016, water delivery was down to 11.43 million gallons, or 368,710 gpd. Over 140 acres, these averaged 3,764 gad and 2,634 gad, respectively.

q. This request should be modified in the following areas:

1. Drinking water for cattle: 25 gad instead of 250 gad.

a. William Jacintho, owner of Na`alae Beef Company and Beef and Blooms, leases about 100 acres currently, on which he raises about 50 head of Angus, Brangus, and Wagyu cattle, which is pretty much what the land can support.

b. “One rule of thumb is cattle drink about a gallon of water per hundred pounds of weight that they have per day. So an average cow, say weighing about 1,000 pounds, mature animal, will drink about at least ten gallons a day. That’s on normal weather. If it’s hotter, they’ll drink, can be even double.”

c. “Well, I haven’t made my request yet, but I would like to ask for, you know, probably 15 gallons per head per day.”

d. Makani Olu grazes about 70 head of cattle on its 86.5 acres.

1 e. Hui/MTF and OHA concludes that 25 gad, 10 percent of the 250  
2 gad claimed by Waikapu Properties, is still more than double what Beef  
3 and Blooms and Makani Olu would need at their current grazing densities,  
4 and that “(b)ased on the evidence in the record, 25 gad should be more  
5 than sufficient to provide drinking water for cattle grazed on WP’s land  
6 above Waihe`e Ditch.”

7 2. Field 737: 10.8 acres instead of 77.3 acres for Beef & Blooms:

8 a. Field 737 is a total of 77.3 acres. 66.5 acres is currently farmed by  
9 Kumu Farms and will continue to be farmed by Kumu Farms.

10 3. Field 731: 1,750 gpd:

11 a. Makani Olu grazes about 70 head of cattle on its 86.5 acres.

12 b. At 25 gallons/head, the daily drinking water is 1,750 gpd.

13 4. Field 747 should be reduced from 91.8 acres to 71.8 acres:

14 a. 20 acres were transferred to the County prior to 2013.

15 5. Irrigation requirements for row crop: 2,500 gad instead of 3,000 gad:

16 a. Waikapu Properties states that the irrigation requirements for  
17 Kumu Farms’ row crops of 3,000 gad is based on 45% of HDOA  
18 allocations for vegetables. It’s prior request was for 2,058 gad, based on  
19 actual use.

20 6. Irrigation requirements for taro/row crop: 2,500 gad instead of 5,400  
21 gad.

22 a. Irrigation requirements of 5,400 gad were stated to be based on  
23 45% of HDOA allocations, but its prior request claimed 5,400 gad for taro  
24 and 6,700 gad for taro/row crops, based on HDOA.

25 b. 45% of 5,400 would be 2,430, and 45% of 6,700 gad would be  
26 3,015 gad.

27 c. Although no explanation was given, according to HDOA, dryland  
28 taro would require less water than row crops. If 3,000 gad is 45% of  
29 HDOA allocations for row crops, then HDOA allocation would be about  
30 6,700 gad for row crops. But again, there is no explanation why a mixture

1 of taro and row crops would be the same requirement as for row crops,  
 2 when taro is allocated less by HDOA.

3 r. Waikapu Properties' request should therefore be as follows, after Kumu Farms  
 4 relocates to below the Waihe`e Ditch, whose water is included in the total for Waihe`e  
 5 Ditch:

6	<u>Field</u>	<u>Acres</u>	<u>User</u>	<u>Use</u>	<u>gpd</u>	<u>Total gpd</u>	<u>Source</u>
7	731	86.5	Makani Olu*	Cattle	25	1,750	Waikapū Stream
8	733	110.5	Beef & Blooms	Cattle	25	2,763	Waikapū Stream
9	735	73.5	Beef & Blooms**	Cattle	25	1,838	Waikapū Stream
10	737***	10.8	Beef & Blooms**	Cattle	25	270	Waihe`e Ditch
11	763	51.1	Beef & Blooms**	Cattle	25	1,278	Waihe`e Ditch
12	765	63.5	Beef & Blooms**	Cattle	25	1,588	Waihe`e Ditch
13	767 <sup>1</sup>	81.5	Beef & Blooms**	Cattle	25	2,038	Waihe`e Ditch
14	737***	66.5	Kumu Farms	Row Crop	2500	166,250	Waihe`e Ditch
15	747	71.8	Kumu Farms	Row Crop	2500	179,500	Waihe`e Ditch
16	749	119	Kumu Farms	Row Crop	2500	297,500	Waihe`e Ditch
17	751	154.5	Ho`aloha Farms	Taro/Row Crop	2500	386,250	Waihe`e Ditch
18	753	155.3	Ho`aloha Farms	Taro/Row Crop	2500	388,250	Waihe`e Ditch
19	757	73.4	Ho`aloha Farms	Taro/Row Crop	2500	185,500	Waihe`e Ditch
20	761	40.5	Kumu Farms	Row Crop	2500	101,250	Waihe`e Ditch
21	767 <sup>2</sup>	<u>41.5</u>	Ho`aloha Farms	Taro/Row Crop	2500	<u>103,750</u>	Waihe`e Ditch
22	Totals:	1,199.9 acres				1,819,775 gpd	
23		(270.5 acres: Waikapū Stream				(6,351 gpd: Waikapū Stream	
24		929.4 acres: Waihe`e Ditch)				1,813,424 gpd: Waihe`e Ditch)	

25 \*70 head on 86.5 acres; \*\*1 head/2 acres; \*\*\*portion of field 737; <sup>1</sup>above highway; <sup>2</sup>below highway

26 s. Alternate sources:

27 1. Waikapū Properties is developing five (5) wells as part of its long-term  
 28 plans to develop a portion of its lands as housing for Maui residents:

29 a. Three wells have been identified as suitable for potable use, have  
 30 undergone testing to determine water quality, and two have been  
 31 permitted. Two have sustainable pumping capacities of 1.4 mgd and 10  
 32 mgd, respectively, and the third will further further testing, and, based on  
 33 an increase in chlorides, may be less than 700 gpm.

1           b.       The fourth and fifth wells have shown low salinity levels, and  
2           testing has been conducted to determine the viability of those wells for  
3           domestic use, and if not, for possible non-potable use. They are adjacent to  
4           the Waihe`e Ditch and would be used for residential agricultural lots,  
5           agricultural farming, parks, and open areas.

6           c.       Availability of ground water for agricultural purposes in the future  
7           will depend greatly on whether all or some of the wells will be transferred  
8           to the County of Maui or remain a private water system, and development  
9           of the infrastructure to transmit and deliver the water from the wells to the  
10          intended recipients.

11          2.       If and when Waikapu Properties' housing plans are developed, it is  
12          anticipated to generate approximately 650,000 gpd of R-1 quality recycled water.

13          t.       Appurtenant rights:

14           1.       Waikapū Properties had claimed appurtenant rights for Parcels 3, 6, and  
15           36, and HC&S had not claimed rights for the `Īao-Waikapū Fields.

16           2.       In the provisional approval process, the Commission had:

17           a.       approved 15 of 16 LCAs for Parcel 3;

18           b.       approved none of 8 LCAs and 5 grants for Parcel 6; and

19           c.       approved three of three LCAs for Parcel 36.

20           3.       During the CCH and in negotiations with Hui/MTF and OHA, Waikapu  
21           Properties stated that it would not be pursuing appurtenant rights in this CCH  
22           except to the extent of seeking drinking water for cattle and reserved the right to  
23           re-submit at a later date.

24           4.       Appurtenant rights were requested for portions of Parcel 3's 657.2 acres:

25           a.       LCAs 2361:2, 3528:1, 3528:2, and 2394. The first three had been  
26           provisionally approved, but LCA 2394 had not been listed.

27           b.       LCA 2361: apana 1 was described as "containing 16-1/2 acres;"  
28           and apana 2 as "containing 4 chains, 49 fathoms, 43 square feet," with  
29           foreign testimony referring to "kalo land" and native testimony  
30           referencing 14 patches and a pō`alima.

1 c. LCA 3528:1 was 3.9 acres, and testimony noting it was bounded  
2 by Waikapū Stream and contained lo`i and taro pauku.

3 d. LCA 3528:2 was 1.56 acres and was bounded on both sides by a  
4 kahawai and `auwai and contined taro aukū with a pō`alima bounding both  
5 sections.

6 e. LCA 2394: apana 1 was 1.36 acres, bounded on one side by  
7 “auwai,” and was a section of lo`i; apana 2 was 0.35 acres, bounded by  
8 “Waihee, by creek,” and contained “4 lois.”

9 5. Waikapu Properties requests recognition of appurtenant rights at 150,000  
10 gad for:

11 a. 0.25 acres of LCA 2361:2, or 37,500 gpd;

12 b. 3.9 acres of LCA 3528:1, or 585,000 gpd;

13 c. 1.56 acres of LCA 3528:2, or 234,000 gpd; and

14 d. 1.71 acres of LCA 2394:1-2, or 256,500 gpd.

15 6. The total appurtenant rights request is for 1,113,000 gpd for 7.42 acres.

16 u. Appurtenant rights are recognized for 742,000 gpd (7.42 acres x 100,000 gad) for  
17 7.42 acres of Parcel 3’s 657.2 acres. These 7.42 acres are located in Fields 731 and 733, a  
18 total of 197 acres, which are used for cattle grazing and for which Waikapu Properties  
19 have requested drinking water for cattle, which the Commission has recognized at 4,513  
20 gpd. As this water is for drinking and not irrigation, such amounts may serve all the cattle  
21 that are located on Fields 731 and 733.

22 1. The Commission need not address the reservation of appurtenant rights for  
23 Parcel 36’s 0.72 acres in 2003, as that request for appurtenant rights has been  
24 withdrawn without prejudice, as has all other appurtenant rights originally  
25 claimed by Waikapu Properties.

26 v. Waikapu Properties is issued a Category 2 permit for 1,819,775 gpd: 6,351  
27 gpd from Waikapū Stream and 1,813,424 gpd from the Waihe`e Ditch.

28 1. Fields 731 and 733 are issued under both appurtenant rights and existing  
29 uses as sugar cane lands purchased by Waikapu Properties but still under  
30 cultivation by HC&S at the time of designation, and the remaining fields under  
31 existing uses as sugar cane lands by HC&S at the time of designation.

1 w. Alternative sources:

2 1. The Commission has ruled, and the Court has confirmed, that when non-  
3 potable surface water and potable ground water are both available for non-potable  
4 purposes, the potable water is not practicably available. (*Waiāhole III*, 130 Haw.  
5 346, 310 P.3d 1047.)

6 i. Therefore, even though Waikapu Properties' two, and possibly  
7 three, potable wells may be available, they do not represent a practical  
8 alternative.

9 2. The two and possibly third agricultural wells may be practical alternatives,  
10 and Waikapu Properties should inform the Commission on the status of these  
11 wells as their development progresses.

12 3. Recycled wastewater from a future housing development is too off in the  
13 future to consider.

14  
15 307. **SWUPAs 2336/2337N—Colin Kailiponi & Alfred Santiago** (FOF 428)

16 a. On April 30, 2009, Colin Kailiponi, landowner, and Alfred Santiago, lessee, filed  
17 existing- and new-use SWUPAs for TMKs No. (2) 3-6-005:019 (“Parcel 19”) and No. (2)  
18 3-6-005:024 (“Parcel 24”).

19 b. Parcel 19 is 3.4 acres, and Parcel 24 is 0.2 acres, for which they requested an  
20 estimated 288,000 gpd in existing use for 0.5 acres of kalo lo`i and 0.2 acres of  
21 diversified agriculture, and an estimated 579,000 gpd in new use for 1 acre of kalo lo`i  
22 and 1 acre of diversified agriculture.

23 c. The land has been in the Kailiponi `ohana since the time of the Māhele.

24 d. They claimed appurtenant rights and were provisionally approved by the  
25 Commission.

26 e. Kailiponi and Santiago did not submit written testimony and did not participate in  
27 the CCH.

28 f. No action is taken on the appurtenant rights claim at this time.

29 g. The permit requests are denied, and the applicants must file new-use SWUPAs.  
30 At that time, the Commission would evaluate whether Kailiponi has traditional and  
31 customary rights as well as appurtenant rights.



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308. **SWUPAs 2260/2261N—Ho`okahi Alves (Miyashiro Trust)** (FOF 429)

- a. On April 23, 2009, the Jinsei Miyashiro Trust filed existing- and new-use SWUPAs for TMK No. (2) 3-6-006:027 (“Parcel 27”) which Ho`okahi Alves and his `ohana purchased in October 2014, where they now live.
- b. Parcel 27 is 0.712 acre, for which Alves request appurtenant rights of 213,600 gpd and a permit for 150,600 gpd, based on Reppun’s high estimate of 300,000 gad for kalo lo`i and Maui County single-family home standard of 600 gpd.
- c. Under SWUPA 2260, the Trust had requested 2,857 gpd for 0.1 acre of diversified agriculture for its `ohana, neighbors, and community members. A modified bucket method was used on October 23, 2008, using a 2-gallon bucket, calculating the flow over a 24-hour period as 40,000 gallons per day. Irrigating for half a day once a week, the estimated existing use was 2,857 gpd.
- d. Under SWUPA 2261N, the Trust had requested 75,000 gpd for 0.25 acre of kalo lo`i, using Reppun’s high estimate of 300,000 gad.
- e. Alves is currently requesting 150, 600 gpd for 0.5 acre of kalo lo`i and a garden.
- f. Parcel 27 is comprised of portions of LCA 10481:5, confirmed by RP 3131, LCA 5280:1-3, confirmed by RP 6699, and Government Grant 1678:2:

- 1. LCA 10481:5 is described as paukukalo.
- 2. LCA 5280:1-3 are described as containing lo`i, including a pō`alima within.
- 3. The pō`alima in LCA 5280:1-3 is part of Government Grant 1678:2.

The Commission had granted provisional recognition for the LCAs.

- g. Based on these documents, Alves claimed appurtenant rights for Parcel 27’s entire acreage of 0.712 acre.
- h. Alves does not translate his documents on Government Grant 1678:2, but it appears to consist of multiple pieces, of which the pō`alima is only a small part. Furthermore, the pō`alima appears to be only a small part—less than 1/25<sup>th</sup>—of Parcel 27’s 0.712 acre. Therefore, it would be reasonable to ascribe appurtenant rights to almost all of Parcel 27.

1 i. Parcel 27 is recognized as having appurtenant rights of 71,000 gpd (0.710 acre x  
2 100,000 gad).

3 j Alves is awarded a permit for 75,000 gpd (0.5 acre x 150,000 gad), 71,000 gpd of  
4 which are in Category 2, and the remaining 4,000 gpd not covered by appurtenant rights  
5 is in Category 3.

6 k. Alves is also recognized as having 600 gpd of domestic use, which is exempt  
7 from the permit requirements.

8  
9 309. **SWUPAs 2217/2218N—John Minamina Brown Trust/Crystal Smythe, Trustee** (FOF  
10 430)

11 a. On April 23, 2009, the John Minamina Brown Trust, through its sole trustee  
12 Crystal Smythe (formerly Crystal Alboro), filed existing- and new-use SWUPAs for  
13 TMKs No. (2) 3-6-006:025 (“Parcel 25”) and No. (2) 3-6-006:029 (“Parcel 29”).

14 b. Parcel 25 is 0.62 acre and Parcel 29 is 0.63 acre, for a combined total of 1.25  
15 acres, for which Smythe requests recognition of appurtenant rights of 375,000 gpd, based  
16 on Reppun’s high estimate of 300,000 gad.

17 c. Smythe also had requested : 90,300 gpd for an existing 0.3 acre of kalo lo`i and  
18 0.1 acre domestic garden, plus 255,000 gpd for an additional 0.85 acre of kalo lo`i, 0.43  
19 acre on Parcel 25 and 0.42 acre on Parcel 29. The total request was 345,300 gpd.  
20 (SWUPA 2217, p. 2, table 1, p. 4, table 3; SWUPA 2218N, p. 1, p.3, table 2.)

21 d. In her written testimony, Smythe had requested 300,600 gpd for 1 acre of kalo lo`i  
22 and 600 gpd for a 0.1 acre of papayas. At the hearing, she confirmed that she was  
23 requesting 0.85 acre in addition to her existing 0.3 acre of kalo lo`i, for a total of 1.15  
24 acres, and that she was requesting 600 gpd, not 300 gpd, for her garden.

25 e. Parcel 25 is comprised of a portion of LCA 2577:1, confirmed by RP 4948, and  
26 Parcel 29 is the entirety of LCA 3277, confirmed by RP 3119:

27 1. LCA 2577:1 contained 11 lo`i as well as a pō`alima.

28 2. LCA 3277 is described as containing lo`i kalo.

29 The Commission had granted provisional approval.

1 f. Parcel 25 is recognized as having appurtenant rights of 62,000 gpd (0.62 acre x  
2 100,000 gad), and Parcel 29 is recognized as having appurtenant rights of 63,000 gpd  
3 (0.63 acre x 100,000 gad).

4 g. Smythe is issued permits of:

5 1. Parcel 25: 87,000 gpd (0.58 acre x 150,000 gad), of which 22,500 gpd  
6 (0.15 acre x 150,000 gad) is an existing use, and 64,500 gpd (0.43 acre x 150,000  
7 gad) is a new use. 62,000 gpd is in Category 2, and the remainder that falls  
8 outside the appurtenant rights, or 25,000 gpd, is in Category 3.

9 2. Parcel 29: 85,500 gpd (0.57 acre x 150,000 gad), of which 22,500 gpd  
10 (0.15 acre x 150,000 gad) is an existing use, and 63,000 gpd (0.42 acre x 150,000  
11 gad) is a new use. 63,000 gpd is in Category 2, and the remainder that falls  
12 outside the appurtenant rights, or 22,500 gpd, is in Category 3.

13 h. Smythe is also recognized as having 600 gpd in domestic uses, which are exempt  
14 from the permit requirements.

15  
16 310. **SWUPA 2366N—George & Yoneko Higa** (FOF 431)

17 a. On April 23, 2009, George and Yoneko Higa filed a new-use SWUPA for TMKs  
18 No. (2) 3-6-006:003 (“Parcel 3”), No. (2) 3-6-006:004 (“Parcel 4”), No. (2) 3-6-006:005  
19 (“Parcel 5”), and No. (2) 3-6-006:016 (“Parcel 16”).

20 b. Parcel 3 is 1.093 acres, Parcel 4 is 0.222 acres, Parcel 5 is 0.16 acre, and Parcel 16  
21 is 0.16 acres.

22 c. The Higas request appurtenant rights for all acres on the four parcels for 416,100  
23 gpd, based on Reppun’s high estimate of 300,000 gad, and a permit for 3,000 gpd for one  
24 acre of garden crops.

25 d. The Higas are not using stream water because their access to Waikapū Stream has  
26 been severely limited by upstream users and alterations to the traditional `auwai. Before  
27 the `auwai mauka of her land was destroyed, Yoneko Higa’s family had always used  
28 `auwai water for gardening, and as recently as 1989, for kalo.

29 e. Parcel 3’s 1.093 acres are comprised of:

30 1. the entirety of LCA 3397:1 & 2, confirmed by RP 4122, consisting of 0.84  
31 acre, with `āpana 1 described as a “paukukalo” and `āpana 2 as a “pahale.”

1           2.       at least half of LCA 3523:1, confirmed by RP 3141, consisting of 0.229  
2       acre, with `āpana 1 described as “a section of lois.”

3           3.       the entirety of LCA 2361:1, confirmed by RP 498, consisting of 0.024  
4       acre, for which water rights were reserved in 1959.

5       f.       Higa claims appurtenant rights to 0.843 acre of Parcel 3, after subtracting 0.25  
6       acre for the pahale but not the 0.024 acre derived from LCA 2361:1, whose water rights  
7       were reserved in 1959, from Parcel 3’s 1.093 acres.

8       g.       Parcel 4’s 0.222 acre is comprised of about 90 percent of LCA 3224:3, confirmed  
9       by RP 4115, described as a “section of lois.”

10       h.       Parcel 5’s 0.16 acre is comprised of a portion of a government grant, confirmed  
11       by RP 1713. The grant does not provide the land use at the time of the grant.

12       i.       Parcel 16’s 0.16 acre is comprised of three government grants, confirmed by RP’s  
13       1710:2 (0.06 acre) and 1520/170 (0.10 acre). The grants do not provide the land use at  
14       the time of the grant.

15       j.       Appurtenant rights therefore attach to 1.041 acres as follows:

16           1.       Parcel 3:       0.819 acre (1.093 acres reduced by 0.25 acre and 0.024  
17       acre).

18           2.       Parcel 4:       0.222 acre.

19           3.       Parcel 5:       0 acre.

20           4.       Parcel 16:      0 acre.

21       k.       The Commission had granted provisional approval for LCAs 3397:1& 2, 3523:1,  
22       and 3224:3.

23       l.       Two of the Higas’ four parcels are recognized as having appurtenant rights of  
24       104,100 gpd (1.041 acres x 100,000 gad).

25       m.       The Higas are also recognized as having 3,000 gpd of domestic use for one acre  
26       of garden crops, which are not subject to the permit requirements.

27  
28   311.   **SWUPA 2368—Teruo Kamasaki** (FOF 432)

29       a.       On April 23, 2009, Teruo and Evelyn Kamasaki filed an existing-use SWUPA for  
30       TMK No. (2) 3-6-007:010 (“Parcel 10”). The Kamasaki’s mistakenly filed out a “new  
31       use” form, but the SWUPA was filed before the April 30, 2009, deadline for existing-use

1 applications. The Kamasakis' daughter, Cynthia McCarthy, testified, because her dad  
2 passed away since the filing of the SWUPA.

3 b. Parcel 10 is 0.71 acre, for which McCarthy requests recognition of appurtenant  
4 rights of 213,000 gpd, based on Reppun's high estimate of 300,000 gad, and a permit for  
5 2,010 gpd for 0.67 acre of her yard and garden, based on Maui County's standard for  
6 domestic cultivation of 3,000 gad, in which her father used to grow fruits and vegetables  
7 until July 2004, when the pipe that used to bring water from the `auwai to their land was  
8 pulled out and destroyed.

9 c. In July 2004, during construction to widen and level the plantation road, Wailuku  
10 Agribusiness destroyed the culvert and the concrete flume on both sides of the road,  
11 destroying the Kamasakis' pipe system in the process. WWC has replaced the  
12 Kamasakis' one-inch pipe under the road and installed a four- or six-inch culvert, but the  
13 Kamasakis' pipe continues to be vandalized and broken. McCarthy would like to see the  
14 pipe reinstalled and would use the water to restart the non-commercial garden.

15 d. Parcel 10 is comprised of a portion of LCA 432, confirmed by RP 102. McCarthy  
16 states that the LCA describes the existence of numerous lo`i, but in the Commission's  
17 Provisional Order, LCA 432 is described as follows: "NT ref. wet & dry patches, 2 mud  
18 houses, 1 grass house. NR ref. stream border, numerous taro patches." McCarthy's  
19 exhibit does not translate from the Hawaiian, but the native testimony includes "maloo  
20 kahi mau loi" and "2 halelepo 1 hale pili."

21 e. One-half of Parcel 10's 0.71 acre, or 0.355 acre, is entitled to appurtenant rights.  
22 The existence of dry patches and three houses, without further specification and without  
23 information on the size of LCA 432, leads to a 50:50 split between kalo lo`i and other  
24 uses for LCA 432 at the time of the Māhele, *supra*, FOF 168.

25 f. Parcel 10 has appurtenant rights of 35,500 gpd (0.355 acre x 100,000 gad).

26 g. McCarthy's permit request is for a new use. Even though it was filed before the  
27 existing-use application deadline of April 30, 2009, there was no existing use on April  
28 30, 2008, the effective date of designation for Nā Wai `Ehā as a surface Water  
29 Management Area, because use ceased in July 2004.

1           h.       However, McCarthy’s request is exempt from the permit requirements, because it  
2           is a domestic use, for which she is recognized as having a use of 2,010 gpd (0.67 acre x  
3           3,000 gad).

4  
5   312.   **SWUPA 2155—Clayton Suzuki** (FOF 433)

6           a.       On April 20, 2009, Clayton Suzuki and his wife, Linda Kadosaki, filed an  
7           existing-use SWUPA for TMKs No. (2) 3-6-006:009 (“Parcel 9”), No. (2) 3-6-006: 013  
8           (“Parcel 13”) and No. (2) 3-6-006:022 (“Parcel 22”).

9           b.       Parcel 9 is 0.12 acre, Parcel 13 is 4.253 acres, and Parcel 22 is 0.06 acre. Suzuki  
10          owns a ten percent undivided interest in Parcel 22.

11          c.       Suzuki’s existing-use request was for 17,379 gpd, estimated between May 2007  
12          and December 2007, and metered from January-April 2008, after a meter was installed in  
13          December 2007. Irrigation was over 4.34 acres: bitter melon on Parcel 9’s 0.12 acre;  
14          pasture on 0.02 acre of Parcel 22’s 0.06 acre; and dryland taro, bitter melon and fruit  
15          trees on 1.2 acres, landscaping on 1.0 acre, and pasture on 2.0 acres (total of 4.2 acres) of  
16          Parcel 13’s 4.253 acres, with the remaining 0.053 acres with a house and swimming pool.

17          d.       The Suzukis moved to the property in 2005, and in 2007-2008, the acreage was  
18          not fully planted. Over the past five years, the average use was 21,371 gpd, which is the  
19          requested use for the application. The Suzukis have a county water meter for household  
20          use.

21          e.       The Suzukis purchased the property from Wailuku Agriculture in 2003 with  
22          reservations of water rights.

23          f.       The Commission granted provisional approval for 11 of 12 LCAs: one for Parcel  
24          9, nine of ten for Parcel 13, and one for Parcel 22, which is shared with Parcel 13.

25          g.       Suzuki suggested that his appurtenant rights could be quantified by reference to  
26          historical lo`i size, using a figure of 40 by 40 feet, or 1,600 square feet, and counting the  
27          number of lo`i in the records for the LCAs, arriving at 183 lo`i. However, he did not  
28          calculate what the acreage would be.

29          h.       After subtracting for government grants and the LCA that had no documentation  
30          of water use at the time of the Māhele, Suzuki claimed appurtenant rights for 3.889 acres,  
31          from the following LCAs:

- 1           1.     Parcel 9:     0.12 acre: all of LCA 3526:1, described as “pauku loi.”
- 2           2.     Parcel 22:    0.06 acre: half of LCA 3107:6, described as “3 loi.”
- 3           3.     Parcel 13:
- 4                 i.     0.06 acre: half of LCA 3107:6, described as “3 loi.”
- 5                 ii.    0.120 acre: all of LCA 3224:2, described as “taro pauku.”
- 6                 iii.   0.038 acre: 4.61% of LCA 3224:3, described as “taro
- 7                    pauku.”
- 8                 iv.    0.430 acre: all of LCA 3224:4, described as “1 loi.”
- 9                 v.     0.320 acre: all of LCA 3224:5, described as “house lot.”
- 10                vi.    2.460 acres: all of LCA 3337:1-3, described as “taro
- 11                   pauku,” “taro loi,” and “taro pauku,” respectively.
- 12                vii.   0.071 acre: 23.67% of LCA 3523:1, described as “taro
- 13                   pauku.”
- 14                viii.   0.150 acre: all of LCA 3523:3, described as “3 taro lois.”
- 15                ix:     0.060 acre: all of LCA 5324:4, described as “2 loi.”
- 16           i.     Subtracting 0.320 acre for the house lot described on LCA 3224:5, the total
- 17                acreage with taro loi is 3.569 acres (3.889 acres – 0.320 acre).
- 18           j.     Appurtenant rights for Parcels 9, 13, and 22 are preserved, because the reservation
- 19                was made in 2003, and the constitutional amendment preserved appurtenant rights on
- 20                November 8, 1978.
- 21           k.     Parcels 9, 13, and 22 are recognized as having appurtenant rights of 356,900 gpd
- 22                (3.569 acres x 100,000 gad).
- 23           l.     The Suzukis are issued a Category 2 permit for 10,850 gpd (4.34 acres x 2,500
- 24                gad), because it falls within their appurtenant rights.

25

26   313.   **SWUPA 2156—Nadao Makimoto** (FOF 434)

- 27           a.     On April 20, 2009, Nadao Makimoto filed an existing-use SWUPA for TMK No.
- 28                (2) 3-6-006:021 (“Parcel 21”). Clayton Suzuki testified for Makimoto at the hearing.
- 29           b.     Parcel 21 is 0.585 acres, which Makimoto purchased from Sunichi Arakawa in
- 30                1964.

1 c. Makimoto requested a permit for 10,400 gpd for the 0.585 acres—0.30 acre of  
2 vegetable truck crops, 0.10 acre of fruit trees, and 0.185 acre of landscaping. Makimoto's  
3 existing use was measured by a meter installed in August 2008, and from September  
4 2008 to February 2009, the average daily use was 10,400 gpd, which he used to estimate  
5 his existing use from May 2007 to April 2008.

6 e. Makimoto also claimed appurtenant rights for Parcel 21's 0.585 acres, which  
7 contains the entirety of LCA 491:4's 0.115 acre and LCA 3522's 0.470 acres. The  
8 Commission had granted provisional approval.

9 f. LCA 491:4 was described as containing 8 lo`i, kula wauke, and 3 sweet potato  
10 patches.

11 g. LCA 3522 was described as containing 7 parcels:

- 12 1. parcel 1 with taro pauku and a kula.
- 13 2. parcel 2 with 4 taro lo`i.
- 14 3. parcel 3 with 4 taro lo`i.
- 15 4. parcel 4 with 5 taro lo`i.
- 16 5. parcel 5 with 9 taro lo`i.
- 17 6. parcel 6 with 1 taro lo`i.
- 18 7. parcel 7 with potato mala.

19 h. While Makimoto did not provide calculations on the amount of appurtenant rights  
20 he requested, he based his request on the number of lo`i in the LCAs which comprise  
21 Parcel 21: multiplying each by 1,600 square feet (a 40 ft. x 40 ft. lo`i), then by a water  
22 duty of 150,000 gad (the duty the Commission had adopted in the Nā Wai `Ehā contested  
23 case—CCH-MA06-01, June 2010).

24 i. Using Kame`eleihiwa's guiding principle #3, *supra*, FOF 168, fifty percent of  
25 LCA 491:4's 0.115 acre would be attributable to kalo lo`i, or 0.058 acre, as well as fifty  
26 percent of LCA 3522's 0.470 acre, or 0.235 acre, for a total of 0.293 acre of Parcel 21's  
27 0.585 acre.

28 j. Parcel 21 is recognized as having appurtenant rights of 29,300 gpd (0.293 acre x  
29 100,000 gad).

30 k. Makimoto is issued a permit for 1,465 gpd for 0.585 acre. The permit is in  
31 Category 2, because it is both an existing use and within his appurtenant rights.



1 l. His measured existing use of 10,400 gpd for 0.585 acres is not “necessary for  
2 economic and efficient utilization,” and a water duty of 2,500 gad for small-scale  
3 diversified agriculture is what his use should be based on.

4 m. His use falls under a permit instead of domestic use, because more than half (0.3  
5 of 0.585 acre) is being used for truck farm crops, which is presumably being conducted  
6 for commercial purposes.

7  
8  
9 **b. Waikapū Stream**

10  
11 314. **SWUPA 2163—David Niehaus** (FOF 435)

12 a. On April 6, 2009, David Niehaus filed an existing-use SWUPA for TMK No. (2)  
13 3-5-002:007, a 163-acre property for which he requested 48,000 gpd for 0.275 acre of  
14 taro and reforestation of 8 acres of native trees, later referred to in his Opening Brief as  
15 “approximately 1 acre of taro and 8 acres of other food crops (such as sweet potato) and  
16 native Hawaiian plants.”

17 b. Niehaus claimed appurtenant rights but did not provide documents during the  
18 provisional approval process, with the Commission noting that Wailuku Agribusiness had  
19 reserved all water and water rights. Niehaus purchased his property from Wailuku  
20 Agribusiness on February 21, 2002, with a reservation of all water rights, but Niehaus  
21 claimed that Wailuku Agribusiness never transferred to WWC any rights of the property  
22 that Wailuku Agribusiness purported to reserve.

23 c. On July 31, 2015, Niehaus submitted documents in support of his appurtenant  
24 rights claim.

25 d. While Niehaus filed an Opening Brief, he did not submit written testimony and  
26 did not participate in the CCH.

27 e. Niehaus’s appurtenant rights claim is denied without prejudice and he may refile  
28 at any time.

29 f. His existing-use SWUPA is denied, and he may file a new-use SWUPA.

30  
31 315. **SWUPA 2276—Ione Shimizu** (FOF 436)

1 a. On April 23, 2009, Ione Shimizu filed an existing-use SWUPA for TMK No. (2)  
2 3-5-012:031 (“Parcel 31”), for which she requested a permit for an estimated 11,052 gpd:  
3 9,600 gpd for 0.032 acre of kalo lo`i and 1,452 gpd for 0.484 acre for a non-commercial  
4 garden, both of which she estimated using Reppun’s high estimate of 300,000 gad and  
5 Maui County diversified agriculture standard of 3,000 gad.

6 b. Parcel 31 is 0.53 acre, with 0.484 acre in a domestic garden and 0.032 acre in lo`i  
7 kalo.

8 c. Shimizu had not claimed appurtenant rights in her SWUPA nor did she participate  
9 in the provisional approval process. However, in her written testimony of 2/3/16, Shimizu  
10 claimed appurtenant rights, based on documents that showed that Parcel 31 is comprised  
11 of a portion of LCA 205, confirmed by RP 7660, which is described as “kalo patches of  
12 this land” and “coffee ground.”

13 d. Shimizu states that it is unclear where the “kalo patches” and coffee ground” were  
14 located but believes that the kalo patches were on her portion of LCA 205, because Parcel  
15 31 contains remnants of an extensive lo`i complex with stone terracing (at least ten  
16 distinct lo`i in various sizes) and an `auwai running through the south side of the parcel.

17 e. Shimizu therefore believes that Parcel 31’s entire 0.53 acre has appurtenant rights.

18 f. However, the drawn map for LCA 205 depicts a clear demarcation between  
19 “Coffee Ground” and the rest of the LCA, with approximately one-eighth (1/8) as coffee  
20 grounds.

21 g. Therefore, about seven-eighths (7/8), or 0.46 acre of Parcel 31’s 0.53 acre, were  
22 in kalo patches at the time of the Māhele.

23 h. Parcel 31 is recognized as having appurtenant rights of 46,000 gpd (0.46 acre x  
24 100,000 gad).

25 i. Shimizu is issued a Category 2 permit for 6,400 gpd for a 0.032-acre kalo lo`i  
26 (0.032 acre x 200,000 gad). Irrigation requirements of 200,000 gad for individual lo`i is  
27 applied instead of 150,000 gad for a lo`i complex, because of the small size of the  
28 patch(es).

29 j. Shimizu is also recognized as having a domestic use of 1,452 gpd for a 0.484  
30 acre domestic garden, which is exempt from the permit requirements.

31

1 316. **SWUPA 2268—Katherine Riyu** (FOF 437)

2 a. On April 23, 2009, Katherine Ryu filed existing-use SWUPA 2268 for TMK No.  
3 (2) 3-5-012:028 (“Parcel 28”). Pamela Dickson and her son, Dustin Vegas, who care for  
4 Riyu’s garden and cultivate lo`i kalo on part of the land, testified on Riyu’s behalf.

5 b. The deed to Parcel 28 contains a reservation of appurtenant rights when Wailuku  
6 Sugar Company sold the parcel to Katherine Riyu’s husband, but no information on the  
7 date of sale was introduced into evidence.

8 c. The Commission had granted provisional approval of appurtenant rights, based on  
9 LCA 434.

10 d. Parcel 28 is 0.61 acre and part of LCA 434:1, confirmed by RP 495, which was  
11 described as containing 41 lo`i, and with the map accompanying the LCA showing it  
12 surrounded by a lo`i pō`alima and lo`i pa`ahao.

13 e. Riyu requests recognition of appurtenant rights for 183,000 gpd, based on  
14 Reppun’s high estimate of 300,000 gad for lo`i kalo applied to 0.61 acre.

15 f. Vegas and Dickson irrigate a garden and lawn and 11 lo`i kalo on about half, or  
16 0.305 acre. They believe Maui County’s single-family home’s 600 gpd is sufficient for  
17 the garden, and request 91,500 gpd for the lo`i (0.305 acre x 300,000 gad) for a total  
18 permit request of 92,100 gpd.

19 g. In the original SWUPA, Riyu had requested 1,230 gpd on 0.41 acre of Parcel 28’s  
20 0.61 acres, using Maui County’s diversified agriculture standard of 3,000 gad.

21 h. Dickson and Vega have replaced 0.305 acre with kalo lo`i nearly two years ago  
22 but have not filed a new-use request.

23 i. The deed to Parcel 28 must be submitted to the Commission to determine when  
24 the water reservation was made. If it occurred after November 8, 1978, Parcel 28 has  
25 appurtenant rights of 61,000 gpd (0.61 acre x 100,000 gad).

26 j. A permit for 45,750 gpd is issued for 0.305 acre of kalo lo`i. If Parcel 28’s  
27 appurtenant rights are preserved, all 45,750 gpd fall under appurtenant rights, and the  
28 permit is in Category 2. If appurtenant rights have been extinguished, the permit falls in  
29 Category 3.

30 k. Domestic use of 600 gpd is recognized, for which no permit is required.

31

1 317. **SWUPA 2338—Judith Yamanoue** (FOF 438)

2 a. On April 30, 2009, Melvin Riyu and Judith Yamanoue filed an existing-use  
3 SWUPA for TMKs No. (2) 3-5-012:027 (“Parcel 27”) and No. (2) 3-5-012:041 (“Parcel  
4 41”), on which Pamela Dickson and her son, Dustin Vega live. Dickson testified on  
5 Yamanoue’s behalf.

6 b. Parcel 27 is 0.71 acre and Parcel 41 is 0.29 acre, for a total of 1.0 acre.

7 c. Riyu and Yamanoue did not claim appurtenant rights in their SWUPAs and did  
8 not participate in the provisional process. However, Dickson’s January 18, 2016 written  
9 testimony and supporting documents claimed appurtenant rights for both parcels, which  
10 were comprised of portions of LCA 434:1, confirmed by RP 495; LCA 2199, confirmed  
11 by RP 3129; Government Grant 1673:3 to John Richardson; and a pō`alima. LCA 434:1  
12 was described as containing 41 kalo lo`i; LCA 2199 was described as kalo land with one  
13 pō`alima; Government Grant 1673:3 was described as containing three taro patches.

14 d. The overlay of parcels 27 and 41 over the two LCAs and the Grant show them to  
15 apparently be entirely in LCA 434:1, Grant 1673:3, and the pō`alima.

16 e. Dickson and Vega requested appurtenant rights to both parcels for a total of 1.0  
17 acre, or 300,000 gpd, using Reppun’s high estimate of 300,000 gad for kalo lo`i.

18 f. The existing-use SWUPA stated that the existing use in 2008 was 1,920 gpd for a  
19 garden on 0.64 acre of Parcel 27’s 0.71 acres, using Maui County diversified agriculture  
20 standard of 3,000 gad.

21 g. Dickson’s and Vegas’s permit request now consists of the following:

22 1. irrigation of a non-commercial garden and lawn, for which they request  
23 600 gpd, based on Maui County’s single-home standard of 600 gpd.

24 2. cultivation of 11 lo`i kalo on 0.5 acre, for which they request 150,000 gpd  
25 (0.5 acre x Reppun’s high estimate of 300,000 gad).

26 h. Dickson stated that the kalo lo`i has been in place for two or three years, replacing  
27 0.5 acre of the original 0.64 acre garden.

28 i. A new-use permit has not been filed.

29 j. Parcels 27 and 41 are recognized as having 100,000 gpd (1.0 acre x 100,000 gad)  
30 in appurtenant rights.

- 1 k. A new-use permit for 75,000 gpd for 0.5 acre of kalo lo`i is issued, which is in  
2 Category 2, because all 75,000 gpd falls under the appurtenant rights of 100,000 gpd.  
3 l. Domestic use of 600 gpd is recognized, for which a permit is not required.  
4

5 318. **SWUPA 2277—Warren Soong** (FOF 439)

6 a. On April 23, 2009, Warren Soong filed an existing-use SWUPA for TMK No. (2)  
7 3-5-012:026, which was subsequently subdivided into two parcels: 1) TMK No. (2) 3-5-  
8 012:047 (“Parcel 47”), which Soong still owns and on which he lives; and 2) TMK No.  
9 (2) 3-5-012:026 (“Parcel 26”), which was sold to the Pellegrino `ohana. Parcel 26 is  
10 being addressed with the Pellegrinos’s applications, SWUPAs 2332 and 2333N.

11 b. Parcel 47 is 0.85 acre, for which Soong requests recognition of appurtenant rights  
12 of 255,000 gpd, based on Reppun’s high estimate of 300,000 gad for lo`i kalo, and a  
13 permit for 600 gpd for his garden and lawn, based on the Maui County single-family  
14 home standard of 600 gpd.

15 c. Parcel 47 is comprised of a portion of LCA 2199, confirmed by RP 3129, and  
16 described as kalo land with a pō`alima within it.

17 d. The Commission had granted provisional approval of appurtenant rights.

18 e. Soong is recognized as having appurtenant rights of 85,000 gpd (0.85 acre x  
19 100,000 gad) for Parcel 47.

20 f. Soong is also recognized as having domestic use of 600 gpd, which is exempt  
21 from the permit requirements.  
22

23 319. **SWUPA 2311—Theodore & Zelig Harders** (FOF 440)

24 a. On April 23, 2009, the Harders filed an existing-use SWUPA for TMK No. (2) 3-  
25 5-012:039 (“Parcel 39”), on which the Harders’ `ohana has lived on for generations.

26 b. Parcel 39 is 0.403 acres and consists of portions of three kuleana awards:

27 1. LCA 3296, confirmed by RP 3147, described by Harder as `āpana 1 being  
28 a section of kalo land. But LCA 3296 consisted of two `āpana, with `āpana 1  
29 described as “a section of kalo,” and `āpana 2 described as “Potato ground

30 2. LCA 6041:3, confirmed by RP 2813, described as containing two lo`i  
31 kalo.

1           3.       LCA 460:1, confirmed by RP 2165, referred to by Harders as being  
2           described as “numerous taro patches,” but actually described as “numerous kalo  
3           patches and a kula.”

4           c.       The great majority of Parcel 39, about 80 percent, is comprised of LCA 3296,  
5           with a small portion, about 10 percent, from LCA 6041:3, and an even smaller portion  
6           from LCA 460:1, with the latter comprising less than 5-10 percent of Parcel 39, or about  
7           0.02 to 0.04 acres.

8           d.       LCA 460:1 was 7.41 acres, of which Parcel 28 of SWUPAs 2240/3467N now  
9           comprises 3.71 acres, and Parcel 1 of SWUPA 2230 now comprises 1.978 acres, for a  
10          total of 5.69 acres, or about 77 percent of LCA 460:1.

11          e.       Ancient lo`i are still prevalent on the 77 percent of LCA 460:1 that now comprise  
12          Parcels 28 and 1, and they are adjacent to Waikapū Stream and a traditional `auwai.

13          f.       The Harders had concluded that all of the three LCAs had been in kalo lo`i and  
14          requested 120,900 gpd in appurtenant rights for Parcel 39, based on Reppun’s high  
15          estimate of 300,000 gad for kalo lo`i applied to Parcel 39’s entire 0.403 acres.

16          g.       However, LCA 3296 was kalo lo`i and potato ground, so only half had  
17          appurtenant rights. About 80 percent of Parcel 39’s 0.403 acre is comprised of LCA  
18          3296, or 0.32 acre, of which half, or 0.16 acre, would have appurtenant rights.

19          h.       Moreover, a small part of LCA 460:1 was in kula, described as “numerous kalo  
20          patches and a kula.” Observable ancient lo`i are present on at least 77 percent of what  
21          was LCA 460:1, so a reasonable estimate is that 80 percent was in kalo lo`i at the time of  
22          the Māhele. LCA 460:1 comprises only 0.02 to 0.04 (average of 0.03 acre) acre of Parcel  
23          39’s 0.403 acres, and 80 percent, or 0.02 acre would have been in kalo lo`i.

24          i.       Thus, of Parcel 39’s 0.403 acre, 0.233 acre (0.402 acre – [0.16 + 0.01 acre])  
25          would have appurtenant rights.

26          i.       The Commission had granted provisional recognition of appurtenant rights.

27          j.       Parcel 39 is recognized as having appurtenant rights of 23,300 gpd (0.233 acre x  
28          100,000 gad).

29          k.       The Harders also requested a permit for 600 gpd for their garden and lawn, based  
30          on Maui County’s single-family home standard of 600 gpd.

1           1.       The Harders are recognized as having 600 gpd for domestic use, which are  
2           exempt from the permit requirements.

3  
4   320.   **SWUPAs 2240/3467N—T & Z Harders Family Limited** (FOF 441)

5           a.       On April 23, 2009, T & Z Harders Family Limited filed an existing-use SWUPAs  
6           for TMK No. (2) 3-5-004:028 (“Parcel 28”), and nearly three years later, on February 6,  
7           2012, a new-use SWUPA for the same parcel.

8           b.       Parcel 28 is 11.247 acres and is comprised of:

- 9                   1.       Approximately one-half of LCA 460.1, confirmed by RP 2165.
- 10                   2.       The entirety of LCA 8808:1, 2, & 4, confirmed by RP 2164;
- 11                   3.       Approximately one-third of LCA 3296, confirmed by RP 3147.
- 12                   4.       Approximately one-half of LCA 6041:3, confirmed by RP 2813.
- 13                   5.       Part of Government Grant 3042 to Adam Pupuhi.

14           c.       The Commission granted provisional recognition of appurtenant rights, with the  
15           comment that rights had been assigned to Wailuku Sugar, but Nicholas Harders stated  
16           that this property has been in their `ohana for generations, and of their five properties,  
17           three have deed restrictions from 1967, but two, including Parcel 28, do not. The Harders  
18           `ohana has submitted five SWUPAs. They have lived on some of these parcels for  
19           generations and were able to buy the other parcels, which have reservation of water  
20           rights, assigned by Edmund Rogers to Wailuku Sugar in 1967. The parcels under  
21           SWUPAs 2240 and 2311 are the ones without reservations.

22           d.       For LCA 8808, `āpana 1 and 2 were each described as a section of lo`i, and  
23           `āpana 4 was described as 4 kula. But the land consisted of four pieces, with `āpana 3  
24           described as 6 lo`i. Therefore, about three fourths of LCA 8808 was in kalo lo`i.

25           e.       For LCA 3296, Harders states that `āpana 1 is described as a piece of kalo land,  
26           but LCA 3296 consisted of two `āpana, with `āpana 1 described as “a section of kalo,”  
27           and `āpana 2 described as “Potato ground.” Therefore, about half of LCA 3296 was in  
28           kalo lo`i.

29           f.       LCA 6041:3 was described as having two lo`i kalo. Therefore, all of LCA 6041:3  
30           was in kalo lo`i.

1 g. For LCA 460:1, confirmed by RP 2165, referred to by Harders as being described  
2 as “numerous taro patches,” was actually described as “numerous kalo patches and a  
3 kula.” LCA 460:1 was 7.41 acres, of which Parcel 28 now comprises 3.71 acres, and  
4 Parcel 1 of SWUPA 2230 now comprises 1.978 acres, for a total of 5.69 acres, or about  
5 77 percent of LCA 460:1. Ancient lo`i are still prevalent on the 77 percent of LCA 460:1  
6 that now comprise Parcels 28 and 1, and they are adjacent to Waikapū Stream and a  
7 traditional `auwai. Therefore, about 80 percent of LCA 460:1 was in kalo lo`i.

8 h. For Government Grant 3042, Harders states that it does not indicate what was  
9 cultivated on this portion of Parcel 28, but visible lo`i kalo terracing across the land  
10 indicates this portion was historically cultivated in kalo. However, the map of Parcel 28  
11 overlaid on the LCAs and Government Grant show that Grant 3042 covered a vast area  
12 and that the portion now included in Parcel is an extremely small part. Therefore, an  
13 insignificant amount of Government Grant 3042 can be attributed to kalo lo`i.

14 i. Thus, for Parcel 28’s 11.247 acres, approximately 7.57 acres have appurtenant  
15 rights:

16 1. LCA 460:1: 80 percent of the 3.71 acres now in Parcel 28, or 2.97 acres.

17 2. LCA 8808:1, 2, & 4: 75 percent of the entirety, or 5.5 acres, which falls  
18 within Parcel 28, or 4.13 acres.

19 3. The remaining LCAs and Government Grant total 2.04 acres (11.247 acres  
20 - 9.21 acres). The Government Grant is about 60 percent, or 1.22 acre; LCA 3296  
21 about 30 percent, or 0.61 acre; and LCA 6041:3 about 10 percent, or 0.20 acres.

22 a. Government Grant: insignificant appurtenant rights.

23 b. LCA 3296: 0.31 acres (50 percent of 0.61 acres).

24 c. LCA 6041:3 0.16 acres (80 percent of 0.20 acres).

25 j. In contrast to the 7.57 acres of Parcel 28 that has appurtenant rights, the Harders  
26 requested recognition of appurtenant rights of 3,374,100 gpd, based on Parcel 28’s entire  
27 11.247 acres and Reppun’s high estimate of 300,000 gad for lo`i kalo.

28 k. Parcel 28 is recognized as having appurtenant rights of 757,000 gpd (7.57 acres x  
29 100,000 gad).

30 l. The Harders also request a permit for current and future uses of 1,507,500 gpd:



1 1. 7,500 gpd for 3 acres of a large non-commercial garden, part of  
2 which had previously been a plant nursery, estimated by applying  
3 *Waiāhole*'s diversified agriculture irrigation rate of 2,500 gad. The 3-acre  
4 non-commercial garden replaces part of the plant nursery and is estimated  
5 to use less—7,500 gpd—than the original estimated existing use of  
6 20,680 gpd.

7 2. 1,500,000 gpd for 5 acres of kalo lo`i, using Reppun's high  
8 estimate of 300,000 gad. One acre had been the original request of the  
9 February 6, 2012 new-use SWUPA, and the request is now expanded to  
10 add 4 acres.

11 m. The Harders are granted an existing-use permit of 9,000 gpd for their 3-acre  
12 garden, and a new-use permit of 750,000 gpd for five acres of kalo lo`i.

13 i. 153,000 gpd are in Category 1 as an exercise of their traditional and  
14 customary rights: one acre of their garden, or 3,000 gpd of their existing-use  
15 permit, and 150,000 gpd of their new-use permit for one acre of kalo lo`i

16 ii. All except for 2,000 gpd of the total permit amount of 759,000 gpd fall  
17 within Parcel 28's appurtenant rights, so 604,000 gpd are in Category 2, and  
18 2,000 gpd is in Category 3.

19  
20 321. **SWUPAs 2332/2333N—Hōkūao & Alana Pellegrino** (FOF 442)

21 a. On April 30, 2009, Victor and Walette Pellegrino filed existing- and new-use  
22 SWUPAs for TMKs No. (2) 3-5-012:020 ("Parcel 20") and No. (2) 3-5-012:023 ("Parcel  
23 23"). The Pellegrinos own and live on Parcel 20, and their son and his wife, Hōkūao and  
24 Alana Pellegrino, own and live on Parcel 23. Subsequently, Victor and Walette  
25 purchased TMK No. (2) 3-5-012:026 ("Parcel 26") from Warren Soong, part of Soong's  
26 original application under SWUPA 2277. Hōkūao Pellegrino testified on behalf of all.

27 b. Parcel 20 is 0.175 acre; Parcel 23 is 2.134 acre; and Parcel 26 is 0.671 acre.

28 c. The deed to Parcel 20 contains a reservation of appurtenant rights. Edmund  
29 Rogers assigned the water rights to Wailuku Sugar Company in 1967.

30 d. Parcel 20 is comprised of LCA 8808:3, confirmed by RP 2164, and described as  
31 containing 6 lo`i.

1 e. Parcel 23 is comprised of LCA 3340:1, confirmed by RP 3115, and LCA 3110:1,  
2 confirmed by RP 3152. LCA 3340:1 is described as “kuleana taro patches.” LCA 3110:1  
3 is described as a section of lo`i that contains a pō`alima and also described as 40 taro  
4 patches and a pō`alima. Additionally, Parcel 23 has remnants of an extensive lo`i  
5 complex with stone terracing, at least 12 lo`i ranging in size from 300 square feet to  
6 6,000 square feet, and adjacent to Waikapū Stream.

7 f. Parcel 26 is comprised of a portion of LCA 2199, confirmed by RP 3129,  
8 described as kalo land with a pō`alima. Like Parcel 23, Parcel 26 has remnants of an  
9 extensive lo`i system, with a number of intact lo`i throughout the parcel.

10 g. The Commission provisionally approved appurtenant rights for the LCAs  
11 associated with all three parcels, but noted the reservation on Parcel 20.

12 h. The Pellegrinos request appurtenant rights of 640,200 gpd for Parcel 23 and  
13 201,300 gpd for Parcel 26, for a total of 841,500 gpd, based on Reppun’s high estimate of  
14 300,000 gad for lo`i kalo.

15 i. If the deed to Parcel 20 survives the reservation of appurtenant rights, they request  
16 an additional 52,500 gpd in appurtenant rights.

17 j. Appurtenant rights to Parcel 20 have been extinguished, because they were  
18 reserved in 1967, prior to the constitutional amendment preserving appurtenant rights on  
19 November 8, 1978.

20 k. Appurtenant rights are recognized for Parcels 23 and 26:

21 1. Parcel 23: 213,400 gpd (2.134 acres x 100,000 gad).

22 2. Parcel 26: 67,100 gpd (0.671 acre x 100,000 gad).

23 l. They also request permits for existing uses of 62,400 gpd on Parcels 20 and 23,  
24 and new uses of 187,800 gpd on Parcel 26 as follows:

25 1. Parcel 20: 600 pgd for a 0.09-acre home garden, using Maui County’s  
26 single-family home standard of 600 gpd.

27 2. Parcel 23: 1,800 gpd for 0.6 acre of diversified agriculture, using  
28 3,000 gad; and 60,000 gpd for 0.2 acre of kalo lo`i, using Reppun’s high estimate  
29 of 300,000 gad.

30 3. Parcel 26: 186,300 gpd for 0.621 acre of kalo lo`i, using Reppun’s  
31 high estimate of 300,000 gad, and 1,500 gpd for a 0.5-acre garden, for a total

1 request of 187,800 gpd. However, Parcel 26 is 0.671 acre, so the garden would be  
2 0.05 acre, not 0.5 acre, or 150 gpd, for a revised total of 186,450 gpd in proposed  
3 new uses.

4 m. Permits are granted as follows:

5 1. Parcel 20: Domestic use of 600 gpd is recognized and exempt from  
6 the permit requirements.

7 2. Parcel 23: 1,500 gpd for 0.6 acre of diversified agriculture (0.6 acre x  
8 2,500 gad), and 30,200 gpd for 0.2 acre of kalo lo`i (0.2 acre x 150,000 gad), for a  
9 total of 31,700 gpd, which is in Category 2, because it is within the appurtenant  
10 rights of 213,400 gpd.

11 3. Parcel 26: 150 gpd for 0.05 acre of the domestic garden (0.05 acre x  
12 3,000 gad), and 93,150 gpd for 0.621 acre of kalo lo`i (0.621 acre x 150,000 gad),  
13 for a total of 93,300 gpd. 67,100 gpd is a Category 2 permit, because it falls  
14 within the appurtenant rights of 67,100 gpd, and the remainder, or 26,200 gpd, is  
15 in Category 3 as a new use.

16  
17 322. **SWUPA 2239—Theodore & Zelig Harders** (FOF 443)

18 a. On April 23, 2009, the Harders filed an existing-use SWUPA for TMK No. (2) 3-  
19 5-0012:016 (“Parcel 16”).

20 b. Parcel 16 is 0.32 acre and has a reservation of water rights, which Edmund Rogers  
21 assigned to Wailuku Sugar in 1967. The Commission had granted provisional approval  
22 but noted the reservation by Edmund Rogers.

23 d. If the deed survives the reservation, the Harders request recognition of  
24 appurtenant rights for 96,420 gpd, based on Reppun’s high estimate of 300,000 gad for  
25 lo`i kalo, applied to 0.3214 acre.

26 e. Parcel 16’s appurtenant rights were extinguished in 1967, prior to the  
27 constitutional amendments preserving appurtenant rights on November 8, 1978.

28 f. The Harders also request a permit for 600 gpd for their garden and lawn.

29 g. The Harders are recognized for 600 gpd of domestic use, which are exempt from  
30 the permit requirements.

31

1 323. **SWUPA 2237—Karl & Lee Ann Harders** (FOF 444)

2 a. On April 23, 2009, Karl and Lee Ann Harders filed an existing-use SWUPA for  
3 TMK No. (2) 3-5-012:013 (“Parcel 13”).

4 b. Parcel 13 is 0.24 acre and has a reservation of water rights, which Edmund Rogers  
5 assigned to Wailuku Sugar in 1967.

6 c. The Commission had granted provisional approval but noted the reservation by  
7 Edmund Rogers.

8 d. Parcel 13’s appurtenant rights were extinguished in 1967, prior to the  
9 constitutional amendments preserving appurtenant rights on November 8, 1978.

10 e. They request a permit for 600 gpd for watering their yard and garden of  
11 approximately 0.08 acre.

12 f. The Harders are recognized for 600 gpd of domestic use, which are exempt from  
13 the permit requirements.

14  
15 324. **SWUPA 2235—Russell Gushi** (FOF 445)

16 a. On April 23, 2009, Russell Gushi filed an existing-use SWUPA for TMK No. (2)  
17 3-5-012:015 (“Parcel 15”), which he purchased in 1992.

18 b. Parcel 15 is 0.319 acre, for which he requests appurtenant rights of 95,700 gpd,  
19 and a permit for 600 gpd for his garden and fruit trees.

20 c. The deed has a reservation of appurtenant rights when Edmund Rogers sold the  
21 property to the prior owner (presumed to be in 1967, when Rogers reserved water rights  
22 for properties he had sold, See SWUPA 2237—Karl & Lee Ann Harders, SWUPA  
23 2239—Theodore & Zelig Harders, SWUPA 2238—Theodore & Zelig Harders Family  
24 Limited Partnership).

25 d. The Commission had granted provisional approval but noted the reservation by  
26 Edmund Rogers.

27 e. Parcel 15’s appurtenant rights were extinguished in 1967, prior to the  
28 constitutional amendments preserving appurtenant rights on November 8, 1978.

29 f. Gushi is recognized for 600 gpd of domestic use, which are exempt from the  
30 permit requirements.

1 325. **SWUPA 2271—Waldemar & Darlene Rogers** (FOF 446)

2 a. On April 23, 2009, Waldemar and Darlene Rogers filed an existing-use SWUPA  
3 for TMK No. (2) 3-5-012:012 (“Parcel 12”).

4 b. Parcel 12 is 0.29 acre, for which the Rogers request recognition of appurtenant  
5 rights for 87,000 gpd, based on Reppun’s high estimate of 300,000 gad, and a permit for  
6 600 gpd for 0.145 acre of their lawn and garden, based on Maui County’s single-family  
7 home standard of 600 gpd.

8 c. Waldemar Rogers inherited Parcel 12 from his father, Edmund Rogers, around  
9 1970, and the deed contains a reservation of appurtenant rights. The Commission had  
10 granted provisional recognition of appurtenant rights but had noted that the rights had  
11 been assigned to Wailuku Sugar.

12 d. Parcel 12’s appurtenant rights were extinguished, because the reservation was  
13 made prior to the constitutional amendment of November 8, 1978, which preserved  
14 appurtenant rights.

15 e. The Rogers are recognized as having a domestic use of 600 gpd, which is exempt  
16 from the permit requirements.

17  
18 326. **SWUPAs 2213/2214N—Alan Birnie**<sup>52</sup> (FOF 447)

19 a. On April 23, 2009, Alan Birnie filed existing- and new-use SWUPAs for TMK  
20 No. (2) 3-5-012:010 (“Parcel 10”).

21 b. Parcel 10 is 0.23 acres, for which Birnie requests appurtenant rights of 69,000  
22 gpd, based on Reppun’s high estimate of 300,000 gad for kalo lo`i, and a permit for 1,950  
23 gpd: a new use for 0.0045 acre of kalo lo`i and an existing use for 0.202 acre of his  
24 garden, multiplied by Maui County’s standard for diversified agriculture of 3,000 gad.

25 c. Edmund Rogers assigned the water rights to Wailuku Sugar in 1967. The  
26 Commission granted provisional approval of appurtenant rights but noted the reservation  
27 to Wailuku Sugar.

28 d. Parcel 10’s appurtenant rights were extinguished in 1967, prior to the  
29 constitutional amendments preserving appurtenant rights on November 8, 1978.

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<sup>52</sup> The hearing transcript incorrectly labels Birnie’s testimony as that of Lester Nakama, Tr., 9/19/16, p. 63, l. 3 to p. 71, l. 8.

1 e. Birnie is issued a new-use permit of 900 gpd for 0.0045 acre of kalo lo`i (0.0045  
2 acre x 200,000 gad), which is in Category 3.

3 d. He is also recognized as having 600 gpd in domestic use, which is exempt from  
4 the permit requirements.

5  
6 327. **SWUPA 2211—Dorothy Bell** (FOF 448)

7 a. On April 23, 2009, Dorothy Bell filed an existing-use SWUPA for TMK No. (2)  
8 3-5-012:011 (“Parcel 11”), a 0.26-acre property, for which she requested an estimated  
9 1,440 gpd, using the bucket method, for 0.17 acre of her yard and garden.

10 b. Edmund Rogers assigned the water rights to her property to Wailuku Sugar in  
11 1967.

12 c. Bell did not claim appurtenant rights in her SWUPA but participated in the  
13 provisional approval process and was granted provisional approval for two LCAs with  
14 the notation that Edmund Rogers had assigned the water rights to Wailuku Sugar.

15 d. Bell did not participate in the CCH.

16 e. No action is taken on Bell’s permit request and appurtenant rights determination.  
17 However, the Commission notes that Bell’s appurtenant rights were reserved in 1967,  
18 prior to the preservation of appurtenant rights by the constitutional amendment of  
19 November 8, 1978.

20 f. If Bell requests recognition from the Commission for domestic use, she would be  
21 entitled to 510 gpd for her 0.17 acre yard and garden (0.17 acre x 3,000 gad), which  
22 would be exempt from the permit requirements.

23  
24 328. **SWUPA 2212—Douglas Bell** (FOF 449)

25 a. On April 23, 2009, Douglas Bell filed an existing-use SWUPA for TMK No. (2)  
26 3-5-012:008 (“Parcel 8”).

27 b. Parcel 8 is 0.34 acre, for which Bell requests recognition of appurtenant rights of  
28 102,000 gpd, based on Reppun’s high estimate of 300,000 gad, and a permit for 2,160  
29 gpd for 0.25 acre of a garden and lawn, using the “bucket method” (180 gallons x 12  
30 hours).

1 c. Bell did not claim appurtenant rights in his SWUPA, stating that Edmund Rogers  
2 had assigned the water rights to Wailuku Sugar in 1967, but participated in the  
3 provisional approval process and was granted provisional recognition with the notation  
4 that rights had been reserved to Wailuku Sugar.

5 d. However, during oral testimony, Bell stated that when he bought the property  
6 from Edmund Rogers in 1972, he wasn't aware of any reservation and thought it  
7 belonged to Edmund Rogers. He also provided a copy of his deed and stated that there  
8 wasn't anything in it about reservation of water. Upon review of the deed, the Hearings  
9 Officer stated for the record that there was no description of any reservation in it.

10 e. Parcel 8 is comprised of a portion of LCA 3108:1, confirmed by RP 2314, with  
11 the description that the land was "aina kalo" with 2 mookalo." This is the same LCA as  
12 claimed under SWUPA 2315—Leinaala Kihm, who stated that her deed had a  
13 reservation.

14 f. Parcel 8 is recognized as having appurtenant rights of 34,000 gpd (0.34 acre x  
15 100,000 gad), subject to Bell's submitting his deed to the Commission, complete with  
16 any and all attachments that are part of the document.

17 g. Bell is recognized for 1,020 gpd of domestic use for his garden and lawn, which is  
18 exempt from the permit requirements.

19  
20 329. **SWUPA 2238—Theodore & Zelig Harders Family Limited Partnership** (FOF 450)

21 a. On April 23, 2009, the Theodore & Zelig Harders Family Limited Partnership  
22 filed an existing-use SWUPA for TMKs No. (2) 3-5-012:006 ("Parcel 6") and No. (2) 3-  
23 5-012:007 ("Parcel 7").

24 b. The Harders `ohana has submitted five SWUPAs. They have lived on some of  
25 these parcels for generations and were able to buy the other parcels, which have  
26 reservation of water rights, assigned by Edmund Rogers to Wailuku Sugar in 1967. The  
27 parcels under SWUPAs 2240 and 2311 are the ones without reservations.

28 c. Parcel 6 is 0.32 acre, and Parcel 7 is 0.36 acre, for a total of 0.68 acre.

29 d. The Commission granted provisional approval but noted the deeds' reservations  
30 to Wailuku Sugar.

1 e. If appurtenant rights survive the deeds' reservations, the Harders Family request  
2 204,000 gpd in appurtenant rights, based on Reppun's high estimate of 300,000 gad for  
3 kalo lo'i.

4 f. Appurtenant rights have been extinguished, because the reservations were made  
5 before the November 8, 1978 constitutional amendments preserving appurtenant rights.

6 g. They also request a permit for 1,800 gpd for three homes and surrounding lawn  
7 and garden, using the Maui County single-family home standard of 600 gpd. In the 2009  
8 SWUPA, the request was for 1,200 gpd for two homes—one on half of each of the two  
9 parcels.

10 h. Domestic uses of 600 gpd each for three homes and gardens are recognized, for a  
11 total of 1,800 gpd, which are exempt from the permit requirements.

12  
13 330. **SWUPA 2259—Jerri Young (Miyamoto)** (FOF 451)

14 a. On April 23, 2009, Elsie Miyamoto filed an existing-use SWUPA for TMK No.  
15 (2) 3-5-012:009 ("Parcel 9"). She has since passed away, and her daughter and current  
16 landowner, Jerri Jane K. Young, submitted testimony and requested that her name replace  
17 her mother's on the permit application.

18 b. Parcel 9 is 0.19 acres, for which Young requests appurtenant rights of 57,000 gpd  
19 and a permit for 600 gpd for her lawn and garden.

20 c. Parcel 9 was purchased by Elsie Miyamoto around 1967 from Edmund Rogers,  
21 and the deed has a reservation of appurtenant rights. The Commission had granted  
22 provisional approval, with the notation that rights had been reserved to Wailuku Sugar.

23 d. Parcel 9's appurtenant rights were extinguished in 1967, prior to the November 8,  
24 1978 constitutional amendment preserving appurtenant rights.

25 e. Since Miyamoto passed away, her neighbor Nicholas Harders has cared for her  
26 garden and lawn, using the same amount of water for the same uses and believes the  
27 single-family home standard of 600 gpd will suffice.

28 f. Young is recognized for 600 gpd in domestic uses, which is exempt from the  
29 permit requirements.

30  
31 331. **SWUPA 2224—James Dodd** (FOF 452)



1 a. On April 23, 2009, James Dodd filed an existing-use SWUPA for TMK No. (2) 3-  
2 5-012:005 (“Parcel 5”), where he has lived since he purchased it in 1977.

3 b. Parcel 5 is 0.32 acre, for which Dodd requests recognition of appurtenant rights  
4 for 96,000 gpd and a permit for 4,113 gpd in existing uses.

5 c. The deed to Parcel 5 contains a reservation of water rights to Wailuku Sugar in  
6 1967. The Commission had granted provisional approval but also noted the reservation to  
7 Wailuku Sugar.

8 d. Parcel 5’s appurtenant rights have been extinguished, because they were reserved  
9 in 1967, prior to the constitutional amendment preserving such rights on November 8,  
10 1978.

11 e. Dodd irrigates 0.26 acre of fruit trees, garden, and lawn, and measured the  
12 irrigation rate by a modified “bucket method,” filling each of two quart jars in 7 seconds.  
13 He then extrapolated the 7 seconds into a 24-hour day, resulting in a rate of 6,170 gpd,  
14 which he reduced by one-third to 4,113 gpd. He did a similar measurement for his  
15 neighbor, Patricia Federcell, with the same results.

16 f. Dodd reduced the measured rate of 6,170 gpd to 4,113 gpd, because: “My  
17 irrigation application varies depending of (*sic*) the season. During the wet winter months,  
18 I may not irrigate at all. But during the hot summer months, I sometimes irrigate  
19 continuously, over a 24-hour period. Based on many years of water use over a twelve-  
20 month period I irrigate Mrs. Federcell’s (as well as his own) garden using the hoses about  
21 2/3 of the time. So, I estimate the average water use at 2/3 of 6,170 gallons per day, or  
22 4,133 gallons per day.”

23 g. However, 2/3s of 6,170 gpd, or 4,133 gpd, still reflects 24-hour irrigation over  
24 eight months, while his testimony was that only “during the hot summer months, I  
25 sometimes irrigate continuously, over a 24-hour period.”

26 h. 4,133 gpd over Federcell’s 0.25 acre equals a rate of 15,896 gad. This is far in  
27 excess of Maui County’s “average typical residential customer” use of 400 to 600 gpd for  
28 combined indoor and outdoor use, irrigation of 1,500 to 2,000 gpd for “lush tropical  
29 landscape treatment” in arid areas, and Maui County’s domestic cultivation standard of  
30 3,000 gad.

1 i. Dodd is recognized as having a domestic use of 780 gpd for his 0.26 acre garden,  
2 which is exempt from the permit requirements. Assuming that Dodd uses the same two  
3 hoses and fills a quart jar for each in 7 seconds—or 28 seconds per gallon for each  
4 hose—780 gpd would take an average of 3.03 hours of irrigation. This would be the  
5 average irrigation over a year, with higher and lower periods of irrigation throughout the  
6 year.

7  
8 332. **SWUPA 2230—Patricia Federcell** (FOF 453)

9 a. On April 23, 2009, Patricia Federcell filed existing-use SWUPA for TMK No. (2)  
10 3-5-012:001 (“Parcel 1”). Federcell’s neighbor James Dodd, cares for her garden and she  
11 gave him permission to testify on her behalf.

12 b. Parcel 1 is 1.198 acres, for which Federcell and Dodd request appurtenant rights  
13 of 593,400 gpd, and a permit for 4,113 gpd for a 0.25-acre home garden.

14 c. In her existing-use application, Federcell stated that although she had purchased  
15 her property, her deed did not indicate that the appurtenant rights were reserved.  
16 However, in granting provisional recognition, the Commission had noted that there was a  
17 reservation to Wailuku Sugar, and Federcell’s Parcel 1 is adjacent to Dodd’s Parcel 5  
18 (whose appurtenant rights had been extinguished in 1967 (See SWUPA 2224—James  
19 Dodd) and both are derived from LCA 460.1.

20 d. Parcel 1 is comprised of a portion of LCA 460:1, confirmed by RP 2165.

21 e. LCA 460:1 was 7.41 acres and described as “numerous kalo patches and a kula.”  
22 Parcel 1’s 1.978 acres and Parcel 28’s (SWUPA 2240) 3.71 acres total 5.69 acres, or  
23 about 77 percent of LCA 460:1. Ancient lo`i are still prevalent on the 77 percent of LCA  
24 460:1 that now comprise Parcels 1 and 28, and they are adjacent to Waikapū Stream and  
25 a traditional `auwai. Therefore, about 80 percent of LCA 460:1 was in kalo lo`i.

26 f. Parcel 1 would have appurtenant rights equal to 80 percent of its 1.198 acres, or  
27 958,000 gpd (0.958 acres x 100,000 gad), if its appurtenant rights were not extinguished  
28 prior to November 8, 1978. Before the Commission recognizes such rights, Federcell  
29 must provide a copy of her deed to support her statement that the deed does not have a  
30 reservation of appurtenant rights.

1 g. On his own property, Dodd irrigates 0.26 acre of fruit trees, garden, and lawn, and  
2 measured the irrigation rate by a modified “bucket method,” filling each of two quart jars  
3 in 7 seconds. He then extrapolated the 7 seconds into a 24-hour day, resulting in a rate of  
4 6,170 gpd, which he reduced by one-third to 4,113 gpd. He did a similar measurement for  
5 his neighbor, Patricia Federcell, with the same results.

6 h. Dodd reduced the measured rate of 6,170 gpd to 4,113 gpd, because: “My  
7 irrigation application varies depending of (*sic*) the season. During the wet winter months,  
8 I may not irrigate at all. But during the hot summer months, I sometimes irrigate  
9 continuously, over a 24-hour period. Based on many years of water use over a twelve-  
10 month period I irrigate Mrs. Federcell’s (as well as his own) garden using the hoses about  
11 2/3 of the time. So, I estimate the average water use at 2/3 of 6,170 gallons per day, or  
12 4,133 gallons per day.”

13 i. However, 2/3s of 6,170 gpd, or 4,133 gpd, still reflects 24-hour irrigation over  
14 eight months, while his testimony was that only “during the hot summer months, I  
15 sometimes irrigate continuously, over a 24-hour period.”

16 j. 4,133 gpd over 0.25 acre equals a rate of 16,532 gad. This is far in excess of Maui  
17 County’s “average typical residential customer” use of 400 to 600 gpd for combined  
18 indoor and outdoor use, irrigation of 1,500 to 2,000 gpd for “lush tropical landscape  
19 treatment” in arid areas, and Maui County’s domestic cultivation standard of 3,000 gad.

20 k. Federcell is recognized as having a domestic use of 750 gpd for her 0.25 acre  
21 garden, which is exempt from the permit requirements. Assuming that Federcell uses the  
22 same two hoses and fills a quart jar for each in 7 seconds—or 28 seconds per gallon for  
23 each hose—750 gpd would take an average of 2.92 hours of irrigation. This would be the  
24 average irrigation over a year, with higher and lower periods of irrigation throughout the  
25 year.

26  
27 333. **SWUPA 2315—Leinaala Kihm** (FOF 454)

28 a. On April 30, 2009, Leinaala Kihm filed an existing-use SWUPA for TMK No. (2)  
29 3-5-012:003 (“Parcel 3”), requesting an estimated 2,200 gpd of domestic use for her lawn  
30 and garden.

31 b. Parcel 3 is 14,000 square feet (0.32 acre).

1 c. In her SWUPA, Kihm did not claim appurtenant rights and later stated that her  
2 deed had a reservation, but participated in the provisional approval process and was  
3 granted provisional approval for LCA 3108.1, with the notation “two moos of kalo’ for  
4 Apana 1. Water rights assigned to Wailuku sugar.”

5 d. Kihm did not participate in the CCH.

6 e. No action is taken on the request for recognition of appurtenant rights. Should  
7 Kihm reapply, she must submit documentation of the date of her water rights reservation,  
8 because she is in the same area as those who had reservations in 1967, prior to the  
9 preservation of appurtenant rights in 1978.

10 e. Kihm’s request for a permit is denied. It is noted, however, that she had applied  
11 for domestic use of 2,200 gpd for 0.32 acres, which would be higher than the rate of  
12 3,000 gad for domestic use. She would be exempt from the permit requirements up to  
13 3,000 gad for her acreage, or 960 gpd for 0.32 acre.

14  
15 334. **SWUPA 2354—Fong Construction Co.** (FOF 455)

16 a. On April 30, 2009, Fong Construction Company Inc. filed an existing-use  
17 SWUPA for an unspecified TMK.

18 b. Estimated existing-use was 3,507 gpd, with a request for 4,000 gpd, on 2 acres for  
19 dust control.

20 c. No appurtenant rights were claimed.

21 d. No further information was provided nor did Fong Construction Co. participate in  
22 the contested case hearing.

23 e. Fong Construction Co.’s existing-use SWUPA is denied. It may apply for a new-  
24 use SWUPA.

25  
26 335. **SWUPA 2180—Hawaiian Cement** (FOF 456)

27 a. On April 24, 2009, Hawaiian Cement filed an existing-use SWUPA for TMK No.  
28 3-8-007:101 for dust control on 15 of its 56 acres, with an estimated use of 9,959 gpd,  
29 using gravel instead of grass to reduce the amount of water needed.

30 b. No appurtenant rights were claimed nor did it participate in the provisional  
31 approval process.

1 c. No further documents were provided, nor did Hawaiian Cement participate in the  
2 contested case hearing.

3 d. Hawaiian Cement’s existing-use SWUPA is denied. It may apply for a new-use  
4 SWUPA.

5  
6 336. **SWUPA 2352—U.S. Fish & Wildlife Service** (FOF 457)

7 a. The U.S. Fish & Wildlife Service (“USFWS”) filed an existing-use SWUPA for  
8 TMK No. 3-2-005:002, dated April 30, 2009 but marked as received by the Commission  
9 on 12:59 p.m. on May 1, 2009.

10 b. The TMK is for Keālia Pond National Wildlife Refuge, into which Waikapū  
11 Stream flows at its terminus. There is no actual diversion by USFWS.

12 c. The Refuge receives water from two other sources, Pohakea and Paleaahu  
13 Streams, and occasionally pumps groundwater to augment pond levels. It is difficult to  
14 state what quantity of water is required from Waikapū Stream itself, and USFWS stated  
15 that it was willing to work with the state to develop a more exact estimate of the quantity  
16 of water necessary.

17 d. Although USFWS claimed appurtenant rights in its SWUPA, it did not provide  
18 any documents nor participate in the provisional approval process.

19 e. USFWS also provided no further information nor participate in the contested case  
20 hearing.

21 f. The existing-use SWUPA was filed after the April 30, 2009 deadline, *supra*, FOF  
22 8, and would have been treated as a new-use SWUPA, but the USFWS did not participate  
23 in the contested case hearing, so the application is denied without prejudice.

24 g. It should be noted that, with the interim restoration to Waikapū Stream, *supra*,  
25 FOF 17, noticeably more water is being observed in Keālia Pond, *supra*, FOF 298.

26  
27 **5. Multiple Sources**

28  
29 **a. Waihe`e Ditch**

1 337. The `Īao-Maniania Ditch, which drops water from Wailuku River into the Waihe`e Ditch,  
2 is now the first place that the Waihe`e Ditch carries other than Waihe`e River water.

3  
4 338. **SWUPA 2142—Hale Mua Properties** (FOF 460)

5 a. On April 29, 2009, Hale Mua Properties filed a new-use SWUPA for TMK No.  
6 (2) 3-3-002:031, a 238-acre property, for which it requested 800,000 gpd for 238 acres of  
7 an affordable and market housing project and 1,000,000 gpd for the Maui Department of  
8 Water Supply public water system for domestic uses. Hale Mua Properties proposed to  
9 build a surface water treatment plant to produce potable water.

10 b. Hale Mua Properties did not claim appurtenant rights nor participate in the  
11 provisional approval process.

12 c. Hale Mua Properties did not submit written testimony nor participate in the CCH.

13 d. No action is taken on the new-use permit application. Applicant may refile a new-  
14 use SWUPA at any time.

15  
16 339. **SWUPA 2351N—Wahi Ho`omalua LP** (FOF 461)

17 a. On April 30, 2009, Wahi Ho`omalua filed a new-use SWUPA for TMKs (2) 3-3-  
18 002-001 (“Parcel 1”), consisting of 834.016 acres, and (2) 3-3-002-026 (“Parcel 26”),  
19 consisting of 0.886 acres, updated on July 7, 2010 by letter and amendment, requesting  
20 984,516 gpd for:

21 1. Parcel 1: 240,000 gpd to produce 144,000 gpd of potable drinking  
22 water for 80 potential connections on 40 lots, 739,200 gpd for 168 acres planted  
23 in macadamia nuts, at a rate of 4,400 gad.

24 2. Parcel 26: 5,316 gpd for flood irrigation on 0.886 acres of wetland  
25 taro at 6,000 gad.

26 b. Wahi Ho`omalua acquired the land from Wailuku Agribusiness Co., Inc. in 2003.  
27 The deed for parcel 26 stated that the water rights had been conveyed to HC&S by Bill of  
28 Sale dated December, 24, 1924.

29 1. The land was part of Wailuku Sugar Co. sugar cane fields planted in the  
30 early 1900’s until about 1982, when the land was planted in macadamia nuts, and  
31 active cultivation stopped in 1999. The macadamia trees in fields 36 and 37 in the

1 northeast portion of the land are still growing and the irrigation system is still in  
2 place although in disrepair. Field 36 was watered from Waihe`e Ditch via  
3 reservoir 37, and field 37 was watered from Wailuku River via the `Īao-Maniania  
4 Ditch and reservoir 45.

5 c. Parcels 1 and 26 include about 19 LCAs along South Waiehu Stream and several  
6 LCAs along Wailuku River. Irrigation water would be supplied from the Waihe`e Ditch  
7 via reservoir 37 and from Wailuku River via the `Īao-Maniania Ditch and reservoir 45.

8 d. In the provisional approval process, Wahi Ho`omalulu claimed appurtenant rights  
9 for seventeen (17) LCAs in Parcel 1 and one (1) LCA in Parcel 26. The Provisional Order  
10 recognized twelve (12) LCAs, denied 1 LCA without prejudice, and made no  
11 determination of the remaining 5 LCAs, including the LCA in Parcel 26.

12 e. On February 5, 2015, Wahi Ho`omalulu's Opening Brief included a declaration  
13 requesting it be granted quantification of its appurtenant rights on 17 LCAs, the 12 that  
14 were provisionally approved and the 5 that had not yet been determined, and requested  
15 that its water permit be amended to include water to grow kalo on all of its LCAs with  
16 appurtenant rights.

17 f. On July 28, 2016, Wahi Ho`omalulu further amended its request for appurtenant  
18 rights and its water use permit request:

19 1. Withdrew its request for 240,000 gpd to produce domestic water for future  
20 development.

21 2. Left unchanged its request for 739,200 gpd for 168 acres planted in  
22 macadamia nuts.

23 3. Reduced its request for wetland kalo to six of the LCAs that it claimed had  
24 appurtenant rights and in the amount for growing kalo in the quantification of  
25 appurtenant rights.

26 g. Of the original 18 LCAs Wahi Ho`omalulu had claimed had appurtenant rights, it  
27 did not pursue the LCA that had been denied and withdrew its request for 2 of the 5 that  
28 had not yet been determined because it was not able to quiet their titles. Of the remaining  
29 15, LCA 3456 in Parcel 26 is also a portion of the same land awarded in LCA 2468:1. In  
30 the event appurtenant rights to Parcel 26's LCA 3456 has been extinguished, Wahi  
31 Ho`omalulu would pursue that portion of LCA 2468:1 that remains in Parcel 1.

1 h. Finally, during testimony at the September 19, 2016 hearings, Wahi Ho`omalu  
2 reduced its request for a water-use permit for wetland kalo to 2.64 acres on six of the  
3 LCAs that it was claiming for appurtenant rights, or 396,000 gpd (2.64 acre x 150,000  
4 gad). If appurtenant rights to LCA 3456 for Parcel 26 has been extinguished, substituting  
5 0.21 acre of LCA 2468:1 would reduce the water-use permit request to 2.42 acres, or  
6 363,000 gpd (2.42 acres x 150,000 gad).

7 i. Wahi Ho`omalu's final claim for appurtenant rights was based on the following  
8 LCAs:

9 1. LCA 2461:2: 0.45 acres described as six patches or reference to lois, for  
10 which it claimed appurtenant rights on all 0.45 acres.

11 2. LCA 2468:2: 2.94 acres described as 7 patches or reference to lois, for  
12 which it claimed appurtenant rights on all 2.94 acres.

13 a. However, 2.94 acres includes both `āpana 1 and 2, which are 2.49  
14 acres and 0.45 acres, respectively.

15 b. Therefore, LCA 2468:2 is 0.45 acres, all of which should be  
16 claimed for appurtenant rights.

17 3. LCA 2554:1: 0.50 acres described as areas of kalo, for which it claimed  
18 appurtenant rights for all 0.50 acres

19 4. LCA 2554:2: 1.38 acres described as taro and kalo, for which it claimed  
20 appurtenant rights for all 1.38 acres.

21 5. LCA 3259: 4.83 acres described as 1 taro section and 2 pō`alimas or  
22 large kalo plots, for which it claimed appurtenant rights for all 4.83 acres.

23 6. LCA 3275D: 2.06 acres described as kalo and kula in `āpana 1, 1 lo`i  
24 each in `āpana 2 and 3, 3 lo`i in `āpana 4, 46 lo`i in `āpana 5, and 6 lo`i in `āpana

25 6. `Āpana 2-6 are also described collectively as Chief's Taro Plantation.

26 a. Wahi Ho`omalu claimed appurtenant rights for half, or 1.03 acres,  
27 because of the presence of kula along with kalo.

28 b. However, `Āpana 1 was 2.03 acres, and the Chief's Taro Plantation  
29 was 0.03 acres. Therefore half of 2.03 acres, or 1.015 acres, should be  
30 claimed for appurtenant rights, and all of the Chief's Taro Plantation, or



- 1                   0.03 acres, should be claimed for appurtenant rights, for a total of 1.045  
2                   acres.
- 3           7.    LCA 3275E:2:        1.12 acres described as lo`i sections or kalo, for  
4           which it claimed appurtenant rights for all 1.12 acres.
- 5           8.    LCA 3275E:3:        6.62 acres described as 22 taro patches or 22 lo`i  
6           and a Chief`s Taro Plantation, for which it claimed appurtenant rights for all 6.62  
7           acres.
- 8           9.    LCA 3275E:6:        3.39 acres described as taro pauka or lo`i sections  
9           and kalo, for which it claimed appurtenant rights for all 3.39 acres.
- 10          10.   LCA 3275W: 0.49 acres, described as a house site.
- 11                a.    Wahi Ho`omalulu claimed appurtenant rights for 0.24 acres after  
12                subtracting 0.25 acres for the house site.
- 13                b.    However, no description other than a house site was provided, and  
14                the parcel was bordered on three sides by kula and on the fourth, by a pali  
15                (cliff).
- 16                c.    Therefore, no appurtenant rights are attached to LCA 3275W.
- 17          11.   LCA 3451:  1.53 acres, described as kalo and kula, for which it claimed  
18                appurtenant rights for half, or 0.765 acres, because of the presence of kula as well  
19                as kalo.
- 20          12.   LCA 11222:  1.58 acres described as kalo and kula, for which it claimed  
21                appurtenant rights for half, or 0.79 acres, because of the presence of kula as well  
22                as kalo.
- 23          13.   LCA 1806:2: 0.46 acres described as 3 taro patches or kalo land of 3 lo`i  
24                and which Wahi Ho`omalulu also states contained a house site, for which it  
25                therefore claimed appurtenant rights for 0.21 acres after subtracting 0.25 acres for  
26                the house site.
- 27                a.    However, there is no reference to a house site on `āpana 2.
- 28                b.    Therefore, appurtenant rights should accrue to all 0.46 acres.
- 29          14.   LCA 3456:  0.886 acres described as 3 sections, taro pauka, 25 taro  
30                patches, 3 taro patches or kalo land and 3 lo`i, for which it claims appurtenant

rights for all 0.886 acres if the deed for Parcel 26 survives the water reservation made in 1924.

15. LCA 2468:1 2.49 acres described as taro land and pasture or kalo and kula lands.

a. Wahi Ho`omalulu states that this is the same parcel of land as LCA 3456 awarded under a different grant and owned as part of parcel 1. The portion of LCA 2468:1 that is not in neighboring TMKs is 0.43 acres, of which it claims appurtenant rights for half, or 0.215 acres, because of the presence of kula as well as kalo.

j. In sum, Wahi Ho`omalulu requests:

- 1. 739,200 gpd for 168 acres planted in macadamia nuts, at a rate of 4,400 gad.
- 2. 396,000 gpd (2.64 acre x 150,000 gad) for kalo lo`i, or in the alternative, 363,000 gpd (2.42 acres x 150,000 gad), as follows:

<u>LCA</u>	<u>Acreage</u>	<u>Appt. Rights Acreage</u>		<u>Permit Request (gpd)</u>
		<u>Claimed</u>	<u>Revised</u>	
2461:2	0.45	0.45	0.45	0
2468:2	2.94	2.94	0.45	0
2554:1	0.50	0.50	0.50	0
2554:2	1.38	1.38	1.38	75,000 (0.5 acre)
3259	4.83	4.83	4.83	75,000 (0.5 acre)
3275D	2.06	1.03	1.045	0
3275E:2	1.12	1.12	1.12	0
3275E:3	6.62	6.62	6.62	0
3275E:6	3.39	3.39	3.39	0
3275W	0.49	0.24	0.00	0
3451	1.53	0.765	0.765	75,000 (0.5 acre)
11222	1.58	0.79	0.79	75,000 (0.5 acre)
1806:2	0.46	0.21	0.46	31,500 (0.21 acre)
3456	0.886	0.886	0.886	64,500 (0.43 acre)
2468:1*	<u>0.43 (part)</u>	<u>0.215</u>	<u>0.215</u>	<u>31,500 (0.21 acre)</u>

1	Totals:	28.236/	25.366/	22.901/	396,000/
2		27.78*	24.695*	22.23*	363,000*

3 \* alternative to LCA 3456.

4 k. Appurtenant rights for LCA 3456 were extinguished when Parcel 26's water  
5 rights were reserved in 1924.

6 l. 14 of 15 LCAs on Parcel 1 have combined appurtenant rights to 22.23 acres on  
7 27.29 acres of land derived from these 14 LCAs, or 2,223,000 gpd (22.23 acres x 100,000  
8 gad):

9 1. The portion of Parcel 1 that is derived from each of the 14 LCAs has  
10 appurtenant rights corresponding to the acreage recognized with appurtenant  
11 rights. For example, appurtenant rights accrue to all of LCA 3259's 4.83 acres,  
12 but only to 0.79 acres of LCA 11222's 1.58 acres.

13 2. LCA 3275W's entire 0.49 acres had no appurtenant rights, because there  
14 is no record of anything other than a house lot.

15 m. A category 2 new-use permit for 400,500 gpd, which fall within the appurtenant  
16 right of 2.2 mgd, is issued for that portion of Parcel 1 that contains the 14 LCAs with  
17 recognized appurtenant rights.

18 1. the requested amount under LCA 1806:2 was equivalent to the acreage  
19 claimed with appurtenant rights (0.21 acre) but the acreage with appurtenant  
20 rights has been found to be the entire 0.46 acre of the LCA, so the permit takes  
21 into consideration the increase by 0.25 acre for LCA 1806:2's appurtenant rights,  
22 or an additional 37,500 gpd, raising the total permit from 363,000 gpd to 400,500  
23 gpd.

24 2. While the exercise of appurtenant rights is limited to the lands from which  
25 those rights are derived, permits are issued on TMKs and not to specific portions  
26 of TMKs. Thus, although the application identified not only specific LCAs but  
27 also the amount of land within each LCA on which the permit would be  
28 exercised, the appurtenant right may be exercised on any of the LCAs with  
29 recognized appurtenant rights, limited only by the maximum right attached to any  
30 recognized LCA.

31 n. A category 3 new-use permit for 420,000 gpd (168 acres x 2,500 gad) is issued  
32 for 168 acres of macadamia trees.

1  
2 **i. Piihana Field 49 Kuleana Pipe**  
3

4 340. The Piihana-Field 49 Kuleana Pipe carries water from the Waihe`e Ditch to the  
5 following kuleanas:  
6

7 341. **SWUPA 2192—Charles Dando Sr.** (FOF 463)

8 a. On April 20, 2009, Charles Dando Sr. filed separate existing-use SWUPAs for  
9 TMKs No. (2) 3-5-030:116 (“Parcel 116”), situated in Waikapu, and (2) 3-4-033:014  
10 (“Parcel 14”), situated in Wailuku, for home landscape irrigation.

11 b. SWUPA 2192 is for Parcel 14’s 0.543 acre, for which he is requesting 1,705 gpd  
12 for 0.5 acre.

13 c. When it was pointed out that 1,705 gpd over 0.5 acre was 3,410 gad and that on  
14 his other property he was using 1,749 gpd on 0.1 acre, Dando replied that when he  
15 averaged the meter readings over a year in 2007 to 2008, he “was establishing the yard  
16 and everything, so it should be way down from that.”

17 d. Dando did not participate in the provisional approval process and does not request  
18 recognition of appurtenant rights.

19 e. Dando is recognized as having 1,500 gpd of domestic use (0.5 acre x 3,000 gad),  
20 which are exempt from the permit requirements.  
21

22 342. **SWUPA 2273/2274N—Alfred Santiago** (FOF 464)

23 a. Alfred Santiago and El Ranchitos DeMello filed SWUPAs on April 23, 2009 for  
24 TMK Nos. (2) 3-4-024:22 (“Parcel 22”) and (2)3-4-024:027 (“Parcel 27”), which  
25 together total 1.626 acres. Santiago uses 0.8 acres of Parcel 22 and 0.7 acres of Parcel 27  
26 (1.5 acres out of a total of 1.626 acres) for diversified agriculture, including tapioca, dry  
27 land kalo, banana, sweet potato, and similar crops. The two parcels have been in the  
28 DeMello `ohana for generations, but the `ohana has agreed that permits should be issued  
29 in Santiago’s name, as he has cultivated the lo`i on these kuleana for decades.

1 b. Existing uses were not measured, and Santiago estimates use at 10,000 gpd based  
2 on his over 30-year experience and expertise in farming these lands. This amounts to  
3 6,667 gad (10,000 gallons divided by 1.5 acres).

4 c. Santiago would like to re-establish lo`i kalo on the 1.5 acres and based on his  
5 experience, he agrees with Reppun’s water and estimates he will need 450,000 gpd (1.5  
6 acres x 300,000 gad).

7 d. Provisional approval of appurtenant rights was granted by the Commission.

8 e. Parcels 22 and 27 are comprised of portions of two LCAs—LCA 3257:2,  
9 confirmed by RP 4329, and LCA 3333, confirmed by RP 5152—as well as a portion of a  
10 pō`alima. Using Reppun’s high estimate, Santiago requests appurtenant rights for 1.626  
11 acres, or 487,800 gpd (1.626 acres x 300,000 gad).

12 f. Again using Reppun’s high estimate, he requests a total 450,000 gpd for the 1.5  
13 acres he plans to convert into lo`i kalo.

14 g. Appurtenant rights of 162,600 gpd (100,000 gad x 1.626 acres) are recognized for  
15 Parcels 22 and 27.

16 h. The estimated existing use of 10,000 gpd, or 6,667 gad for 1.5 acres, is in excess  
17 of the amount necessary for economic and efficient utilization, but he has appurtenant  
18 rights greatly in excess of 10,000 gpd, and the 1.5 acres will be converted to lo`i kalo.

19 i. A permit is issued in the amount of 225,000 gpd (150,000 gad x 1.5 acres).

20 j. 162,600 gpd of the permit falls into Category 2, and 62,400 gpd, in Category 3.

21  
22 343. **SWUPA 2043—DeMello**

23 a. This SWUPA was filed for the same two properties as for SWUPAs  
24 2273/2274N—Alfred Santiago (immediately *supra*), but Alfred Santiago is pursuing the  
25 applications after consultation with the property owner, El Ranchitos DeMello, because  
26 Santiago has been cultivating this land for decades.

27  
28 344. **SWUPA 2287—Michelle Haller** (FOF 466)

29 a. On April 24, 2009, Steve Haller filed an existing-use SWUPA for TMK No. (2)  
30 3-4-031:001 (“Parcel 1”), a 46.97-acre property for which he requested 19,519 gpd of

1 metered use on 31 acres: 25 acres of vegetables and 6 acres of ornamental and nursery  
2 plants. Michelle Haller testified at the hearing, as her husband had recently passed away.

3 b. About 70 percent of the land is producing, and they have farmers or their  
4 descendants that have been there since they purchased the property in 2004 from Wailuku  
5 Water Company, which has been providing the water.

6 c. Michelle Haller says that currently, about 31 acres would be vegetable farming,  
7 with about seven acres in trees.

8 d. In his written testimony of March 18, 2016, Steve Haller had submitted  
9 documents on “32 Land Commission Awards and 15 Poalima on 46.97 acres,” but he had  
10 not submitted any documents during the provisional approval process and had been  
11 denied without prejudice. Michelle Haller stated that they haven’t had legal counsel, so  
12 her son did the research.

13 e. Michelle Haller’s request for recognition of appurtenant rights is dismissed  
14 without prejudice, and she may reapply after the conclusion of the CCH.

15 e. She is issued a permit for 19,600 gpd for her existing use, which is well below the  
16 maximum duty for diversified agriculture of 2,500 gad for her 31 acres. The permit is in  
17 Category 2.

18  
19 345. **SWUPA 2223—Winifred & Gordon Cockett** (FOF 467)

20 a. The Cocketts filed an existing-use SWUPA on April 23, 2009, for TMK No. (2)  
21 3-4-031:008 (“Parcel 8”), which has been in their family for over 60 years, requesting  
22 recognition of appurtenant rights in the amount of 195,000 gpd for 0.65 acres, using  
23 Reppun high estimate of 300,000 gad, and an existing-use permit of 942 gpd, based on  
24 irrigating 0.314 acre of non-commercial gardening and applying the 2002 State of  
25 Hawai`i Water System Standard for Maui County domestic cultivation of 3,000 gad.

26 b. Parcel 8 is a portion of LCA 3382, confirmed by RPs 3793 and 5288, with 24 lo`i  
27 by foreign testimony and existing physical features that the land was cultivated entirely in  
28 lo`i kalo. The Commission granted provisional approval.

29 c. The Cockett’s are recognized as having appurtenant rights of 65,000 gpd (100,000  
30 gad x 0.65 acre) for Parcel 8.

1 d. The Cockett’s non-commercial garden on 0.314 acres is a domestic use exempt  
2 from the permit requirements, which the Commission recognizes at 940 gpd (0.314 acre x  
3 3000 gad), supra, FOF 311.

4  
5 **ii. Wailuku Town Kuleana Ditch**  
6

7 346. The Wailuku Town Kuleana Ditch is next on the Waihe`e Ditch

8  
9 347. **SWUPA 2181—Kaanapali Kai** (FOF 469)

10 a. On April 30, 2009, Kaanapali Kai filed an existing-use SWUPA for TMK No. (2)  
11 3-4-014:060 (“Parcel 60”), a 6.088-acre property, for 4,595 gpd of metered use on 5.0  
12 acres of household landscaping. Kaanapali Kai is a corporation owned by the Yokouchi  
13 family, and it is used as a residence for members of the family. Sheryl-Lynn Suzuki,  
14 president of Kaanapali Kai, says her father purchased the property in 1992, but she also  
15 said she purchased it from Wailuku Agribusiness in 2002.

16 b. There is a main house, a four-car garage, a cottage, and a tennis court in disrepair.  
17 Suzuki’s niece was living in the house, but no one lives there now.

18 c. The dwellings and a small pool receive County water.

19 d. Kaanapali Kai did not claim appurtenant rights nor participate in the provisional  
20 approval process.

21 e. Kaanapali Kai is granted a Category 2, existing-use permit for 4,595 gpd, which is  
22 less than 1,000 gad and below the domestic use standard of 3,000 gad. A permit is  
23 required, because the domestic use exceeds 1 acre.

24  
25 348. **SWUPAs 2209/2210N—Vernon Bal** (FOF 470)

26 a. On April 23, 2009, Vernon Bal filed existing- and new-use SWUPAs for TMK  
27 No. (2) 3-4-007:042, a 0.33-acre property for which he requested 600 gpd of existing use  
28 for 0.28 acres of a yard and garden, and 1,800 gpd of new use for 0.006 acre for kalo lo`i,  
29 applying Reppun’s high estimate of 300,000 gad.

30 b. Bal claimed appurtenant rights and was granted provisional recognition by the  
31 Commission.

- 1 c. Bal did not submit written testimony nor participate in the CCH.  
2 d. No action is taken on Bal’s appurtenant rights claim. He may refile at any time.  
3 e. The Commission also notes that his existing-use request of 600 gpd for a yard and  
4 garden would be exempt from the permit requirements, and the request for 0.006 acre of  
5 kalo lo`i may also be exempt from the permit requirements. He should therefore refile for  
6 such exemptions so that the Commission can make a determination whether or not  
7 permits are required or not.  
8

9 349. **SWUPAs 2241/2242N—Mary Ann Velez (Higa)** (FOF 471)

10 a. On April 23, 2009, existing- and new-use SWUPAS were filed for TMKs No. (2)  
11 3-4-004:016 (“Parcel 16”) and No. (2) 3-4-004:017 (“Parcel 17”) by Darrell Higa, who  
12 has since passed away. Mary Ann Velez’s mother, Perolina Domogma, is the majority  
13 owner of both parcels and Velez, who was Higa’s partner, has been managing the  
14 properties since Higa passed away.

15 b. Parcel 16 is 0.445 acre and Parcel 17 is 0.468 acre, a total of 0.913 acres, for  
16 which Velez requests existing use of an estimated 1,200 gpd for 0.22 acre on Parcel 16  
17 and 0.17 acre on Parcel 17 for domestic agriculture and a new-use of 138,000 gpd to  
18 return 0.46 acre to kalo lo`i, based on Reppun’s high estimate of 300,000 gad.

19 c. Darrell Higa had claimed appurtenant rights and been granted provisional  
20 approval for both parcels.

21 d. Parcel 16 was directly fed by an ancient `auwai and lies within LCA 3339:2,  
22 confirmed by RP 6251, described as kalo land and 24 lo`i.

23 e. Velez states that Parcel 17 lies within LCA 2532:3, described as “taro mo`o,”  
24 while provisional recognition stated that Parcel 17 lies within `āpana 4, which was a  
25 houselot.

26 f. Velez states that what was surveyed as `āpana 4 in the LCA was actually  
27 described as `āpana 3 in the testimony and that “taro mo`o” means “narrow strip of land  
28 in taro,” corresponding to the layout of her land in LCA 2532 compared to the layout of  
29 `āpana 4. Furthermore, a portion of the LCA states “Apana 5 Pahale,” which means  
30 “Parcel 5. Houselot.” Velez also states that it was not uncommon where a pō`alima is



1 between two `āpana and the pō`alima is awarded to someone else, thus breaking one  
2 `āpana into two and causing a re-numbering of the parcels in the LCA.

3 g. All of Parcels 16 and 17 have appurtenant rights, or for 0.913 acres.

4 h. Parcels 16 and 17 are recognized as having appurtenant rights of 91,300 gpd  
5 (0.913 acre x 100,000 gad).

6 i. Velez is awarded a Category 2 permit for 69,000 gpd (0.46 acre x 150,000 gad),  
7 because her new use is all within her appurtenant rights of 91,300 gpd.

8 j. She is also recognized as having 1,170 gpd (0.39 acre x 3,000 gad) in domestic  
9 agriculture for two houses, which are exempt from the permit requirements.

10  
11 350. **SWUPA 2247 &2248N—Jordanella Ciotti** (FOF 472)

12 a. Jordanella Ciotti purchased TMK No. (2) 3-4-004:019 (“Parcel 19”) from the  
13 original applicants, who filed for existing- and new-use SWUPAs on April 23, 2009.

14 b. Ciotti requests recognition of appurtenant rights in the amount of 135,300 gpd and  
15 a permit for 18,805 gpd, of which 1,088 gpd was the existing use on April 30, 2008, both  
16 estimates and not measurements, using Reppun’s high estimate for kalo lo`i of 300,000  
17 gad and 2002 State of Hawai`i Water System Standard for Maui County domestic  
18 cultivation of 3,000 gad.

19 c. Ciotti currently irrigates 0.1125 acre of her yard and non-commercial garden and  
20 an 18- by 6-foot lo`i kalo of approximately 0.0025 acres, for which she estimates a total  
21 use of 1,088 gpd, 338 gpd for her yard and commercial garden (0.1125 acre x 3,000 gad)  
22 and 750 gpd for her lo`i (0.0025 acre x 300,000 gad).

23 d. She requests an additional 17,717 gpd: 16,530 gpd (300,000 gad x 0.0551 acre) to  
24 restore a 60- x 40-foot lo`i on approximately 0.0551 acre and 1,187 gpd (0.3957 acre x  
25 3,000 gad) to irrigate grass and non-commercial crops throughout the remainder of her  
26 property, or 0.3957 acre.

27 e. However, the 0.3957 acre for which she requests additional water must include  
28 the 0.1125 acre she is already irrigating, because Parcel 19 is only 0.451 acres, and  
29 0.0025 acre is her existing 18- by 6-foot lo`i kalo and she proposes to restore 0.0551 acre  
30 (60- by 40-foot lo`i kalo), which together total 0.0576 acre, leaving a remainder of 0.3934  
31 acre.

1 f. So Ciotti's request for additional water to irrigate grass and non-commercial crops  
2 should have been applied to 0.2809 acres, not to 0.3957 acres.

3 g. Parcel 19 is 0.451 acres, and includes LCA 3209:4, confirmed by RP 7893,  
4 consisting of approximately 0.23 acres. The records state that there were five lo'i kalo,  
5 without reference to any other use. The Commission provisionally approved appurtenant  
6 rights.

7 h. Ciotti requests recognition of 135,300 gpd in appurtenant rights, based on  
8 Reppun's highest estimate for her 0.451 acres (0.451 acre x 300,000 gad). However, only  
9 0.23 acres are derived from LCA 3209:4, so even using Reppun's highest estimate, her  
10 request for appurtenant rights should have been 69,000 gpd (0.23 acres x 300,000 gad).

11 i. Ciotti's appurtenant rights are recognized at 23,000 gpd (0.23 acres x 100,000  
12 gad).

13 j. Ciotti's yard and non-commercial garden of 0.3934 acre is a domestic use exempt  
14 from the permit requirements and is recognized at 600 gpd, supra, FOF 311.

15 k. A permit is issued for 11,500 gpd for 0.0576 acre of lo'i kalo (0.0576 acre x  
16 200,000 gad for lo'i—compared to 150,000 gad for a lo'i complex, supra, COL 65).

17 j. Ciotti's permit falls under her appurtenant rights of 23,000 gpd, so whether the  
18 uses are classified as existing or new, all of the permitted amounts fall under Category 2.

19  
20 351. **SWUPAs 2245/2246N—Greg Ibara** (FOF 473)

21 a. Greg Ibara filed existing- and new-use SWUPAs on April 23, 2009, for TMK No.  
22 (2) 3-4-004:020 ("Parcel 20"), which he purchased in 1998. Parcel 20 is 1.171 acres, for  
23 which he requests recognition of appurtenant rights of 351,300 gpd (1.171 acres x  
24 300,000 gad), estimates his existing use to irrigate 0.007 acre at 2,100 gpd (0.007 acre x  
25 300,000 gad), and requests an additional 6,000 gpd to restore lo'i on 0.02 acres (0.02  
26 acres x 300,000 gad), all using Reppun's high estimate.

27 b. Parcel 20 is comprised of portions of two LCAs: LCA 2621, confirmed by RP  
28 3214, and LCA 3233:2, confirmed by RP 7559. Records describe these kuleana as mo'o  
29 kalo, without referencing any other land use. Physical features, including land slope and  
30 proximity to an `auwai intake and pō`alima, further supports that these lands were

1 cultivated in lo`i. The Commission provisionally approved appurtenant rights for these  
2 LCAs.

3 c. Ibara’s appurtenant rights for Parcel 20’s 1.171 acres is recognized as 117,100  
4 gpd (100,000 gad x 1.171 acres).

5 d. As for the existing- and new-use SWUPAs, the Commission’s adoption of current  
6 irrigation requirements of 150,000 gad is for kalo lo`i complexes, with 200,000 gad for  
7 individual lo`i, *supra*, COL 65.

8 f. Ibara estimated his existing use to irrigate 0.007 acre at 2,100 gpd (0.007 acre x  
9 300,000 gad), and requests an additional 6,000 gpd to restore lo`i on 0.02 acres (0.02  
10 acres x 300,000 gad), all using Reppun’s high estimate.

11 g. Ibara is granted:

- 12 1. a permit for 1,400 gpd for the 0.007 acres (0.007 acre x 200,000 gad); and
- 13 2. for 4,000 gpd for 0.02 acres of new lo`i (0.02 acre x 200,000 gad); or
- 14 3. a total of 0.027 acres at 200,000 gad, or 5,400 gpd.

15 h. The permit falls under Category 2, because it is within Ibara’s appurtenant rights  
16 of 117,100 gpd.

17  
18 **iii. Waihe`e Ditch: After the intake on Waikapū Stream**

19  
20 352. After the intake on Waikapū Stream, the remaining SWUPAs are:

21  
22 353. **SWUPA 2203—Maui Tropical Plantation** (FOF 475)

23 a. On April 24, 2009, Maui Tropical Plantation (“MTP”) filed an existing-use  
24 SWUPA for TMK No. (2) 3-6-005:007 (“Parcel 7”), a 59.054-acre parcel for which it  
25 requested an average metered use of 124,532 gpd by trickle drip or sprinklers:

- 26 1. 82,332 gpd for 40 acres of rotating row crops at an average of 2,058 gad;
- 27 2. 36,000 gpd for 15 acres of landscaping at an average of 2,400 gad; and
- 28 3. 6,200 gpd for 4 acres of ornamental and nursery plants at an average of  
29 1,550 gad.

30 b. A comparison of metered uses versus Hawai` Department of Agriculture  
31 “HDOA”) Water Use Guidelines is as follows:

	<u>MTP</u>	<u>HDOA</u>
1		
2	agricultural crop irrigation	2,058 gad 4,400-6,700 gad
3	Landscape irrigation	2,400 gad 4,000-6,000 gad
4	Ornamental/Nursery irrigation	1,550 gad 3,700-6,000 gad

5 c. In 2006, MTP was acquired through various entities by Michael Atherton, the  
6 managing general partner of several related entities, including but not limited to Waikapu  
7 Properties, MTP, and Waiale 905 Partners, LLC.

8 1. The deed to MTP contained a reservation of water rights recorded on  
9 March 24, 1983.

10 d. Waikapu Properties and its related entities also have SWUPAs 2205, 2356,  
11 2297N, and 3472N, *supra*, FOF 429, which receive waters from Waikapū Stream through  
12 the South Waikapū Ditch. SWUPA 2205 is for the ʻĪao-Waikapū fields formerly  
13 cultivated for sugar cane by HC&S, which has been returned to Waikapu Properties,  
14 *supra*, FOF 25.

15 e. MTP was built by C. Brewer & Company more than 30 years ago, which  
16 Atherton has transformed into an eco-tourism site, emphasizing agriculture, farm to table  
17 values, and other tourism education activities. It currently employs over 50 local residents  
18 on property and is also home to a variety of local businesses, including Maui Tropical  
19 Plantation, Mill House Restaurant (using farm-fresh ingredients from MTP lands), Maui  
20 Chef’s Table, Mill House Café (featuring 100% Maui coffees), Moku Pua Soap Factory,  
21 Ron L. Jewelers, Flyin`Hawaiian Ziplines, Maui Ziplines, and Kumu Farms.

22 f. Although MTP’s SWUPA did not claim appurtenant rights, it had filed for  
23 provisional approval of appurtenant rights for 11 LCAs and 8 land grants and had been  
24 provisionally approved for 9 LCAs and one land grant. On September 20, 2016, Mr.  
25 Atherton testified that his entities were no longer asserting claims for appurtenant rights,  
26 except as necessary to secure drinking water for cattle grazing above the Waihe`e Ditch,  
27 which would be pursued under the other SWUPAs, and reserved the right to re-submit a  
28 permit application for appurtenant rights for other parcels at a later date.

29 g. The deed to MTP contains a water reservation dated in 1983, but the reservation  
30 would not extinguish appurtenant rights, because such rights were preserved by the  
31 November 8, 1978 constitutional amendments.

1 h. MTP is granted a Category 2 existing-use permit for 124,532 gpd.

2  
3 354. **SWUPA 2186—MMK Maui** (FOF 476)

4 a. On April 22, 2009, MMK Maui, LP (“MMK”) filed an existing-use SWUPA for  
5 TMK Nos. (2) 3-6-004-010, -011, -012, and -014 for 1,292,704 gpd of metered use on  
6 two golf courses, the King Kamehameha and Kahili Courses.

7 b. The golf courses encompass approximately 350 acres, on which water delivered  
8 by WWC is used to irrigate 302 acres of Bermuda grass and 3 acres of miscellaneous  
9 landscape.

10 c. MMK states that, based on water meter readings from June 2006 through  
11 December 2015, as well as further considerations regarding the weekly, monthly, and  
12 yearly variability of water usage over a 9.5-year period and the actual need to adequately  
13 and efficiently water the golf courses, it currently requests 1.25 mgd.

14 1. 1.29 mgd and 1.25 mgd over 305 acres equal 4,230 gad and 4,098 gad,  
15 respectively.

16 d. The average for the period, June 2006 through December 2015, was 1.037 mgd,  
17 ranging from a low of 0.129 mgd in March 2014 to a high of 2.485 mgd in April 2007.

18 1. Per calendar year, water use ranged from 1.4 mgd in 2007 to 0.66 mgd in  
19 2014.

20 2. Typically, water needs decreased during the winter months and increased  
21 during the summer months. For example, in January and February 2011, the  
22 courses used 21.9 and 18.7 mgd, respectively, whereas from June to September  
23 2011, the courses used 41.1 (June), 38.4 (July), 39.9 (August), and 41.4  
24 (September) million gallons, respectively.

25 3. MMK states that the water usage in 2014 and 2015 decreased to 0.66 mgd  
26 and 0.70 mgd, respectively, without any significant changes to water-saving  
27 measures or mitigation efforts, and that the reason was unusual weather patterns  
28 that caused more frequent and consistent rain throughout the majority of months  
29 during years 2014 and 2015. Conversely, huge rainfall followed by several weeks  
30 of no rain may result in the same quantity of rainfall, but there is still a need to  
31 irrigate within a week after the rainfall, so the need for irrigation is still greater

1 where the rainfall is less frequent and not as consistent, even though total rainfall  
2 is the same.

3 e. MMK believes that the average of 1.037 mgd over the last 9.5 years is more  
4 indicative of the average usage it may see over the next ten years, but an amount based on  
5 average use does not necessarily meet the needs of the golf courses for drier months, and  
6 that in regions where the annual rainfall is highly variable, the estimate should be based  
7 on one of the drier years rather than an average over the years.

8 1. 2007 was one of the highest yearly average usage at 1.34 mgd.

9 2. Between 2006 and 2015, the driest month in each year averaged 1.53 mgd.

10 f. Therefore, MMK's revised request of 1.25 mgd is approximately the mid-point  
11 between the historical 9.5-year usage of 1.037 mgd and the driest month average over the  
12 same period of 1.53 mgd. 1.25 mgd closely compares to the 1.20 mgd 12-month moving  
13 average from April 2008 to March 2009, the period immediately preceding the filing of  
14 the SWUPA on April 22, 2009; and the 1.29 mgd 12-month moving average from May  
15 2007 to April 2008 that was used to calculate the existing use as of April 30, 2008.

16 g. MMK also noted that even if it requested more water than what it actually needed,  
17 due to the nature of golf course irrigation in which too little water is harmful and too  
18 much water is not desired due to suboptimal and soggy/wet golfing conditions, it would  
19 not benefit from using more water than what it needed. Proper irrigation requires an  
20 adequate amount of water at the time water is needed on a daily/weekly/monthly basis.  
21 Without the necessary and adequate amount of irrigation water, the golf courses will not  
22 be able to adequately maintain the turf grass.

23 h. The golf courses have a water-delivery agreement with WWC for a maximum of  
24 4 mgd and paid approximately \$4 million for the perpetual delivery of up to 2.7 mgd.

25 1. Water from the Waihe`e Ditch is pumped into Kahili Course Reservoir 4,  
26 then pumped into a distribution system consisting of hundreds of individually  
27 controlled sprinkler heads to irrigate the Kahili Course and, through a transfer  
28 pump, pumped from Reservoir 4 into King Kamehameha Course Reservoir 18,  
29 where the water is pumped through a distribution system again consisting of  
30 hundreds of individually controlled sprinkler heads to irrigate the King  
31 Kamehameha Course.

1           2.       Daily water needs is communicated to WWC, who controls and releases  
2           on a weekly or so basis the amount of pumped water from the Waihe`e Ditch  
3           based on the immediate needs of the golf courses. WWC takes meter readings  
4           weekly or so and regulates the pumps that allow water into the reservoirs at the  
5           golf courses.

6           i.       Steps taken to mitigate water use include:

7           1.       The two reservoirs are rubber-lined to minimize water leakage and  
8           designed to capture, hold, and store water (including rainwater).

9           2.       Both courses utilize Bermuda turf grass, commonly known as a drought-  
10          resistant species of grass.

11          3.       Staff manually monitor and adjust the duration of water usage on a daily  
12          basis, as a fully automatic irrigation system that does not require periodic  
13          programming and maintenance does not exist.

14          4.       More than 5,000 sprinkler heads are used on the golf courses, in which the  
15          duration and volume of water released can be individually controlled for efficient  
16          use of water. A central control system gives staff full control and monitoring of  
17          the sprinkler heads remotely, for daily/hourly access and control of watering.

18          5.       Soil moisture levels are assessed daily by visual assessment of the turf and  
19          soil, including the use of soil probes to measure moisture conditions.

20          6.       Irrigation is done mainly in the evenings and early mornings, which are  
21          cooler and less dry periods.

22          j.       Alternatives:

23          1.       In January 2016, Carroll of MMK met with Pearson, the Deputy Director  
24          of CWRM, to inquire whether it would be a reasonable alternative for MMK to  
25          drill its own well and was informed that the possibility was not promising. A&B  
26          and Atherton were also looking to drill wells and dedicate them to the County.  
27          The 3 mgd sustainable yield of the Waikapū Aquifer would be consumed entirely  
28          by these wells. Moreover Pearson believed that MMK could not use potable water  
29          for golf courses.

30          2..       Also in January 2016, Carroll met with Mike Atherton, owner of MTP,  
31          which is located near the golf course, to inquire whether water might be available

1 for MMK from Atherton’s wells. Atherton was not sure how much water was  
2 going to be available, how much he would need for his own purposes, when the  
3 water would be available for use, or what the quality of the water would be and  
4 that he was conducting tests to clarify those issues (see 2205, 2356/2357N/3471N,  
5 & 3472N—Waikapu Properties). Carroll concluded that well water was not a  
6 reasonable alternative today but may come available in the distant future.

7 3. In January 2016, Carroll also contacted Derek Takahashi, Recycled Water  
8 Coordinator and Project Manager, Wastewater Reclamation Division of the  
9 County of Maui, regarding the possibility of reclaimed water. Mr. Takahashi  
10 stated that the closest wastewater reclamation facility is located in Kahalui near  
11 Kanaha Beach Park and that the County does not have any recycled water  
12 distribution systems for Central Maui where the golf courses are located. There is  
13 also no distribution system from the more distant Kihei Wastewater Facility to  
14 Central Maui.

15 k. MMK did not claim appurtenant rights.

16 l. MMK is granted a Category 2 existing-use permit for 1.037 mgd.

17 a. It’s request to issue a permit for 1.25 mgd, based in part on dry years as  
18 well as average years, is similar to requesting priority access to water during  
19 periods of water shortage over other permittees in advance (see HRS § 174C-62)  
20 or to being granted a water reservation, for which rulemaking is required (see  
21 HRS § 174C-49(d).)

22 b. Moreover, monitoring of permits is on a 12-month moving average (“12-  
23 MAV”), so the permitted use for 1.037 mgd can be exceeded, as long as the 12-  
24 MAV is within 1.037 mgd.

25  
26 355. **SWUPA 2151—Pohakulepo Recycling LLC** (FOF 477)

27 a. On April 24, 2009, Pohakulepo Recycling, LLC filed an existing-use SWUPA for  
28 TMK No. (2) 3-6-04:007 for the metered use of 8,555 gpd for dust control on 14.8 acres  
29 and rock crushing operations on 0.1 acre. The water is necessary to meet Hawai`i  
30 Department of Health and Land Use Commission permits and Maui County permits to  
31 control fugitive dust emissions.



1 b. The quarry serves the entire West Maui communities as well as several central  
2 Maui communities and has eight employees with a combined annual salary of over  
3 \$900,000.

4 c. Reclaimed water has been considered but because no pipeline exists from the  
5 County of Maui, it is deemed unfeasible. The cost of putting in a transmission pipe would  
6 be several million dollars, would require an Environmental Impact Statement, and  
7 numerous grants of easements. There is also no county water meter or service line to the  
8 property.

9 d. Pohakulepo Recycling, LLC did not claim appurtenant rights nor participate in the  
10 provisional approval process.

11 e. Pohakulepo Recycling, LLC is granted an existing-use permit for 8,555 gpd,  
12 which is in Category 2.

13  
14 356. **SWUPA 2272—Nobriga’s Ranch** (FOF 478)

15 a. On April 27, 2009, Nobriga’s Ranch filed an existing-use SWUPA for TMK No.

16 b. Metered use on 100 acres of the 257.784 property averaged 25,776 gpd for  
17 pasture grass.

18 c. Nobriga’s Ranch neither claimed appurtenant rights nor participated in the  
19 provisional recognition process.

20 d. Nobriga’s Ranch also provided no further information and did not participate in  
21 the contested case hearing.

22 e. No action is taken on Nobriga’s Ranch’s existing-use SWUPA. It may apply for a  
23 new-use permit.

24  
25  
26 **b. Spreckels Ditch**

27  
28 357. On the Spreckels Ditch, after the intakes from South Waiehu Stream and Wailuku River  
29 and the Hopoi Ditch from the Waihe`e Ditch, the only remaining SWUPA is HC&S at the  
30 terminus of what used to be the Waiale Reservoir.

1 358. **SWUPA 2206-HC&S** (FOF 480.)

2 a. On April 22, 2009, HC&S filed existing-use SWUPA 2205 for 10.58 mgd for  
3 1,491 acres of its leased `Īao-Waikapū fields and existing-use SWUPA 2206 for 36.29  
4 mgd for 4,408 acres of its Waihe`e-Hopoi fields.

5 b. On April 17, 2014, the Commission approved and adopted the 2014 Mediated  
6 Agreement, *supra*, FOF 16, in which the Commission had found that HC&S's reasonable  
7 daily water use requirements for sugar cane cultivation was 5,408 gad or 6.06 mgd on  
8 1,120 cultivated acres of the `Īao-Waikapū fields and 5,958 gad or 21.75 mgd on 3,650  
9 cultivated acres of the Waihe`e-Hopoi fields.

10 c. On January 6, 2016, A&B announced it would close HC&S by the end of the year  
11 and transition to diversified agriculture, *supra*, FOF 22.

12 d. On February 5, 2016, HC&S requested 4.84 mgd for 1,120 acres of the `Īao-  
13 Waikapū fields and 19.48 mgd for 3,650 acres of the Waihe`e-Hopoi fields, 17.33 mgd  
14 for agricultural irrigation and 2.15 mgd for system losses for those portions of the West  
15 Maui Ditch System that are operated and controlled by HC&S.

16 e. The amended request was based on HC&S's intended transition from sugarcane  
17 cultivation to bioenergy tropical grasses. Using the Commission's finding that sugarcane  
18 cultivation required 5,408 gad on the `Īao-Waikapū fields and 5,958 gad on the Waihe`e-  
19 Hopoi fields, HC&S's estimates of irrigation requirements for bioenergy tropical grasses  
20 is 4,326 gad for the 1,120 acres of the `Īao-Waikapū fields, or 4.84 mgd, and 80% of  
21 5,958 gad, or 4,776 gad for the 3,650 acres of the Waihe`e-Hopoi fields, or 17.43 mgd.<sup>53</sup>  
22 Because of higher than normal rainfall during 2016, HC&S was unable to conduct  
23 appropriate irrigation trials to accurately determine the actual water duty for sorghum.

24 f. On July 25, 2016, HC&S gave notice that it will not pursue the SWUPA for the  
25 `Īao-Waikapū fields, because it would no longer lease those lands. Waikapu Properties,  
26 LLC, the owner of those fields, will continue to pursue SWUPA 2205 in place of HC&S,  
27 *supra*, FOF 25.

28 g. Whereas HC&S's diversified agriculture plans for some of the approximately  
29 35,000 acres of its former sugar lands in Central Maui are premature, its plans for the  
30 3,650 acres of the Waihe`e-Hopoi fields are further along, because: 1) its large expanse of

---

<sup>53</sup> HC&S calculated 17.33 mgd, but 4776 gad x 3,650 acres is 17.43 mgd.

1 relatively flat and rock-free terrain has been identified as the fields most suitable for  
2 growing bioenergy crops, which would be mechanically planted and harvested; and 2)  
3 HC&S plans to cultivate these bioenergy crops itself rather than try to identify someone  
4 else who would do it.

5 h. “Bioenergy crops” include a variety of crops that can support biogas or biofuel  
6 production, including, but not limited to, fuel for jets, marine and land vehicles, and to  
7 generate electricity. These bioenergy crops may include, but are not limited to, annual  
8 seed crops, such as soybean, safflower, sunflower and canola; perennial oil-bearing trees,  
9 such as jatropha, kukui and pongamia; and tropical grasses, such as energy canes,  
10 banagrass, sorghum, hemp and new hybridized perennial tropical grasses.

11 i. The transition from sugar cane to bioenergy crops has several advantages.  
12 Because of the similarities between the two, HC&S may be able to take advantage of  
13 existing infrastructure and equipment and adapt management practices (e.g., integrated  
14 pest management) to new crops.

15 j. HC&S plans to have a mix of bioenergy crops that will be rotated over the course  
16 of a few seasons. The primary focus for the Waihe`e-Hopoi fields will be on tropical  
17 grasses to take advantage of the large expanse of contiguous, relatively flat fields that are  
18 conducive to the efficient planting and harvesting of these types of crops. The bioenergy  
19 crop most likely to initially replace sugar cane is sorghum, which is in the same family as  
20 sugar cane. Sorghum was selected as an initial “anchor” crop because of the experience  
21 gained by HC&S’s participation in a five-year, \$10 million Department of Defense study  
22 of biofuel production started in 2010. Sorghum was one of the crops included in the  
23 study, and HC&S participated in crop and harvest trials of different varieties of energy  
24 crops and also participated in anaerobic digestion yield-testing on a 6-acre plot, gaining  
25 preliminary experience with the requirements, including water requirements and  
26 irrigation practices, for growing some of these energy crops.

27 k. HC&S states that further research and testing are necessary for growing these  
28 energy crops on a large scale and has been capturing cost data, testing farming methods at  
29 scale, and refining the economic model based on a 50-acre trial fields. In mid-2016,  
30 HC&S planted an additional 200 acres, including approximately 150 acres in sorghum  
31 and 25-30 acres of various oil seed crops, to validate bioenergy crop density, irrigation

1 layout, per-acre yield in different soil types, water demand, and field-scale costs. Testing  
2 on larger acreages allows HC&S to better understand actual yields, input costs and the  
3 market for bioenergy crops.

4 l. Sugar cane was a two-year crop, meaning that it was planted and harvested on a  
5 two-year cycle. The energy crops mature in a much shorter period of 60 to 105 days.  
6 Multiple harvests from a single planting are possible with some crops, such as sorghum,  
7 but other crops are truly annual crops, providing only one harvest per planting. Sorghum  
8 ratoons, and multiple harvests are possible without the need for replanting. In mid-2016,  
9 one of the sorghum trial plots was in its fourth harvest cycle and continued at productive  
10 levels over the multiple harvests. Sorghum matures in three to four months, yielding up to  
11 four harvests a year. Yields, however, appear to decrease during the shorter-day-length  
12 period from November through February, and, therefore, HC&S is looking for varieties  
13 that will yield better during the fall and winter periods.

14 m. In addition to sorghum trials, HC&S is working on cover crops with mixtures  
15 including tillage radishes, clovers, mung beans, rye grass, turnips, buckwheat, and sunn  
16 hemp, where appropriate. The focus is to increase soil organic matter, improve soil tilth  
17 and water-holding capacity, and increase beneficial insect populations to reduce the need  
18 for pesticide spraying. At any one time, approximately ten percent of the Waihe`e-Hopoi  
19 fields will be in cover crops. Cover crops will also be utilized as borders around the fields  
20 of bioenergy crops. After the completion of bioenergy crops cycles lasting multiple years,  
21 the entire field will be planted in cover crops to protect against erosion and to replenish  
22 the soil. Cover crops are expected to be planted in the entire field for approximately a  
23 three-month period as part of a three-year crop rotation cycle to minimize pests, control  
24 weeds, improve soil health and reduce tillage requirements.

25 n. The fields will not lie fallow in the sense that there would be nothing planted for a  
26 period of time. The Waihe`e-Hopoi fields are subject to very high winds, and without  
27 cover crops, soil erosion would be a serious problem.

28 o. All the lands that comprise the Waihe`e-Hopoi fields are classified as Agriculture  
29 under the state land-use classification and zoned for agricultural use, and a majority of  
30 the 3,650 cultivated acres have been designated Important Agricultural Lands (“IAL”)  
31 pursuant to HRS Ch. 205, Part III.

1 p. System losses:

2 1. The portions of the West Maui Ditch System that are owned and  
3 controlled by HC&S includes approximately 10.51 miles of open, lined and  
4 unlined ditches and pipelines and two reservoirs. Evidence presented in CCH-  
5 MA06-01, June 2010, included HC&S's estimate that it loses 6-8 mgd through  
6 seepage from Waiale Reservoir, depending on the level of the reservoir, and 3 to 4  
7 mgd from seepage throughout the rest of its ditch and reservoir system. The  
8 Commission limited system losses to 2.0 mgd "for purposes of the restoration of  
9 stream flows under an amended IIFS," and reaffirmed those losses in the 2014  
10 Mediated Agreement without prejudice to the rights of any party and of the  
11 Commission to revisit the issue in the context of any proceeding involving a  
12 WUPA by HC&S.

13 2. To address leakage from the unlined Waiale Reservoirs, HC&S analyzed  
14 several loss-mitigation options and determined that bypassing the reservoirs  
15 would be the most cost-effective way of mitigating losses. Thus, HC&S no longer  
16 uses the Waiale reservoirs for water storage and bypasses them with a concrete-  
17 lined bypass. HC&S cannot eliminate all of its reservoirs to reduce system losses,  
18 because the ditch and reservoir system is essential to the continued irrigation of its  
19 agricultural lands.

20 3. HC&S requests 2.15 mgd for system losses, based on calculations for  
21 seepage rates using the National Engineering Handbook, which is published by  
22 the Soil Conservation Service of the US. Department of Agriculture ("SCS-  
23 USDA"), plus an average daily evaporation rate of 0.40 acre-inches. The  
24 Handbook is a proxy to having to actually measure evaporation and seepage  
25 losses from each part of the system. Based on these calculations, losses ranges  
26 from 2.15 to 4.20 mgd.

27 q. Alternative sources:

28 1. Well No. 7:

29 a. Brackish water from Well No. 7 (USGS No. 16) was the primary  
30 source of irrigation for the Waihe`e-Hopoi fields from 1927 until  
31 additional surface water became available when Brewer ceased its sugar

1 operations in the 1980s and the Waihe`e and Spreckels Ditch flows  
2 previously used by Brewer were allowed to flow uninterrupted into the  
3 Waiale Reservoir. (CCH-MA06-01, June 2010, FOF 263, 494.) [HC&S  
4 FOF 59.]

5 b. CCH-MA06-01, June 2010 had determined that Well No. 7 was a  
6 practicable alternative source of 9.5 mgd, but after the remand from the  
7 Hawai`i Supreme Court, HC&S spent \$1,658,369 to upgrade Well No. 7  
8 by installing a second booster pump (Pump 7D) and a 4,000-foot pipeline  
9 extending to the Waihe`e Ditch, enabling HC&S to pump a maximum of  
10 18.5 mgd on a sustained daily basis. The Commission concluded in the  
11 2014 Mediated Agreement that up to 18.5 mgd was a practical alternative,  
12 without prejudice to revisiting the issue in any future proceeding involving  
13 a WUPA by HC&S.

14 c. HC&S maintains that it would be uneconomical, at least for the  
15 short term to pump 18.5 mgd, or even 9.5 mgd, on a sustained basis until  
16 crops can be grown on a commercial scale and producing revenues that  
17 can cover costs. As a byproduct of sugar cane cultivation, HC&S  
18 generated electricity by burning bagasse and operated hydropower  
19 turbines on its East Maui Ditch system, generating enough electricity to be  
20 self-sufficient and have excess power to sell to Maui Electric Company.  
21 At least for the short-term, generating electricity will be limited to its  
22 hydroelectric facilities, which depend on the East Maui Irrigation system  
23 water historically producing a maximum of 6 MWH of power. The  
24 amount of power that can be generated in the future will depend on the  
25 IIFS amendments currently before the Commission. Ideally, HC&S will  
26 be able to utilize some of the biofuel stock that it grows to generate  
27 electricity for its own use, but even if that were to happen, it will be  
28 several years before biofuel stock becomes available in sufficient  
29 quantities, and HC&S would have to renovate or rebuild its power plant to  
30 be able to utilize new fuel sources.

1 d. HC&S estimates that it would cost \$178 (based on MECO's rate of  
2 \$0.22 per kwh) to pump 1 mgd from Well No. 7 to the Waihe'e Ditch.  
3 18.5 mgd would amount to more than \$1.2 million annually, and 9.5 mgd  
4 would cost more than \$600,000 annually. No income is derived from the  
5 crops in their research and testing phase, and until more data is collected  
6 for its economic model, HC&S would not know what water costs can be  
7 borne and states that given the current stage of the energy crop industry in  
8 Hawai'i and the lack of agronomic data, HC&S maintains that Well No. 7  
9 cannot be viewed as a practicable alternative source during the period of  
10 transition from sugar to diversified agriculture.

11 e. The Kahului Aquifer, from which Well No. 7 draws brackish  
12 water, has a sustainable yield of only 3 mgd based on natural recharge.

13 i. Between 1927 and 1985, when HC&S pumped an average  
14 of about 21 mgd from Well No. 7, both HC&S and Brewer were  
15 cultivating sugar cane, largely by furrow irrigation, which meant  
16 there was significant irrigation recharge.

17 ii. Between 1993 and 2007, the Waihe'e-Hopoi fields received  
18 approximately 39 mgd from the Waiale Reservoir, and HC&S had  
19 reported its existing use in 2008 under SWUPA 2206 as 36.29  
20 mgd. However, in 2010, the Commission had determined that  
21 21.75 mgd was the irrigation requirement on 3,650 cultivated acres  
22 of the Waihe'e-Hopoi fields. Therefore, despite the use of drip  
23 irrigation, irrigation on the Waihe'e-Hopoi was significantly  
24 greater than what was required.

25 iii. After 2010, when HC&S upgraded Well No. 7 and  
26 increased pumping to approximately 18.5 mgd, surface water  
27 imports decreased as a result of the amended IIFS. To date, well  
28 data shows no significant adverse impact to the aquifer due to the  
29 increased pumping and decrease in surface water imports.

30 However, 2014, 2015, and the first half of 2016 have been

1 relatively wet years, which may have mitigated the impact of  
2 increased withdrawals.

3 iv. Thus, data collected thus far is not sufficient to assess the  
4 long-term impact on the Kahului Aquifer of increased pumping  
5 from Well No. 7 and decreased surface water imports. According  
6 to Nance, WCEIC's expert in water resource engineering, the  
7 closure of HC&S's sugar plantation substantially reduces the  
8 amount of recharge to the aquifer and, therefore, the viability of  
9 Well No. 7 needs to be pragmatically determined as the years roll  
10 by.

11 2. HC&S's `Īao Tunnel well:

12 a. Well No. 5330-02 develops ground water which is discharged into  
13 the Spreckels Ditch between HC&S's intakes on South Waiehu Stream  
14 and Wailuku River, for which HC&S has WUP No. 691, an interim permit  
15 with an allocation of 0.1 mgd from `Īao Tunnel.

16 b. When the interim permit was issued on October 28, 2010, `Īao  
17 Tunnel was not separately metered, and one of the conditions of the  
18 interim permit was that HC&S measure the amount collected, and, within  
19 five years the Commission was to make a final determination of the  
20 amount of the allocation. HC&S installed a flow meter in February 2011,  
21 has been submitting monthly ground water reports to the Commission, and  
22 in June 2015, requested by letter that the interim permit be converted to a  
23 full and final permit, which to date has not been brought before the  
24 Commission.

25 c. Provided that the Commission approves HC&S's request to  
26 convert the interim permit to a permanent permit with an allocation of 0.1  
27 mgd, HC&S states that it is a practicable alternative source to Nā Wai  
28 `Ehā surface waters.



1 r. HC&S requests an existing-use permit for 17.43 mgd<sup>54</sup> for agricultural irrigation  
2 and 2.15 mgd for system losses. For the short term, HC&S states that Well No. 7 is not a  
3 practicable alternative, because while it is technologically feasible to pump up to 18.5  
4 mgd from Well No. 7, it no longer has the “free” energy from its past electricity  
5 generation and will not be generating income from its fields in research and testing to  
6 cover operational costs.

7 s. HC&S states that offstream water use will vary from day to day throughout the  
8 year, so there will be times when IIFS requirements are met, when the needs of other  
9 surface water permittees are met, and there will still be water available for other  
10 reasonable-beneficial offstream uses. Because HC&S is the last user on the Spreckels  
11 Ditch, its use of whatever water is available in the Spreckels Ditch at its terminus would  
12 not impact any other permittee’s allocation. As nearly the last user on the Waihe`e Ditch  
13 very few permittees take water from the Waihe`e Ditch after the Hopoi Chute drops water  
14 from the Waihe`e Ditch into the Spreckels Ditch near its terminus. HC&S proposes that it  
15 and other down-ditch permittees should be able to coordinate their day-to-day water  
16 requirements such that HC&S, from time to time, will be able to utilize water in the  
17 Waihe`e Ditch without negatively impacting down-ditch permittees’ allocations.

18 t. HC&S’s irrigation requirements are reduced from 17.43 mgd to 16.60 mgd. At  
19 any one time, 10 percent of the 3,650 acres are expected to be in cover crops. Bioenergy  
20 tropical grasses’ water requirements are 4,776 gad, but cover crops’ requirements should  
21 be less and therefore assessed at 2,500 gad for diversified agriculture. Therefore, for the  
22 ten percent of 3,650 acres in cover crops, the water requirement would be 912,500 gpd  
23 (365 acres x 2,500 gad) and for the remaining 3,285 acres of grasses, the water  
24 requirement would be 15.69 mgd (3,285 acres x 4,776 gad).

25 u. HC&S’s system losses are 2.15 mgd.

26 v. HC&S’s alternative sources are:

- 27 1. 0.1 mgd from HC&S’s `Īao Tunnel, for which the Commission will  
28 convert the interim permit to a regular permit.
- 29 2. 3 mgd to 18.5 mgd from Well No. 7.

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<sup>54</sup> While its request was for 17.33 mgd because of a multiplication error, it is corrected to 17.43 mgd.

1 a. The Commission, in considering nonpotable resources for  
2 irrigation, must balance between competing interests. Operationally, this  
3 may mean the use of both non-potable resources, which can only be  
4 determined by an analysis of the specific circumstances of each case to  
5 determine the amount of each competing resource which is not  
6 “practicably available,” *supra*, COL 119.

7 i. Surface water would be available for HC&S’s Waihe`e-  
8 Hopoi fields only after the IIFS are met, offstream uses of higher  
9 priority (exercise of traditional and customary rights) are met, and  
10 water is allocated between offstream uses of equal priority  
11 (exercise of appurtenant rights and existing uses).

12 ii. For water from Well No. 7, water would be available after  
13 considering costs, technology, and logistics, and the sustainable  
14 yield.

15 iii. Therefore, after determining the amount of water that is  
16 reasonable and beneficial to irrigate the Waihe`e-Hopoi fields,  
17 surface water must be offset by the contribution from Well No. 7  
18 that is practicably available.

19 b. Cost is the only consideration that HC&S cites as making water  
20 from Well No. 7 not “practicably available,” as logistics and technology  
21 are already in place; i.e., a new pump and pipeline. But HC&S only cites  
22 costs for 18.5 mgd or 9 mgd, which, when used, would mean that the  
23 Waihe-e-Hopoi fields would be in complete or at least in substantial  
24 production and producing income. Currently, less than 200 acres are in  
25 experimental plantings, which would be using only approximately 0.955  
26 mgd (200 acres x 4,776 gad), which HC&S estimates would cost  
27 \$178/mgd. HC&S does not explain at what point pumping costs for Well  
28 No. 7 without offsetting income, would cause it to cease activities on the  
29 3,650 acres of the Waihe`e-Hopoi fields.

1 c. Therefore, what limits the practical availability of brackish water  
2 from Well No. 7 is its sustainable yield, which is 3 mgd from natural  
3 recharge for the underlying Kahului Aquifer.

4 d. Recharge from irrigation is currently unknown but the Commission  
5 had determined, and HC&S had confirmed, that total yield was a  
6 maximum of 18.5 mgd on a sustainable daily basis when sugar cane was  
7 being irrigated at rates determined by the Commission to have been  
8 excessive.

9 e. Currently, only a few hundred acres are being irrigated and at  
10 about 80% of the reasonable and necessary irrigation rate determined by  
11 the Commission for sugar cane. Thus, while research and testing are being  
12 conducted and expansion of acres under cultivation proceeds gradually,  
13 irrigation recharge will be minimal or even non-existent.

14 f. As acres under active cultivation increases, recharge is expected to  
15 increase in some direct proportion to irrigation—though at rates  
16 significantly less than when sugar cane irrigation was using more water  
17 than necessary—making more brackish water available from Well No. 7.  
18 But as more brackish water is used from Well No. 7 to offset surface  
19 waters, there will be less recharge. Therefore, the contribution of Well No.  
20 7 to irrigation requirements would be constantly changing, and the  
21 equilibrium point between the two may never be known, much less  
22 achieved.

23 w. HC&S is issued a Category 2 existing-use permit for 15.65 mgd, 13.5 mgd for  
24 3,650 acres of the Waihe`e-Hopoi fields and 2.15 mgd in system losses:

25 1. Irrigation requirements of 16.60 mgd are reduced by 0.1 mgd from  
26 HC&S's `Iao Tunnel and 3 mgd from Well No. 7's natural sustainable yield.

27 x. In addition to the standard conditions, the permit is subject to the following  
28 special conditions:

29 1. HC&S will coordinate its and other down-ditch permittees' day-to-day  
30 water requirements such that HC&S will utilize water in the Waihe`e Ditch  
31 (through the Hopoi Chute, which drops water down to the Spreckels Ditch near

1 the latter's terminus) without negatively impacting down-ditch permittees'  
2 allocations.

3 2. To prevent waste, HC&S is permitted to use any and all waters that reach  
4 the terminus of the Spreckels Ditch (previously ending in the Waialae Reservoir,  
5 which is now being bypassed).

6 3. Although HC&S is permitted 13.5 mgd of surface waters to irrigate its  
7 Waihe`e-Hopoi fields, when HC&S's use of surface water reaches half of its  
8 permitted amount, or approximately 7 mgd, it will be required to use Well No. 7  
9 to the point that the brackish well water becomes unusable for irrigation.

10 a. Without significant recharge from irrigation, the yield from Well  
11 No. 7 cannot be expected to be significantly higher than the natural  
12 recharge. The permitted amount of 13.5 mgd already contains the discount  
13 from 3 mgd of the Kahului Aquifer's natural recharge. Thus, if significant  
14 increase in recharge is to occur, significant overlying irrigation has to  
15 occur.

16 b. Under the Commission's 2010 and 2014 Orders, HC&S was  
17 required to reduce its irrigation of sugar cane to what the Commission had  
18 determined to be necessary for economic and efficient utilization.  
19 Presumably, then, HC&S had previously been over-irrigating, and the  
20 excess irrigation, along with seepage principally from Waialae Reservoir,  
21 had been recharging the Kahului Aquifer to significantly higher levels  
22 over natural recharge. With sugar cane irrigation from 2010 to 2016, and  
23 now with minimal, if any, recharge from HC&S's embryonic bioenergy  
24 crop irrigation, minimal irrigation recharge must have been and is taking  
25 place. Even under full production, the sustainable yield of the Kahului  
26 Aquifer, and thus, brackish water that could be pumped from Well No. 7,  
27 cannot be expected to reach the levels sustained under sugar cane  
28 irrigation. Irrigation up to 2010 averaged 36 mgd to 39 mgd, compared to  
29 the permitted 13.5 mgd (16.5 mgd if 3 mgd from Well No. 7 is included)  
30 whenever the 3,650 acres of the Waihe`e Hopoi fields reach full

1 production. Thus, there is a new, lower, and unknown yield from Well No.  
2 7 than what was historically achieved.  
3  
4

### 5 **III. Decision and Order**

#### 7 **A. Interim Instream Flow Standards (IIFS)**

8  
9 1. The Commission's 2010 D&O restored water to Waihe'e River and Waiehu Stream, but  
10 not to Wailuku River and Waikapū Stream.

11 2. The 2014 Mediated Agreement left the Waihe'e River restoration at the 2010 amended  
12 flow, modified the Waiehu Stream's 2010 restoration, and restored water to Wailuku River and  
13 Waikapū Stream.

14 3. The Commission's amended IIFS for the Nā Wai `Ehā rivers and streams are as follows:  
15

##### 16 **1. Waihe'e River**

17  
18 4. The 2010 D&O, kept by the 2014 Mediated Agreement, amended the IIFS as follows:

19 a. above all diversions at gauging station 16614000 near an altitude of about 605  
20 feet the flow will remain as designated on December 10, 1988, estimated by USGS,  
21 based on data from 1984-2005, as Q<sub>90</sub> of 24 mgd, Q<sub>70</sub> of 29 mgd, and Q<sub>50</sub> of 34 mgd;

22 b. just downstream of the Spreckels Ditch diversion, the flow will be 10 mgd, unless  
23 the flow at about 605 feet is less, at which time the flow will be the corresponding  
24 amount;

25 c. at the mouth of the River, the flow will be the corresponding amount, estimated at  
26 6.0 mgd when reduced by losses into the streambed that are estimated as averaging 4  
27 mgd, with estimates ranging from 2.1 to 5.9 mgd.

28 (CCH-MA06-01, June 2010, p. 185.)

29 5. Prior to this increase in stream flow, dry weather flow immediately downstream of the  
30 Waihe'e and Spreckels Ditch intakes was commonly on the order of about 0.1 mgd, but the River  
31 may not have had continuous surface flow from mauka to makai. (FOF 60.)

1 6. The increased river flow resulted in an increase of natural habitat units from less than 1%  
2 to 11.1%, and the revival of springs, seeps, and wetlands. (FOF 291, 297-298.)

3 7. However, the amended IIFS of 10 mgd was less than the lowest flow recorded of 14 mgd,  
4 and though increasing the flow will not have a proportionate increase in habitat units, a 40  
5 percent increase from 10 mgd to 14 mgd should nevertheless have a measurable impact in  
6 increasing natural habitat units higher than the current 11.1%. (FOF 56, COL 142143, 167.)

7 8. The IIFS for Waihe`e River is therefore modified as follows:

8 a. above all diversions at gauging station 16614000 near an altitude of about 605  
9 feet the flow will remain as designated on December 10, 1988, estimated by USGS,  
10 based on data from 1984-2005, as Q<sub>90</sub> of 24 mgd, Q<sub>70</sub> of 29 mgd, and Q<sub>50</sub> of 34 mgd;

11 b. just downstream of the Spreckels Ditch diversion, the flow will be increased from  
12 10 mgd to 14 mgd, unless the flow at about 605 feet elevation is less, at which time the  
13 flow will be the corresponding amount;

14 c. at the mouth of the River, the flow will be the corresponding amount, increased  
15 from an estimated 6.0 mgd to an estimated 10.0 mgd when reduced by losses into the  
16 streambed that are estimated as averaging 4 mgd, with estimates ranging from 2.1 to 5.9  
17 mgd.

## 18 19 **2. Waiehu Stream**

20  
21 9. The 2010 D&O amended the IIFS for North Waiehu Stream as follows:

22 a. above all diversions near an altitude of 880 feet, the flow will remain as  
23 designated on December 10, 1988, estimated by USGS as Q<sub>90</sub> of 1.4 to 2.7 mgd, Q<sub>70</sub> of  
24 2.3 mgd to 2.7 mgd, and Q<sub>50</sub> of 3.1 mgd to 3.6 mgd; and

25 b. 1.6 mgd immediately below the North Waiehu Ditch diversion, unless the flow at  
26 altitude 880 feet is less, at which time the flow will be the corresponding amount.

27 (CCH-MA06-01, June 2010, pp. 185-186.)

28 10. The 2010 D&O amended the IIFS for South Waiehu Stream as follows:

29 a. above all diversions near an altitude of 870 feet, the flow will remain as  
30 designated on December 10, 1988, estimated by USGS as Q<sub>90</sub> of 1.3 mgd to 2.0 mgd, Q<sub>70</sub>  
31 of 1.9 mgd to 2.8 mgd, and Q<sub>50</sub> of 2.4 mgd to 4.2 mgd; and

1           b.       0.9 mgd immediately below the Spreckels Ditch diversion, unless the flow at  
2           altitude of 870 feet is less, at which time the flow will be the corresponding amount.  
3 (CCH-MA06-01, June 2010, p. 186.)

4 11.       The 2010 D&O amended the IIFS for the mouth of Waiehu Stream as follows:  
5           a.       the corresponding amount, estimated at 0.6 mgd when reduced by estimated  
6           losses of 1.3 mgd between the North Waiehu Ditch and the confluence of North and  
7           South Streams and 0.6 mgd between the confluence of North and South Waiehu Streams  
8           and the mouth.

9 (CCH-MA06-01, June 2010, p. 186.)

10 12.       Prior to the restorations, Waiehu Stream was commonly dry downstream of the Spreckels  
11 Ditch and did not flow continuously from mauka to makai. (FOF 71.)

12 13.       The restoration of 1.6 mgd to North Waiehu Stream was comparable to the lowest  
13 recorded flow of 1.6 mgd, and restoration of 0.9 mgd to South Waiehu Stream was less than the  
14 lowest recorded flow of 1.5 mgd. (FOF 62, 67.)

15 14.       With the restorations, natural habitat units increased from 6.1% to 55.5%, and springs  
16 and seeps were reviving. (FOF 291, 298.)

17 15.       The 2014 Mediated Agreement revised the 2010 D&O in the following ways:

18           a.       After the North Waiehu Ditch was abandoned, the IIFS for North Waiehu Stream  
19           was relocated to a lower elevation at the level of the Waihe`e Ditch, and the IIFS was  
20           lowered from 1.6 mgd to 1.0 mgd to reflect the approximately 0.6 mgd of seepage loss  
21           into the streambed between the two points. WWC was also supposed to provide water  
22           from the Waihe`e Ditch to the kuleana previously provided water from the North Waiehu  
23           Ditch, which has not been accomplished and addressed, *infra*.

24           b.       The South Waiehu IIFS of 0.9 mgd immediately below the Spreckels Ditch was  
25           retained, but HC&S's South Waiehu diversion into the Spreckels Ditch was modified to  
26           allow approximately 250,000 gpd during low stream flows to flow from the Ditch to the  
27           kuleana intake (see Figure 1), with the remainder of the low flows being returned to the  
28           stream.

29 (2014 Mediated Agreement, p. 26-27.)

30 16.       This modification was the result of "certain kuleana users (who) did not appear in these  
31 proceedings (the hearings after the 2010 D&O and before the 2014 Mediated Agreement), but

1 have contacted the Parties and the Commission with their concerns about the impacts of  
2 implementing the IIFS for South Waiehu Stream on their kuleana water uses...(T)he Parties and  
3 Commission staff have discussed a provisional ditch modification to maximize the amount of  
4 water diverted from South Waiehu Stream that can be delivered to the kuleana users during low  
5 ditch flows, and the kuleana users on the parcel designated as TMK No. 3-3-2-9 have been  
6 informed of and approve the ditch modification notwithstanding that they may need to clear the  
7 grate of debris more than is currently required.” (2014 Mediated Agreement, Exh. A, pp. 1-2.)

8 17. TMK No. 3-3-2-9 is 3.38 acres, of which SWUPAs were filed by Jason Miyahira for his  
9 2.08-acre portion and by Rene Molina for the remaining 1.3 acres. Miyahira and Molina own the  
10 parcel in a hui along with two other families. Both Miyahira and Molina had filed for existing  
11 uses for the 3.38 acres in April 2009. In this CCH, both parcels have been recognized as having  
12 appurtenant rights, and Miyahira has been approved for a Category 2 permit of 79,020 gpd and  
13 Molina, for a Category 2 permit of 18,750 gpd plus domestic use of 750 gpd. (FOF 389-390,  
14 COL 268-269.)

15 18. There is another kuleana that receives water from the same kuleana ditch, filed in July  
16 2012 under SWUPA3465N—Curry, Gomes & Laimana, who had also filed for and been granted  
17 provisional recognition of appurtenant rights but who did not participate in the CCH. If the  
18 documents they had provided so far had been validated, their presumed appurtenant rights would  
19 also appear to have been traditional and customary rights, or in Category 1. But the 2014  
20 Mediated Agreement only specifically identifies the properties of Miyahira and Molina as the  
21 basis for the exceptions under low ditch flows. (FOF 391, COL 270.)

22 19. The only reason given for this special treatment for Miyahira and Molina was the 2014  
23 Mediated Agreement rationale that they had concerns about the impacts of implementing the  
24 IIFS for South Waiehu Stream on their kuleana water uses, for which the Mediated Agreement  
25 approved a provisional ditch modification to maximize the amount of water diverted from South  
26 Waiehu Stream that can be delivered to the kuleana users during low ditch flows, about which  
27 Miyahira and Molina had been informed of and approved the ditch modification notwithstanding  
28 that they may need to clear the grate of debris more than is currently required. (2014 Mediated  
29 Agreement, Exh. A, pp. 1-2.)

30 20. The Commission finds the special accommodations for Miyahira and Molina to be  
31 arbitrary and contrary to the treatment of other approved permits, which include permittees in



1 Category 1 with traditional and customary rights and others similarly situated with Miyahira and  
2 Molina in Category 2 with appurtenant rights and/or existing uses.

3 21. A similar arbitrary and special treatment has been afforded to MDWS and certain other  
4 kuleana users on Wailuku River, which will be addressed, *infra*.

5 22. The IIFS for Waiehu Stream is modified as follows;

6 a. North Waiehu Stream:

7 i. above all diversions near an altitude of 880 feet, the flow will remain as  
8 designated on December 10, 1988, estimated by USGS as Q<sub>90</sub> of 1.4 to 2.7 mgd,  
9 Q<sub>70</sub> of 2.3 mgd to 2.7 mgd, and Q<sub>50</sub> of 3.1 mgd to 3.6 mgd; and

10 ii. 1.0 mgd at the level of the Waihe`e Ditch as established in the 2014  
11 Mediated Agreement, unless the flow at altitude 880 feet is less, at which time the  
12 flow will be the corresponding amount after subtracting for estimated losses.

13 b. South Waiehu Stream:

14 i. above all diversions near an altitude of 870 feet, the flow will remain as  
15 designated on December 10, 1988, estimated by USGS as Q<sub>90</sub> of 1.3 mgd to 2.0  
16 mgd, Q<sub>70</sub> of 1.9 mgd to 2.8 mgd, and Q<sub>50</sub> of 2.4 mgd to 4.2 mgd;

17 i. 0.9 mgd just below the Spreckels Ditch, as established in the 2010  
18 Decision and Order, unless the flow at altitude of 870 feet is less, at which time  
19 the flow will be the corresponding amount.

20 ii. The 2014 Mediated Agreement's special treatment under low-flow  
21 conditions for kuleana ditch users off HC&S's South Waiehu diversion into the  
22 Spreckels Ditch is rescinded, and those users will have access to water according  
23 to the priority category of their permits, as with all other permittees and  
24 appurtenant rights holders.

25 c. The IIFS at the mouth of Waiehu Stream shall remain as established in the 2010  
26 D&O; i.e., an estimated 0.6 mgd after accounting for infiltration losses between the IIFS  
27 locations for North and South Waiehu Streams and the mouth.

28

29 **3. Wailuku River**

30

1 23. The 2010 D&O did not amend the IIFS for Wailuku River. (CCH-MA06-01, June 2010,  
2 p. 186.)

3 24. Following the Hawai`i Supreme Court review and subsequent rehearing and proposed  
4 D&O by the Hearings Officer, the 2014 Mediated Agreement amended the IIFS as follows:

5 a. 10 mgd just below the diversion operated by WWC above the `Īao-Waikapū and  
6 `Īao-Maniania Ditches.

7 b. Provided that:

8 i. When the average daily flow measured at USGS stream-gauge station  
9 16604500 is between 15 mgd and 10 mgd and has continued in that range for  
10 three consecutive days, the greater of one-third (1/3) of the stream flow or 3.9  
11 mgd may be diverted for noninstream use until the flow returns to 15 mgd or  
12 above.

13 ii. When the average flow for any day falls below 10 mgd, commencing the  
14 next day and continuing until the average daily flow returns to at least 10 mgd,  
15 3.4 mgd may be diverted for noninstream use.

16 c. 5 mgd at the mouth. No water may be diverted at the Spreckels Ditch intake  
17 operated by HC&S except when the stream flow is adequate to allow the IIFS of 5 mgd at  
18 the mouth.

19 (2014 Mediated Agreement, p. 27.)

20 25. As in the case of South Waiehu Stream, the 2014 Mediated Agreement provides special  
21 treatment, this time “to provide adequate water to accommodate MDWS’s 3.2 mgd for its water  
22 treatment plant and the estimated 0.2 mgd used by kuleana users served exclusively by the `Īao-  
23 Waikapū Ditch.” (2014 Mediated Agreement, p. 27.)

24 26. As the provider of water for domestic uses of the general public, MDWS’s water use is a  
25 public trust purpose and in priority Category 1, along with traditional and customary Native  
26 Hawaiian practices. (COL 7, 199.) But there are no absolute priorities among public trust  
27 purposes. (COL 9.)

28 27. Furthermore, first, while at times there may be insufficient water available for all  
29 permitted offstream uses, it will rarely, if ever, be of such deficiency that no water will be  
30 available, only a reduced amount compared to the maximum permitted amount. Second, water

1 available from rivers and streams inherently fluctuates with stream flow, so permittees of such  
2 water are never guaranteed a set amount, only a maximum amount that they cannot surpass.

3 28. On the estimated 0.2 mgd for kuleana users of the `Īao-Waikapū Ditch, besides MDWS,  
4 there were 21 other SWUPAs filed for the `Īao-Waikapū Ditch: 1) six kuleana, 2) 7 other  
5 applicants who participated in the CCH and met the conditions for water-use permits, and 3) 8  
6 applicants who did not participate in the CCH.

7 a. Counting all categories of permits and domestic uses, the SWUPAs for the six  
8 kuleana were found to meet the permit conditions for a total of 165,525 gpd. 158,775 gpd  
9 was for three applicants with traditional and customary rights: 150,000 gpd, 5,475 gpd,  
10 and 3,300 gpd exercised as appurtenant rights. One other applicant with traditional and  
11 customary rights applied only for domestic uses, which are exempt from the permit  
12 requirements.

13 b. The seven other applicants who met the conditions for water-use permits totaled  
14 185,462 gpd, of which 171,128 gpd was in Category 2 as exercising appurtenant rights  
15 and/or existing uses, 11,834 gpd was in Category 3 as new uses without appurtenant  
16 rights, and 2,500 gpd was exempt as domestic uses.

17 (Tables 2 and 3.)

18 29. As in the special treatment for some South Waiehu Stream users, the special treatment for  
19 some Wailuku River users is arbitrary and contrary to the treatment of similarly situated users.  
20 There are twelve other kuleana applicants with traditional and customary rights in Nā Wai `Ehā,  
21 none of whom has received special treatment. Moreover, the special treatment in the 2014  
22 Mediated Agreement excludes the other 7 users on the `Īao-Waikapū Ditch without any stated  
23 reason.

24 30. Wailuku River is now deep enough to swim, and springs have become more consistent.  
25 (FOF 299-300, COL 126.)

26 31. The IIFs for Wailuku River is modified as follows:

27 a. above all diversions near an altitude of 780 feet, the flow will remain as  
28 designated on December 10, 1988, estimated by USGS as Q<sub>90</sub> of 13 mgd, Q<sub>70</sub> of 18 mgd,  
29 and Q<sub>50</sub> of 25 mgd. (FOF 74.)

30 b. 10 mgd just below the diversion operated by WWC above the `Īao-Waikapū and  
31 `Īao-Maniania Ditches.

1 i. The special provisions for MDWS and the kuleana users of the `Īao-  
2 Waikapū Ditch are rescinded, and they will receive water through the priority  
3 system established for all permittees.

4 c. 5 mgd at the mouth. No water may be diverted at the Spreckels Ditch intake  
5 operated by HC&S except when the stream flow is adequate to allow the IIFS of 5 mgd at  
6 the mouth.

7  
8 **4. Waikapū Stream**

9  
10 32. The 2010 D&O did not amend the IIFS for Waikapū Stream. (CCH-MA06-01, June  
11 2010, pp. 186-187.)

12 33. Following the Hawai`i Supreme Court review and subsequent rehearing and proposed  
13 D&O by the Hearings Officer, the 2014 Mediated Agreement amended the IIFS as follows:

14 a. 2.9 mgd, measured below the South Waikapū Ditch diversion.

15 b. Water remaining in Waikapū Stream at the Waihe`e Ditch diversion can be  
16 diverted into the Waihe`e Ditch except during periods of high flow, when most of the  
17 flow of Waikapū Stream passes or tops the diversion and flows toward Kealia Pond, and  
18 excess ditch flow is discharged into Waikapū Stream. The intent was that the frequency  
19 and amount of intermittent flows that pass the Waihe`e Ditch diversion during rainy  
20 periods will not be diminished by any change in the manner in which this diversion is  
21 currently operated.

22 (2014 Mediated Agreement, p. 28.)

23 34. Although not stated, the IIFS of 2.9 mgd below the South Waikapū Ditch diversion—  
24 versus the absence of any IIFS below the South Waikapū Ditch diversion under the previous  
25 status quo that reflected unrestricted diversion conditions—had the effect of limiting the amount  
26 that could be diverted by the South Waikapū Ditch diversion for HC&S’s `Īao-Waikapū fields,  
27 thereby providing more water for kuleana further down the stream (see Figure 1).

28 35. The conditions for the Waihe`e Ditch diversion at high flows was to ensure that such  
29 flows would not be captured by the Waihe`e Ditch and that water would reach Kealia Pond when  
30 the stream flooded. As a consequence, water has returned to Kealia Pond, which was previously  
31 “mud flats,” despite its not flowing continuously in its lowest reaches. (FOF 85, 301, COL 127.)

1 36. The IIFs for Waikapū Stream shall remain as established in the 2014 Mediated  
2 Agreement:

- 3 a. above all diversions near an altitude of 880 feet, the flow will remain as  
4 designated on December 10, 1988, estimated by USGS as Q<sub>90</sub> of 3.3 mgd to 4.6 mgd, Q<sub>70</sub>  
5 of 3.9 mgd to 5.2 mgd, and Q<sub>50</sub> of 4.8 mgd to 6.3 mgd. (FOF 81.)  
6 b. 2.9 mgd below the South Waikapū Ditch diversion.  
7 c. No alterations shall be made to the Waihe`e Ditch diversion that would increase  
8 the diversion of high stream flows beyond what can be diverted under current  
9 configurations.

10 37. WWC and HC&S will work with Commission staff to implement the IIFS and  
11 modifications to the previous conditions that have been rescinded.  
12

### 13 **5. Enhanced Flows for Downstream Permittees**

14

15 38. The flows established below the diversions shall be augmented by the amounts necessary  
16 to meet the requirements of downstream water-use permittees and domestic users. (COL 118.)

17 39. Except for Waikapū Stream, which did not flow continuously to the ocean under natural  
18 conditions and for which the IIFS is intended to allow high stream flows to reach Kealia Pond,  
19 the IIFS for Waihe`e River, Waiehu Stream, and Wailuku River are intended to result in  
20 continual mauka to makai stream flows to enable instream values, including but not limited to  
21 maintenance of fish and wildlife habitats. (FOF 223-288.)

22 40. Thus, sufficient flows must be added for permittees and domestic users downstream of  
23 the IIFS locations. This will be a particularly difficult task with IIFS located where there are also  
24 substantial numbers of upstream as well as downstream permittees and domestic users, because  
25 WWC and to a lesser extent, HC&S, must maintenance a balance between upstream and  
26 downstream users while meeting the IIFS for instream purposes. Moreover, when stream flows  
27 are insufficient to meet the permitted amounts, WWC and HC&S must reduce available water  
28 for upstream and downstream permittees equitably, a task which will be difficult at best.  
29

### 30 **B. Appurtenant Rights and Surface Water-Use Permit Applications (SWUPAs)**

31

1 41. The determinations of appurtenant rights and SWUPAs have been addressed individually  
 2 in FOF 322-480 and COL 204-358. Refer to the relevant FOF and COL (see Table 1) for the  
 3 evaluations and decisions on individual SWUPAs.

4 42. In its Conclusions of Law, the Commission has taken an inclusive approach to  
 5 appurtenant rights and SWUPAs, not limiting the evaluation of appurtenant rights only to those  
 6 TMKs that had been provisionally approved and including new-use permit requests under the  
 7 umbrella of existing-use applications. The Commission has concluded that it has the authority to  
 8 take such approaches. Not to take such an inclusive approach would only delay appurtenant  
 9 rights recognition to those claimants who have substantiated their claims but who would be  
 10 excluded in this CCH on procedural issues which the Commission has addressed.

11 43. Because of the large number of SWUPAs and the redundancy of each applicant repeating  
 12 the same information, the Commission has taken the approach to address permit requirements  
 13 and practical alternatives collectively (see COL 100-114, 174), except for the requirement that  
 14 the amount applied for is “necessary for economic and efficient utilization,” which have been  
 15 addressed for each SWUPA.

16 44. Table 3 summarizes the acres claimed for appurtenant rights, the acres recognized as  
 17 having such rights attached, and the amounts to be exercised under appurtenant rights that have  
 18 been determined to be reasonable and beneficial:

<u>Source</u>	<u>Claimed (acres)</u>	<u>Recognized (acres)</u>
21 Waihe`e River:	261.223	82.132
22 Waiehu Stream:	10.915	8.593
23 Wailuku River:	95.927*	116.319*
24 Waikapū Stream:	34.934	14.826
25 Multiple Sources:	<u>29.506</u>	<u>26.82</u>
26 Total:	432.505	248.69

27 \*2207/2208N-Makani Olu claimed 14.9 acres by the number of lo`i and assumptions  
 28 of the size of the lo`i but was recognized for 50.69 acres by the method of expert witness  
 29 Kame`eleihiwa, FOF 150-171.

30  
 31 45. Amounts to be exercised under appurtenant rights and determined to be reasonable and  
 32 beneficial:

1	Waihe`e River:	4,737,530 gpd
2	Waiehu Stream:	493,730 gpd
3	Wailuku River:	1,344,723 gpd
4	Waikapū Stream:	1,196,078 gpd
5	Multiple Sources:	<u>649,000 gpd</u>
6	Total:	8,421,861 gpd

7

8 46. Note that there are 248.69 acres with appurtenant rights, equal to 24,869,000 gpd at  
9 100,000 gad (see COL 71), while those exercising appurtenant rights for kalo lo`i would require  
10 150,000 gad at present-day irrigation requirements (see COL 61). Even at the higher irrigation  
11 requirement today for kalo lo`i, most of the appurtenant rights have not been exercised in this  
12 CCH.

13 47. Table 2 summarizes permits by source and priority categories:

14 Total permitted amounts by source:

15	Waihe`e River:	8,327,070 gpd
16	Waiehu Stream:	832,930 gpd
17	Wailuku River:	6,428,297 gpd
18	Waikapū Stream:	2,957,252 gpd
19	Multiple Sources:	<u>17,991,392 gpd</u>
20	subtotal:	36,536,941 gpd
21	WWC:	<u>2,730,000 gpd</u> (system losses in Category 2 as an existing use)
22	Total permitted:	39,266,941 gpd

23

24 48. Total permitted amounts by category (domestic use is exempt from the permit  
25 requirements):

- 26 Category 1: 4,743,217 gpd. (Waihe`e River: 828,415 gpd; Wailuku River: 3,914,802 gpd.)
- 27 Category 2: 27,750,676 gpd. (Waihe`e River: 5,641,248 gpd; Waiehu Stream: 506,130 gpd;  
28 Wailuku River: 1,240,476 gpd; Waikapū Stream: 2,858,040 gpd;  
29 Multiple Sources: 17,504,782 gpd.)
- 30 Category 3: 3,977,384 gpd. (Waihe`e River: 1,831,310 gpd; Waiehu Stream: 322,050 gpd;  
31 Wailuku River: 1,261,024 gpd; Waikapū Stream: 80,600 gpd;

1 Multiple Sources: 482,400 gpd.)  
2 Domestic Use: 65,664 gpd. (Waihe`e River: 26,097 gpd; Waiehu Stream: 4,750 gpd;  
3 Wailuku River: 11,995 gpd; Waikapū Stream: 18,612 gpd;  
4 Multiple Sources: 4,210 gpd.)  
5 Total: 36,536,941 gpd  
6

7 49. Note that Category 2's total is 27,750,676 gpd, comprised of exercised appurtenant rights  
8 and existing uses. Exercised appurtenant rights are 8,421,061 gpd, so most of Category 2 is  
9 existing uses of 19,329,615 gpd.

10

11 **C. Implementation**

12

13 50. WWC and HC&S shall confirm and correct the identities of the users identified on the  
14 various ditches in Figure 1 and report monthly on the amounts delivered to each ditch or user,  
15 when applicable.

16 51. WWC, and to a lesser extent, HC&S will confer with Commission staff on how they will  
17 allocate water between permittees and domestic users upstream and downstream of the IIFS  
18 locations for Waihe`e River, Waiehu Stream, and Wailuku River (see, "Enhanced Flows for  
19 Downstream Permittees," *supra*).

20 52. Implementation of the permits will begin with Categories 1 and 2 and domestic uses for  
21 one year to determine whether the available water is sufficient, insufficient, or in excess of the  
22 permitted amounts to Category 1 and 2 permittees and for domestic uses.

23 a. Many of the Category 1 and 2 permittees have applied for future uses and may  
24 take some time before full use, so the Commission will determine at the end of one year  
25 whether to extend the interim one-year period before determining that water can be made  
26 available to Category 3 permittees. If made available to Category 3 permittees, it will be  
27 on the condition that such permits may again be held in abeyance if increased use by  
28 Category 1 and 2 permittees requires all or part of the water allocated to Category 3  
29 permittees. Furthermore, new applications for recognition of appurtenant rights and  
30 permits to exercise those rights are expected, and such additional permits will have  
31 priority over Category 3 permits.



1 b. If water is insufficient to meet the requirements of the lowest category of permits,  
2 such permittees will have prorated uses of water (see COL 202).

3 c. Many permittees have more than one category of permits (see Table 2), and water  
4 deliveries by WWC and HC&S must take this into account with the assistance of  
5 Commission staff, and confirmed by the water reporting required by both metered and  
6 unmetered users, *infra*.

7 53. Finally, WWC will report to the Commission its plan and implementation schedule to  
8 provide water from the Waihe`e Ditch for previous kuleana users of the North Waiehu Ditch (see  
9 COL 128.)

#### 10 11 **D. Reporting by Unmetered Users**

12  
13 54. All unmetered users, whether receiving water directly from the river/stream or from a  
14 ditch, are required to report the following information to the Commission on a monthly basis for  
15 a period of one year:

16 a. Source and amount of inflows.

17 b. Outflow amounts, when relevant, such as for kalo lo`i.

18 c. For outflows, where the water is going, whether to the source ditch, other users, or  
19 dispersed without re-use.

20 55. Measurement of flows will be by practicable methods, such as with a bucket, as approved  
21 by the Commission.

22 56. The frequency and period of measurement are to report natural variances in flows due to  
23 crop cycles.

24 57. The reporting of both inflows and outflows for kalo lo`i should result in more reliable and  
25 extensive information on losses.

#### 26 27 **E. Management of Kuleana Systems**

28  
29 58. WWC's responsibilities are to maintain its ditches to the point of delivery of water into  
30 the kuleana ditch or pipe system, with maintenance of the kuleana ditches and pipes the  
31 responsibility of the users, *supra*, FOF 142-144.

1 59. In the pre-Māhele period, kuleana lands frequently contained pō`alima which the  
2 occupants worked for the konohiki, chief, or king, and maintenance of the ditches was a  
3 collective responsibility. Present-day kuleana owners/users retain mutual responsibility for the  
4 maintenance of the kuleana ditches and pipes and to share the waters that flow in mutually used  
5 kuleana ditches and pipes.

6 60. Hui/MTF and OHA propose that the Commission employ a special master “to resolve  
7 water course or access issues as they may arise in the administration of the IIFS and permits—  
8 effectively serving the role of the modern-day ‘konohiki’ to protect kuleana rights...recounting  
9 the konohiki’s traditional role to manage ‘equality of division and avoid troublesome quarrels  
10 between the tenants’.” (Hui/MTF and OHA, Proposed D&O, p. 98.)

11 61. The resuscitation of kuleana lands for kalo lo`i is not only to allow individual kuleana to  
12 grow kalo through traditional practices but to do so in mutual cooperation and labor with  
13 neighboring kuleana, and a regulatory approach only solidifies the present focus on one’s own  
14 kuleana irrigation needs.

15 62. The modern-day “konohiki” must have the skills to shepherd kuleana occupants toward  
16 agreed mutual sharing of both water and the improvement and maintenance of the kuleana  
17 ditches and pipes. Such an endeavor is a long-term activity, entailing “konohiki” that are both  
18 knowledgeable of kalo lo`i irrigation practices and efficient sharing of water. OHA has invested  
19 considerable resources in this CCH to assist their Native Hawaiian constituents in Nā Wai `Ehā  
20 to regain water for traditional practices. Now that this goal will be substantially achieved, OHA  
21 should see it to completion by helping kuleana occupants develop the social bonds that in pre-  
22 Māhele days resulted in the extensive kalo lo`i that these occupants are attempting to revive.

23 63. Thus, the Commission requests that OHA continue its involvement through its resources  
24 and contacts in the Hawaiian community to develop the community-sharing system that is  
25 needed to revive Nā Wai `Eha as the premier wetland kalo producer not only on Maui, but  
26 throughout the State (see FOF 264, 269, 271-272, 275, 285-286).

27

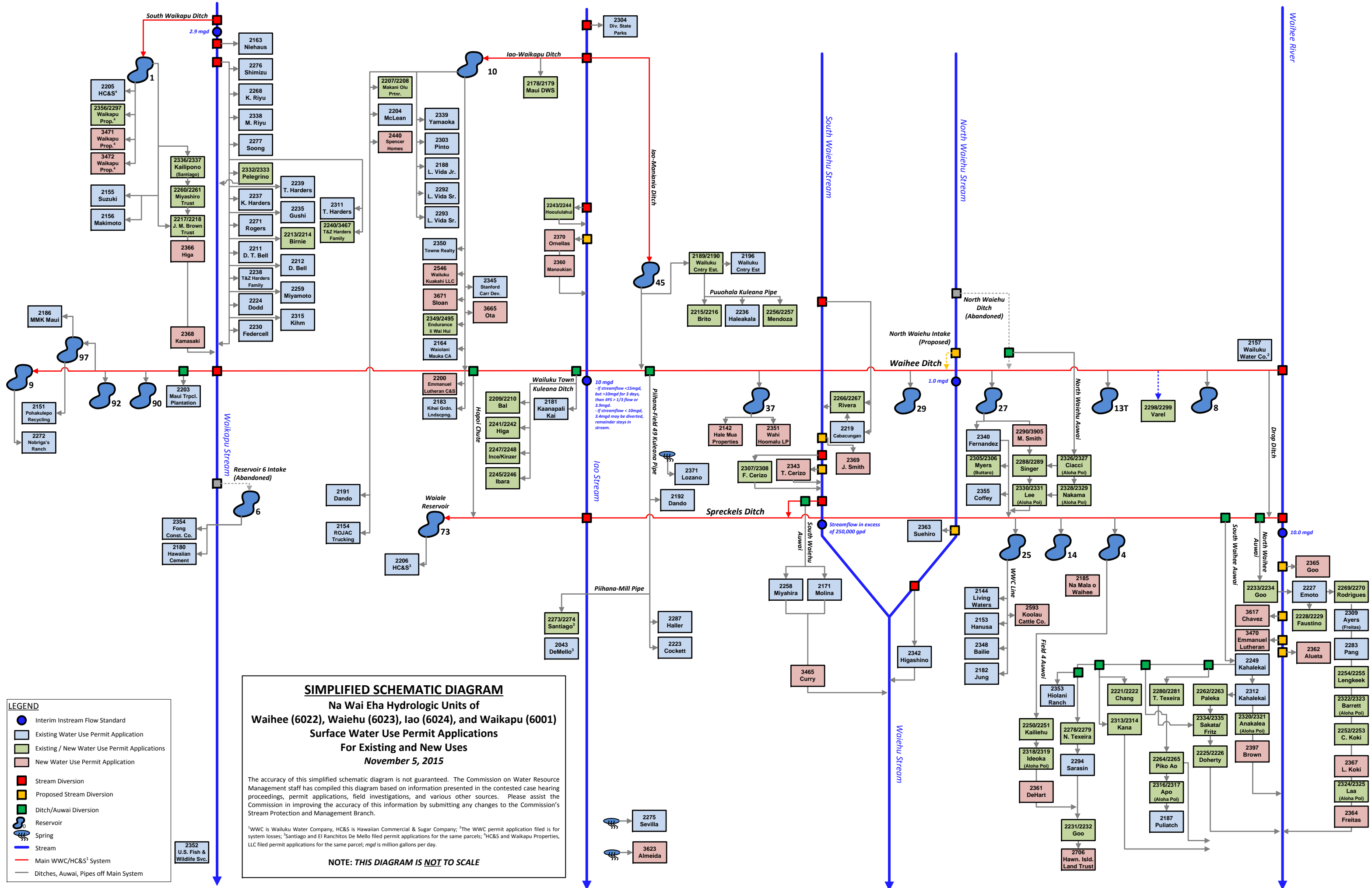
28 **F. Reclaimed Wastewater**

29

1 64. MDWS will convene a working group of large users to address the use of R-1 water from  
2 the Wailuku-Kahului Wastewater Reclamation Facility (WWRF) and report its findings to the  
3 Commission in one year.

4 65. The current potential for treating the WWRF's R-1 water to R-2 is unrealized because it  
5 is not practical for any single potential user because of the logistics and costs of obtaining  
6 easements and building transmission pipelines. Even MDWS has not found it practical to use, the  
7 costs having no direct relationship with the amount of water that could be used at various  
8 delivery sites. Such obstacles of cost and logistics in relationship to the amount of water to be  
9 used at particular sites also extend to private users (see FOF316-317).

10



**SIMPLIFIED SCHEMATIC DIAGRAM**  
**Na Wai Eha Hydrologic Units of**  
**Waiehu (6023), Iao (6024), and Waikapu (6001)**  
**Surface Water Use Permit Applications**  
**For Existing and New Uses**  
**November 5, 2015**

The accuracy of this simplified schematic diagram is not guaranteed. The Commission on Water Resource Management staff has compiled this diagram based on information presented in the contested case hearing proceedings, permit applications, field investigations, and various other sources. Please assist the Commission in improving the accuracy of this information by submitting any changes to the Commission's Stream Protection and Management Branch.

<sup>1</sup>WWC is Waialuku Water Company, HC&S is Hawaiian Commercial & Sugar Company; <sup>2</sup>The WWC permit application filed is for system losses; <sup>3</sup>Santiago and El Ranchitos De Mello filed permit applications for the same parcels; <sup>4</sup>HC&S and Waikapu Properties, LLC filed permit applications for the same parcel; mgd is million gallons per day.

**NOTE: THIS DIAGRAM IS NOT TO SCALE**

**LEGEND**

- Interim Instream Flow Standard
- Existing Water Use Permit Application
- Existing / New Water Use Permit Applications
- New Water Use Permit Application
- Stream Diversion
- Proposed Stream Diversion
- Ditch/Auwai Diversion
- Reservoir
- Spring
- Stream
- Main WWC/HC&S<sup>1</sup> System
- Ditches, Auwai, Pipes off Main System

2352  
U.S. Fish & Wildlife Svc.

2275  
Sevilla

3623  
Almeida

Table 1

SWUPAs and Corresponding Findings of Fact and Conclusions of Law

<u>SWUPA</u>	<u>Findings of Fact</u>	<u>Conclusions of Law</u>
2142-Hale Mua Properties	460	338
2144-Living Waters Foundation, LLC	378	257
2151-Pohakulepo Recycling, LLC	477	355
2153-Robert Hanusa	379	258
2154-Rojac Trucking, Inc.	425	304
2155-Clayton Suzuki	433	312
2156-Nadao Makimoto	434	313
2157-Wailuku Water Company	322	204
2163-David Niehaus	435	314
2164-Waiolani Mauka Comm. Ass'n	411	290
2171-Renee Molina	390	269
2178/2179N-MDWS	403	282
2180-Hawaiian Cement	456	335
2181-Kaanapali Kai	469	347
2182-Cecilia Chang (Jung)	381	260
2183-Kihei Garden & Landscaping Co., LLP	413	292
2185N-Na Mala O Waihee	374	253
2186-MMK Maui	476	354
2187-Milla Puliatch	364	243
2188-Leslie Vida Jr.	405	284
2189/2190N & 2196-WCEIC	399	278
2191-Charles Dando, Sr.	424	303
2192-Charles Dando, Sr.	463	341
2200-Emmanuel Lutheran Church & School	412	291
2203-Maui Tropical Plantation	475	353
2204-Luke McLean	422	301
2205/2356/2297N, 3471N & 3472N-Waikapu Prop.	427	306

2206-HC&S	480	358
2207/2208N-Makani Olu Partners	421	300
2209/2210N-Vernon Bal	470	348
2211-Dorothy Bell	448	327
2212-Douglas Bell	449	328
2213/2214N-Alan Birnie	447	326
2215/2216N-Gary & Evelyn Brito	400	279
2217/2218N-Brown Trust/Crystal Smythe, Trustee	430	309
2219/2220N-Regino Cabacungan & Kathy Alves	385	264
2221/2222N-Cordell Chang	365	244
2223-Winifred & Gordon Cockett	467	345
2224-James Dodd	452	331
2225/2226N-Michael Doherty	360	239
2227-Richard Emoto & Roy Ellis	342	221
2228/2229N-Faustino & Lovato-Rodrigues	343	222
2230-Patricia Federcell	453	332
2231/2232N-Diannah Goo	371	250
2233/2234N-Diannah Goo	341	220
2235-Russell Gushi	445	324
2236-Valentine Haleakala	401	280
2237-Karl & Lee Ann Harders	444	323
2238-T&Z Harders Family Ltd. Partnership	450	329
2239-Theodore & Zelie Harders	443	322
2240/3467N-T&Z Harders Family Ltd. Partnership	441	320
2241/2242N-Mary Ann Velez (Higa)	471	349
2243/2244N-Ho`oululāhui LLC (Duey)	393	272
2245/2246N-Greg Ibara	473	351
2247/2248N-Jordanella Ciotti (Ince/Kinzer)	472	350
2249-Kenneth Kahalekai	354	233
2250/2251N-Alfred Kailiehu Jr. & Ina Kailiehu	375	254
2252/2253N-Crystal Koki	349	228
2254/2255N-David Lengkeek	347	226

2256/2257N-Kenneth Mendoza	402	281
2258-Jason Miyahira	389	268
2259-Jerri Young (Elsie Miyamoto)	451	330
2260/2261N-Ho`okahi Alves (Miyashiro Trust)	429	308
2262/2263N-John Varel (Kalani & Tera Paleka)	358	237
2264/2265N-Piko Ao	362	241
2266/2267N-Isabelle Rivera	384	263
2268-Katherine Ryu	437	316
2269/2270N-Michael Rodrigues	344	223
2271-Waldemar & Darlene Rogers	446	325
2272-Nobriga's Ranch	478	356
2273/2274N-Alfred Santiago	464	342
2275-Sevilla, Smith, & County of Maui	397	276
2276-lone Shimizu	436	315
2277-Warren Soong	439	318
2278/2279N-Noel & Katherine Texeira	368	247
2280/2281N-Thomas Texeira & Denise Texeira	361	240
2283-Lorin Pang	346	225
2287-Michelle Haller	466	344
2288/2289N-Donalee & David Singer	337	216
2290/3905N-Murray & Carol Smith	335	214
2292 & 2293-Donna Vida	406	285
2294-Bryan Sarasin, Sr.	369	248
2298/2299N-John Varel	328	209
2303-Claire Pinto	407	286
2304-Division of State Parks	392	271
2305/2306N-Douglas Myers & Alex Buttaro	332	211
2307/2308N-Francisco Cerizo	387	266
2309/2310N-Alfred Ayers & William Freitas	345	224
2311-Theodore & Zelie Harders	440	319
2312-Kau`i Kahakelai	355	234
2313/2314N-Charlene & Jacob Kana	366	245

2315-Leinaala Kihm	454	333
2316/2317N-Gordon Apo (Aloha Poi)	363	242
2318/2319N-Nolan Ideoka & Lester Nakama	376	255
2320/2321N-Ramsay Anakalea (Aloha Poi)	356	235
2322/2323N-Robert Barrett (Aloha Poi)	348	227
2324/2325N-La`a & Rodrigues	351	230
2326/2327N-Lester Nakama (Ciacci)	336	215
2328/2329N-Lester Nakama	338	217
2330/2331N-Peter Lee & Lester Nakama	339	218
2332/2333N-Hökūao & Alana Pellegrino	442	321
2334/2335N-Burt Sakata & Peter Fritz	359	238
2336/2337N-Colin Kailiponi & Alfred Santiago	428	307
2338-Judith Yamanoue (Melvin Ryu)	438	317
2339-Roger Yamaoka & Kevin Yamaoka	404	283
2340-Rudy Fernandez	331	210
2342-Paul Higashino	334	213
2343N-Thomas Cerizo	388	267
2345-Stanford Carr Development, LLC	409	288
2348-Michael Bailie	380	259
2349/2495N-Endurance li Wai Hui	410	289
2350/2546N-Towne Realty/Wailuku Kuakahi, LLC	408	287
2351N-Wahi Ho`omalū LP	461	339
2352-U.S. Fish & Wildlife Service	457	336
2353-Hiolani Ranch	367	246
2354-Fong Construction Company	455	334
2355-Fred Coffey	333	212
2360N-Anthony Manoukian	395	274
2361N-Kathleen DeHart	370	249
2362N-Joseph Alueta	327	208
2363N-Natalie Hashimoto & Carl Hashimoto	383	262
2364N-William Freitas	352	231
2365N-Diannah Lai Goo	324	205



2366N-George & Yoneko Higa	431	310
2367N-Lawrence Koki	350	229
2368-Teruo Kamasaki	432	311
2369N-Jeff Smith	386	265
2370N-Francis Ornellas	394	273
2371N-Kimberly Lozano	396	275
2406N-David & Anne Brown	357	236
2440-Spencer Homes	423	302
2593N-John Varel (Koolau Cattle Co.)	382	261
2706N-Hawaiian Islands Land Trust	372	251
3465N-Curry, Gomes & Laimana	391	270
3470N-Varel (Emmanuel Lutheran Church)	326	207
3617N-Joshua Chavez	325	206
3623N-Noelani & Allan Almeida & Gordon Almeida	398	277
3665N-Ken & Saedene Ota	416	295
3671N-Kurt & Betsy Sloan	415	294
4442N-Gerald Lau Hee	417	296
4443N-Roy Kitagawa	418	297
4444N-Anthony Takitani	419	298
4445N-SPV Trust (Shane Victorino)	420	299

Table 2

SWUPAs: Permit Categories, Permitted Amounts, and Domestic Uses

Totals by Category:

Category 1:	4,743,217 gpd.	(Waihe`e River: 828,415 gpd; Wailuku River: 3,914,802 gpd.)
Category 2:	27,750,676 gpd.	(Waihe`e River: 5,641,248 gpd; Waiehu Stream: 506,130 gpd; Wailuku River: 1,240,476 gpd; Waikapū Stream: 2,858,040 gpd; Multiple Sources: 17,504,782 gpd.)
Category 3:	3,977,384 gpd.	(Waihe`e River: 1,831,310 gpd; Waiehu Stream: 322,050 gpd; Wailuku River: 1,261,024 gpd; Waikapū Stream: 80,600 gpd; Multiple Sources: 482,400 gpd.)
Domestic Use:	<u>65,664</u> gpd.	(Waihe`e River: 26,097 gpd; Waiehu Stream: 4,750 gpd; Wailuku River: 11,995 gpd; Waikapū Stream: 18,612 gpd; Multiple Sources: 4,210 gpd.)
Total:	36,536,941 gpd	

Totals by Source:

Waihe`e River:	8,327,070 gpd
Waiehu Stream:	832,930 gpd
Wailuku River:	6,428,297 gpd
Waikapū Stream:	2,957,252 gpd
Multiple Sources:	<u>17,991,392</u> gpd
Total:	36,536,941 gpd

WWC: 2,730,000 gpd for system losses is also in Category 2 as an existing use.

Total permitted: 39,266,941 gpd

I. Waihe`e River

A. Waihe`e River

1. Waihe`e River

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2365N—Goo	157,500			
3617N—Chavez		did not participate in the CCH		
3470N—Varel		150,000		
2362N—Alueta		40,000	260,000	

2. Waihe`e Ditch

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2298/2299N—Varel		869,300	25,000	1,200
2340—Fernandez		did not participate in the CCH		
2305/2306N—Myers/Buttaro		did not participate in the CCH		
2355—Coffey				600
2342—Higashino		300,000		1,500
2290N/3905N—Smith		5,850		1,260
2326/2327N—Nakama		165,000	11,400	
2288/2289N—Singer		did not participate in the CCH		
2328/2329N—Nakama		105,000		
2330/2331N—Lee/Nakama		106,600	53,300	

3. Spreckels Ditch

a. North Waihe`e `Auwai

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2233/2234N—Goo		27,150	81,450	
2227—Emoto		60,000		1,200
2228/2229N—Faustino/Lovato-Rodrigues		70,000	30,500	
2269/2270N—Rodrigues		132,000	60,000	1,200
2309/2310N—Ayers/Freitas		did not participate in the CCH		
2283—Pang				2,280
2254/2255N—Lengkeek		did not participate in the CCH		
2322/2323N—Barrett		281,300	187,450	
2252/2253N—Koki		110,400		1,568
2367N—Koki		did not participate in the CCH		

2324/2325N—La`a/Rodrigues	164,000	82,000	
2364N—Freitas	70,000		790

b. South Waihe`e `Auwai

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2249—Kahalekai		237,700	50,300	2,100
2312—Kahalekai	291,000		125,400	
2320/2321N—Anakalea		72,000	3,000	
2406N—Brown	did not participate in the CCH			
2262/2263N—Varel		11,100	29,400	810
2334/2335N—Sakata/Fritz		194,300		
2225/2226N—Doherty		232,500	82,500	2,550
2280/2281N—Texeira		22,500		1,605
2264/2265N—Piko Ao		737,490		600
2316/2317N—Apo		109,500		
2187—Puliatch	did not participate in the CCH			
2221/2222N—Chang		76,350		
2313/2314N—Kana		144,100	28,850	
2353—Hiolani Ranch	did not participate in the CCH			
2278/2279N—Texeira	did not participate in the CCh			
2294—Sarasin		99,000		300
2361N—DeHart	3,000			1,350
2231/2232N—Goo	69,000			3,600
2706N—HILT		973,920	376,080	

c. Field 4 `Auwai

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	

2185N—Na Mele O Waihee did not participate in the CCH

2250/2251N—Kailiehu 37,915

2318/2319N—Ideoka/Nakama 100,000 15,500

d. Reservoir 25/WWC Line

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2144—Living Waters		22,938		
2153—Hanusa				900
2348—Bailie				did not participate in the CCH
2182—Chang				684
2593N—Varel		21,250	329,180	

II. Waiehu Stream

A. North Waiehu Stream

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2363N—Hashimoto				600

B. South Waiehu Stream

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2266/2267N—Rivera		255,000	108,000	600
2219/2220N—Cabacungan/Alves			33,000	600
2369N—Smith		78,660		
2307/2308N—Cerizo		12,400	56,600	2,200
2343N—Cerizo		62,300	124,450	
2258—Miyahira		79,020		
2171—Molina		18,750		750

3465N—Curry/Gomes/Laimana did not participate in the CCH

III. Wailuku River

A. Wailuku River

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2304—State Parks		5,600		
2243/2244N—Ho`olulāhui	151,667	77,033	226,300	
2370N—Ornellas	213,150			600
2360N—Manoukian				did not participate in the CCH
2371N—Lozano	27,540			2,565
2275—Sevilla et al.		599,170	650,330	1,200
3623N—Almeida	3,270			

B. Īao-Maniania Ditch

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2189/2190N & 2196—WCEIC		385,595	372,560	
2215/2216N—Brito	7,400			600
2236—Haleakala				did not participate in the CCH
2256/2257N—Mendoza				did not participate in the CCH

C. Īao-Waikapū Ditch

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2178/2179N—MDWS	3,200,000			
2339—Yamaoka		1,950		
2188—Vida	5,475			930
2292 & 2293—Vida				2,880

2303—Pinto	3,300		
2350/2546N—Towne Realty		did not participate in the CCH	
2345—Stanford Carr		did not participate in the CCH	
2349/2495N—Endurance Ii Wai Hui		did not participate in the CCH	
2164—Waiolani Mauka		did not participate in the CCH	
2200—Emmanuel Lutheran		did not participate in the CCH	
2183—Kihei Garden		33,261	
3671N—Sloan		2,167	
3665N—Ota			5,667
4442N—Lau Hee			1,667
4443N—Kitagawa		application withdrawn	
4444N—Takitani			2,833
4445N—SPV Trust			1,667
2207/2208N—Makani Olu		135,700	2,500
2204—McLean	150,000		420
2440N—Spencer Homes		did not participate in the CCH	
2191—Dando			300
2154—Rojac Trucking		did not participate in the CCH	

IV. Waikapū Stream

A. South Waikapū Ditch

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2205, 2356/2297N, 3471N, 3472N—Waikapu Properties		1,819,775		
2336/2337N—Kailiponi/Santiago		did not participate in the CCH		
2260/2261N—Alves		71,000	4,000	600
2217/2218N—Brown/Smythe		125,000	47,500	600
2366N—Higa				3,000

2368—Kamasaki		2,010
2155—Suzuki	10,850	
2156—Makimoto	1,465	

B. Waikapū Stream

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2163—Niehaus		did not participate in CCH		
2276—Shimizu		6,400		1,452
2268—Ryu		45,750*		600
		*subject to submittal of deed to confirm; if not, permit is Category 3		
2338—Yamanouye		75,000		600
2277—Soong				600
2311—Harders				600
2240/3467N—Harders	153,000	604,000	2,000	
2332/2333N—Pellegrino		98,800	26,200	600
2239—Harders				600
2237—Harders				600
2235—Gushi				600
2271—Rogers				600
2213/2214N—Birmie			900	600
2211—Bell		did not participate in the CCH		
2212—Bell				1,020
2238—Harders Family				1,800
2259—Young				600
2224—Dodd				780
2230—Federcell				750
2315—Kihm		did not participate in the CCH		
2354—Fong Construction		did not participate in the CCH		



2180—Hawaiian Cement did not participate in the CCH  
 2352—U.S. Fish & Wildlife did not participate in the CCH

V. Multiple Sources

A. Waihe`e Ditch

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2142—Hale Mua				did not participate in the CCH
2351—Wahi Ho`omalu		400,500	420,000	

1. Piihana Field 49 Kuleana Pipe

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2192—Dando				1,500
2273/2274N—Santiago		162,600	62,400	
2287—Haller		19,600		
2223—Cockett				940

2. Wailuku Town Kuleana Ditch

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2181—Kaanapali Kai		4,595		
2209/2210N—Bal				did not participate in the CCH
2241/2242N—Velez		69,000		1,170
2247/2248N—Ciotti		23,000		600
2245/2246N—Ibara		5,400		

3. Waihe`e Ditch after intake on Waikapū Stream

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2203—MTP		124,532		

2186—MMK Maui	1,037,000
2151—Pohakulepo Recycling	8,555
2272—Nobriega’s Ranch	did not participate in the CCH

B. Spreckels Ditch

<u>SWUPA</u>	<u>Permit Category (gpd)</u>			<u>Domestic Use (gpd)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
2206—HC&S		15,650,000		

Table 3

SWUPAs and Appurtenant Rights

	<u>Acres Claimed</u>	<u>Acres Recognized</u>
Waihe`e River:	261.223	82.132
Waiehu Stream:	10.915	8.593
Wailuku River:	95.927*	116.319*
Waikapū Stream:	34.934	14.826
Multiple Sources:	<u>29.506</u>	<u>26.82</u>
Total:	432.505	248.69

\*2207/2208N-Makani Olu claimed 14.9 acres by the number of lo`i and assumptions of the size of the lo`i but was recognized for 50.69 acres by the method of expert witness Kame`eleihiwa, FOF 150-171.

Amounts to be exercised under appurtenant rights and determined to be reasonable and beneficial:

Waihe`e River:	4,737,530 gpd
Waiehu Stream:	493,730 gpd
Wailuku River:	1,344,723 gpd
Waikapū Stream:	1,196,078 gpd
Multiple Sources:	<u>649,000 gpd</u>
Total:	8,421,061 gpd

I. Waihe`e River

A. Waihe`e River

1. Waihe`e River

<u>SWUPA</u>	<u>Acreege</u>	<u>Amount (gpd)</u>	<u>Exercised under</u>
	<u>claimed</u>	<u>recognized</u>	<u>permit (gpd)*</u>
2365N-Goo	1.05	1.05	105,000
3617N-Chavez	provisionally recognized but did not participate in the CCH		
3470N-Varel	1.89	1.89	189,000
2362N-Alueta	0.4	0.4	40,000

2. Waihe`e Ditch

<u>SWUPA</u>	<u>Acreege</u>	<u>Amount (gpd)</u>	<u>Exercised under</u>
	<u>claimed</u>	<u>recognized</u>	<u>permit (gpd)</u>
2298/2299N-Varel	168.28	0.00	0.00
			N/A

2305/2306N-Myers/Buttaro	provisionally recognized but did not participate in the CCH			
2355-Coffey	0.55	0.446	44,600	0
2342-Higashino	1.889	1.258	125,800	125,800
2290N/3905N-Smith	1.8	1.8	180,000	7,020
2326/2327N-Nakama	1.0	1.0	100,000	100,000
2288/2289N-Singer	provisionally recognized but did not participate in the CCH			
2328/2329N-Nakama	0.7	further documentation requested		
2330/2331N-Lee/Nakama	2.132	1.066	106,600	106,600

3. Spreckels Ditch

a. North Waihe'e `Auwai

<u>SWUPA</u>	<u>Acreege</u> <u>claimed</u>	<u>Acreege</u> <u>recognized</u>	<u>Amount (gpd)</u>	<u>Exercised under</u> <u>permit (gpd)</u>
2233/2234N-Goo	0.724	denied w/o prejudice		
2227-Emoto/Ellis	0.845	0.8	80,000	60,000
2228/2229N-Faustino/ Lovato-Rodrigues	0.7	0.7	70,000	70,000
2269/2270N-Rodrigues	1.73	0.9	90,000	90,000
2309/2310N-Ayers/ Freitas	provisional recognition but did not participate in the CCH			
2283-Pang	1.42	1.42	142,000 (subject to submittal of his deed)	0
2254/2255N-Lengkeek	no appurtenant rights claim and did not participate in the CCH			
2322-2323N-Barrett	3.125	2.813	281,300	281,300
2252/2253-Koki	1.2	1.2	120,000	110,400
2367N-Koki	provisional recognition but did not participate in the CCH			
2324/2325N-La`a/ Rodrigues	1.747	1.64	164,000	164,000
2364N-Freitas	0.775	0.388	38,800	38,800

b. South Waihe'e `Auwai

<u>SWUPA</u>	<u>acres</u> <u>claimed</u>	<u>acres</u> <u>recognized</u>	<u>Amount (gpd)</u>	<u>Exercised under</u> <u>permit (gpd)</u>
2249-Kahalekai	2.617	2.377	237,700	237,700
2312-Kahalekai	2.776	1.825	182,500	182,500
2320/2321N-Anakalea	0.6	0.6	60,000	60,000
2406N-Brown	no appurtenant rights claim and did not participate in the CCH			
2262/2263N-Varel	appurtenant rights extinguished in 1963			
2334/2335N-Sakata/ Fritz	8.471	7.596	759,600	194,300
2225/2226N-Doherty	2.445	2.325	232,500	232,500
2280/2281N-Teixeira	0.327	0.327	32,700	22,500
2264/2265N-Piko Ao	18.72	18.72	1,872,000	737,490
2316/2317N-Apo	1.40	1.34	134,000	109,500
2187-Puliatch	provisional recognition but did not participate in the CCH			
2221/222N-Chang	1.25	1.25	125,000	76,350
2313/2314N-Kana	1.57	1.441	144,100	144,100
2353-Hiolani Ranch	provisional recognition but did not participate in the CCH			
2278/2279N-Teixeira	provisional recognition but did not participate in the CCH			
2294-Sarasin	0.99	0.99	99,000	99,000
2361N-DeHart	0.5	0.5	50,000	3,000
2231/2232N-Goo	1.45	1.305	130,500	69,000
2706N-HILT	15.14	15.14	973,920*	973,920
*8.86 acres of kalo lo`i at 100,000 gad; 6.28 acres of fishponds at 14,000 gad				

c. Field 4 `Auwai

<u>SWUPA</u>	<u>acres</u> <u>claimed</u>	<u>acres</u> <u>recognized</u>	<u>Amount (gpd)</u>	<u>Exercised under</u> <u>permit (gpd)</u>
2185N-Na Mele O Waihe`e	no appurtenant rights claim and did not participate in the CCH			
2250/2251N-Kailiehu	0.51	0.255	25,500	25,500
2318/2319N-Ideoka/Nakama	1.0	1.0	100,000	100,000

d. Reservoir 25

<u>SWUPA</u>	<u>Acreage</u> <u>claimed</u>	<u>Acreage</u> <u>recognized</u>	<u>Amount (gpd)</u>	<u>Exercised under</u> <u>permit (gpd)</u>
2144-Living Waters				provisionally recognized but no further information provided
2153-Hanusa	0.5	0.25	25,000	0
2348-Bailie				no appurtenant rights claim and did not participate in the CCH
2182-Chang	0.5	0.5	50,000	0
2593-Varel	8.5	5.62	562,000	21,250

II. Waiehu Stream

A. North Waiehu Stream

<u>SWUPA</u>	<u>Acreage</u> <u>claimed</u>	<u>Acreage</u> <u>recognized</u>	<u>Amount (gpd)</u>	<u>Exercised under</u> <u>permit (gpd)</u>
2363N-Hashimoto	0.2	0.18	18,000	0

B. South Waiehu Stream

<u>SWUPA</u>	<u>Acreage</u> <u>claimed</u>	<u>Acreage</u> <u>recognized</u>	<u>Amount (gpd)</u>	<u>Exercised under</u> <u>permit (gpd)</u>
2266/2267N-Rivera	2.55	2.55	255,000	255,000
2219/2220N-Cabacungan/Alves	0.34	0	0	N/A
2369N-Smith	1.86	1.86	186,000	78,660
2307/2308N-F. Cerizo	1.2	0	0	N/A
2343N-T. Cerizo	1.245	0.623	62,300	62,300
2258-Miyahira	2.22	2.08	208,000	79,020
2171-Molina	1.3	1.3	130,000	18,750
3465N-Curry/Gomes/Laimana				provisional recognition but did not participate in the CCH

III. Wailuku River

A. Wailuku River

<u>SWUPA</u>	<u>Acreage</u> <u>claimed</u>	<u>Acreage</u> <u>recognized</u>	<u>Amount (gpd)</u>	<u>Exercised under</u> <u>permit (gpd)</u>
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2304-State Parks	0.75	1.45	145,000	5,600
2243/2244N-Ho`oululāhui, LLC	4.839	2.287	228,700	228,700
2370N-Ornellas	1.51	0.75	75,000	75,000
2360N-Manoukian	provisional recognition but did not participate in the CCH			
2371N-Lozano	1.324	1.324	132,400	27,540
2275-Sevilla et al.	11.291	9.78	599,170*	599,170
* 5.375 acres for kalo lo`i at 100,000 gad and 4.405 acres of fishponds at 14,000 gad.				
3623N-Almeida	2.365	2.365	236,500	3,270

B. Īao-Maniania Ditch

<u>SWUPA</u>	<u>claimed</u>	<u>Acreage</u> <u>recognized</u>	<u>Amount (gpd)</u>	<u>Exercised under</u> <u>permit (gpd)</u>
2189/2190N & 2196—WCEIC	55.09	43.79	4,379,000	165,901
2215-Brito	0.248	0.186	18,600	7,400
2236-Haleakala	provisional recognition but did not participate in the CCH			
2256/2257N-Mendoza	submitted written testimony but was not available at the CCH			

C. Īao-Waikapū Ditch

<u>SWUPA</u>	<u>claimed</u>	<u>Acreage</u> <u>recognized</u>	<u>Amount (gpd)</u>	<u>Exercised under</u> <u>permit (gpd)</u>
2178/2179N-MDWS	did not claim appurtenant rights			
2339-Yamaoka	claimed appurtenant rights but did not provide any documentation			
2188-L. Vida, Jr.	0.36	0.144	14,400	5,475
2292/2293-D. Vida	0.97	0.39	39,000	0
2303-Pinto	1.14	0.456	45,600	3,300
2350/2546N-Towne Realty	neither claimed appurtenant rights nor participated in the CCH			
2345-Stanford Carr Dev.	neither claimed appurtenant rights nor participated in the CCH			
2349/2495N-Endurance	neither claimed appurtenant rights nor participated in the CCH			
2164-Waiolani Mauka	neither claimed appurtenant rights nor participated in the CCH			
2200N-Emmanuel Lutheran	neither claimed appurtenant rights nor participated in the CCH			

2183-Kihei Garden			did not claim appurtenant rights	
3671N-Sloan	*	1.852	185,200	2,167
* requested appurtenant rights in the amount of his new-use request, but provided rights documentation				
3665N-Ota	*	0	N/A	N/A
* requested appurtenant rights in the amount of his new-use request, but rights documentation inadequate				
4443N-Kitagawa			SWUPA withdrawn during the CCH	
4444N-Takitani			insufficient documentation to quantify appurtenant rights	
4445N-SPV Trust			insufficient documentation to quantify appurtenant rights	
2207/2208N-Makani Olu	14.9*	50.69**	5,069,000	135,700
* by number of lo`i and assumptions of the size of the lo`i				
** by method of expert witness Kame`eleihiwa, FOF 150-171				
2204-McLean	1.14	0.855	85,500	85,500
2440N-Spencer Homes			neither claimed appurtenant rights nor participated in the CCH	
2191-Dando Sr.			did not claim appurtenant rights	
2154-Rojac Trucking			neither claimed appurtenant rights nor participated in the CCH	

IV. Waikapū Stream

A. South Waikapū Ditch

<u>SWUPA</u>	<u>claimed</u>	<u>Acreage</u> <u>recognized</u>	<u>Amount (gpd)</u>	<u>Exercised under</u> <u>permit (gpd)</u>
2205, 2356/2297N, 3471N, and 3472N-Waikapu Properties	7.42	7.42	742,000	4,513
2336/2337N-Kailiponi/Santiago			provisional recognition but did not participate in the CCH	
2260/2261N-Alves	0.712	0.710	71,000	71,000
2217/2218N-Brown/Smythe	1.25	1.25	125,000	125,000
2366N-Higa	1.385	1.201	120,100	0
2368-Kamasaki	0.71	0.355	35,500	0
2155-Suzuki	3.889	3.569	356,900	10,850
2156-Makimoto	0.585	0.293	29,300	1,465

B. Waikapū Stream

<u>SWUPA</u>	<u>Acreage</u>	<u>Amount (gpd)</u>	<u>Exercised under</u>
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	<u>claimed</u>	<u>recognized</u>		<u>permit (gpd)</u>
2163-Niehaus	submitted documents but did not participate in the CCH			
2276-Shimizu	0.53	0.46	46,000	6,400
2268-Ryu	0.61	0.61*	61,000	45,750
* Subject to verification of the date of the deed				
2338-Yamanoue	1.0	1.0	100,000	75,000
2277-Soong	0.85	0.85	85,000	0
2311-T&Z Harders	0.403	0.233	23,300	0
2240/3467N-Harders Family	11.247	7.57	757,000	757,000
2332/2333N-Pellegrino	2.805	2.805	280,500	99,100
2239-T&Z Harders	appurtenant rights extinguished in 1967			
2237-K&L Harders	appurtenant rights extinguished in 1967			
2235-Gushi	appurtenant rights extinguished in 1967			
2271-Rogers	appurtenant rights extinguished in 1970			
2213/2214N-Birmie	appurtenant rights extinguished in 1967			
2211-Dorothy Bell	neither claimed appurtenant rights nor participated in the CCH			
2212-Douglas Bell	0.34	0.34*	34,000	0
* Subject to verification of the date of the deed				
2238-Harders Family	appurtenant rights extinguished in 1967			
2259-Young	appurtenant rights extinguished in 1967			
2224-Dodd	appurtenant rights extinguished in 1967			
2230-Federcell	1.198	0.958*	95,800	0
* Subject to verification of the date of the deed				
2315-Kihm	provisional recognition but did not participated in the CCH			
2354-Fong Construction	neither claimed appurtenant rights nor participated in the CCH			
2189-Hawaiian Cement	neither claimed appurtenant rights nor participated in the CCH			
2352-US Fish&Wildlife	did not participate in provisional recognition or the CCH			

V. Multiple Sources

A. Waihe`e Ditch

<u>SWUPA</u>	<u>Acreage</u>		<u>Amount (gpd)</u>	<u>Exercised under permit (gpd)</u>
	<u>claimed</u>	<u>recognized</u>		
2142-Hale Mua	neither claimed appurtenant rights nor participated in the CCH			
2351N-Wahi Ho`omalu	24.695	22.23	2,223,000	400,500

1. Piihana Field 49 Kuleana Pipe

<u>SWUPA</u>	<u>Acreage</u>		<u>Amount (gpd)</u>	<u>Exercised under permit (gpd)</u>
	<u>claimed</u>	<u>recognized</u>		
2192-Dando Sr.	not claiming appurtenant rights			
2273/2274N-Santiago	1.626	1.626	162,600	162,600
2287-Haller	reapply—lacks documentation of portions of LCAs within the TMK			
2223-Cockett	0.65	0.65	65,000	0

2. Wailuku Town Kuleana Ditch

<u>SWUPA</u>	<u>Acreage</u>		<u>Amount (gpd)</u>	<u>Exercised under permit (gpd)</u>
	<u>claimed</u>	<u>recognized</u>		
2181-Kaanapali Kai	not claiming appurtenant rights			
2209/2210N-Bal	provisional recognition but did not participate in the CCH			
2241/2242N-Velez	0.913	0.913	91,300	69,000
2247/2248N-Ciotti	0.451	0.23	23,000	11,500
2245/2246N-Ibara	1.171	1.171	117,100	5,400

3. Waihe`e Ditch after intake on Waikapū Stream

<u>SWUPA</u>	<u>Acreage</u>		<u>Amount (gpd)</u>	<u>Exercised under permit (gpd)</u>
	<u>claimed</u>	<u>recognized</u>		
2203-MTP	not seeking appurtenant rights at this time			
2186-MMK Maui	not claiming appurtenant rights			
2151-Pohakulepo	not claiming appurtenant rights			
2272-Nobriega's Ranch	neither claimed appurtenant rights nor participated in the CCH			

B. Spreckels Ditch

<u>SWUPA</u>	<u>Acreage</u>	<u>Amount (gpd)</u>	<u>Exercised under</u>
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claimed

recognized

permit (gpd)

2206-HC&S

not claiming appurtenant rights

**Table 4****Summary of WCEIC Appurtenant Rights and Permits**

<u>Lot*</u>	<u>Acreage</u>	<u>Request (gpd/acreage)</u>		<u>Appt. rights (gpd)</u>	<u>Permit(gpd)</u>	
		<u>Existing</u>	<u>New</u>		<u>Cat. 2</u>	<u>Cat. 3</u>
* Existing and/or new use request(s) greater than 2600 gad.						
1	2.309	1286/0.75	2500/1.00	0	1286	2500
2	2.546	695/0.75	2250/1.25	0	695	2250
3	2.412	2236/1.0	1600/1.00	0	2236	1600
4	2.451	18/0.25	3150/1.75	0	18	3150
5	2.193	682/0.50	2250/1.75	0	682	2250
6*	2.107	-----	4200/1.50	0	0	3750
7	2.611	841/0.50	3600/1.50	0	841	3600
8*	2.092	-----	3950/1.50	0	0	3750
9	2.149	1145/0.75	2200/1.00	0	1145	2200
10	2.504	1876/1.25	1600/1.00	26,000	3476	0
11	2.636	2197/1.50	1800/0.75	70,000	3997	0
12	2.580	1883/1.25	2500/1.00	0	1883	2500
13	2.524	3470/1.75	850/0.25	0	3470	850
14*	2.580	-----	3000/1.00	0	0	2500
15	2.221	2693/1.25	1200/0.50	0	2693	1200
16	2.537	-----	3000/2.00	0	0	3000
17	2.369	26/0.25	2200/1.50	0	26	2200
18	2.203	1205/0.75	1850/1.0	0	1205	1850
19	3.003	998/1.25	2200/1.25	0	998	2200
20*	2.128	3464/1.25	750/0.25	0	3125	625
21	2.128	134/0.25	3200/1.25	0	134	3200
22	2.868	-----	4325/2.25	0	0	4325
23	2.603	2713/1.25	1400/0.75	0	2713	1400
24	2.819	2593/1.50	1150/0.75	0	2593	1150
25	2.532	1764/1.25	1750/0.75	0	1764	1750
26	2.632	2923/1.25	1200/0.75	0	2923	1200
27	2.342	285/0.25	2560/1.50	0	285	2560
28	2.252	1744/1.25	1300/0.50	0	1744	1300
29	2.395	1879/1.00	1800/1.00	0	1879	1800
30	2.360	1083/0.50	2100/1.25	92,000	3183	0
31	2.399	2554/1.50	1000/0.50	131,000	3554	0
32	2.173	-----	3000/1.75	92,000	3000	0

33	2.147	1176/0.50	1850/1.00	0	1176	1850
34*	2.095	-----	4025/1.50	0	0	3750
35	2.783	800/0.50	2500/1.75	0	800	2500
36	2.728	1868/1.50	1600/0.75	0	1868	1600
37	2.043	2244/1.00	1150/0.50	74,000	3394	0
38	2.078	1480/0.50	2400/1.00	0	1480	2400
39	2.026	131/0.25	2725/1.25	0	131	2725
40*	2.009	-----	4000/1.50	0	0	3750
41*	2.033	1451/1.00	1850/0.50	64,000	2701	0
42	2.212	-----	4400/1.75	161,000	0	4400
43*	2.098	-----	4150/1.50	69,000	0	3750
44	2.116	108/0.25	3200/1.25	130,000	3308	0
45	2.584	3127/1.50	550/0.50	0	3127	550
46	2.216	-----	4275/1.75	51,000	4275	0
47*	2.127	4092/1.25	875/0.25	56,000	4000	0
48	2.059	3135/1.25	500/0.25	0	3135	500
49*	2.131	-----	4000/1.00	10,000	2500	0
50	2.015	1243/0.75	1400/0.75	8,000	2643	0
51*	2.122	556/0.25	3000/1.00	21,000	3056	0
52	2.381	-----	4500/1.75	0	0	4500
53*	2.189	3320/1.25	750/0.25	0	3125	750
54	2.187	1361/0.75	2000/1.00	0	1361	2000
55	2.817	780/0.75	2900/1.50	0	780	2900
56*	2.194	2738/1.50	750/0.25	160,000	3363	0
57	2.029	1924/1.00	1100/0.50	185,000	3024	0
58	2.052	79/0.25	2800/1.25	185,000	2879	0
59	2.04	2360/1.00	800/0.50	185,000	3160	0
60	2.127	-----	3650/1.50	111,000	3650	0
61	3.392	-----	4400/2.75	25,000	4400	0
62	3.874	-----	4500/3.25	0	0	4500
63*	2.247	1507/0.50	2450/1.25	0	1250	2450
64*	2.196	2644/1.00	900/0.75	0	2500	900
65	2.076	-----	3500/1.50	0	0	3500
66*	2.017	1536/1.00	1625/0.50	0	1536	1250
67	2.178	254/0.25	3000/1.25	0	254	3000
68	2.631	-----	4400/2.00	7,000	4400	0
69	2.989	4331/2.00	250/0.50	0	4331	250
70	2.118	1478/0.75	1900/0.75	0	1478	1900
71	2.215	4827/1.50	250/0.25	0	4827	250
72	2.212	-----	4250/1.75	0	0	4250

73	3.394	2678/1.50	1700/1.25	0	2678	1700
74	2.792	1659/1.00	2550/1.25	0	1659	2550
75	2.538	2062/1.00	1700/1.00	0	2062	1700
76	2.255	1932/1.00	1500/0.75	0	1932	1500
77	2.701	-----	3950/2.25	0	0	3950
78	2.903	508/0.25	3450/2.25	0	508	3450
79	2.128	-----	3650/1.50	0	0	3650
80	2.304	283/0.25	3150/1.50	0	283	3150
81	2.277	-----	3200/1.75	0	0	3200
82	2.147	-----	3900/1.75	0	0	3900
83	2.586	1656/0.75	2300/1.25	0	1656	2300
84	2.755	-----	3000/2.25	0	0	3000
85	2.246	225/0.25	3150/1.50	0	225	3150
86	2.183	931/0.50	2050/1.25	0	931	2050
87*	2.718	1814/1.25	1450/0.50	0	1814	1250
88	2.340	75/0.25	3100/1.50	0	75	3100
89	2.091	1816/1.00	1200/0.50	0	1816	1200
90.	2.761	-----	4800/2.25	0	0	4800
91	2.148	1564/0.75	1650/0.75	0	1564	1650
92*	2.199	3491/1.50	700/0.25	0	3491	625
93	2.260	259/0.25	3100/1.50	0	259	3100
94	2.685	2625/1.50	1000/0.50	0	2625	1000
95	2.068	470/0.25	3000/1.25	0	470	3000
96*	2.094	1322/0.75	2000/0.75	0	1322	2000
97	2.281	1040/0.50	2650/1.25	0	1040	2650
98	2.219	-----	3750/1.75	0	0	3750
99*	2.001	3701/1.25	700/0.25	0	3125	625
100	2.082	-----	3650/1.50	0	0	3650
101	2.024	196/0.25	2900/1.25	0	196	2900
102*	2.025	1204/0.50	3000/1.00	0	1204	2500
103	2.140	-----	3450/1.50	0	0	3450
104*	2.027	3133/1.00	1350/0.50	12,000	3750	0
105*	2.056	360/0.50	3000/1.00	74,000	2860	0
106	2.190	-----	3600/1.50	11,000	3600	0
107*	2.008	1858/0.75	2450/0.75	61,000	3733	0
108	2.040	-----	3725/1.50	56,000	3725	0
109*	2.020	876/0.25	2600/1.25	187,000	3225	0
110	2.245	-----	4000/1.75	116,000	4000	0
111*	2.002	1745/0.50	2800/1.00	37,000	3750	0
112	2.228	-----	3800/1.75	0	0	3800

113	2.238	279/0.25	3850/1.50	4,000	4129	0
114	2.442	-----	4550/2.00	62,000	4550	0
115*	2.096	3106/1.00	950/0.50	96,000	3450	0
116	2.423	2150/1.00	2550/1.00	134,000	4700	0
117*	2.293	300/0.25	4250/1.50	121,000	4050	0
118	2.316	147/0.25	3800/1.50	26,000	3947	0
119*	2.329	956/0.25	4050/1.50	125,000	4375	0
120	2.184	766/0.50	2550/1.00	111,000	3316	0
121*	2.095	42/0.25	3700/1.25	58,000	3167	0
122	2.028	1882/0.75	1800/0.75	164,000	3682	0
123*	2.114	695/0.25	4300/1.25	110,000	3750	0
124*	2.043	2378/1.00	1800/0.50	112,000	3628	0
125*	2.072	2446/1.00	1650/0.50	75,000	3696	0
126*	2.018	-----	4200/1.50	0	0	3750
127*	2.098	-----	4000/1.50	0	0	3750
128*	2.190	-----	4000/1.50	0	0	3750
129*	2.008	-----	4000/1.50	0	0	3750
130*	2.004	3317/1.25	800/0.25	0	3125	625
131*	2.00	-----	4025/1.50	0	0	3750
132*	2.023	598/0.25	3500/1.25	0	598	3125
133	2.124	-----	3600/1.50	0	0	3600
134*	2.150	-----	4075/1.50	0	0	3750
135	2.503	-----	4150/2.00	0	0	4150
136	2.381	2204/1.25	1200/0.50	0	2204	1200
137*	2.001	1459/0.75	2700/0.75	0	1459	1875
138*	2.333	1959/1.00	2000/0.75	0	1959	1875
139	2.265	-----	4325/1.75	0	0	4325
140*	2.002	456/0.25	3550/1.25	0	456	3125
141*	2.001	-----	4200/1.50	0	0	3750
142*	2.007	5069/1.50	-----	0	3750	0
143*	2.004	-----	4000/1.50	0	0	3750
144.	3.291	4341/2.0	1050/0.75	0	4341	1050
145	2.250	-----	4300/1.75	0	0	4300
146	2.525	-----	4675/2.00	0	0	4675
147*	2.319	1714/0.50	3150/1.25	0	1250	3150
148	2.089	-----	3800/1.50	0	0	3800
149*	2.044	-----	4375/1.50	0	0	3750
150*	2.139	-----	4000/1.50	0	0	3750
151*	2.096	-----	4000/1.50	0	0	3750
152*	2.115	1406/0.75	2500/0.75	0	1406	1875

153*	2.006	-----	4000/1.50	0	0	3750
154*	2.008	-----	4000/1.50	0	0	3750
155	2.034	-----	4400/1.75	0	0	4400
156*	2.064	454/0.25	3700/1.25	0	454	3125
157	2.551	-----	4350/2.00	0	0	4350
158*	2.319	1778/0.50	3000/1.25	0	1250	3000
159*	2.344	210/0.25	3900/1.50	0	210	3750
160*	2.584	3601/1.25	1800/0.75	0	3125	1800
161*	2.588	3771/1.25	1600/0.75	0	3125	1600
162.*	2.588	3647/1.25	1000/0.75	0	3125	1000
163	2.882	-----	4750/2.25	0	0	4750
164*	2.010	-----	4000/1.50	0	0	3750
165*	2.072	-----	4500/1.50	0	0	3750
166*	2.122	591/0.25	3600/1.25	0	591	3125
167.*	2.132	2370/1.00	1650/0.50	0	2370	1250
168*	2.073	315/0.25	3950/1.25	0	315	3125
169*	2.02	3731/1.25	1000/0.25	0	3125	625
170	2.783	-----	4700/2.25	179,000	4700	0
171*	2.046	6237/1.50	-----	104,000	3750	0
172*	2.074	-----	3900/1.50	65,000	3750	0
173	2.253	1932/1.00	2000/1.00	0	1932	2000
174*	2.087	4248/1.25	800/0.25	0	3125	625
175*	2.015	-----	4500/1.50	0	0	3750
176*	2.118	344/0.25	3500/1.25	0	344	3125
177	2.226	-----	4150/1.75	0	0	4150
178*	2.460	1017/0.25	3750/1.75	0	625	3750
179	2.253	-----	4200/1.75	0	0	4200
180	2.338	-----	4450/1.75	0	0	4450
181*	2.180	1112/0.50	3500/1.00	0	1112	2500
182*	2.154	3561/1.00	1150/0.50	0	2500	1150
183	2.441	-----	4700/2.00	0	0	4700
184*	2.118	1886/0.75	2500/0.75	1,000	<u>1886</u>	<u>1875</u>

Total for 184 homeowner lots: 4,014,000 307,440 372,560

Common areas:

185	2.262			144,000	5,655	
186	6.726				0	
187	0.224				0	
188	0.755				0	



189	23.028	0	0
29 acres drainage swales and roadside setbacks			<u>72,500</u>

Total for common area:		144,000	78,155
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Miscellaneous areas:

190	86,000
191	0
192	0
193	1,000
194	0
195	0
196	0
197	43,000
198	91,000
199	0
200	0
201	0
202	0
203	0
204	0
205	0
206	0
207	<u>0</u>

Total for miscellaneous areas:		221,000
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Total for all lots:		4,379,000
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**Table 5**

**Calculation of Appurtenant Rights Acreage for WCEIC Lots**

<u>Lot #</u>	<u>LCA</u>	<u>Percent of LCA</u>	<u>Appt. Acres in LCA</u>	<u>Appurtenant Rights (Acres)</u>
10	406:1	19%	1.39	0.26
11	406:1	47%	1.39	0.65
	453:2	5%	1.04	<u>0.05</u>
				0.70
29	2436:2	0%	2.40	0
30	2495:1-4	5%	1.80	0.09
	4461:1-2	22%	3.77	<u>0.83</u>
				0.92
31	2495:1-4	6%	1.80	0.11
	3275-E:	100%	0.14	0.14
	4461:1-2	28%	3.77	<u>1.06</u>
				1.31
32	2495:1-4	7%	1.80	0.13
	4461:1-2	21%	3.77	<u>0.79</u>
				0.92
37	2495:1-4	14%	1.80	0.25
	4461:1-2	13%	3.77	<u>0.49</u>
				0.74
41	2495:1-4	7%	1.80	0.13
	2436:2	20%	2.40	0.48
	2533:1	1%	3.40	<u>0.03</u>
				0.64
42	2495:1-4	0%	1.80	0.00
	2436:2	67%	2.40	1.61
	2502:1	0%	0.35	<u>0.00</u>
				1.61
43	2495:1-4	23%	1.80	0.41
	2436:1&3	57%	0.40	0.21
	2436:2	3%	2.40	<u>0.07</u>
				0.69

44.	2495:1-4	39%	1.80	0.70
	4461:1-2	16%	3.77	<u>0.60</u>
				1.30
46	453:2	38%	1.04	0.40
	406:1	8%	1.39	<u>0.11</u>
				0.51
47	453:2	54%	1.04	0.56
49	453:2	3%	1.04	0.03
	406:1	5%	1.39	<u>0.07</u>
				0.10
50	406:1	6%	1.39	0.08
51	406:1	15%	1.39	0.21
54	453:1	0%	12.32	0.00
55	453:1	0%	12.32	0.00
56	453:1	13%	12.32	1.60
57	453:1	15%	12.32	1.85
58	453:1	15%	12.32	1.85
59	453:1	15%	12.32	1.85
60	453:1	9%	12.32	1.11
61	453:1	2%	12.32	0.25
64	2503:2	0%	0.415	0.00
65	2503:2	0%	0.415	0.00
68	2434	5%	1.405	0.07
104	453:1	1%	12.32	0.12
105	453:1	6%	12.32	0.74
106	377	3%	3.61	0.11

107	377	5%	3.61	0.18
	3292	28%	1.52	<u>0.43</u> 0.61
108	377	14%	3.61	0.51
	3294-B:2	2%	0.56	0.01
	3335	3%	0.73	0.02
	3388	3%	0.54	<u>0.02</u> 0.56
109	377	23%	3.61	0.83
	3335	35%	0.73	0.26
	3294-B:2	72%	0.56	0.40
	3388	71%	0.54	<u>0.38</u> 1.87
110	3335	25%	0.73	0.18
	3294-B:2	26%	0.56	0.15
	377	19%	3.61	0.69
	3388	25%	0.54	<u>0.14</u> 1.16
111	3335	36%	0.73	0.26
	377	3%	3.61	<u>0.11</u> 0.37
112	3488	0%	3.67	0.00
113	3488	1%	3.67	0.04
114	3488	17%	3.67	0.62
	377	0%	3.61	<u>0.00</u> 0.62
115	3488	22%	3.67	0.81
	377	1%	3.61	0.04
	3294-B:1:M:1	40%	0.28	<u>0.11</u> 0.96
116	3488	29%	3.67	1.06
	377	6%	3.61	0.22
	3294-B:1:M:1	17%	0.28	0.05
	3294-B:1:M:2	1%	0.52	<u>0.01</u> 1.34
117	3488	22%	3.67	0.81

	377	9%	3.61	0.32
	3294-B:1:M:2	16%	0.52	<u>0.08</u>
				1.21
118	3488	1%	3.67	0.04
	377	1%	3.61	0.04
	3292	6%	1.52	0.09
	2436:1&3	0%	0.40	0.00
	3330	0%	4.435	0.00
	3294-B:1:M:2	17%	0.52	<u>0.09</u>
				0.26
119	3292	26%	1.52	0.40
	2436:1&3	43%	0.40	0.17
	3330	12%	4.435	0.53
	3294-B:1:M:2	4%	0.52	0.02
	2502:3	79%	0.17	<u>0.13</u>
				1.25
120	3292	6%	1.52	0.09
	3330	23%	4.435	<u>1.02</u>
				1.11
121	3292	26%	1.52	0.40
	3330	4%	4.435	<u>0.18</u>
				0.58
122	3292	0%	1.52	0.00
	453:1	13%	12.32	1.60
	3330	1%	4.435	<u>0.04</u>
				1.64
123	3292	0%	1.52	0.00
	453:1	1%	12.32	0.12
	3330	22%	4.435	<u>0.98</u>

				1.10
124	453:1	3%	12.32	0.37
	3330	17%	4.435	<u>0.75</u>
				1.12
125	3330	17%	4.435	0.75
170	3294-B:1:M:2	49%	0.52	0.25
	2502:3	8%	0.17	0.01
	2533:1	39%	3.40	1.33
	3237	0%	4.79	0.00
	3387	30%	0.68	<u>0.20</u>
				1.79
171	2533:1	23%	3.40	0.78
	3498	33%	0.775	<u>0.26</u>
				1.04
172	3498	66%	0.775	0.51
	3294-B:1:M:1	43%	0.28	0.12
	3294-B:1:M:2	4%	0.52	<u>0.02</u>
				0.65
184	3498	1%	0.775	0.01
<u>(End of owners' lots)</u>				
185	2436:2	7%	2.40	0.17
	3387	2%	0.68	0.01
	2533:1	34%	3.40	1.16
	3237	2%	4.79	<u>0.10</u>
(2.262 acres of County Park)				1.44
186	3225	0%	14.92	0.00

(6.726 acres of the Waihe`e Ditch)

187	4461:1&2	0%	3.77	0.00
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(0.224 acre for access off Maiki Place for owners/John Russell)

(No appurtenant rights for lot 188—0.755 acres for Maui County water tank site, and lot 189—23.008 acres of roads and shoulders.)

190	453:1	7%	12.32	0.86
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193	453:2	1%	1.04	0.01
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196	2436:1&3	0%	0.40	0.00
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197	2533:1	4%	3.40	0.14
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	3294-B:1:M:2	7%	0.52	0.04
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	3488	5%	3.67	0.18
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	377	2%	3.61	<u>0.07</u>
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0.43

198	3488	3%	3.67	0.11
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	377	15%	3.61	0.54
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	3292	9%	1.52	0.14
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	453:1	1%	12.32	<u>0.12</u>
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0.91

Total for all lots:            43.79 acres

Source: Exh. 2189-WCEIC-243-B-1 for acreage of the LCAs, and Exh. 2189-WCEIC-243-A for acreage in each lot derived from the LCAs.

STANDARD STREAM CHANNEL ALTERATION PERMIT AND  
STREAM DIVERSION WORKS PERMIT CONDITIONS  
(Revised January 28, 2016)

1. The permit application and staff submittal approved by the Commission at its meeting on the above date shall be incorporated herein by reference.
2. The project may require other agency approvals regarding wetlands, water quality, grading, stockpiling, endangered species, and floodways. The permittee shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments.
3. The permittee, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the permittee or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.
4. The permittee shall notify the Commission, by letter, of the actual dates of project initiation and completion. The permittee shall submit a set of as-built plans and photos in pdf format of the completed work to the Commission upon completion of this project. This permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The proposed work under this stream channel alteration permit shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.
5. Before proceeding with any work authorized by the Commission, the permittee shall submit one set of construction plans and specifications in PDF format to determine consistency with the conditions of the permit and the declarations set forth in the permit application.
6. The permittee shall implement site-specific, construction Best Management Practices in consultation with the DOH Clean Water Branch and other agencies as applicable, that are designed, implemented, operated, and maintained by the permittee and its contractor to properly isolate and confine activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting State waters per HRS Ch. 342D Water Pollution; HAR §11-54-1 through §11-54-8 Water Quality Standards; and HAR Ch. 11-55 Water Pollution Control, Appendix C.
7. The permittee shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The permittee shall plant or cover lands denuded of vegetation as quickly as possible to prevent erosion and use native plant species common to riparian environments to improve the habitat quality of the stream environment.
8. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the permittee shall stop work in the area of the find and contact the Department's Historic Preservation Division immediately. Work may commence only after written concurrence by the State Historic Preservation Division.