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2014 JAN -7 PM 3: 27

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COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

`Iao Ground Water Management Area High-
Level Source Water Use Permit Applications
and Petition to Amend Interim Instream Flow
Standards of Waihe'e, Waiehu, `Iao, &
Waikapū Streams Contested Case Hearing

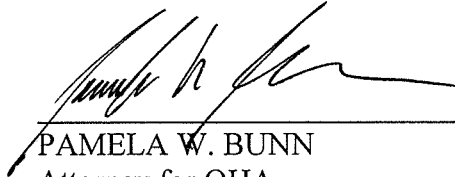
Case No. CCH-MA06-01

**OFFICE OF HAWAIIAN AFFAIRS'
JOINDER IN HUI ON NĀ WAI `EHĀ
AND MAUI TOMORROW
FOUNDATION, INC.'S OPENING BRIEF
AND OPENING STATEMENT**

**OFFICE OF HAWAIIAN AFFAIRS' JOINDER IN HUI ON NĀ WAI EHĀ
AND MAUI TOMORROW FOUNDATION, INC.'S
OPENING BRIEF AND OPENING STATEMENT**

Office of Hawaiian Affairs ("OHA"), by and through its undersigned counsel, hereby
joins in the Opening Brief and Opening Statement filed by Hui O Nā Wai `Ehā and Maui
Tomorrow Foundation, Inc. on January 7, 2014. OHA reserves its right to make an oral opening
statement.

DATED: Honolulu, Hawai'i, January 7, 2014.



PAMELA W. BUNN
Attorney for OHA

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Contested Case Hearing

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**OFFICE OF HAWAIIAN AFFAIRS'
WITNESS LIST**

OFFICE OF HAWAIIAN AFFAIRS' WITNESS LIST

NO.	NAME/ORGANIZATION/ POSITION (List in order of Appearance:	TO BE QUALIFIED AS AN EXPERT IN: (If applicable)	SUBJECT MATTER	EXHIBITS TO BE INTRODUCED BY WITNESS	REQ. LENGTH OF DIRECT
1.	Levi Kainalu Almeida		`Ohana's Need for and Desired Uses of Water	C-R 1, C-R 2 (A-E)	15 mins.
2.	Ethan Harders		`Ohana's Need for and Desired Uses of Water	C-R 3, C-R 4(A-C), C-R 5(A-C), C-R 6(A-B), C-R 7(A-C), C-R 8(A-C)	15 mins.

				C-R 9(A-C) C-R 10, C-R 11	
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Office of Hawaiian Affairs (“OHA”) reserves the right to call any witness designated by any other party, and any witnesses necessary for impeachment or rebuttal. OHA also reserves the right to cite to and/or rely on any testimony given in the original proceedings in this matter.

Dated: Honolulu, Hawai‘i, January 7, 2014.



ANNA ELENTO-SNEED

PAMELA W. BUNN

Attorneys for OFFICE OF HAWAIIAN AFFAIRS

COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

ʻĪao Ground Water Management Area High)	Case No. CCH-MA06-01
Level Source Water Use Permit)	
Applications and Petition to Amend Interim)	TESTIMONY OF LEVI KAINALU
Instream Flow Standards of Waihe'e,)	ALMEIDA
Waiehu, ʻĪao, & Waikapū Streams)	
Contested Case Hearing)	
)	
)	
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COMMISSION ON WATER RESOURCE MANAGEMENT
STATE OF HAWAII
JAN -7 PM 3:27

TESTIMONY OF LEVI KAINALU ALMEIDA

1. I am Kanaka Maoli (Native Hawaiian), and my ancestral home is in Paukūkalo, Maui, at the mouth of ʻĪao Stream in Nā Wai ʻEhā, where I was born and raised and currently reside. I am twenty years old, and recently graduated from the University of Hawaiʻi, Maui, with an Associates' Degree in Hawaiian Studies. I currently study with Mike Lee, a Papakilohoku (Hawaiian Astronomer), and Kahuna o Ke Kai (Hawaiian limu and marine invertebrate medicinal expert).

2. My ʻohana (extended family) resides on four lots in Paukūkalo: TMK Nos. 3-3-001:022, 023, 024, and 025. Exhibit C-R 1 is a true and correct copy of the Tax Map for Zone 3, Section 3, Plat 01, with highlighting added, which shows the location of these parcels.

3. I am part of the Reinhardt and Krueger ʻohana, and can trace my lineage for nine generations to Kaianui, who received Land Commission Award No. ("LCA") 3234C during the Māhele. Our ancestral kuleana land is Apana 2 of LCA 3234C.

4. Exhibit C-R 2 includes true and correct copies (with highlighting added) of: (a) LCA 3234C to Kaianui (Exh. C-R 2A); Royal Patent No. 4256 to Kaianui (Exh. C-R 2B); (c) the Foreign Testimony in support of Kaianui's claim (together with a copy that has been enhanced by

tracing) (Exh. C-R 2C); the Native Testimony in support of Kaianui's claim (Exh. C-R 2D; and (e) Kaianui's claim, from the Native Register (Exh. C-R 2E). Both the LCA and the Royal Patent refer to a Poalima on Apana 2, and the Native Testimony refers to Apana 2 as "Aina Kalo" or kalo land. The claim of Kaianui in the Native Register is for "Helu 448," but it must have been renumbered to 3234C at some point. The claim refers to land in Paukūkalo, Nehe and Waiehu, which correspond to the locations described in both the foreign and native testimony in support of LCA 3234C, and the two apana described in the LCA and Royal Patent are in Nehe and Paukūkalo. With respect to the land in Paukūkalo, Kaianui's claim describes it as "27 loi" (of which 7 were taken back by the konohiki). The land is described as being "ke kahawai nee [?] ke kai," or between the stream and the sea, which is the location of our kuleana land.

5. I am the great-grandson of Hannah Reinhardt Antonio and Catalino B. Antonio, and the grandson of Noelani Almeida. According to family lore passed down by Tutu Hannah, Tutu Noelani, and aunts and uncles who also grew up here, our `ohana was once able to live a self-sustaining lifestyle on this kuleana land, relying on the bounty of the land, water and sea.

6. Paukūkalo is a natural coastal wetland that once contained numerous groundwater springs and seeps. When Tutu Noelani was a child, the springs and seeps on our kuleana land ran freely and provided sufficient water for kalo cultivation. Tutu Hannah pounded the kalo for poi. Tutu Noelani and her siblings had the job of keeping the ditches cleared, and planks were used as gates to direct the flow where needed. The `ohana also grew sweet potato, banana, coconuts, citrus, figs, paypaya, ulu, ki leaf, a vegetable garden, and lā`au (medicinal plants) such as noni and aloe. They raised animals including pigs, cows, chickens, ducks, turkeys, geese, and goats.

7. In addition to raising crops and livestock on the kuleana, the `ohana gathered limu (seaweed) along the coast, caught fish such as moi and mullet near the mouth of the stream, and gathered delicacies such as o`opu and opae from `Īao Stream.

8. I have learned about this way of life from my kūpuna, but have never been able to experience it for myself. I would like to grow kalo on our kuleana land, not just for subsistence but because kalo has a unique role in traditional Hawaiian culture and reinforces the connection of the Hawaiian people to the land and water that is at the very core of Hawaiian culture and spiritual belief. I cannot do so, however, because the springs and seeps that once supported kalo cultivation, livestock, and other crops on our kuleana land no longer flow freely and support only limited crops.

9. The nearshore and stream resources my `ohana once relied on in their daily lives have become scarce. Stream flow to the ocean provides fresh water and nutrients vital to the growth of limu, an important food and medicinal resource. `Īao Stream rarely flows to the ocean now, and limu is no longer abundant. Fish species that thrived in the brackish water created by the freshwater flows from `Īao Stream, such as āholehole, moi, and ama`ama, were once plentiful but are now hard to find. O`opu and opae can no longer be gathered in `Īao Stream.

10. Restoration of stream flow to Nā Wai `Ehā would replenish the resources upon which the exercise of traditional and customary Hawaiian practices depends, and allow Kanaka Maoli of my generation and future generations to actually experience our cultural traditions rather than study them academically.

11. My `ohana and I support full restoration of stream flow to `Īao Stream, so that we and our neighbors can practice the traditions and culture of our ancestors.

4. The Parcel includes the following kuleana parcels: Grant 3042 to D. Adam Pupuhi; a portion of Land Commission Award No. ("LCA") 460, Apana 1, to Puupahoeohoe; a portion of LCA 6041, Apana 3 to Eeka; a portion of LCA 3105, Apana 2 to Kaaa, a portion of LCA 3296 to Mumuku; and all of LCA 8808, Apana 1, 2, and 4 to Kekeleiaiku. *See* Exhibit C-R 4C.

5. Exhibit C-R 5 includes true and correct copies, with highlighting added, of: LCA 460 to Puupahoeohoe (Exhibit C-R 5A), Royal Patent 2165 to Puupahoeohoe (Exhibit C-R 5B), and the Native Testimony of Eeka and Kaili in support of Puupahoeohoe's claim, each of which attest that the land in Pilipili (Apana 1) has lo'i and kula (Exhibit C-R 5C).

6. Exhibit C-R 6 includes true and correct copies, with highlighting added, of: LCA 6041 to Eeka (Exhibit C-R 6A) and the Native Testimony of Kamai in support of Eeka's claim, which establishes that Apana 3 is "2 loi kalo" (Exhibit C-R 6B).

7. Exhibit C-R 7 includes true and correct copies, with highlighting added, of: LCA 3105 to Kaaa (Exhibit C-R 7A), Royal Patent 3154 to Kaaa (Exhibit C-R 7B), and the Native Testimony of Kamai in support of Kaaa's claim, which establishes that Apana 2 is "Pauku kalu – 10 loi" (Exhibit C-R 7C).

8. Exhibit C-R 8 includes true and correct copies, with highlighting added, of: LCA 3296 to Mumuku (Exhibit C-R 8A), Royal Patent 3147 to Mumuku (Exhibit C-R 8B), and the Foreign Testimony of Eeka in support of Mumuku's claim, which establishes that Apana 1 is "a section of kalo land" (Exhibit C-R 8C).

9. Exhibit C-R 9 includes true and correct copies, with highlighting added, of: LCA 8808 to Kekeleiaiku (Exhibit C-R 9A), Royal Patent 2164 to Kekeleiaiku (Exhibit C-R 9B), and

the Foreign Testimony of Eeka in support of Kekeleiaiku's claim, which establishes that Apana 1 and 2 are each sections of loi, and Apana 4 is kula (Exhibit C-R 9C).

10. These kuleana lands receive water through an ancient 'auwai known in this case as the "North Waikapū" 'auwai. This 'auwai also feeds other kuleana lands in our neighborhood, including those of the Pellegrino 'ohana who previously testified in this case (who are also our distant relatives).

11. The North Waikapū 'auwai draws water directly from Waikapū Stream. The 'auwai begins at a po'owai (intake) upstream which is a traditional hand-built dam of loose stones that raises the water level and channels some flow into the 'auwai. The 'auwai first supplies the kuleanas of the Shimizu, Riyu, Soong, and Pellegrino 'ohana, in that order. After the Pellegrino's kuleana, the 'auwai branches into two. One branch goes under the road to its north side, where it feeds our 'ohana's Parcel. The other branch continues on the south side of the road, where it feeds the other kuleanas owned by my 'ohana, as well as the Rosario and Gushi 'ohana.

12. Currently, the only streamflow that reaches the po'owai under non-rainy conditions comes from a small tributary that flows into Waikapū Stream downstream of the Wailuku Water Company's main diversion. This flow is nowhere near enough to supply all the kuleana lands on the North Waikapū 'auwai.

13. The traditional po'owai, by nature and design, will capture only a portion of the streamflows, while the rest flows through downstream. We and other 'auwai users have done everything we can under current streamflow conditions to make the po'owai as efficient as possible in channeling stream flows and also to augment the capacity and flow of the 'auwai. We really cannot do anything more to increase the 'auwai flow under current streamflow

conditions. In any event, even if we could somehow capture more of the streamflow, we could and would not in good conscience drain the stream totally dry.

14. Our 'ohana have used the small flow in the 'auwai branch that brings water to our Parcel to cultivate lo'i on our land. We currently are cultivating ten (10) small lo'i covering about 0.5 acres. Exhibit C-R 10 is a true and correct copy of a photograph showing these lo'i. We previously had a nursery operation using a portion of this land, but that has discontinued, and our 'ohana intends to make as much of this kuleana land productive in cultivation as possible. We plan to open five (5) acres of wetland kalo. We have already restored some of the ancient lo'i on the Parcel, but they are currently lying fallow and waiting for water. Exhibit C-R 11 is a true and correct copy of a photograph showing several of the fallow lo'i. We also plan to cultivate three (3) acres of other crops, including an orchard of fruit trees and forage crops for animals.

15. This is a family labor of love and vision for our land, and not a money making operation. Members of our larger 'ohana, my siblings, cousins, and uncles and aunties are contributing their spare time and labor, and we will use the crops to feed our 'ohana and, with any extra, cover our expenses such as materials and property taxes.

16. In addition, there are ten (10) houses on the 11.25 acre parcel occupied by members of our 'ohana and others, and seven (7) houses on the subdivided kuleana parcels on the south side of the road owned by our 'ohana members. We use water for these households' crops and gardens.

17. Our 'ohana is very aware of this ongoing case concerning restoration of streamflows in Nā Wai 'Ehā , including Waikapū Stream, and we support restoring full flow to the traditional stream system including kuleana lands like those of our 'ohana and neighbors on

the North Waikapū auwai, which have traditionally depended on these flows and have shared and given back these flows to the stream. The stream is the natural and cultural lifeline for our ahupua‘a. We want it restored as a part of our ‘ohana’s and community’s way of life, to observe and gather stream life, to swim and play and appreciate the flowing stream. Currently, the stream is just a trickle and a constant reminder of how Wailuku Water Company takes the water away and leaves nothing for others downstream.

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'Iao Ground Water Management Area
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**OFFICE OF HAWAIIAN AFFAIRS'
EXHIBIT LIST**

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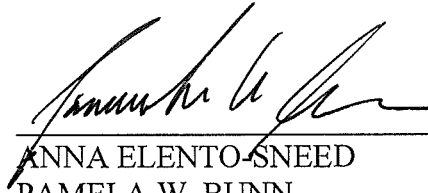
OHA EXHIB IT NO.:	DESCRIPTION	REFERENCES	ADM
C-R 1	Tax Map for Zone 3, Section 3, Plat 01	Testimony of Levi Kainalu Almeida ("Almeida WT"), ¶ 2	
C-R 2A	Land Commission Award No. 3234C to Kaianui	Almeida WT, ¶¶ 3, 4	
C-R 2B	Royal Patent No. 4256 to Kaianui	Almeida WT, ¶ 4	

C-R 2C	Foreign Testimony in support of Kaianui's claim	Almeida WT, ¶ 4	
C-R 2D	Native Testimony in support of Kaianui's claim	Almeida WT, ¶ 4	
C-R 2E	Kaianui's claim from Native Register	Almeida WT, ¶ 4	
C-R 3	Tax Map for Zone 3, Section 5, Plat 04	Testimony of Ethan Harders ("Harders WT"), ¶ 2	
C-R 4A	Map 1 for Land Court Application 1315	Harders WT, ¶ 2	
C-R 4B	Enlargement of portion of Map 1	Harders WT, ¶ 2	
C-R 4C	Enlargement of portion of Map 1	Harders WT, ¶ 2	
C-R 5A	Land Commission Award No. 460 to Puupahoehe	Harders WT, ¶ 5	
C-R 5B	Royal Patent No. 2165 to Puupahoehe	Harders WT, ¶ 5	
C-R 5C	Native Testimony of Eeka and Kaili in support of Puupahoehe's claim	Harders WT, ¶ 5	
C-R 6A	Land Commission Award No. 6041 to Eeka	Harders WT, ¶ 6	
C-R 6B	Native Testimony of Kamai in support of Eeka's claim	Harders WT, ¶ 6	
C-R 7A	Land Commission Award No. 3105 to Kaaa	Harders WT, ¶ 7	
C-R 7B	Royal Patent No. 3154 to Kaaa	Harders WT, ¶ 7	
C-R 7C	Native Testimony of Kamai in support of Kaaa's claim	Harders WT, ¶ 7	
C-R 8A	Land Commission Award No. 3296 to Mumuku	Harders WT, ¶ 8	

C-R 8B	Royal Patent No. 3147 to Mumuku	Harders WT, ¶ 8	
C-R 8C	Foreign Testimony of Eeka in support of Mumuku's claim	Harders WT, ¶ 8	
C-R 9A	Land Commission Award No. 8808 to Kekeleiaiku	Harders WT, ¶ 9	
C-R 9B	Royal Patent No. 2164 to Kekeleiaiku	Harders WT, ¶ 9	
C-R 9C	Foreign Testimony of Eeka in support of Kekeleiaiku's claim	Harders WT, ¶ 9	
C-R 10	Photograph of cultivated lo'i	Harders WT, ¶ 14	
C-R 11	Photograph of fallow lo'i	Harders WT, ¶ 14	
C-R 12	Excerpts from Keālia Pond National Wildlife Refuge Comprehensive Conservation Plan dated September 2011	Hui o Nā Wai 'Ehā and Maui Tomorrow's Opening Brief and Opening Statement, p. ____	
C-R 13	Surface Water Use Permit Application filed May 1, 2009 by U.S. Fish and Wildlife Service	Hui o Nā Wai 'Ehā and Maui Tomorrow's Opening Brief and Opening Statement, p. ____	

Office of Hawaiian Affairs ("OHA") reserves the right to introduce additional exhibits at the remand hearing for purposes of impeachment or rebuttal, and to cite to and/or rely on all exhibits admitted in the original contested case proceeding, and all documents in the Commission on Water Resource Management's ("CWRM's") files relative or relevant to this matter, including all Water Use Permit Applications and Surface Water Use Permit Applications, all correspondence, and all other filings in CCH-MA-06-01.

Dated: Honolulu, Hawai'i, January 7, 2014.

A handwritten signature in black ink, appearing to read "Anna Elento-Sneed", is written over a horizontal line.

ANNA ELENTO-SNEED

PAMELA W. BUNN

Attorneys for OFFICE OF HAWAIIAN AFFAIRS

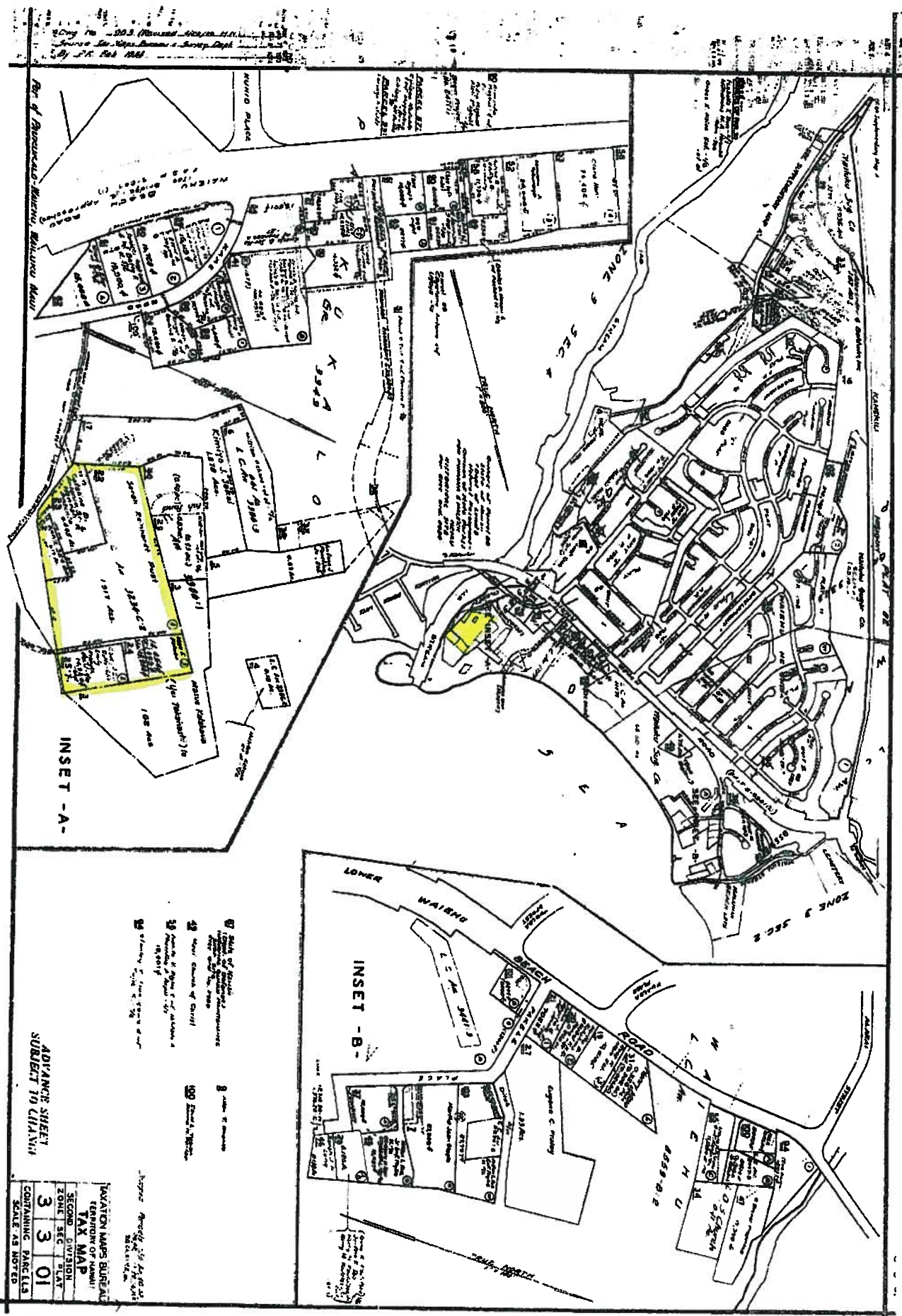


EXHIBIT C-R 1

a puni malote via apama 2 Eka.

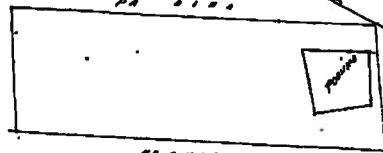
P. H. H. 16 1/2 1 54

Abwa Keshokale.

Mua ana aima

Na E. Bailey i hoponopono.

Apr. 8, 1852.



Palama. Mai ke kiki Kama vana'ia
Alo 65 ft. ki 100 kha. ahiko i ke kiki maua oiaia.
hilo Alo 65 ft. 116 kha. 3 ah. 27. Ki 136 kha.
Ki 56 ft. 135 kha. 3 ah. 31. Ki 136 kha. ahiko
ma kiki maua oiaia. Eka. via ke lauaia
malote oiaia. 1/2 Kaula. a na Kaula 1 1/2 Eka.
E. Bailey
Kaula. Kaula 31. 1854. Kaula. Kaula.

2 Kaula. Kha.

Ulu paia la 5.00

W. L. Lu

L. M. Robertson

H. Smith

E. Kaula. Kaula

Honolulu, Ann. Aug. 29, 1853.

Helu 3234 C Hawaii

Kaula. Kaula.

Palapa oiaia ana i ke Kaula. Alo 3234 C Hawaii. Kaula. Kaula.

Apama 1. Eli. Alo. E hamaia ana ma ke kiki Kaula a fili ana ia Kaula. Kaula.
Kaula. E holo ana.

Kama	49"	Kaula. Kaula	2.32	Kaula. Kaula	Kaula.
Alo	45"	Kaula. Kaula	1.90		
Alo	39 15	Kaula. Kaula	0.50		
Alo	53 15	Kaula. Kaula	0.94		
Alo	49 15	Kaula. Kaula	1.97		
Kama	45 15	Kaula. Kaula	2.85		

a kiki i Kaula i hamaia ai. a malote via apama 6 Kaula. Kaula.

Apama 2. Eli. Alo. E hamaia ana ma ke kiki Kaula a fili ana ia Kaula. Kaula.
ana i Kaula. E holo ana.

Alo	47 15	Kaula. Kaula	6.15	Kaula. Kaula	P. H. H.
Alo	42	Kaula. Kaula	4.60		P. H. H.
Kama	41. 30	Kaula. Kaula	8.60		
Kama	74. 45	Kaula. Kaula	4.48		

a kiki i Kaula i hamaia ai. a malote via apama 3 1/2 Eka.

Palapa Mai ke kiki Kaula a fili ana ia Kaula. Alo 3234 C Hawaii. Kaula. Kaula.
Kaula. E holo ana.

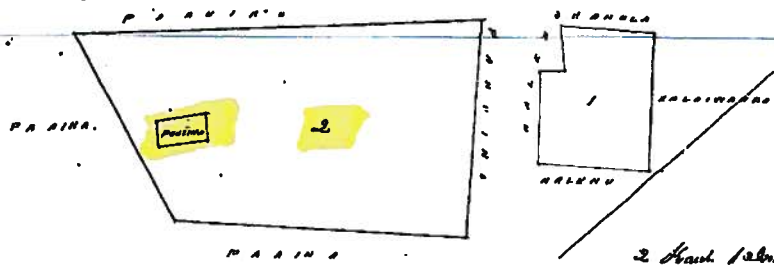
Alo	35	Kaula. Kaula	1.00	Kaula. Kaula	
Alo	52	Kaula. Kaula	0.50		
Kama	35	Kaula. Kaula	1.00		
Kama	52	Kaula. Kaula	0.50		

a puni a malote via apama 5 1/2 Eka.

Abwa Keshokale.

Hoponopono. E. Bailey

Apr. 8, 1852



Ulu pa lea 7.00

W. L. Lee
J. M. Robertson
J. H. Smith
J. A. Kaula

Honolulu, January 29, 1852

Helu 3225 Opunui

Lelamata & Pihakakuputanga Hailuta Maui

Pahapala on to ana ana : ke Kuluana 3225 on Opunui ana ka ili. Lelamata & Pihakakuputanga Hailuta Maui, E hoomaka ana ka hiki Maui Kuluana a pili ana ana ka Kuluana o ka Kuluana a hiki ana.

Maui	53	Kuluana	272	Kaula ana ana ka Kuluana a hiki ana
Kuluana	19	Kuluana	406	
Kuluana	46' 45"	Kuluana	287	
Kuluana	46' 15"	Kuluana	757	
Kuluana	30. 30	Kuluana	251	
Kuluana	44 -	Kuluana	350	
Kuluana	47 15	Kuluana	320	
Kuluana	60. 15	Kuluana	275	
Kuluana	29. 15	Kuluana	287	
Maui	41. 15	Kuluana	670	
Maui	65. 30	Kuluana	290	
Kuluana	36. 45	Kuluana	400	
Maui	48	Kuluana	800	
Maui	39	Kuluana	756	
Maui	21	Kuluana	400	

A malalo ia apana 15 Eha.

O ka pauna Kuluana ana ka Kuluana ana hiki ana ana ka Kuluana, a iia malalo ia apana, malalo ia hiki ana ana ana ka Kuluana a pili : ka hiki Kuluana o ka Kuluana a pili : ka Kuluana pa ana ka Kuluana ana Kuluana ana

Po 5, 1 Mai' ke hiki ana o ka apana Ma. 5th Kom. 342 Lona ka hiki ana Cholo ana

Kuluana	42'	Kuluana	1.00	Kaula ana
Maui	48'	Kuluana	0.25	
Maui	44'	Kuluana	1.00	
Kuluana	48'	Kuluana	0.25	a pauni ana apana 1/5 Kaula ana.

Polimio 2. Mai' ke hiki ana ana o ka apana ana a Kuluana 34 Kom 460 Lona ka hiki ana (1) Cholo ana.

Kuluana	85	Kuluana	0.65	Kaula ana.
Kuluana	15	Kuluana	0.40	
Maui	85	Kuluana	0.65	
Maui	15	Kuluana	0.40	a pauni malalo 1/5 Kaula ana

H. Kaula ana

HELU *11/15/18*
PALAPALA SILA NUI.

A KE ALII, NAMULI O KA OLELO A KA POE HOONA KULEANA.

NO KA MEA, Ua hooholo na Luna Hoona i na kumu kuleana aina i ka olelo, ho kuleana nina ko
Maui
ma ke **AAU AIAU** Ioko o kahi i oleloia mahele.

Nolalla, ma keia Palapala Sila Nui, ke hoike aku nei o Kamehameha IV. ke Alii nui a ke Akua
i kona lokomaikai i hoonoho i ulana o ko Hawaii Poe Aina, i na kanaka a pau, i keia la nana lilo,
a no kona mau hapa alii, ua hawii aku oia ma ke **AAU AIAU** la
i kela *Maui* wahi a pau loa ma *Maui*
ma ke inokupuni o *Maui* penei na hokaria,

Maui 1. Alii *Maui*
E hoowalewa ana ma ke kahi *Maui* o *Maui* ana i a
Maui *Maui* & *Maui* ana

Maui 49' *Maui* 2.32 *Maui* ma *Maui*
Maui 45' *Maui* 1.96 . . .
Maui 49'15' *Maui* 1.58 . . .
Maui 48'15' *Maui* 1.98 . . .
Maui 49'15' *Maui* 1.97 . . . *Maui*
Maui 48'15' *Maui* 2.15 . . . *Maui*
a hiki i *Maui* i *Maui* *Maui* *Maui* *Maui*

Maui 2. Alii *Maui* *Maui*
E hoowalewa ana ma ke kahi *Maui* *Maui* o *Maui*
ana i *Maui* ana

Maui 49'15' *Maui* 6.15 *Maui* ma *Maui*
Maui 48' *Maui* 4.60 . . . *Maui*
Maui 49'15' *Maui* 1.96 . . .
Maui 48'15' *Maui* 2.15 . . . *Maui*
a hiki i *Maui* i *Maui* *Maui* *Maui* *Maui*

Maui 3. Alii *Maui* *Maui* *Maui* *Maui* *Maui*
i *Maui* *Maui* *Maui* *Maui* *Maui* *Maui* *Maui*
i *Maui* *Maui* a hiki i *Maui* *Maui* *Maui* *Maui* *Maui* *Maui* *Maui*

Maui 45' *Maui* 1.00 *Maui*
Maui 45' *Maui* 1.00 . . .
Maui 45' *Maui* 1.00 . . .
Maui 45' *Maui* 1.00 . . . a *Maui* *Maui* *Maui* *Maui*

B

Maloko o *Mia* *Maui* *apina* *5th Dec 5th Nov* *Fla*
 a oi iki aku, a emi iki mai pahā. Ua koo hae i ke aupuni na mine minorela a mā na urele a mau.

No *Maui*
 ua alua ia i hawila mā ke ANO ALODIO a no kona mau hooilina, a me kona wailona; ua pili nō
 ka euhā a ka Pōe Absoloio a kau like ai ma ua aina aloio i keia manawa i keia manawa.

A i mea ē ike ai, ua kau wau i ke'o hoo, a me ka Sila Nui o ke Hawaii Pae

Aina mā Hōnōlū i keia la

o *Samuel* 1849

Kamoharui

Kamoharui

Cl 3234 C Kamenur;

Kamama, Sr. wrote out the Claim of Kaimai; sent to [unclear], and
it to [unclear] Richards.

Kamaka Sw. I know the lands of the Ot. May consist of 3 pieces.

N^o. 1. is in the lib^y of Nokes' Warbler.

11 2. 5 4 5 11 11 *Pankhalo Waikiki.*

A J, N N N N " *Maria Waichow*

The title to these lands from Kāhūliua and Kāhuna, in the days before the laws (before 1839) and his title is not disputed.

Ms. 192. were not rec'd till 1843.

N^o 1 is bounded Mauka, by Nui's Land Waiahee, by Hakooda's land Maikai, by Kahuwihou's land Maialoa, by Halekua's land.

N^o 2 is provided Maaka, by the Govt Lot Waikare, by Poharino
Land Maaka, by the same Maaka, by the Govt Lot

No. 3. is bounded Maaka, by Kaidula's land. Writke, by the same, Makai, by Kopevula's land. Maalaa, by the Post Office.

I forgot he has one other piece of - his in Waiuku, which he rec'd from Hailuola in the year before 1829, and has always held in peace.

It is branded. Kauka, by Kahula's land and so on all the other sides.

3 Eia na palena, M. Iripachas, M. Alarini Aipuni
M. Kawapohaka, M. Kalawaiakoune

4 Eia na palena, M. Ili o Poaka, M. Pali o Ka
pukahau, M. Kikane, M. Ika

5 Eia na palena, M. Nalipulehu & Kawailili, M.
Kawailili & Kaupae, M. Nalipulehu, M. Nalipulehu & Kahawai

6 Eia na palena, M. Maukili, M. Kaunuu, M.
pela no, M. o Kaunuu no.

3934 Nimakahua

Julai 19, 1839

Noroi Hoshikua Wa ike au i kona Apana
hoshiki ma. Kalua ili no Wailuku, No Nihuk-
fiwa mai kona mauua o M. N. 1830. Aoka-
hi potuna maloke, Aole mea heahe ia ia.

Eia na palena, M. George Lass, M. L. Kawani
M. Pallupuni, M. Makahanohana

3234 B Kalaeloa

Kalaeloa Hoshikua Wa oiaio mai no i kahan
a hoiuua ma. Oahu i ka M. N. 1816, aole me i
hiki mai me, "A wa hoiu mai no i Kalaeloa."

Makili Hoshikua Wa ike au hoshiki no Apana
ma. Hamanias ili ma Wailuku, No Apana mai
mauua o ka M. N. 1831, Eoleu man potuna
maloke o kua Apana, Aole mea heahe ia ia.

Eia na palena, M. Kalawaiakoune, M. Kahawai,
M. Naea, M. Pali o Wailuku.

3234 C Kaiamui

Kamamui Hoshikua Wa oiaio kua kahan
ama i ka Kaiamui i ka M. N. 1816.

Kaiamui Hoshikua Ole mai la kua mea Aokana

Ua hōkai iā kīu kuleana o Kāmuna, Wāi
no i hōkai aku iā o. o. o. Kāmuna i kō Pēka
una mai, mai lōke mai o kō, pō.

Kāmuna, Hōhikūia Ua ike au i kōna mau
Apama 1. maheia mau ili ma Wailuku, Wāiuku.

Apama 1. Simakalo ili o. Nēke Wailuku

" 2. ^{Simakalo} Simakalo ili Paukukalo

" 3. Simakalo ili o. Pīlani Wāiuku

" 4. Eua Līkalo ili o. "

No. Kāhuna mai kō Apama 1 i kō. M.H. 1833,

Apama 2 No Kāhuna mai mānana o M.H. 1839,

Apama 3, 4 ma Wāiuku no Kāhuna mai mānana
o kō M.H. 1839, Kōle mau kōkua i kōia mānana

1. Eia ma pōkua, M. Mui, M. Kāhuna, M.
Kāhuna, M. Kāhuna

2. Eia ma pōkua, M. Pa Aina, M. Pehuiro, M.
Pehuiro, M. Pa Aina,

3. Eia ma pōkua, M. Kāhuna, M. pōkua no,
M. Kāhuna, M. Pa Aina,

4. Eia ma pōkua, Ua pōkua i kō aina o Kāhuna

3234. D. Kāhuna

Subs 10 1839

Kāhuna, Hōhikūia Wāi no i kōkua i kōna pōkua
i Dekemapa 22, 1837. Ua hōkai ma. Oahu, Kōle no.
he kōkua mai mui, Ua ike no au i kōna mau
Apama i 7 maheia mau ili ma Wailuku maheia ili,

Apama 1. Simakalo ma Kāhuna 2.

" 2. 1 Līkalo ma " "

" 3. 1 Līkalo ma " "

" 4. 1 Līkalo ma " "

" 5. 2 Līkalo ma " "

" 6. 3 Līkalo ma " "

" 7. 3 Līkalo ma " "

No Apama 1, 3, 4, 5. no Wāiuku mai M.H. 1833. Apama 2,

loi; ma i hui ia ma loi a pau ke 16.
Eia ka hui. Iha i make au o Hahioneia
ka hoelina o koi mau loi Pan.

Ma Hams, ka mea mau ma loi.

Hele 447 Heano
Ma

Auea oe e Bolepela Kaauwai e ma
luna houna eia koi manas ia oia. He hui
aku nei au i koi kuleana, umi kumama-
wahi, loi ma ka ahan ma kahawai oia
loi, ma ka huiia, umi kumamaia loi
ma ke kumamaia ma ka kuma, ma ka
auwai, o ka pa auwai e pili ana ma ke
kula hawai pili ahe, oia ka mokuna, aia
ma ka huiia kuleana mokuna, aia ma ka
ahan ma ka ka ka pa o kahawai, ma ke alo
o na pukeala, e pili ana me oia oia ka
mokuna ma ka ahan aia ma ke kumama-
na kuleana mokuna pau koi kuleana o
Hahioneia koi hui

Ma Heano. Auea oia
e ma luna houna, o, Kane, hui.

Hele 448 Kaianini

Ma

Auea oe e B. Kaauwai ke aloha aku
nei au ia oe me ka ahanalo.
Eia koi wahi mea hoopi kuleana ai-
ma ma Pauhahalo 37 loi e hui loi i laue
ia e ke kumamaia e Hui ka kahawai ma
ke hui.

Pikawa, iā Kahune iāi cā maumea
a pan oia kōu wahi kuleana aia, e hoo-
pū iā oe i kēā mānawa, he 15 loī iāu
he wahi kula kahi, elua hale, o Kahune
kia hōke 65 loī mas Maiehu, No Lūla
Ma Nōhe he 11 loī e 3 loī i lilo, he mānawa
nei he Kōnōhiki e lawe i kēā mān loī
iū ma Nōhe

Na Halima kia hōke

Na ma Kaiamui

Helu 449 Kuahine

Ma

Aloha oe e. Hoanawai. He mau kanaka
ai kuhapai nāhēhē māua, ua hēle māua
i ka la o kēā, a me he Kōnōhiki, ahe ai o
ka aia he nāhēhē iā i kōu mānawa
e hēle me ka olelo o he Hoanawai māua aia
a e hē māhāhiki, alaila, hēle i ka la o kēā, a
me he Kōnōhiki.

Na Kaunika Kuahine

Helu 450 Inatana Napela

Ma

E na Luma Hoona.

Aloha oukou.

He kuleana kōu māi ka Mōi māi. Kamēha-
neha III. Ua māi aku wau he wahi kula ma
Maiehu māi.

Onu kia waiho ana

Ahau. He pali a me ka māua.

Hikūia Pa o Nāhēhēhē

Hēia. He mau loī

Kōnōhiana Pa o Kaunika a me ka

MAUI T.N.

LOT 107

Range all of Grant 2047 to D. Adams Populus; the northern portion of R.R. 265, L.C. No. 940, Apurá, in Tugayhuachi, a portion of R.R. 263, L.C. No. 624, Apurá 3 to Eneca and a small portion of R.R. 3154, L.C. No. 3185, Apurá 2 to Yana, the easterly portion of R.R. 2477, L.C. No. 3596 to Mucuy and all of R.R. 264, L.C. No. 6008, Jumbay 1 and 2, and in Vastakichu.

AREA: 11.791 ACRES

LOT B

Being the southern portion of R.P. E165, L.C.Hr. 400, Apans 1 to Puzpalabzina, R.P. E184, L.C.Hr. 3195, Apans 1 to Naxobine, all of R.P. E163, L.C.Hr. 440, Apans 2 to Puzpalabzina, a portion of R.P. E164, L.C.Hr. 3195, Apans 2 to Kansa, a portion of R.P. E164, L.C.Hr. 4000, Apans 3 to R.P. E164, L.C.Hr. 4041, Apans 1 to Kansa, a portion of R.P. E163, L.C.Hr. 4041, Apans 1 to Kansa,

AREA: 8.058 ACRES

Let X is subject to Invention 1, a 1/16 (6) foot ditch right-of-way being an ancient and well used by the Applicant and the British Sugar Company for irrigation purposes, as shown on the map on plan of Invention 1.

subject to Paragraph 2, a six (6) foot ditch right-of-way being another branch of the
segment shown on the map used by the Applicant and others for irrigation purposes, as shown on this map

[illegible]

This map is from an actual survey on the ground made by and under the direct supervision of the undersigned, between the dates October 20, 1938 and May 22, 1939, and may be checked by the Territorial Surveyor with my Field Book Number 8, Calculation Folder 7.

Source: *Financial Times*, 1998.

Police Registrar, Bowditch 1001000000

I hereby certify that the description of survey and map herein have been examined and checked as to form and mathematical correctness, but not on the ground, and the same have been found to be in accord.

W. H. Williams
 Surveyor, Territory of Nevada

Heretofore, J. H.
 Jan. 10, 1941

I hereby certify that Decree of Registration dated December 28, 1945, and numbered 19524 has issued to Zelig Rogers Cockett covering the land described hereon, and that Owner's Certificate of Title No. 39,853 has been transcribed therefrom.

Monololu, T. H.
December 28, 1945. *P. H. Mullikins*
Registrar of the Land Court

C. H. Northland
Registrar of the Land Court

EXHIBIT C-R 4A

Notes: Curves as shown on map are from records filed in the
Tombston Maps Bureau.
Figures shown thus 8 indicates number of course.
All corners marked by 14 pipes in concrete
unless otherwise noted.

... after that ... out

Pilos hawaii 1940

LAND COURT
TERRITORY OF HAWAII
MAP AND DESCRIPTION WITH APPLICATION 1315
ZELIE ROGERS COCKETT - APPLICANT

LAND SITUATED AT PILIPILI KUAIIWA AND MAKAHELAHELA - WAIKAPU DISTRICT OF WAILUKU,
 MAUI T.H.

LOT 'A'

owners

Being all of Grant 3042 to D. Adam Pupuhi, the northerly portion of R.P. 2165, L.C. No. 460, Apana 1 to Puupahohoe, a portion of R.P. 2163, L.C. No. 6041, Apana 3 to Eeka and a small portion of R.P. 3154, L.C. No. 3105, Apana 2 to Kaaa, the easterly portion of R.P. 3147, L.C. No. 3296 to Mumuku and all of R.P. 2164, L.C. No. 8508, Apanas 1, Land 4 to Kekelaiaiku.

AREA: 11.791 ACRES

LOT 'B'

Company (Owner)

Being the southerly portion of R.P. 2165, L.C. No. 460, Apana 1 to Puupahohoe, R.P. 2164, L.C. No. 3108, Apana 1 to Konoia, all of R.P. 2165, L.C. No. 460, Apana 2 to Puupahohoe, a portion of R.P. 3154, L.C. No. 3105, Apana 2 to Kaaa, a portion of R.P. 2164, L.C. No. 8508, Apana 3 to Kekelaiaiku and all of R.P. 2163, L.C. No. 6041, Apana 1 to Eeka.

AREA: 8.058 ACRES

Lot 'A' is subject to Easement 1, a six (6) foot ditch right-of-way being an ancient aumai now used by the Applicant and the Wailuku Sugar Company for irrigation purposes, as shown on this map or plan as Easement 1.

Lot 'A' is also subject to Easement 2, a six (6) foot ditch right-of-way being another branch of the ancient aumai now used by the Applicant and others for irrigation purposes, as shown on this map or plan as Easement 2.

Lot 'B' is subject to Easement 3, a six (6) foot ditch right-of-way being an ancient aumai now used by the Applicant and the Wailuku Sugar Company for irrigation purposes, as shown on this map or plan as Easement 3.

~~Lot 'B' is also subject to Easement 4, being a three (3) foot easement for the Wailuku Sugar Company's domestic water supply line, as shown on this map or plan as Easement 4.~~

This map is from an actual survey on the ground made by, and under the direct supervision of the undersigned between the dates October 20, 1938 and May 22, 1939, and may be checked by the Territorial Surveyor with my Field Book Number 5, Calculation Folder 7.

Scale: 1 inch = 100 feet
 Wailuku, Maui T.H.
 May 23, 1939



Robert P. Bruce
 Registered Professional Surveyor
 Certificate Number 2483
 Wailuku, Maui T.H.

Zelie Rogers Cockett Applicant

I hereby certify that the description of survey and map hereon have been examined and checked as to form and mathematical correctness, but not on the ground, and the same have been found to be in accord.

Robert P. Bruce
 Honolulu, T.H.
 Jan. 16, 1941
 Surveyor, Territory of Hawaii

I hereby certify that Decree of Registration dated December 28, 1945, and numbered 1824 has issued to Zelie Rogers Cockett covering the land described hereon, and that Owner's Certificate of Title No. 33893 has been transcribed therefrom.
 Honolulu, T.H.
 December 28, 1945. P. H. Mulholland
 Registrar of the Land Court

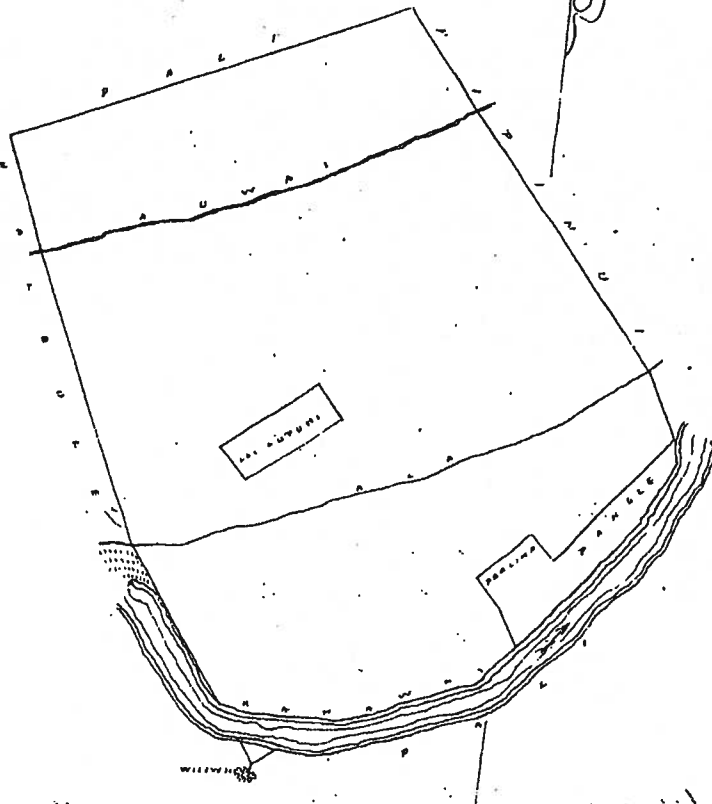
Easement 4 as shown hereon has been deleted by Order of the Judge of the Land Court dated December 19, 1939.
 Honolulu, Hawaii
 December 19, 1939
James M. Burns
 State Land Surveyor

Ulu. 53 1/2 No 71 Ulu. No. 54 1/2 No. 21 Ulu. No. 52 1/2 No. 41 Ulu. i haku i hiamahia i 14 Ulu.

Quib 27. 1852.

E. Bailey.

Moa. araviana.



Ulu. pauc. loc.

10 1/2

M. L. Lee
G. M. Robertson
J. Kikaulaia
J. H. Smith

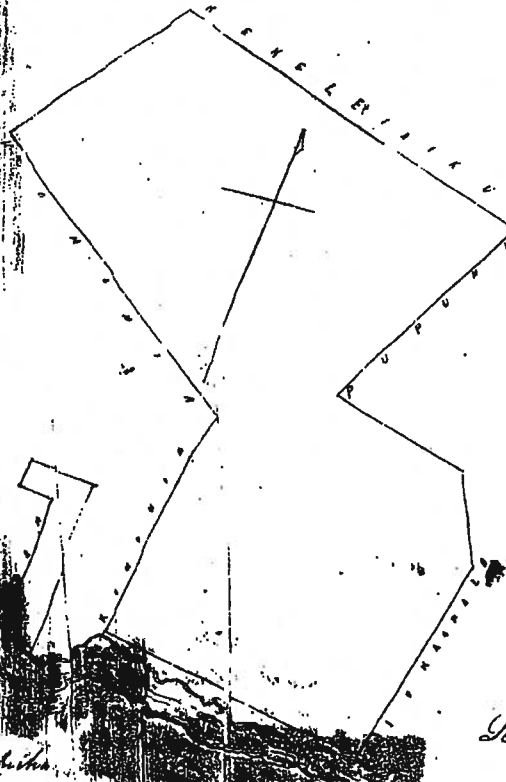
Honolulu June 25. 1852.

Ulu 460 Puapuhoohe Maui

Palapala mo ke ana ana i ke Kulaana 460 no Puapuhoohe, ma ka 'ike o
Pihipili, Waikapu, Molekuni, o Maui.

Opunui o E. Hermann o ke ana ana mo ke hiki o Ulu o ke ana ana
mo ke Kulaana o Maui o ke Molekuni, o ke hiki o Ulu o ke ana ana
Ulu mo ke Kulaana o Maui. No. 52 1/2 No. 54 1/2 Ulu. ma ke Pihipili No. 49 No. 51 1/2.

C. Bailey
Mea ana aina



See Page 484. 73. April.

2 Kämpfer & Kämpfer

Wm	Paiz	Loc	\$4
Wm E. M. Robertson J. H. H. H. H. C. B. Smith			

Heck 3539 *Staph.*

Найкарис Нам

Kulana 5539 Kapiti, Paikapaue Haei
 Apapa 1 ili. Palama Submala ma te Kiti Ahau via te Kiti Hi. Frypan a te Solo He 21 1/2
 He 16 1/2 Ah e piti ana me te Solo He 48 1/2 He 54 Ah e piti ana me te Heakua He 58 1/2 Hi 15 1/2
 ma te Heakua He 21 1/2 He 27 Ah e piti ana me te Heakua He 31 1/2 Hi 17 1/2 Ah ma te Heakua He 37 1/2
 He 58 1/2 Ah ma te Poupan He 65 He 72 Ah ma te Heakua He 80 1/2 He 112 Ah, me te Heakua
 ili. Ohia He 22 1/2 He 97 Ah ma te Kiti. Ohia He 71 1/2 Hi 31 1/2 Ah ma te Poupan a te Kiti ma
 te Kiti ma 2 1/2 He 27 Ah
 Apapa 2 ili. Haanui Submala ma te Kiti Ahau via te Kiti Hi. Halapuanu
 e Solo He 21 1/2 Hi 55 Ah e piti ana me te Richardson He 27 He 55 Ah e piti ana me
 te Richardson He 45 He 90 Ah e piti ana me te Richardson He 55 He 129 Ah e piti ana me
 te Richardson He 15 1/2 He 30 Ah e piti ana me te Richardson He 15 1/2 He 30 Ah e piti ana me
 te Richardson He 15 1/2 He 30 Ah e piti ana me te Richardson He 15 1/2 He 30 Ah e piti ana me
 ma te Kiti ma 1 1/2 He 27 Ah

Ms. A. 9. 2. 1. 1852

L. Bailey
Linnæa acaulis

HELU 2/6/5

PALAPALA SILA NUI.

A KE ALII, NAMULI O KA OLELO A KA POE HOONA KULEANA.

No ka mea, ua hoooho na Luna Hoona i na kumu kuleana aina i ka olelo, he kuleana oia ko
Punepahukue (*Kuleana Kulu Ulu*)

ma ke ano Kuleana Nui malalo o ke Ano Alodio iloko o kahi i oleloia malalo, a no ka mea,

Nolaila, ma keia Palapala Sila Nui, ke hoike aku nei o Kamohamoha IV, ke Alii Nui a ko Akua i kona lokomalkai
i hoonoho ai malalo o ko Hawaii Pae Aina, i na hanaka a pau, i keia la, nona iho a no kona mau hope Alii ua hoolilo, a ua
haawi aku oia ma ke Ano Alodio ia *Punepahukue*.

i kela wahi a pau loa ma *Pilipili* *Waihofo*
ma ka mokupuni o *Maua*; penei na mokuna:

*O ka mea i ke ano ma ke kahi Aha o Keia a pili ana ma
ke Kuleana iho. Kaula a ma Maunaloa o ke kahi
Aha 7 1/4 Aha 755 Kaula ma ke Kuleana iho.
Aha 32 1/2 Aha 471 " " *Punepahukue*
Aha 77 Aha 279 " " " "
Aha 22 Aha 156 " " *Maunaloa*
Aha 7 Aha 205 " " " "
Aha 7 Aha 251 " " " "
Aha 38 Aha 175 " " *Maunaloa*
Aha 77 1/4 Aha 281 " " " "
Aha 6 1/4 Aha 371 " " *Maunaloa*
Aha 15 1/4 Aha 100 " " " "
Aha 57 Aha 693 " " " "
Aha 34 1/4 Aha 447 " " *Maunaloa*
i ke kahi maunaloa *Aha 7 1/4 Aha**

*O ka mea i ke ano ma ke Kuleana iho a pili ana ma ke Kuleana
a e kaula Aha 4 Aha 363 Kaula ma ke Kuleana iho.
Aha 87 Aha 141 " " *Maunaloa*
Aha 4 Aha 53 " " " "
Aha 87 Aha 68 " " " "
Aha 7 1/4 Aha 256 " " *Maunaloa*
Aha 53 1/4 Aha 78 " " *Maunaloa*
i ke kahi maunaloa *Aha 7 1/4 Aha**

Maloko o *Heia mon* Apana

7th mo

Eka

n oi iki aku, a emi iki mau paha. Ua koe nae i ke aupuni na 'mino minerela a me na metela o pau.

No

Pamphakaw

ua aina la i haawiia ma ke **Ano Alodio** a no kona mau hoolina, a me kona waihona, ua pili nae ka auhau a ka Poe Ahaolelo e kau like ai ma na aina alodio i kela manawa i keia manawa.

A i nua e ikeai, ua kau wau i ko'u inoa, a me ka Sila Nui o ko Hawaii

Pae Aina, ma Honolulu, i keia la

Septemba, 1855.

Victoria K. Kaahumanu

Stancharaka

Helu 429 Kaulohea

From Page 172

Hooihikiia o Pūpūhōehoe
 Na ike no au i kahi o Kaulohea e hōpū
 mai nei, he māhauke, aia ma Kahi
 ma. Iao, nōna no ia wahi mai a hūa
 mai ka nōhū ana, a ia Kaluwardhouse
 i kēia wa i paipā ka mea ilalo ai ia in
 uole au lōke ka mea i hemo ai, Na
 ike au ka nui o ka loaa malaila ia wa
 he mau no ka loaa malaila

Waikuku Feb. 28, 1847

Helu 466 Pūpūhōehoe

Hooihikiia o Eka ma ka ilalo a ke
 . hūa. Na ike no au ia mau aina o pau
 a P. e hōpū aku nei ia oukou, o Ohia,
 o Pilipili, o Kōkelahele, o Haamui, Olohe,
 o kona mau palena, o ke ala a o
 Kaumukē ma ka Hik. ma ka Hema
 o ke Alia a me ke kai, ma ke Kōmohana
 ma ke kuahiwi mau ka pono o Waikapu
 he mau kula no iloko o ka pa aina
 He aina o Pilipili, he mau loi a ke
 kula kona o Haamui he aina no ia,
 nōna ke kuahiwi mauka o Waikapu
 he mau loi no malaila a me ke kula
 maloko o ka pa aina o Olohe, he
 Loi no malaila a ke kula no wa
 Kapu ia e Kimo i ke Kō manua
 o kela mau Loi i hoolimalimaia he
 rama ka waiwai i lilo malaila,
 a he Hōmū kahi a me na Kao he
 kanaka, oia ka lilo no kela mau
 Loi

Mai kahiho loa mai no ka loa ana.
 keia mau aina ia Puupahoehoe. Aole
 ona mea nana i keakea mai.

Hooikiia. **Kaili** ma ka olelo a ke
 Ahua. Ma ike no au i kahi. Puupahoehoe
 e hooi mai nei. aia ma Waikapu
 o Ohia, o Pilipili, o Makahelakela
 o Haanui, o Olohe, no kona kuu hua-
 ana mai kona. Kalainohoino he
 inoa no Keemoku mai ke Kalai-
 nohoino. Ma ike au i ka noho ana
 malaila, ma kahi aia no au.
 Waikapu, a kala kahi mau makakiki
 alaila hoi mai au a noho pu ma kou
 malaila, a ia wa lohe au he mau
 aina pono i kela no lakou. he
 / kai paakai. Ohia a me ke kula
 a he kai no hoi mai ke aba ae,
 mai a Kaunukee a me na kula
 eue e huli ana ma Wailuku, a he
 kula e ae no iloko o ka pa aina o
 Waikapu, no Ohia, a he mau loi
 kahi **he mau loi no ke Pilipili**
a he kula no hoi maloko o ka pa
aina. O Haanui he mau loi no
 kona a me ke kula no, a no
 Haanui no hoi ke kuahiwi o Waika-
 pu, o Makahelakela, he kula kona,
 o Olohe mau loi no kona a me
 ke kula, aia ma ka Ahau. ka
 hale pule. He mau loi no
 kahi o Puupahoehoe i koo lima lima

ia, he rama he kumu a he honu
 kahi a me na hao he kanaka, a he
 Mano he kahi i lilo no ka hana ana
 a he ia maoli no kahi i lilo aku
 he ka mea nana i heakea o Haanui
 Ha ae mai no ia no Haanui io no ia
 aina.

Hulu 48 Halualani

Hookikua o Halukua ma ka olelo a he Akua
 Ua ike no au i kahi o Halualani, aia ma
 Kapaakukui ma Iao, no'u aku kona noho
 ana malaila, no Mahune mai koe, a
 no ka Mei mai ko Mahune, he kanakolu
 humanalima aie Ioi i haawi ai, a cha
 ma kahi eae, a huiia he kanakoluhuma
 maiwa a pau, Aole ona mea nana i hea
 heakea mai.

Hookikua o Kuhu ma ka olelo a he Akua
 Ua ike no au i kahi o Halualani i hookii mai
 nei ia eukou, no'u aku kahi mau Ioi ona
 no Mahune mai koe, a no Kamehameha
 mai ko Mahune, aia ma Kapaakukui
 huiwahi ona he aina okea no ia, aia
 ma Kaluauki kahi ona, aole nae au ike
 kono i ka nui o na Ioi malaila, Aole
 no hoi he mea ona nana i heakea

Vol. 3340

Nahau

Waikapu Maui

Moulana 3340 Nahau Waikapu Maui

Apama 1 Shi. Mithana & hormata ma ke kiki Ahau & pili ana me ke Pahra a & hiki Ke 28th 11th 20th Ah & pili ana me Keaahua Ke 23rd Ke 45th Ah & pili ana me ke Palima i ke Kahawai alata hiki ma ke Kahawai a i ke kiki Komohana Ah 75th Ke 29th Ah Ah 75th Ke 28th Ah & pili ana me Palima Ah 23rd Ke 31st Ah & pili ana me Pahra Ah 54th Ke 17th Ah & pili ana Pahra i kahi i hana ma ke i ke Eka

1.09

Ke 2nd ma hui Ke Apama 1. Hul. 2959 me kika ma Kea pauna i Hika ke ma ke ma. Nahau a ma ma ke.

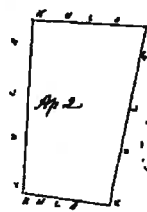
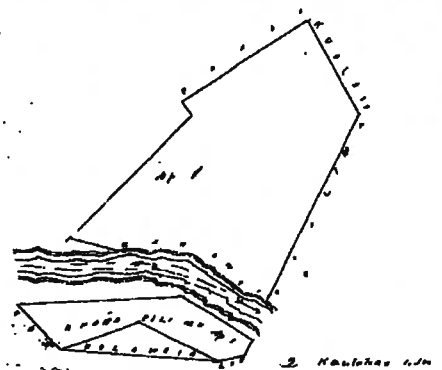
Apama 2 Shi. Oke oia Ke Apama 1. ke kika Keauna & hormata ma ke kiki Oke Oke. Ahau a & hiki Ah 28th Ke 24th Ah ma ke Kea Kuma 7th Ke 21st Ah & pili ana i ke Kea Kuma 7th Ke 18th Ah & pili ana me ke Kea Ah 15th Ke 40th Ah & pili ana me ke Kea i kahi i hormata i ke Eka

66
1.28

April 14 1852

E. Bailey
Maui, Hawaii

Apama pili ana Apama 1 & hormata ma ke Kahawai & pili ana me Kea a & hiki ma ke Kahawai Ah 25th Ke 25th Ah & Ke 27th Ke 14th Ah alata Ke 31st Ke 40th Ah & Ke 25th Ke 25th Ah ma ke Kea Ah 63rd Ke 13th & Ke 63rd Ke 17th Ah ma ke Kahawai Ah 44th Ke 10th Ah a pauna 4th Eka



Ulu Pau Lora #6

H. M. Robertson
J. H. S. etc

Honolulu Oahu June 25 1852

Vol. 6041 Eka

Waikapu Maui

Moulana 6041 me Eka Waikapu Maui

Apama 1 Shi. Makahulehale & hormata ma ke Kahawai kiki Kuma & pili ana me ke Pahra i ma Ah & hiki Ah 20th Ke 26th Ah & pili ana me ke Palima Ke 75th Ke 60th Ah & pili ana me Keaahua i ke 23rd Ke 12th Ah & pili ana me Keaahua Ke 10th Ke 70th Ah & pili ana me Keaahua Ke 29th Ke 6th Ah & pili ana me Keaahua Ke 44th Ke 13th Ah & pili ana me Keaahua i ke Kahawai ma ke Kahawai & hiki a i kahi i ke kiki ma ke 4th Eka

Apama 2 Shi. Pili ana Kea hana ma. Eka i ke Apama 2 i ke Mauna & hormata Ke Apama 1 ma ke kiki Ahau & pili ana me Keaahua a me Pili ana a hiki Ke 5th Ke 23rd Ah & pili ana me Pili ana i ke 21st Ke 11th Ah & pili ana i ke 21st Ah 70th Ke 22nd Ah & pili ana me Keaahua Ah 44th Ke 17th Ah & pili ana me Kea i kahi i hormata i ke Eka

April 24 1852

E. Bailey
Maui, Hawaii

3242. Nānahu.

Julai 13. 1849.

663

Pahoa. Hoorohitua. Ua ike au 1 apana holo ma ka ili o Kuaiawa, ma Waikapa.

No Nahunu wahine o Hookei mai kona aina i ka M. H. 1837, aole ma ka haka, aole pualima maloko. Ua maka o Nānahu i ka M. H. 1839, ma ka moke. Emily W. H. o hana wahine o Nānahu kona hana.

Puni ma pualima. M. holo o Hookei. W. Pūhaka. H. o Mūmūhū. M. o Pūpūhaka.

2499. Pahoa.

Pahoa. Hoorohitua. Ua ike au 2 apana ma ka ili o Kuaiawa, ma Waikapa kahalo apana. O ma ka Ahupuaa o Waikapa, Hookei, kahalo apana.

No Nānahu mai kona aina ma Waikapa i ka M. H. 1837. No hana wahine ma ka apana ma Hula i ka M. H. 1846. he aina kahalo ma ma ma hana wahine, aole ma ka haka, 1 pualima ma ka aina holo ma Waikapa.

1 Puni ma pualima o ka aina holo ma Waikapa, M. aina o Pūhaka. M. pūhaka. M. aina o Mūmūhū. M. aina o Hookei.

2 ma Waikapa. Hookei. Puni ma pualima. Ma ka hana o Hookei. Hookei. Hookei. M. pūhaka. M. pūhaka. M. pūhaka. M. pūhaka.

664. Pahoa.

Hookei. Hoorohitua. Ua ike au 3 apana, ma ka ili o Hookei, ma Kuaiawa, i Waikapa, 1 apana ma Waikapa i Hula.

Apana 1. 14 lo ma ka ili o Hookei, Waikapa.

" 2. Pahoa " " " " " "

" 3. 2 kahalo " " " " " "

" 4. Hookei kahalo - Waikapa - Hookei

No Pūpūhaka mai kona hana ma apana ma Waikapa i ka M. H. 1842. No Emily mai ka apana 4. i ka M. H. 1846. No Pūpūhaka mai ka Emily ma ka hana o Hookei, Hookei. aole ma ka haka.

Eono hi fualima iloko o ka Apana 1.

- 1 Peni na fualima. M. M. Fualima. H. Ilo o Piliipili. 2. M. Kakaia.
- 2 Peni na fualima. M. Ilo o Piliipili. W. Maia o Konoia. H. o Kaka.
- M. aia o ka Konoia.
- 3 Peni na fualima. M. W. aia o Mumiuku. H. aia o Konoia.
- M. aia o Mumiuku.
- 4 Peni na fualima. M. H. M. aia o Pimpahochre. M. Kakaia o Waikuli.

3226. Opunui.

Julai 13. 1849.

Hakiki Hoshikui. Na ike au i kona aia ma Waikapu, me Iula.

6 Apana.

Apana 1. 7 lei ma ka ili o Kualala. Waikapu.

" 2. Panku kaali " " Kapaala "

" 3. " " " " Kapaala "

" 4. 1 lei " " " Pania "

" 5. Pahale ma " " Kapaala "

" 6. Mala wala Ahup. " Waikuli Iula.

Me Iulai mai ka apana 3. 35. i ka M. H. 1842. Me Iulai mai ka Iulai. Me Iulai mai ka apana 1. 4. i ka M. H. 1835. Apana 6 me Pimpahochre mai i ka M. H. 1846. Aul mea ka ka. I fualima ma ka Apana 3.

1 Peni ma aia. M. o Kakaia. W. H. aia o Kaka. M. aia o Pihono.

2 Peni ma aia. M. H. Peni. W. o Kakaia. H. o Kaka o Pihono.

M. aia o Kaka.

3 Peni ma aia. M. W. H. Kakaia. Waikapu. M. Pali o Waikapu.

4 Peni ma aia. Na puni i ka aia o Kakaia.

5 Peni ma aia. M. hini aia. W. o Kakaia. H. o Kaka. M. o Kaka o Pihono.

6 Peni ma aia. M. o Kaka. H. o Kaka. M. o Pimpahochre. M. o Kaka.

3105. Kaka.

Kaka Hoshikui. Na ike au i kona aia ma Waikapu, 3 Apana.

Waikeke, Keana

Waikeke, Maui

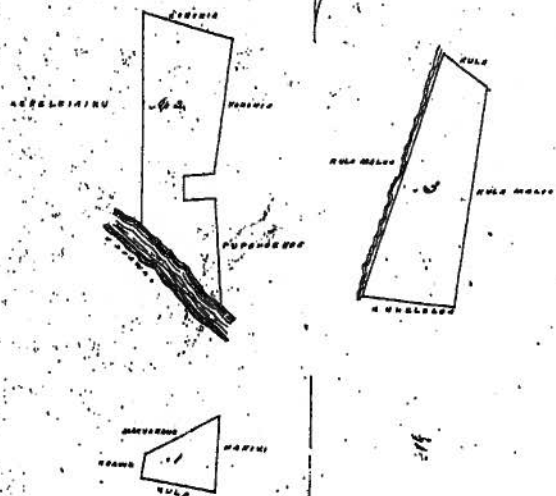
Apurua 1. pihala ilu o Karpala, aole o Pihili
 E hōmāka ma ke kiki Akaia i pili ana me Makawakane, a e holo hem. 2' ho. 119' lli.
 i pili ana me Kahihi, Ak. 74 3/4' ho. 176' lli. i pili ana me Kahihi i hula, Ak. 123 1/2'
 Ho. 50' lli. i pili ana me Keana, Ak. 65' ho. 200' lli. i pili ana me Makawakane, i kahi
 hōmāka ma 1/2' lli.

Apurua 2. i. o Pihili E hōmāka ma ke kiki Akaia, ma ke kiki Kahi, a ke
 Kahihi a e holo hem. 71' ho. 216' lli. i pili ana me Kahihi, hem. 10 1/2' ho. 316'
 lli. i pili ana me Kahihi, hem. 89' ho. 68' lli. i pili ana me Pūpūhōhō, hem. 11'
 hem. 55' lli. i pili ana me Pūpūhōhō, hem. 89' ho. 68' lli. i pili ana me Pūpūhōhō,
 hem. 11' ho. 316' lli. i pili ana me Pūpūhōhō, Ak. 11 1/2' ho. 266' lli. i pili ana
 me ke Kahihi, Ak. 3 1/4' ho. 290' lli. i pili ana me Kahihi a e holo i hōmāka
 ma 1' lli.

Apurua 3. i. o Pihili - he maua lei i hula
 E hōmāka ma ke kiki hem. Kana, i pili ana me Kahihi a e holo Ak. 22 1/2' ho. 60'
 lli. i pili ana me Kahihi, hem. 67' ho. 125' lli. ma ke Kahihi, hem. 18' ho. 5' lli. lli.
 i pili ana me ke Kahihi, Ak. 79 1/2' ho. 223' lli. i pili ana me ke Kahihi, i kahi i hōmāka
 ma 1 1/2' lli.

Waikeke, Aug. 1st, 1852.

E. Bailey
 Mea ana aiaa



Waikeke, Maui
 3. m. Kahihi
 J. H. Smith
 J. Kahihi

Waikeke, Sep. 27, 1852

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Maloko o *Kamihameha* apana. *24th* Eke
a oi iki aku, a emi iki mai paha. Ua koe-nae i ke aupuni na mine minerele a me na metela a pau.

No *Kamihameha*
ua aina ia i hawaii ma ke ANO ALODIO a no kona mau hooolina, a me kona waihana; ua pili nae
ka kuhau a ka Poe Aholeole a kau like ai na na aina alodio i keia manawa i keia manawa.

A i mea e like ai, ua kau wau i ko'u laka, a me ka Sila Nui o ko
Hawaii Poe Aina ma Honolulu i keia la *4th*

August 18th

Kamihameha

Kamihameha

- Eono lei pōalima iloko o ka Aprana 1.
- 1 Penei ma pōalima. M. M. Pōalima. H. H. o Pōlipo 2. M. Kahawai.
 - 2 Penei ma pōalima. M. H. o Pōlipo. M. Hina o Kōmohia. H. o Kōa.
 - M. aina o ka Kōmohia.
 - 3 Penei ma pōalima. M. M. aina o Mūmūhū. H. aina o Kōmohia.
 - M. aina o Mūmūhū.
 - 4 Penei ma pōalima. M. H. M. aina o Pūpūhōhō. M. Kahawai.
 - Waiohū.

3226. Opunui.

Julai 13. 1849.

Kahiki Kōmohia. Ua ike au i kōna aina ma Waikape, me itala.

6 Aprana.

Aprana 1. 7 lei ma ka ili o Kōalala. Waikape.

" 2. Pūhūhū " " Kōpala "

" 3. " " " " Kōalala "

" 4. 1 lei " " " Pūhūhū "

" 5. Pūhūhū ma " " Kōpala "

" 6. Māla māla Ahup. " Waiohū itala.

M. Hina mai ka Aprana 3, 35. i ka M. H. 1842. M. Hina mai ka Kōa. M. Hina mai ka Aprana 1, 4. i ka M. H. 1835. Aprana 6 m. Pūpūhōhō mai i ka M. H. 1846. Ua mea kōkō. 1 pōalima ma ka Aprana 3.

1 Penei ma aor. M. o Naanaa. M. H. aina o Kōa. M. aina o Pōhono.

2 Penei ma aor. M. H. Pūhūhū. M. o Kōmohia. H. o Kōa. M. H. o Kōa.

M. aina o Kōa.

3 Penei ma aor. M. M. H. Kahawai. Waikape. M. Pūhūhū. Waikape.

4 Penei ma aor. Ua pūhūhū i ka aina o Naanaa.

5 Penei ma aor. M. Hina. M. o Kōalala. H. o Kōa. M. o Kōa.

Kōa o Kōa.

6 Penei ma aor. M. o Kōmohia. H. o Kōmohia. M. o Pūpūhōhō. M. o Kōa.

3105. Kōa.

Kōa Kōmohia. Ua ike au i kōna aina ma Waikape. 3 Aprana.

EXHIBIT C-R 7C

Apana 1. Pahalo ma ha ili. Pilipili 2.

2. Pautu hualo. 10 li. "

3. 5 li & kula. — "

M. Pampahoe ma hua i ka wa. Kamahameha 1. aole ma
haka. 1 li on Pampahoe ma hua Apana 1.

1. Puni na pulu. M. o. Kawa. M. kahawai. Waikapu. H. H. o. Kapaala
M. fula no.

2. Puni na aao. M. aino. Leka. M. H. Pilipili. Konohe. M. o. Konohe
M. kahawai.

3. Puni na aao. M. o. Pampahoe. M. o. Kapaala. H. o. Kapaala. M. o.
Kapaala.

2337. Naama.

Julai 13. 1849

Puni na Hoolihia. Ua ike au i hua aino ma Waikapu. a me atula.
5 Apana.

Apana 1. Pautu hualo ma ha ili o Puni, Waikapu -

2. " li " " " " "

3. " hualo " " " " "

4. " " " " " " " " " " " "

5. Mala mata " " " " " " " " " " " "

Apana 1, 2, 3, 4. ma hua hoolihia ma i ka M. H. 1832, ma hua i
hua hoolihia ma hua, Kamahameha 1. Apana 5. ma Kapaala
ma i ka M. H. 1845. he aino hoolihia ma Kapaala ma
aole ma haka. 1 Palima ma ha Apana 1.

1. Puni na aao. M. o. Kapaala. M. o. Kapaala. H. o. Kapaala. M. o. Kapaala.

2. Puni na aao. M. o. Kapaala. M. o. Kapaala. H. o. Kapaala. M. o. Kapaala.

3. Puni na aao. M. o. Kapaala. M. o. Kapaala. H. o. Kapaala. M. o. Kapaala.

4. Puni na aao. M. o. Kapaala. M. o. Kapaala. H. o. Kapaala. M. o. Kapaala.

5. Puni na aao. M. o. Kapaala. M. o. Kapaala. H. o. Kapaala. M. o. Kapaala.

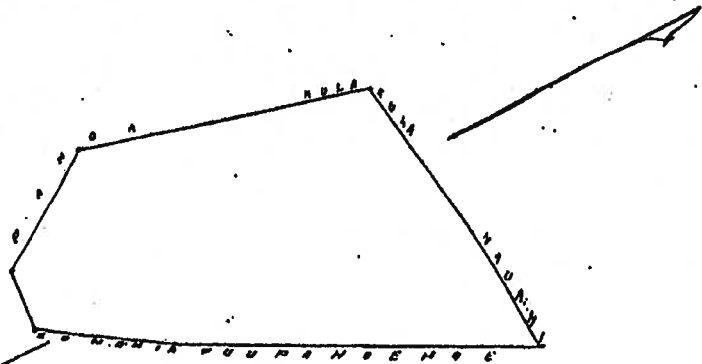
5551. Hoolihia.

Hua. Hoolihia. Ua ike au i hua ma Apana aino ma Waikapu.

R. P. 3147

Kulu 3296 Mumukū Maikapa Māui

Kuluana 3296 me Mumukū Maikapa Māui. Ili & Kuluana. E hōma ka
ma ka hiki Kuluana i pili ana me Kuluana Kuluana i pili ana me Kuluana
No. 444 Ili i pili ana me Kuluana Kuluana i pili ana me Kuluana
No. 454 No. 78 Ili i pili ana me Kuluana Kuluana i pili ana me Kuluana
No. 464 No. 345 Ili i pili ana me Kuluana Kuluana i pili ana me Kuluana
No. 474 No. 181 Ili i pili ana me Kuluana Kuluana i pili ana me Kuluana
April 15. 1852. E Bailey Māuiana.

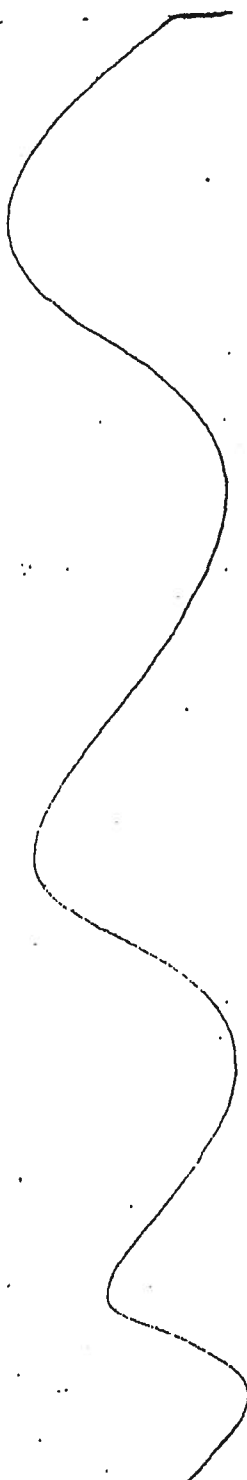


Ulu paau loa

M. L. Lee
G. M. Robinson
J. H. Smith
J. H. Kaulahar.

Honolulu June 25. 1852.

88
78



Malo ko a *Kia* apena *1-62-100* Eno
a oi ihi aku, a emi ihi mai paha. I/a koe nāe i ke aupuni a māne mānereia, a me na metela a pau.

No *Mumukia*
un. nina la i haawila ma ke ANO ALODIO, a no koe māne hoolia, a me koe waihoua; ua pii māne
ke auhau a ha Pae Ahaoalo a kau like ai māne nina alodio i kela mānawa i kela mānawa.

A i mea a laka ai, ua kau wai i ke'ia laka, a me ke EIA Nui o ke
Hawaii Pae Aina ma Honolulu i kela la.

Angate 1956

Mumukia

Kiwi Shuncho

15

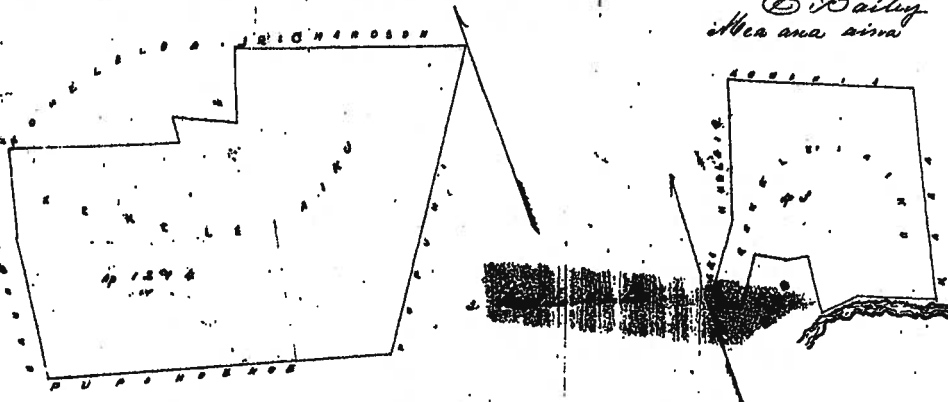
Honolulu June 25 1858

Hoku 8808 Hekuleiaiku

Гаикари Мауни

[illegible][illegible]

E. Bailey
Mesa ana sirva

$$\begin{array}{r} 5.50 \\ 1.96 \\ \hline 7.46 \end{array}$$


Uku Pau Pau 18.

J. H. Her
 J. M. Robertson
 J. H. Kaulakias
 J. H. Smith

Honolulu Juni 25 1852

off. 5742 Haluakinui

Гаикари Наму

[Faint handwritten notes, possibly bleed-through from the reverse side.]

HELU 2164.

PALAPALA SILA NUI.

A KE ALII, NAMULI O KA OLELO A KA POE HOONA KULEANA.

No ka mea, ua hoohele na Luna Hoona i na kumu kuleana aina i ka olelo, he kuleana oiaio ku
He kuleana Nui *He kuleana Nui 1818*

ma ke ano Kuleana Nui malalo o ke Ano Alodio iloko o kahi i oleloia malalo, a no ka mea,

Nolaila, ma keia Palapala Sila Nui, ke hoike aku nei o Kamohameha IV, ke Alii Nui a ke Akua i kona lokomaikai
 i hoonohele ai maluna o ke Hawaii Pao Aina, i na kuuaka a pau, i keia la, nona iho a no kona mau hope Alii ua hoolilo, a ua
 haawi aku oia ma ke **Ano Alodio** la *He kuleana Nui*

i keia wahi a pau loa ma *He kuleana Nui* *He kuleana Nui*
 ma ka mookupuni o *Mori* ; penel na mokuna:

O hoonahele i ke ana o keia kuleana i 2 a no ka mea i hoonahele
 ma ke kahi o keia kuleana i kahi ma keia kuleana, hoonahele
 a me hoonahele a i keia

Akua 7	He kuleana 339	He kuleana ma keia kuleana	He kuleana
Akua 14 1/2	He kuleana 204	"	He kuleana
Akua 7 1/2	He kuleana 358	"	He kuleana
Akua 9 1/2	He kuleana 56	"	He kuleana
Akua 6 1/2	He kuleana 136	"	He kuleana
Akua 18 1/2	He kuleana 165	"	He kuleana
Akua 7 1/2	He kuleana 505	"	He kuleana
Akua 3 1/2	He kuleana 702	"	He kuleana
Akua 7 1/4	He kuleana 755	"	He kuleana
i ke kahi oia			He kuleana

O hoonahele i ke ana o keia kuleana i ke kahi o keia kuleana.
 He kuleana i kahi o keia kuleana a i keia
 Akua 3 1/4 He kuleana 491 He kuleana ma keia kuleana He kuleana i keia kuleana
 Akua 7 1/4 He kuleana 398 " " He kuleana ma keia kuleana
 Akua 7 1/4 He kuleana 322 " " He kuleana
 Akua 23 He kuleana 201 " " He kuleana
 Akua 75 He kuleana 61 " " He kuleana
 Akua 23 1/2 He kuleana 127 " " He kuleana

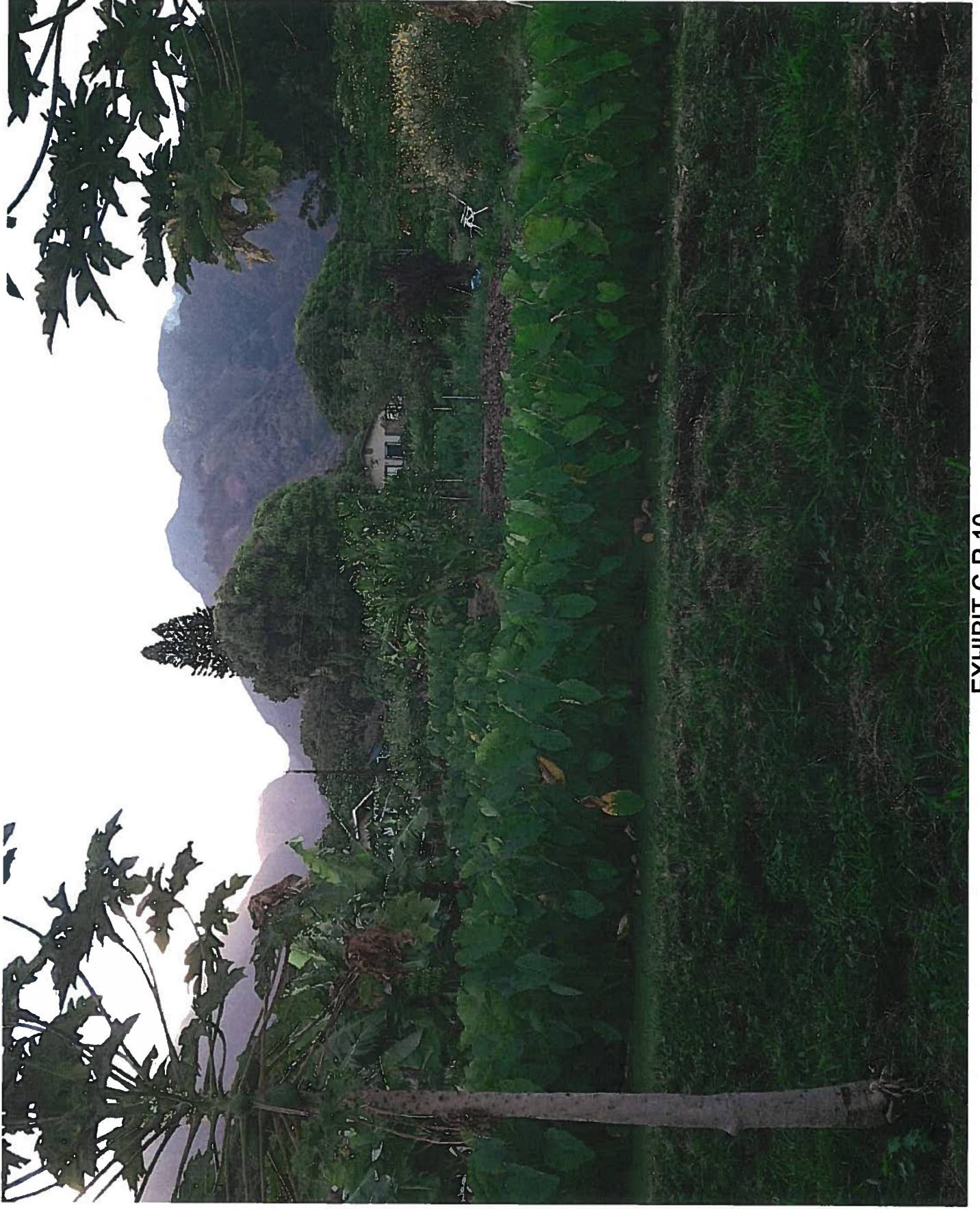


EXHIBIT C-R 10



EXHIBIT C-R 11

Keālia Pond National Wildlife Refuge

Comprehensive Conservation Plan

Prepared by:

U.S. Fish and Wildlife Service
Maui National Wildlife Refuge Complex
Milepost 6 Mokulele Highway (Hwy. 311)
P.O. Box 1042
Kihei, HI 96753

and

U.S. Fish and Wildlife Service
Pacific Islands Planning Team
300 Ala Moana Boulevard, Room 5-231
Honolulu, HI 96850

September 2011

Approved: _____

Acting


Regional Director, Region 1
Portland, Oregon

9/28/11

Date



Chapter 1. Introduction

Keālia Pond National Wildlife Refuge (NWR or Refuge) was established in 1992 to preserve, restore, and manage essential habitat for two endangered Hawaiian waterbirds: the ae'o (Hawaiian stilt) and 'alae ke'oke'o (Hawaiian coot). The 704-acre Refuge is situated along the south-central shore of Maui in the isthmus separating the West Maui Mountains from the East Maui volcano, Haleakalā. Refuge habitats include open water (200 acres), vegetated flats (450 acres), and upland (54 acres). Keālia Pond is a significant foraging and nesting area for Hawai'i's endangered wetland birds, and is host to hundreds of migratory shorebirds and waterfowl during winter months. In addition, the Refuge provides coastal beach strand habitat for native plant species, endangered 'Ōio-holo-i-ka-uaua (Hawaiian monk seal), threatened honu (Hawaiian green turtle), and endangered honu 'ea (hawksbill turtle).

The proposed 19-acre Molokini Unit of the Refuge encompasses a crescent-shaped islet located between the Islands of Maui and Kaho'olawe. It has a diameter of about 0.4 miles and hosts a colony of 'ua'u kani (wedge-tailed shearwaters) that nest from March-December. Other inhabitants include a smaller nesting population of 'ou (Bulwer's petrel), 'iwa (great frigate), noio (black noddy), and noio kōhā (brown noddy) that use the island for roosting. The 'ihi plant (*Portulaca molokiniensis*) is a rare Hawaiian endemic known from only two locations, one on Molokini and one on Kaho'olawe.

The Molokini Unit, Keālia Pond NWR, and Kakahai'a NWR (located on the southeastern coast of Moloka'i) make up the Maui National Wildlife Refuge Complex (Complex). This Comprehensive Conservation Plan (CCP) will focus on the Keālia Pond NWR and the Molokini Unit.

are quickly cooled by water before crystals can form. Glass is a geologically unstable material. It alters rapidly to brownish-yellow clays, giving Molokini its earthy yellow color. In contrast, cinders erupted on land are reddish and black. The Molokini deposits are basanite, a type of basalt with fairly low amounts of silicon (Si) and high concentrations of sodium and potassium (USGS 2008).

3.4 Hydrology

The hydrologic processes that occur in the Hawaiian Islands are unique compared to continental landmasses or temperate zones. Drainage basins are typically small and streams are characterized by steep longitudinal profiles and numerous waterfalls. Due to its location, Keālia Pond has historically served as a settling/deflation basin for a 56-square mile watershed extending to the West Maui Mountains. There are three major streams that are tributary to the wetland: Pōhākea Stream, Pale‘a‘ahu Stream, and Waikapū Stream. All three streams are unpredictable and intermittent, some of which is due to diversions for agriculture. Wilcox (1996) reports that most of Hawai‘i’s streams are flashy, with flow rates that rise and fall rapidly in response to precipitation. Several other streams occasionally flow into the wetland from the west side of Haleakalā during very high rainfall events. Historically, these streams may have flowed into the wetland more frequently.

Hydrologic conditions vary considerably seasonally and annually. During the wet season, the Main Pond usually maintains moderate to high water levels due to increased precipitation and streamflow with a maximum Pond depth of 3-4 feet. As summer progresses, precipitation decreases, less stream water flows into the Pond, and the water levels recede. Some years, inflows are sufficiently high to maintain water levels throughout the summer. Most years, the water level begins to recede by April or May, resulting in very low water or even dry conditions in the Pond by late summer or early fall.

3.4.1 Annual Hydrologic Cycle

The information presented next is based on Pond water level data collected at Keālia’s Main Pond from 1996-2006. Since June 2000, Pond levels have been recorded hourly with a datalogger. Figures 3.4, 3.5, and 3.6 show the Pond levels and monthly precipitation for water years 1996-2007. The relationship between precipitation and water levels can be observed in the figures, with wetter years and wetter times of the year resulting in higher water levels.

In most years, the Main Pond fills quite abruptly (within days) due to a combination of rainfall and runoff following the first major storm in the fall or winter. Usually, this occurs in October or November, although it has happened later, as in 2000 and 2006. Rainfall directly on the Pond is a fairly minor component of the total inflow into the Pond. The majority of inflow is from runoff and streamflow. Inflow reaches the Pond in three forms: as direct streamflow from any of three major tributaries to the Pond; as runoff and diffuse surface flow from the surrounding lands; and as subsurface flow (groundwater seepage).

Of the three main streams flowing to the Pond, Waikapū Stream is the major contributor of inflow during the wet season. Although this stream is dry much of the time, the volume of water is considerable when it is flowing. Peak flow measurements were collected annually from 1963-1997 at USGS Station 16650500 Waikapū Stream, located just upstream of the Refuge at Lower Mā‘alaea

Rd. The peak flows averaged 620 cubic feet per second (cfs) and ranged from 104-1,130 cfs. Flows greater than 1,000 cfs are not uncommon in the record. Weekly estimates of flow were collected at this same site by Refuge staff 2001-2006. The maximum estimated flow recorded was 450 cfs and the site was dry about 80 percent of the weekly visits. Historically, Waikapū Stream was believed to be perennial through its entire reach but the stream was fully diverted of all but peak flows many years ago for the purpose of sugarcane irrigation (Maciolek 1971). There is presently a reservoir upstream of the Refuge on Waikapū Stream that may affect inflows to the Pond. Within the past 5 years, water rights issues have come to the forefront between environmental groups, agricultural companies, and user groups that include the Waikapū Stream. However, to date, the State's decision to return water to some of the West Maui streams has not included the Waikapū Stream.

The other two streams, Pōhākea and Pale'a'ahu, make up a smaller fraction of the streamflow to the Pond. Weekly flow estimates of these two streams were collected by Refuge staff 2001-2006 as well. These two streams are still intermittent but flow more consistently than Waikapū Stream. Pōhākea Stream was dry an average of 50 percent and Pale'a'ahu Stream was dry an average of 20 percent of the weekly visits. The maximum estimated flow was 94 cfs in Pōhākea Stream and 25 cfs in Pale'a'ahu Stream. Flows in Pōhākea Stream have been greatly reduced since 2004, based on Refuge staff observations. From 2001-2004, Pōhākea Stream was observed to be dry 23 percent of the weekly visits to the stream. In 2005 and 2006, the stream was dry 92 percent of the weekly visits. The decrease is likely due to some upstream change in water or land management. Pōhākea Stream is not a major contributor of inflow to the Pond. The major effect of this change is that the area around the outlet channel of this tributary has become slightly drier.

Groundwater levels are quite dynamic and generally follow the same seasonal patterns as surface water levels in the Pond. There is large temporal and spatial variability in water table levels and groundwater salinity. However, the groundwater system appears to be only weakly connected to the surfacewater system and groundwater seepage to the Pond is a minor component of total inflow. Groundwater does not seem to influence the Pond in terms of quantity or quality, although groundwater storage adjacent to the Pond may buffer the Pond water levels to some extent.

During the wet season, inflows from rainfall and streamflow usually exceed outflows, maintaining high Pond water levels through this season. As precipitation and runoff decrease in the late spring and summer, Pond levels begin a slow, steady decline. This decline usually begins in April or May and continues unabated throughout the dry season until the fall rains begin. Water is lost from the Pond through three processes: 1) surface flows to the ocean; 2) groundwater seepage losses; and 3) evapotranspiration losses. Based on the physical constraints to surface outflow discussed below and the consistency of salinity measurements as the Pond recedes (discussed later), the primary water loss from the Pond appears to be through evaporation.

Figure 3.4. Water level depths and monthly precipitation at Keālia Pond NWR, water years (WY) 1996-1999.

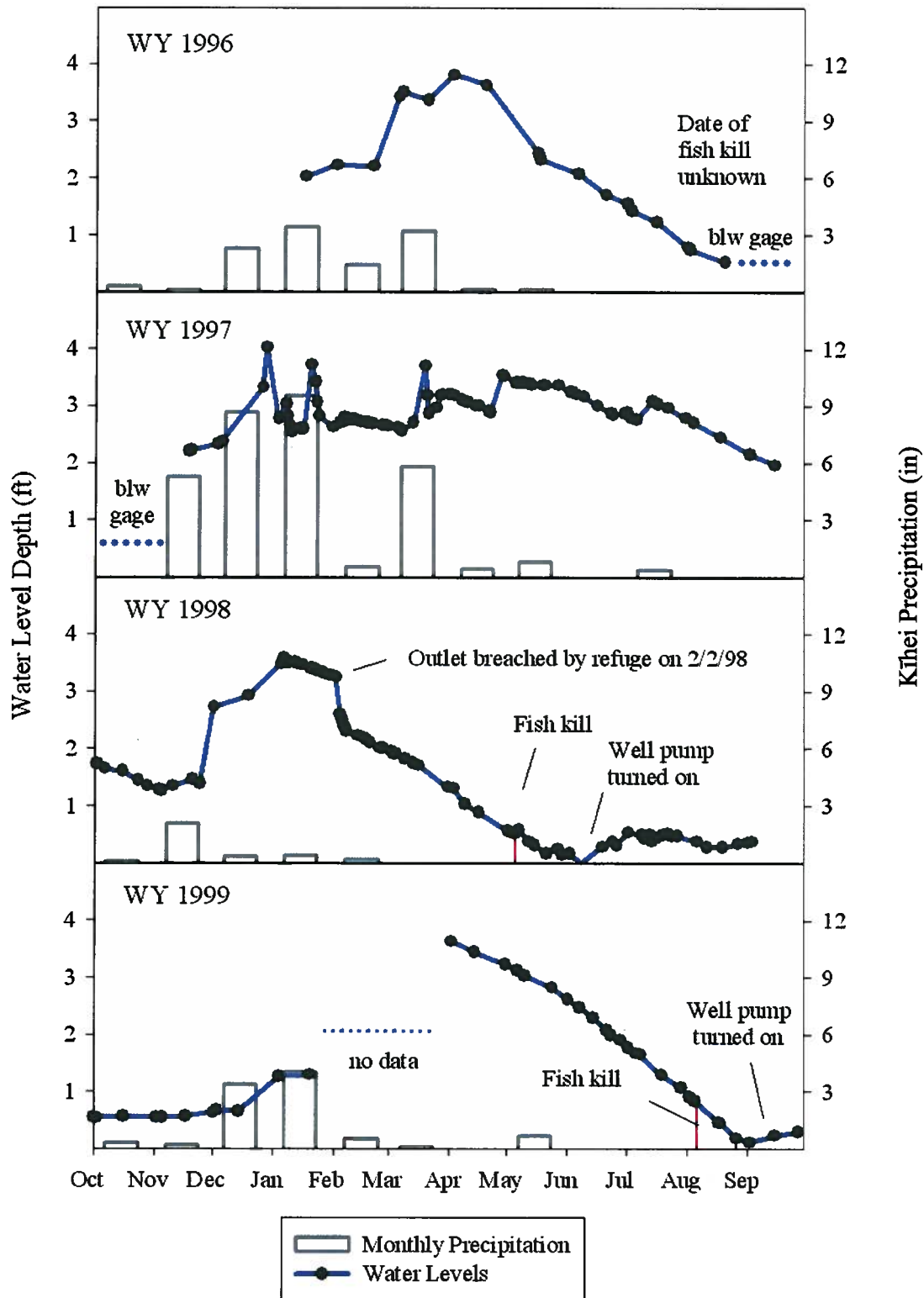


Figure 3.5. Water level depths and monthly precipitation at Keālia Pond NWR, 2000-2003.

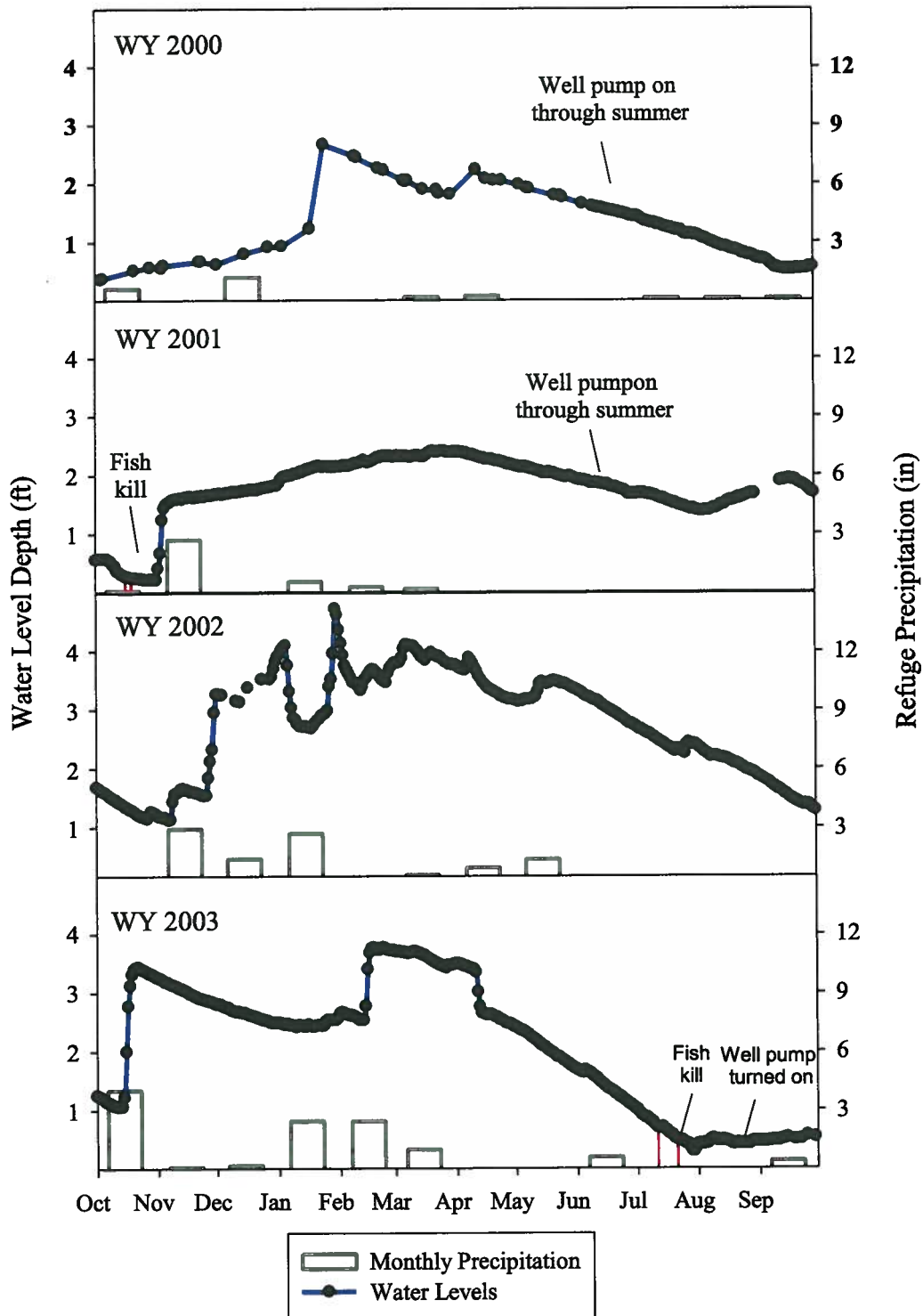
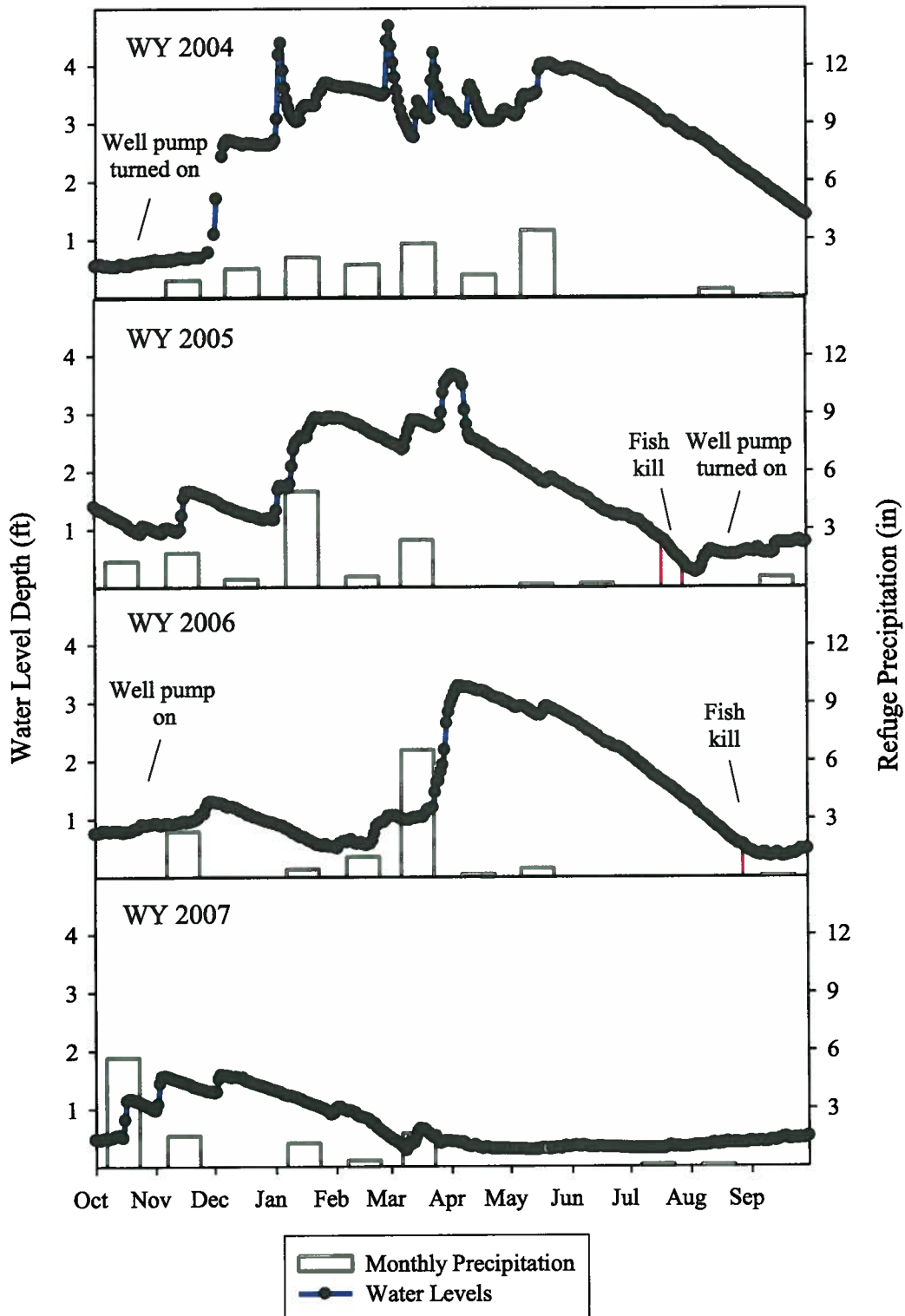


Figure 3.6. Water level depths and monthly precipitation at Keālia Pond NWR, 2004-2007.



Surface outflows to the ocean occur only occasionally in the winter at high Pond levels which are greater than 4 feet mean lower low water (MLLW). The outlet channel from the bridge to the ocean is usually blocked by a sandplug formed naturally by ocean currents and tidal action. This sandplug and the berm separating the Pond from the ocean cause water to Pond. Large rain events will raise the Pond level enough to breach the sandplug temporarily, allowing surface outflow to the ocean and resulting in a rapid drop in Pond levels. The sandplug typically rebuilds within several days. Although the water that outflows to the ocean contains some suspended sediment and organic matter, Maciolek (1971) believed that, at the time of the report, this turbidity was not severe enough to harm the Mā'alaea coral reef community living at or to the west of the discharge point.

There appears to be a small amount of subsurface seepage through the sand beach berm and plug from the Pond to the ocean. Water can be observed to be flowing out under the bridge on N. Kīhei Rd. even when the sandplug is in place and there is no surface outflow to the ocean. This indicates the existence of subsurface seepage through the beach berm separating the Pond and the ocean. The sand substrate of the beach berm is probably more permeable than the silts and clays underlying the remainder of the Pond. The subsurface seepage outflow is estimated to be as high as 2 cfs or 4 acre-feet/day, depending on the Pond elevation. Subsurface seepage losses will be head-dependent, meaning the higher the Pond level, the greater the subsurface seepage outflow.

The elevation of the bottom of the box culvert under the bridge is 2.54 feet MLLW. As the water level recedes below this elevation, the box culvert blocks any outflow under the bridge, isolating the Pond from the area of seepage outflow. Seepage losses in other areas of the Pond are very small and, it appears that Pond outflows at water surface elevations less than about 2.5 feet MLLW are solely through evaporation. The Pond essentially acts as a closed basin as water levels recede below the elevation of the box culvert at the bridge. This has important chemical and biological implications since evaporation concentrates salts, nutrients, and other solutes, as will be discussed later.

One of the characteristics of evaporative losses at Pond levels less than 2.5 MLLW is that they are quite predictable. The rate of evaporation varies seasonally but is consistent from year to year in the absence of any significant inflows. The dry season rate of decline, without any pumping of well water into the Pond, has averaged 0.023 feet/day (0.65 feet/month), with a range from 0.020 feet/day, in 2002, to 0.026 feet/day, in 1999 and 2008 (Table 3.1). Variability in the rate of decline during the dry season appears to be related mainly to fluctuations in evaporation rates and to occasional stream inflows during the period of decline. Pumping groundwater into the Pond slows the rate of decline considerably. In 2000, the rate was 0.01 feet/day and in 2001, it was 0.008 feet/day. In both years, pumps were running fairly consistently throughout the spring and summer during the period of declining water levels. The rate of water level decline is slightly slower in the cooler wet season. In the absence of any groundwater pumping or inflows, it averages about 0.013 feet/day during the winter months and about 0.18 feet/day during spring/fall months, based on data from 2007-2008.

At the previous well capacity of approximately 700 gallons per minute (gpm), groundwater pumping slowed the rate of decline and stabilized the Pond elevation at about 1.00-1.30 feet MLLW (about 0.4-0.5 feet average Pond depth) in the summer. This elevation range represents about 50-60 percent water coverage. Above this elevation, the evaporative losses are too great and the existing well capacity cannot meet the demand.

Table 3.1. Rates of Water Level Decline for Periods with No Significant Inflow to Pond.

Water Year	Period with No Significant Inflow	Season	Rate of Pond Level Decline (ft./day)
1998	2/24-5/21/98	Winter/Spring	0.021
1999	6/23-8/26/99	Summer	0.026
2000	4/17-9/5/00	Spring/Summer	0.010*
2001	4/1-8/1/01	Spring/Summer	0.008*
2002	8/24-10/11/02	Summer/Fall	0.020
2003	5/17-7/24/03	Spring/Summer	0.023
2004	9/5-24/04	Summer/Fall	0.022
2005	5/26-8/1/05	Summer	0.022
2006	7/4-9/5/06	Summer	0.026
2007	2/3-3/12/07	Winter	0.017
2008	2/22-4/30/08	Winter/Spring	0.018
Summer Average			0.023

* Wells were pumping continuously during the summer period during 2000 and 2001. These years were not included in the summer average rate of decline calculation.

There is about 2 feet of difference between winter maximum water levels and summer minimum water levels. Maximum water levels typically occur in winter months of February -April, with mean depths of about 3 feet. Even during the dry winter in 2006, the Pond was full by April. June, July, and August levels have been quite variable, but are usually quite low in dry years. October and November have consistently been the months of minimum water elevations. Early fall storms are responsible for the higher elevations observed during October and November in some years.

3.4.2 Water Quality of the Main Pond

The water quality and algae information presented here is based on 5 years of monitoring at the Main Pond from 2001-2006. In general, the Pond is extremely productive and hypereutrophic, meaning chlorophyll-a concentrations greater than 100 parts per billion (ppb) as classified by the Organization for Economic Cooperation and Development. Chlorophyll-a had a median concentration of 125 ppb for the period but concentrations were greater than 1000 ppb on several occasions. Water temperatures, salinity, turbidity, macronutrient concentrations, chlorophyll- a concentrations, and algal biomass were usually greater in summer and fall at lower water levels. The Pond has a very low relative depth (ratio of depth to surface area) and flat bathymetry, and is polymictic (mixed continuously) due to the shallow depth and strong local winds. There is little spatial variability in water quality conditions in the Pond because it is so well-mixed. Water quality is strongly related to Pond water levels; this is the single most important factor affecting water quality. Pond depths and water quality are strong controls of its biota as well (OECD 1982).

Temperature

Mean annual water temperature at Keālia is 76.6° F and ranges from an average of about 73° F in winter (December-March) to 79° F in summer (June-September). This is very close to the annual average of 75.2° F predicted for water bodies at this latitude. A time series plot of hourly water



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ORIGINAL

APPLICATION FOR SURFACE WATER USE PERMIT
FOR EXISTING USE IN THE NA WAI EHA, MAUI, SURFACE WATER
MANAGEMENT AREAS

FORM SWUPA-E (NA WAI EHA, MAUI)

For detailed instructions on filling out this application, refer to the attached instructions.

For Official Use Only:
RECEIVED
COMMISSION ON WATER
RESOURCE MANAGEMENT

2009 MAY -1 PM 12: 59

Event ID:

APPLICANT INFORMATION: Note: In accordance with §174C-51(1)(B), HRS, in the event a lessee, licensee, developer, or any other person with a terminable interest or estate in the land, which is the water source of the permitted water, applies for a water permit, the landowner shall also be stated as a joint applicant for the water permit.

1. APPLICANT'S NAME U.S. Fish and Wildlife Service Kealia Pond National Wildlife Refuge		Applicant's Contact Glynnis L. Nakai Project Leader		2. SOURCE LANDOWNER'S NAME Department of the Interior U.S. Fish and Wildlife Service		Source Landowner's Contact Glynnis L. Nakai Project Leader	
Applicant's Mailing Address, or Principal Place of Business P.O. Box 1042 Milepost 6 Mokulele Highway Kihei, Hawaii 96753				Source Landowner's Mailing Address, or Principal Place of Business U.S. Fish and Wildlife Service Division of Water Resources 911 N.E. 11 th Avenue Portland, Oregon 97232-4181			
Applicant's Phone		Applicant's Fax		Applicant's E-mail		Source Landowner's Phone	
						Source Landowner's E-mail	

EXISTING SOURCE INFORMATION

The following must be attached before this application is accepted as complete:
• Portion of 7.5-Minute Series USGS topographic map (scale 1:24,000) labeled with stream and diversion locations and quad map name.
• Property Tax Map Key (TMK), showing stream or diversion location, and location of water use referenced to established property boundaries.
• Photograph(s) of the surface water diversion works and end use.

3. SURFACE WATER HYDROLOGIC UNIT AND CODE: ☐ Waialeale/5022 ☐ Waialeale/5023 ☐ Iao/5024 ☒ Waikapu/5001

4. DIVERSION LOCATION: Choose the appropriate category and enter information in either 4a or 4b.

4a. TMK OF STREAM DIVERSION LOCATION: Zone: 3 Sector: 8 Plat: 005 Parcel: 02

4b. TMK OF DITCH DIVERSION LOCATION: Zone: - Sector: - Plat: - Parcel: -

5. STREAM DIVERSION: How is water diverted from the stream to your property? Check all that apply.

☐ Pipe ☐ Pump ☐ Ditch/auwai ☒ Other Describe: Stream flows directly into Kealia Pond National Wildlife Refuge
Is the diverted water returned to the stream or ditch? ☐ Yes ☒ No. If yes, how much water is returned?

6. FLOW MEASUREMENT INFORMATION:

Does the stream diversion have a flowmeter with totalizer or other device to measure diverted amounts?

☐ Yes. Enter the installation date:

Describe the device and enter measured amounts in Table 1.

☒ No. Explain how you are measuring flow to justify amounts shown in Table 1 in the space below

Periodic flow measurements are conducted

EXISTING USER INFORMATION

7. APPURTENANT RIGHT: Do you claim an appurtenant right for your water use? ☒ Yes ☐ No

If yes, has the appurtenant right been established by the courts or the Commission? ☐ Yes ☒ No

8. END USER INFORMATION: Are you an end user on an existing water system? ☐ Yes ☒ No

If yes, who is the operator of the water system?

9. REGISTRATION AND DECLARATION OF WATER USE: Do you have a Registration and Declaration of Water Use with the Commission?

☐ Yes. List the file reference name(s):

☒ No

10. STREAM DIVERSION WORKS PERMIT (SDWP):

Have you ever been issued a SDWP by the Commission?

☐ Yes. List the permit number(s):

☒ No

NOTE: Signing below indicates that the signatories understand and affirm that the information provided on this application is accurate and true to the best of their knowledge. Furthermore, the signatories understand that: 1) If necessary, further information may be required before the application is considered complete; 2) If a water use permit is granted by the Commission, this permit will be subject, but not limited to, any existing legal uses, changes in sustainable yields and instream flow standards, Hawaiian Home Lands uses, and any other conditions imposed by the Commission; and 3) the applicant is responsible for paying the required public notice fees associated with this application.

11. APPLICANT		12. SOURCE LANDOWNER	
Signature: <u>Glynnis L. Nakai</u>		Signature: <u>Glynnis L. Nakai</u>	
Glynnis L. Nakai		(Agent) Glynnis L. Nakai	
Date: 04/30/09		Date: 04/30/09	
Print		Print	

FILE ID: SWUP, 2352.6
DOC ID: 0376

FORM SWUPA-E 2/12/09 Page 1 of 8

EXHIBIT C-R 13

**SURFACE WATER USE PERMIT APPLICATION
EXISTING USE (NA WAI EHA, MAUI)**

TABLE 1: 12-MONTH AVERAGE DAILY USE
Measured or Calculated Use of Water at the Source: (Check one) ☒ Stream ☐ Ditch ☐ Auwai
As of the Effective Date of Designation, April 30, 2008

MONTH / YEAR	AVERAGE DAILY USE FOR THE MONTH IN GALLONS PER DAY (GPD)	Check one item per box				OTHER Please describe
		METERED	ESTIMATED	ACTIVE BUT UNKNOWN	INACTIVE	
May 2007		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.11 g.
June 2007		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.85
July 2007		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.86
August 2007		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.69
September 2007		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.39
October 2007		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.91
November 2007		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.14
December 2007		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.86
January 2008		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.99
February 2008		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.58
March 2008		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.69
April 2008		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.10
SUM OF AVERAGE DAILY USE FOR THE MONTH		GPD				
AVERAGE DAILY USE (Average of the above)		GPD				

**SURFACE WATER USE PERMIT APPLICATION
EXISTING USE (NA WAI EHA, MAUI)**

TABLE 2: LAND USE CONSISTENCY/EFFICIENCY
(Attach additional copies of Table 2 if necessary)

LAND USE CONSISTENCY					EFFICIENCY OF USE				
1. PURPOSE/ WATER USE CATEGORY	2. USE TYPE ATTACH THE FOLLOWING: • Property tax map, showing use location in reference to established property boundaries • Photograph of the area of use	3. STATE LAND USE DISTRICT	4. ZONING RECORD Enter either: Yes and Date approved, or Yes and not approved, or No	5. COUNTY ZONING CODE	6. ZONING RECORD Enter either: Yes and Date approved, or Yes and not approved, or No	7. REQUESTED QUANTITY OF USE (Gallons per Day (GPD))	8. SUB- MITTERED? (Yes or No)	9. LIMITS ON NEW ACREAGE	10. APPLICANT'S JUSTIFICATION FOR REQUESTED QUANTITY OF USE FOR ITEM 7. If applicable, attach sheets to show how this number was calculated. For irrigation uses, fill in Table 3.
Uses that require potable (drinking) water									
	Zone: _____ Sector: _____ Plot: _____ Parcel: _____								
	Zone: _____ Sector: _____ Plot: _____ Parcel: _____								
	Zone: _____ Sector: _____ Plot: _____ Parcel: _____								
	Zone: _____ Sector: _____ Plot: _____ Parcel: _____								
TOTAL POTABLE USE									GPD
Uses that do not require potable water									
	Zone: _____ Sector: _____ Plot: _____ Parcel: _____								Refuge's land use is not identified under the categories provided
	Zone: _____ Sector: _____ Plot: _____ Parcel: _____								
	Zone: _____ Sector: _____ Plot: _____ Parcel: _____								
	Zone: _____ Sector: _____ Plot: _____ Parcel: _____								
TOTAL NON-POTABLE USE									GPD
TOTAL USE REQUESTED (Sum of Total Potable Use and Total Non-Potable Use above) =									GPD
If total use requested is not equal to the total monthly average in Table 1, please explain.									
In accordance with §174C-51(5), please explain if there are any limitations (legal, contractual, etc.) on the use(s) of water described above.									

**SURFACE WATER USE PERMIT APPLICATION
EXISTING USE (NA WAI EHA, MAUI)**

TABLE 3: IRRIGATION INFORMATION

List all crops as separate line items and include landscape and golf course irrigation, grown in the 12 months prior to April 30, 2008. Attach additional copies of Table 3 if necessary.

1. USE TAX MAP KEY (YES) Attach map outlining area and photo.	2. CROP	3. TOTAL ACREAGE	4. NET IRRIGATED ACREAGE	5. BEGIN GROWTH PERIOD (Month)	6. END GROWTH PERIOD (Month)	7. IRRIGATION SYSTEM (Refer to Instructions.)	8. IRRIGATION PRACTICE (Refer to Instructions.)
Zone: _____ Sector: _____ Plot: _____ Parcel: _____							
Zone: _____ Sector: _____ Plot: _____ Parcel: _____							
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Zone: _____ Sector: _____ Plot: _____ Parcel: _____							

**SURFACE WATER USE PERMIT APPLICATION
EXISTING USE (NA WAI EHA, MAUI)**

TABLE 4: ALTERNATIVES ANALYSIS

	Potable Alternatives Attach additional sheets if necessary.	Non-Potable Alternatives Attach additional sheets if necessary.
Municipal sources		
Wastewater reuse		
Ditch system		
Desalinization		
Ground water		Ground water wells are available. See Attachment 1 for explanations.
Other (specify)		

PUBLIC INTEREST

§174C-2(c) states that: *The state water code shall be liberally interpreted to obtain maximum beneficial use of the waters of the State for purposes such as domestic uses, aquaculture uses, irrigation and other agricultural uses, power development, and commercial and industrial uses. However, adequate provision shall be made for the protection of traditional and customary Hawaiian rights, the protection and procreation of fish and wildlife, the maintenance of proper ecological balance and scenic beauty, and the preservation and enhancement of waters of the State for municipal uses, public recreation, public water supply, agriculture, and navigation. Such objectives are declared to be in the public interest.*

Explain below how the uses in your application are consistent with the public interest as described above. Attach additional sheets if necessary.

Koolia Pond National Wildlife Refuge (691 acres) was established in 1992 under the authority of the Endangered Species Act with the purpose "...to conserve (a) fish or wildlife which are listed as endangered species or threatened species, or (B) plants..." (16 U.S.C. 1534, Endangered Species Act of 1973. Koolia Pond is a seasonal wetland that relies primarily on the drainage from the upper watershed (Waikapu) to fill in winter months and sustain decreasing water level during summer-fall. In protecting and managing the habitat for endangered Hawaiian waterbirds (Hawaiian stilt and Hawaiian coot) the refuge requires adequate water from the streams to provide foraging and nesting habitat for endangered waterbirds. The refuge does not divert water from streams to accomplish this but is applying as an existing use because we depend on the surface water that is not diverted. This is consistent with the public interest by protecting and procreating fish and wildlife and maintaining a balanced ecological system.

**US Fish and Wildlife Service, Keālia Pond National Wildlife Refuge
Additional Information for Surface Water Use Permit (Na Wai Eha)**

Item # 4a) The tax map key is for Keālia Pond National Wildlife Refuge, into which the Waikapū Stream flows.

Item # 5) U.S. Fish and Wildlife Service (USFWS) does not have an actual diversion on Waikapū stream. The stream flows directly into Keālia Pond, which is the terminus of the stream. Waikapū Stream is the main surface water source to the pond but it is not the only surface water source. Pohakea Stream and Paleaahu Stream (which may be connected with Waihe'e Ditch) also flow into and terminate at the pond. Occasionally, we use groundwater pumping to augment pond levels for endangered Hawaiian waterbirds.

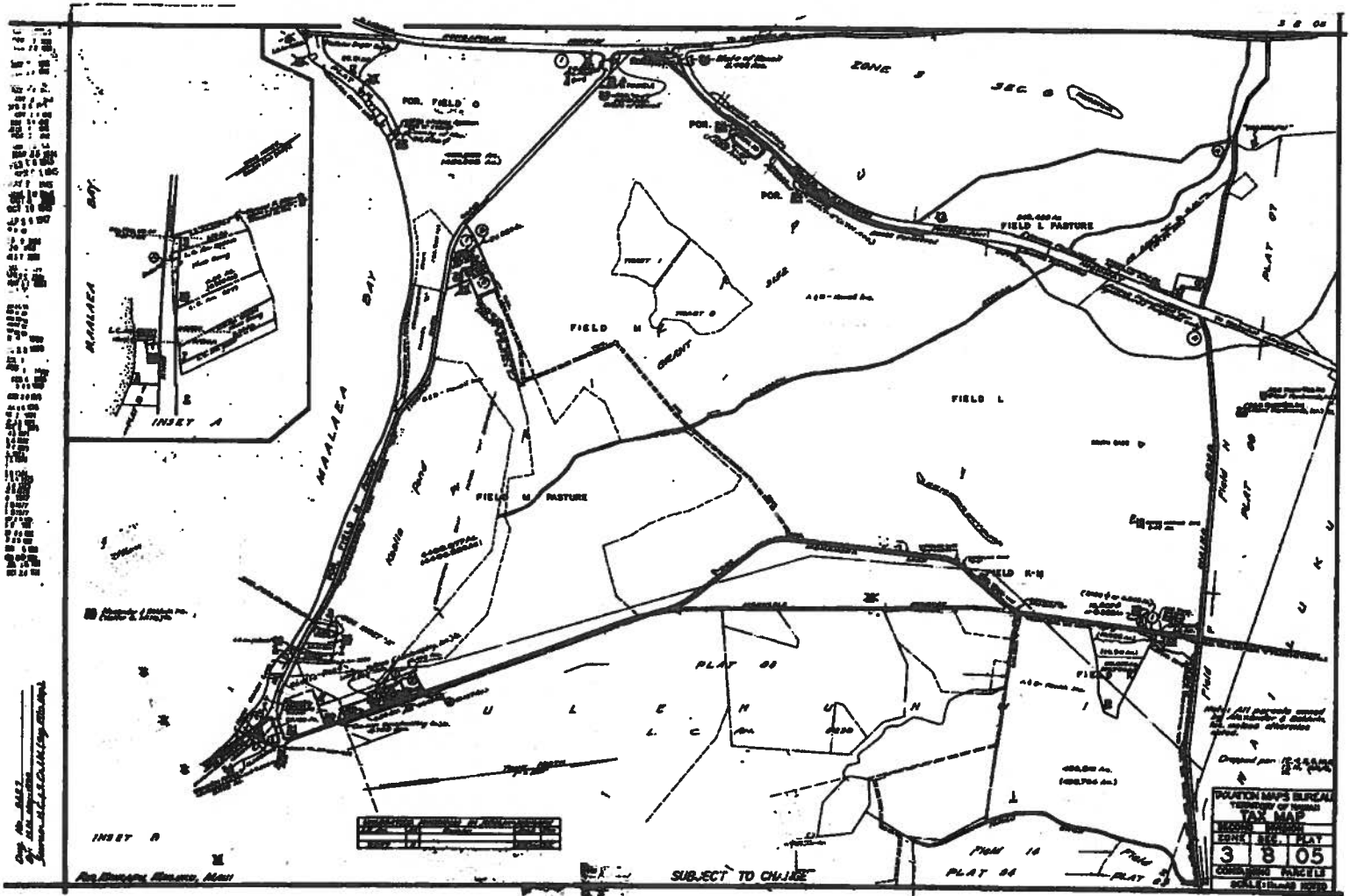
Item # 6) We collected periodic flow measurements of Waikapū Stream from 2002 to 2006 at the point where it flows onto the refuge. A few of these measurements were made using a current meter and standard USGS measurement techniques but most of the measurements were visual estimates of flow. The stream channel is often dry at this location so when we made a visual estimate of flow, we first noted whether stream was flowing or not and, if it was, we made visual estimates of velocity, depth, and width, then computed an estimate of flow.

Table 1 – The numbers in the “Other” column in this table are the monthly median water level elevations (MLLW in feet) for the years 2002 to 2006. We did not include the months indicated (May 2007-April 2008) because that was an exceptionally dry winter and does not represent the levels required to sustain habitat for endangered waterbirds. The water levels reported are based on hourly continuous water level data collected for that same period. The refuge has received water in sufficient quantities from rainfall, groundwater seepage and pumping, and all three tributary streams (including Waikapū Stream) to meet evaporation needs, seepage losses, and occasional surface outflows and sustain these water levels. We would like to continue to be able to do so in the future. Since the water supplying the refuge is from multiple sources, it is difficult to state what quantity of water is required from Waikapū Stream itself. We are willing to work with the state to develop a more exact estimate of the quantity of water necessary to continue to maintain these levels.

Table 2 – The particular land use at the refuge is not identified in the categories provided. The refuge was established for the protection and conservation of endangered waterbirds, including Hawaiian coot and Hawaiian stilt, and the land use reflects this purpose.

Table 4 – Brackish groundwater wells are available for augmenting the water supply to Keālia Pond. However, groundwater, in and of itself, is not adequate to supply the entire pond throughout the year and is usually only used at very low water levels.

USFWS, Kealia Pond National Wildlife Refuge, Maui, Hawaii
 Application for Surface Water Use Permit for Existing Use in the Na Wai Eha, Maui, SW Management Area



USFWS, Kealia Pond National Wildlife Refuge, Maui, Hawaii
Application for Surface Water Use Permit for Existing Use in the Na Wai Eha, Maui, SW Management Area



ORIGINAL

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OFFICE OF HAWAIIAN AFFAIRS

2014 JAN -7 PM 3:29
CONFIDENTIAL
-ES011

COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

ʻIao Ground Water Management Area High-
Level Source Water Use Permit Applications
and Petition to Amend Interim Instream Flow
Standards of Waiheʻe, Waiehu, ʻIao, &
Waikapū Streams Contested Case Hearing

Case No. CCH-MA06-01

CERTIFICATE OF SERVICE

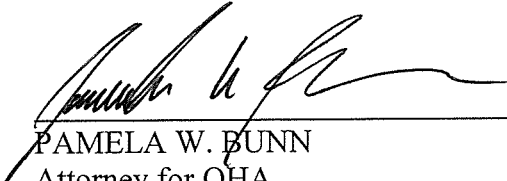
CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this date I caused true and correct copies of the
following documents to be served on the following persons by facsimile, hand-delivery or U.S.
mail, postage prepaid (as indicated below) to their respective addresses:

1. Office of Hawaiian Affairs Joinder in Hui O Nā Wai ʻEhā and Maui Tomorrow Foundation, Inc.'s Opening Brief and Opening Statement;
2. Office of Hawaiian Affairs' Witness List and Written Testimonies of Levi Kainalu Almeida and Ethan Harders;
3. Office of Hawaiian Affairs' Exhibit List and Exhibits C-R 1 to C-R 13.

	HAND- DELIVERED	FAXED	MAILED
DAVID SCHULMEISTER ELIJAH YIP Cades Schutte LLP 1000 Bishop street, Suite 1200 Honolulu, HI 96813 Attorney for Hawaiian Commercial & Sugar Company (HC&S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GILBERT S.C. KEITH-AGARAN Takitani & Agaran, Law Corporation 24 N. Church Street, Suite 409 Wailuku, HI 96793 Attorney for Wailuku Water Company LLC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PAUL R. MANCINI Mancini, Welch & Geiger LLP 33 Lono Avenue, Suite 470 Kahului, HI 96732 Attorney for Wailuku Water Company LLC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ISAAC H. MORIWAKE D. KAPUA SPROAT SUMMER KUPAU-ODO Earthjustice 850 Richards Street, Suite 400 Honolulu, HI 96813 Attorney for Hui O Nā Wai `Ehā and Maui Tomorrow Foundation, Inc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
JENNIFER M.P.E. OANA PATRICK K. WONG Department of the Corporation Counsel, County of Maui 200 South High Street Wailuku, HI 96793 Attorneys for County of Maui, Department of Water Supply	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DATED: Honolulu, Hawai'i, January 7, 2014.



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Attorneys for
OFFICE OF HAWAIIAN AFFAIRS

COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII

`Iao Ground Water Management Area High-
Level Source Water Use Permit Applications
and Petition to Amend Interim Instream Flow
Standards of Waihe'e, Waiehu, `Iao, &
Waikapū Streams Contested Case Hearing

Case No. CCH-MA06-01

AMENDED CERTIFICATE OF SERVICE

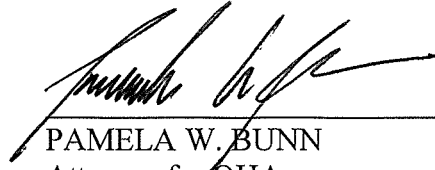
AMENDED CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this date I caused true and correct copies of the
following documents to be served on the following persons by facsimile, hand-delivery or U.S.
mail, postage prepaid (as indicated below) to their respective addresses:

1. Office of Hawaiian Affairs Joinder in Hui O Nā Wai `Ehā and Maui Tomorrow Foundation, Inc.'s Opening Brief and Opening Statement;
2. Office of Hawaiian Affairs' Witness List and Written Testimonies of Levi Kainalu Almeida and Ethan Harders;
3. Office of Hawaiian Affairs' Exhibit List and Exhibits C-R 1 to C-R 13.

	HAND- DELIVERED	FAXED	MAILED
DAVID SCHULMEISTER ELIJAH YIP Cades Schutte LLP 1000 Bishop street, Suite 1200 Honolulu, HI 96813 Attorney for Hawaiian Commercial & Sugar Company (HC&S)	<input checked="" type="checkbox"/> 1/7/2014	<input type="checkbox"/>	<input type="checkbox"/>
GILBERT S.C. KEITH-AGARAN Takitani & Agaran, Law Corporation 24 N. Church Street, Suite 409 Wailuku, HI 96793 Attorney for Wailuku Water Company LLC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> 1/7/2014
PAUL R. MANCINI Mancini, Welch & Geiger LLP 33 Lono Avenue, Suite 470 Kahului, HI 96732 Attorney for Wailuku Water Company LLC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> 1/7/2014
ISAAC H. MORIWAKE D. KAPUA SPROAT SUMMER KUPAU-ODO Earthjustice 850 Richards Street, Suite 400 Honolulu, HI 96813 Attorney for Hui O Nā Wai `Ehā and Maui Tomorrow Foundation, Inc.	<input checked="" type="checkbox"/> 1/7/2014	<input type="checkbox"/>	<input type="checkbox"/>
JENNIFER M.P.E. OANA PATRICK K. WONG Department of the Corporation Counsel, County of Maui 200 South High Street Wailuku, HI 96793 Attorneys for County of Maui, Department of Water Supply	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> 1/7/2014
JULIE H. CHINA Department of Attorney General 465 S. King Street, Suite 300 Honolulu, HI 96813	<input checked="" type="checkbox"/> 1/9/2014	<input type="checkbox"/>	<input type="checkbox"/>

DATED: Honolulu, Hawai'i, January 9, 2014.



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