STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

November 20, 2013
Honolulu, Hawaii

Norman Rizk
RESUBMITTAL APPLICATION FOR A GROUND WATER USE PERMIT
Papohaku-Rizk Well (Well No. 1015-001), TMK 5-1-006:072, WUP No. 937
Future (Agricultural) Use for 0.015 mgd
Kaluakoi Ground Water Management Area, Molokai

APPLICANT:

Norman Rizk
P.O. Box 71
Maunaloa, HI 96803

LANDOWNER:

Same

SUMMARY OF REQUEST:

Mr. Norman Rizk (Applicant) requests that the Commission on Water Resource Management (Commission) approve a Ground Water Use Permit (GWUP) for 0.015 million gallons per day (mgd) of non-potable basal brackish ground water from a new well in the Kaluakoi Ground Water Management Area, Molokai to irrigate 5 acres of agricultural land.

LOCATION MAP: Kaluakoi Ground Water Management Area, Molokai. See Exhibits 1a, 1b & 1c

BACKGROUND:

October 6, 2011 — Applicant submitted applications for a ground water use permit (GWUPA) and a well construction/pump installation permit (WCPIPA). The applications were incomplete.

May 1, 2013 — Applicant resubmitted amended GWUPA & WCPIPA. The GWUPA was complete, but the WCPIPA needed a licensed contractor signature to complete it.

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May 13, 2013 The Applicant agreed to proceed with the GWUPA and defer completion of the WCPIPA details until the GWUPA is approved. Therefore, May 13, 2013 is the completion GWUPA completion date. The Public Notice was published May 30, and June 6, 2013. The deadline for comments and objections was June 21, 2013.

June 20, 2013 The Department of Hawaiian Home Lands (DHHL) filed comments.

June 26, 2013 The Applicant's agent responded to DHHL's comments. Tom Nance Water Resource Engineering submitted a report on the findings of the previously approved Zappacosta Well (0916-001 WUP 869 approved 2/18/09) near the Rizk Well. Nance also discussed Technical Report No. 187 by the Water Resource Research Center (John Mink and L. Stephen Lau) describing the West Molokai aquifer system areas.

July 2, 2013 The Office of Hawaiian Affairs (OHA) commented (June 26, 2013) that the GWUPA appeared incomplete because readily available sources on gathering rights were not discussed. OHA questioned potential impacts of well pumping on the nearshore discharge and marine resources important to traditional and customary gathering. OHA also questioned potential impacts on migratory birds if the aquaculture shrimp became diseased.

These questions were re-circulated to the Applicant, Department of Health (DOH), and the Department of Land and Natural Resources (DLNR) Division of Aquatics Resources (DAR) July 16, 2013. The Applicant's agent replied to OHA's comments. The application relied on two archaeological survey books, one by OHA and one by the Bishop Museum. Neither showed any sites within half a mile of the proposed project. The agent requested more information about other references.

July 17, 2013 The Water Commission (Commission) denied this application without prejudice. There were too many unanswered questions regarding impacts on traditional and customary gathering rights and archaeological sites, the amounts needed to pump for desalting amounts required for irrigation, and concerns for agricultural impacts on ground water being discharged to the ocean.

Due to last-minute posting, the Applicant's agent was not notified of the meeting and did not appear.

July 24, 2013 The Applicants' agent sent a letter with additional information for the GWUPA issues. Additional information was emailed, telephoned, and walked-in, including identification of the source of gathering rights information reviewed by the applicants as the author of a report referenced by OHA. Additional

information is provided as new Exhibits 8 through 12.

Sept 13, 2013 The Applicant's agent submitted an amended application (Exhibit 9), increasing the amounts requested, to reflect consultation with those familiar with desalting, and estimating the total amount of withdrawals will be equal to 2.5 times the amount to be used based on expected chloride concentrations.

Additional information regarding the source and use is provided in Attachment A.

No objections were submitted. Most questions or concerns raised by several parties were answered on the application, and staff concluded that the lack of formal objections did not necessitate a public hearing. Questions from the Commission were forwarded to the applicants, and their agent has provided answers incorporated into this submittal. A review of the comments follows. Subsequent to the July 17 Commission meeting, staff has enlarged written discussion with respect to Commissioners' and public questions.

ANALYSIS/ISSUES:

The State Water Code, Haw. Rev. Stat. § 174C-49(a), establishes seven (7) criteria that must be met to obtain a water use permit. We analyze the 7 criteria in order:

(1) Water availability

Through its 2008 Water Resource Protection Plan (WRPP 2008) in the overall Hawaii Water Plan, the Commission adopted a sustainable yield for the brackish water at 2 mgd for the **Kaluakoi** Aquifer System Area. The entire system is brackish. Individual existing water use permits in this aquifer system area are shown in Exhibit 2. All wells in the aquifer area are shown in Exhibit 3. A summary of the current ground water allocation conditions in the aquifer is provided in Table 1:

Table 1. Kaluakoi Aquifer System Area

ITEM	**Kaluakoi** Aquifer System Area (mgd)
Sustainable Yield	2
Less: Other Existing Water Use Permits (shown in Exhibit 2)	0.016
Reservation to DHHL	0
Subtotal (Current Available Allocation)	1.984
Less: Other Completed Applications (shown in Exhibit 2)	0.011
Less: This Application	0.015
Subtotal (Potential Available Allocation/Allocation Deficit)	1.958

Therefore, there is adequate water available to accommodate this application request though it is likely water will be very brackish. Desalting could make the water useable.

(2) Reasonable-beneficial

Haw. Rev. Stat Section 174C-3 defines "reasonable-beneficial use" is

> *...the use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and the public interest.*

I. Purpose of Use

The Applicant is requesting the use of brackish, non-potable ground water to irrigate an acre of citrus trees and four acres of general landscaping. Haw. Rev. Stat. §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 various purposes including industrial and irrigation uses.

II. Quantity Justification

At the July 17, 2013 meeting, Commissioners expressed a concern that the withdrawal requested may not provide enough after desalting for the proposed agriculture. One Commissioner noted that desalting through reverse osmosis typically requires twice the

product water. The applicant researched this issue and estimates that the expected pumpage-to-use ratio is 2.5. Thus, in order to obtain the projected 2,000 gallons per day (gpd) to irrigate citrus and fruit trees, the applicant needs to desalt 2.5 times that amount, or 5,000 gpd (0.005 mgd) of brackish water. The Applicant also noted that the brine effluent from desalting will add 6,000 gpd (0.006 mgd) of raw brackish water for the 1 acre of shrimp and fish aquaculture. Thus the new total request is for **0.015 mgd**.

III. Efficiency of Use

The Applicant states that its operations are as water efficient as possible because the trees will be trickle or drip-irrigated. The four acres of general landscaping will be done via multiple sprinklers.

Staff applied an updated irrigation model designed by the University of Hawaii College of Tropical Agriculture and Human Resources (UH-CTAHR) (Irrigation Water Requirement Estimate Decision Support System, or IWREDSS Ver 2.0) to verify the amounts appropriate for the location and season. IWREDSS Ver 2.0 incorporates the latest and best data for rainfall (2011 Rainfall Atlas), soil types (September 2012 NRCS state soil maps - typical natural ground cover, crop transpiration and root depth, and slope factors) along with more daily climate stations and crop types.

The IWREDSS Ver 2.0 estimated demand for citrus trees and for grass and either heliconia or a domestic garden. (See Exhibit 4). The requirement estimated for citrus trees over the year for the standard 1 in 5 year drought is 4,009 gpd per acre, which is twice the requested amount. The IWREDSS Ver 2.0 further estimated the 1 in 5 drought demand for Bermuda grass at 5,492 gpd per acre, for heliconia at 5,364 gpd/ac, and domestic garden 5,474 gpd/ac – all roughly in the same ballpark, and five times the proposed amount of 1,000 gpd/ac. The applicant explains that the plan is for xeriscaping, drought-tolerant plants, gravel, and a sparse planting of trees and landscaping, not a commercial duty for agriculture as estimated by IWREDSS. Table 2 below is a summary or this irrigation demand analysis combined with the estimated need for an additional 2.5 withdrawal multiplier for desalting purposes, which results in a total 12-month moving average withdrawal estimate of 0.064 mgd. Staff's analysis of expected demand is summarized in Table 2.

Table 2. Estimated IWREDSS 12-Month Moving Average Water Demand (based on commercial agriculture duty)

Crop	Acres	Irrigation Method	IWREDSS 80 % gpd/acre	Average Daily Use gpd
Citrus Trees	1.00	trickle spray	4,009	4,009
Bermuda Grass	4.00	multiple sprinkler	5,492	
Heliconia	4.00	multiple sprinkler	5,364	
Domestic Garden	4.00	multiple sprinkler	5,474	
General Landscaping (ave)	**4.00**	**multiple sprinkler**	**5,443**	**21,773**
Total Irrigation Demand	5.00			25,782
TOTAL WITHDRAWAL @ 2.5 x Irrigation Demand				**64,455**

Note: IWREDSS 80% refers to 1 in 5 year drought probability.

IV. Analysis of Practical Alternatives

The applicant has identified four (**4**) alternatives to the proposed use of brackish basal water. A statement of each of the alternatives is as follows:

1. Municipal – unavailable for irrigation
2. Wastewater - unavailable
3. Desalting – this is the proposed use; pumpage will be 2.5 times the amount needed for irrigation.
4. Conservation – drought-tolerant species will be planted, and large shade trees planted to minimize evaporation. A hedge of naupaka will not require irrigation.

The 2000 Legislature amended the Water Code to include a new section, Haw. Rev. Stat. §174C-51.5 that provides the Commission with the authority to require dual line (potable and non-potable) water supply systems in new industrial and commercial developments located in designated water management areas. In this case, the applicant has potable water service and is proposing to install only a single non-potable system. Therefore, this provision does not need to be invoked.

Haw. Rev. Stat. §174C-51.5(3)(b) requires the county boards of water supply, in consultation with the department of health, to adopt standards for non-potable water distributed through dual line water supply systems and rules regarding the use of non-potable water. The standards must protect existing water quality and the health and safety

of the public.

(3) Interference with other existing legal uses

There are 3 other wells within 1 mile of this source. Only the Harris Well (0915-002, WUP 878 approved 11/18/2009) is currently in use, although no use has been reported. Water quality information for the Harris Well shows a chloride content over 1000 mg/L. This is very brackish but usable for salt-tolerant plants. The 72 degrees F temperature indicates that the water originated from a low elevation. The Rizk Well is not expected to affect any nearby wells. The well's cone of influence stops expanding once it captures the commensurate amount of coastline leakage.

(4) Public interest

The Water Code, Haw. Rev. Stat. §174C-2 Declaration of Policy, states:

(c) 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.

Gathering Rights

DHHL and OHA both raised the issue of traditional and customary (access and gathering) rights.

The Hawaii Supreme Court set forth a three part test that agencies apply to protect traditional and customary Hawaiian rights when considering regulatory duties. *Ka Pa`akai O Ka Aina vs. LUC*, 94 Haw. 31, 7 P.3d 1068 (2000 ). *Ka Pa`akai* requires agencies to

> make specific findings and conclusions as to: (1) the identify and scope of 'valued cultural, historical, or natural resources', including the extent to which traditional and customary rights are exercised there; (2) the extent to which those resources – including the rights – will be affected or impaired by the proposed action; and (3) the feasible action, if any, to be taken to reasonably protect rights if they are found to exist.

Ka Pa`akai O Ka Aina vs. LUC, 94 Haw. 31.

DHHL stated "that the effects of ground water withdrawals on the nearshore environment and related practices have been established during litigation on this island". (See Exhibit 5) This statement is incomplete as discussed below. The applicant responded to DHHL's comments in a letter dated June 26, 2013. (See Exhibit 7).

On July 2, 2013 (11 days after the deadline for objections), OHA commented that the Applicant had not adequately addressed gathering rights (See Exhibit 6). The letter notes that various reports discuss the importance of the West End in traditional and customary practices and gathering as a prominent practice of life on Molokai. However, the reports do not identify gathering practices at specific locations on the West End. The letters were re-circulated to the DOH and DAR. Neither had any comments.

The application and public notice were sent to the Molokai Water Working Group which has a long standing collection of knowledge and interest about water uses in the community. No one had any knowledge of gathering at this location. Ms. Lori Buchanan (present at the July 17, 2013 meeting) expressed similar concerns, but did not identify any specific gathering rights at this location. The applicant states that there is no limu in this area. There is no salt collected. All the fishing is done offshore from boats.

Ground Water Discharge:

In the 2008 WRPP, the Commission established the sustainable yield at 2 mgd for Kaluakoi. It is estimated that 36% of the water entering the ground is recharge and 64% of the water flows through and discharges to the ocean. The proposed well's impact would be limited to the first 1000 feet to the shoreline along the 10,000-foot stretch of open sandy beach. The local discharge is not known. However, in other cases, the impacts of well pumping on near shore discharge represented only a very small percent of the total ground water ocean discharge. This well will only pump 15 gallons per minute (gpm). Total proposed withdrawals represent six-tenths of one percent (0.008) of the sustainable yield.

The Waiola and Kukui (Molokai), Inc. contested cases raised this issue and provided some information. Marine scientists explained that four primary factors influence gathered resources in the nearshore environment: substrate, turbidity, seaward nutrients, and currents. There is one secondary factor: ground water discharge. In those cases, the ground water discharge was concentrated fresh basal water (either from springs, in association with fishponds with head pressure from its elevated mountain origins, or streamflow in muliwai (estuaries)). Here, the water is 50% salt water at ambient air temperature and very low head. The two situations are not comparable.

Near shore fresh water discharge can be important because of its microscopic mineral nutrients, important to some species in the larval stage, and relevant in the context of the other factors. In Waiola and Kukui (Molokai), Inc., there was a protected shoreline of rock and mud, significant springs associated with fishponds, but no steep sandy beach swept by

open ocean currents. In Waiola and Kukui (Molokai), Inc., inland pumping might diminish salinity of spring discharge. In this case, the water is not "fresh" but rather half salt. The discharge is weak along this shoreline. Thus, the comparison with the Waiola and Kukui (Molokai), Inc situations is not appropriate. The impact of pumping on discharge will be insignificant and negligible.

Conclusions:

(1) The items which may be traditionally and customarily gathered are generic on the west end of Molokai, but not specific to this location. The principal author of the study of the region did not identify resources in this area. Nor did other parties. Responsible agencies did not offer any further comment when asked again about the question. The Applicant affirmatively addressed gathering rights. The conclusions are consistent with nearshore conditions at that location. The Applicant carried his burden to reasonably investigate. By contrast, practitioners did not come forward to identify resources potentially affected.

(2) Second, the potential impact on gathering rights is minimal because the reduction of discharge from pumping is negligible.

(3) Finally, the pumping is subject to review and reduction or revocation if there are future impacts. This application otherwise meets the criteria of the public interest.

Archaeological Sites

The known archaeological sites are at least half a mile from this project. All well drilling permits carry a standard condition that any discovery of unsuspected artifacts requires the applicant to stop work and contact the DLNR Division of Historic Preservation.

Brine Injection, aquaculture, and agriculture discharge

The Department of Health Safe Drinking Water Branch administers underground injections. HAR Chapter 11-23. The Clean Water Branch administers discharges into state waters, whether from well drilling fluids, aquaculture maintenance, or the application of fertilizers and pesticides. HAR Chap 11-55 the Applicant should document compliance with these DOH requirements.

(5) State & county general plans and land use designations

The land is in the State **Agriculture** District. The County zones the land "**Agriculture.**" The proposed use is consistent with these land use designations.

The following State and County agencies reviewed the application.

1) DLNR and its State Parks (SP), Division of Aquatic Resources (DAR), Historic Preservation (HP), and Land Division (LD); the DOH with its Clean Water, Safe Drinking Water, and Wastewater Branches; DHHL, and Land Use Commission (LUC); and OHA.

2) County of Maui - Office of the Mayor, Department of Planning, and the Department of Water Supply;

No comments or objections were received. These proposed uses are consistent with the state and county general plans and land use designations.

The application **meets** the state and county general plans and land use designations.

(6) County land use plans and policies

The Maui County, Office of the Mayor, Department of Planning, and the Department of Water Supply reviewed the application. No comments or objections were received.

The application **meets** the county land use plans and policies.

(7) Interference with Hawaiian home lands rights

All permits are subject to the prior rights of Hawaiian home lands. DHHL and OHA reviewed this application. Standard water use permit conditions 3.g., 6., and 9.f. notify all water use permittees that their permits are subject to and cannot interfere with Hawaiian home land rights.

DHHL comments (Exhibit 5):

1. The applicant has provided no analysis of the potential impacts that water withdrawal from the Kaluakoi aquifer system (sic) has on the other Ground Water Management Areas, more specifically, the Kualapuu aquifer system.

Staff response: The Applicant relies on the WRPP 2008, as does DHHL. The WRPP 2008 spells out the ground water management system, sets forth the assumptions and analysis leading to estimated sustainable yields, and establishes hydrologic units for management. Molokai has five distinct aquifer sectors, based upon the geologic understanding that ground water flows in known ways and is prevented from flowing in other ways. The Kaluakoi Aquifer System Area is one of two system areas in the West Sector of Molokai, defining the ground water flows that originate and flow within the lavas of the West Molokai Volcano. These are overlain by lavas of the East Molokai volcano, which is divided into three sectors.

Ground water is unlikely to flow between sectors – only between systems within each sector. Ground water from the outer flanks of the East Molokai volcano flow west toward Maunaloa (the Central Sector) and meet flows passing easterly beneath the Mahana Plain. These easterly and westerly flows, upon meeting, move toward the ocean to north and south. Ground water flowing weakly west from the peak of the West Molokai volcano toward Papohaku and the well in question is hydraulically incapable of affecting ground water flowing with greater head and volume westerly from the East Molokai volcano. The cone of depression from the well will stop growing once it reaches it shoreline discharge point on the west end.

DHHL partnered with the U.S. Geological Survey (USGS), which has created a ground water model for the island of Molokai (USGS Oki 1997) to assess ground water flow in and around the DHHL wellfield at Kauluwai. This model provides further understanding of the ground water flows affecting DHHL. It is possible to use the ground water model to predict possible impacts from this application. The staff's conclusions are drawn from this model.

2. DHHL is not restricted to withdrawing water from beneath or on its own properties...the applicant is inferring that the distance (from Hawaiian home lands) is sufficient to establish that there will be no impact on DHHL. . . .DHHL seeks...(that) CWRM's decision on this WUPA 'shall, to the extent applicable and consistent with other legal requirements and authority, incorporate and protect adequate reserves of water for current and foreseeable development and use of Hawaiian home lands as set forth in section 221 of the Hawaiian Homes Commission Act.'

Staff: HHCA § 221 states in relevant part

> All water licenses (sic) shall be deemed subject to the condition...that the licensee (sic) shall, *upon demand by the department*, grant to it the right to use...any water which the department deems necessary adequately to supply the livestock, aquaculture operations, agriculture operations, or domestic needs of individuals upon any tract" (emphasis added).

DHHL has an affirmative duty to establish its current and foreseeable needs.

DHHL has a significant reservation of water where its current wells are located (Wells 1 & 2, Well Nos. 0801-01 & -02). The reservation was established on DHHL's request to include both current and foreseeable needs (far in excess of its current use).

At the same time, DHHL has for several years been overpumping these wells beyond the allocation of their current water use permit (WUP 267 authorizes 0.367 mgd). DHHL's water use reporting is delinquent. The Commission is not able to empirically assess the potential problems in the well field. There has long been a concern about increased chlorides from excessive pumping at DHHL's wells. The reporting to date confirms a

dramatic rise in chlorides in DHHL's wells.

The Papohaku-Rizk Well will not interfere with DHHL water rights.

(8) Other issues

I. Chapter 343 – Environmental Assessment (EA) Compliance

EA Triggers
The applicant's proposed action does not trigger the need for an EA. Haw. Rev. Stat. §343-5(a).

II. Well Construction/Pump Installation

The applications for well construction and pump installation are incomplete. Upon obtaining a water use permit, the applicant may select a contractor to complete those applications and submit them for the normal review. Approval is subject to review.

The desalinating process has not yet been described. There must be a safe disposal of the brine. DOH regulates waste product brine.

RECOMMENDATION:

That the Commission APPROVE the issuance of Ground Water Use Permit no. 937 to Norman Rizk for the reasonable and beneficial use of 0.015 million gallons per day of brackish ground water for Agricultural use from the anticipated Papohaku-Rizk Well (Well No. 1015-001).

Subject to:

a. Standard water use permit conditions listed in Attachment B; and

b. Special Conditions:

1. Prior to issuing any permits, Applicant shall document consultation with the Department of Health regarding any necessary compliance with rules concerning injection of desalting by-products

2. In the event that the tax map key at the location of the water use is changed, the permittee shall notify the Commission in writing of the tax map key change within thirty (30) days after the permittee receives notice of the tax map key change.

Respectfully submitted,

WILLIAM M. TAM
Deputy Director

Attachment(s):
A (Water Use Permit Detailed Information)
B (Water Use Permit Standard Conditions)

Exhibit(s):
1 (a - Location Map; b - Irrigation features on parcel map; c - Source and Location of Proposed Uses Map)
2 (Existing Water Use Permits, Pending Applications, and 12-Month Moving Average Withdrawal)
3 (All Wells in Kaluakoi Aquifer System Area)
4 (IWREDSS Summary)
5 (DHHL letter dated June 18, 2013)
6 (OHA letter dated June 26, 2013)
7 (Applicant's response dated June 26, 2013)
8 (Applicant's response dated July 24, 2013)
9 (Modified application for larger amount dated September 13, 2013)
10 (Applicant's cover letter on application motivations)
11 (Desalting/Aquaculture report by Desmund Manaba)
12 (Testimony of Adolph Helm)
13 (Testimony of Kelson K. Poepoe)

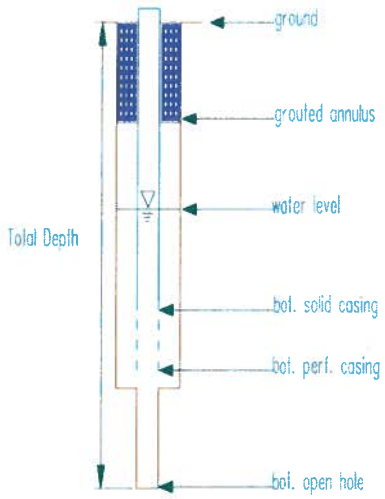
APPROVED FOR SUBMITTAL:

for WILLIAM J. AILA, JR.
Chairperson

WATER USE PERMIT DETAILED INFORMATION

Source Information

AQUIFER:	**Kaluakoi** System, West Sector, Molokai
Sustainable Yield:	2 mgd
Existing Water Use Permits:	0.016 mgd
Available Allocation:	1.984 mgd
Total other pending applications:	0.008 mgd
This application:	0.006 mgd
WELL:	Papohaku-Rizk (Well No. 1015-01)
Location:	Papohaku Ranchlands TMK: 5-1-006:072
Year Drilled:	proposed 2013
Casing Diameter:	12 in.
Elevations (msl= 0 ft.)	
Water Level:	unknown
Ground:	unknown
Bottom of Solid Casing:	unknown
Bottom of Perforated:	unknown
Bottom of Open Hole:	unknown
Total Depth:	unknown
Grouted Annulus Depth:	unknown
Pump Capacity	proposed: 15 gpm



Use Information

Quantity Requested:	6,000 gallons per day.
Future Type of Water Use:	Agricultural
Place of Water Use:	TMK: 5-1-006:072
Reported Water Usage:	0 gpd
Nearby Similar Water Usage:	0 gpd

Kaluakoi Aquifer System
Current reported12-Month Moving Average Withdrawal (See Exhibit 2): 0.000 mgd

Nearby Surrounding Wells and Other Registered Ground Water Use

There are 3 other wells within a mile of the well (see Exhibit 1). None of these wells is believed to be currently in use (one has submitted well completion reports, but is not yet reporting water use). Information from the registration program indicates there are possibly 8 existing wells in the Kaluakoi Aquifer System. Several of these wells may have been initially field checked but many of the declarants, including the larger users, have not been completely field verified. Several are not in use or are rights claims. The Final Report of the Molokai Working Group Estimated the actual use from the Kaluakoi Aquifer System to be 0 mgd.

ATTACHMENT A

Public Notice

In accordance with HAR §13-171-17, a public notice was published in the Honolulu Advertiser on May 30, 2013 and June 6, 2013 and a copy of the notice was sent to the Office of the Mayor. Copies of the completed application were sent to the Department/Board of Water Supply, Planning Department, Department of Health, Department of Hawaiian Home Lands, Office of Hawaiian Affairs, the various divisions within the Department of Land and Natural Resources, and other interested parties for comments. Written comments and objections to the proposed permit were to be submitted to the Commission by June 21, 2013.

Objections

The public notice specifies that an objector meet the following requirements: (1) state property or other interest in the matter; (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; (3) state all grounds for objections to the proposed permits, (4) provide a copy of the objection letter(s) to the applicant, and (5) submit objections meeting the previous requirements to the Commission by June 21, 2013.

To the best of staff's knowledge there are no objections, no comments from those who have property interest within the Kaluakoi Aquifer System or who will be directly and immediately affected by the proposed water use.

Briefs in Support

Responses to objections, or briefs in support, regarding the application are required to be filed with the Commission ten (10) days after an objection is filed and, presumably, copies are served to the applicant. No briefs in support were filed with the Commission.

Field Investigation

The water source and Future use have not been investigated.

STANDARD WATER USE PERMIT CONDITIONS

1. The water described in this water use permit may only be taken from the location described and used for the reasonable beneficial use described at the location described above. Reasonable beneficial uses means "the use of water in such a quantity as is necessary for economic and efficient utilization which is both reasonable and consistent with State and County land use plans and the public interest." (HRS § 174C-3)

2. The right to use ground water is a shared use right.

3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:

   a. Can be accommodated with the available water source;
   b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
   c. Will not interfere with any existing legal use of water;
   d. Is consistent with the public interest;
   e. Is consistent with State and County general plans and land use designations;
   f. Is consistent with County land use plans and policies; and
   g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).

4. The ground water use here must not interfere with surface or other ground water rights or reservations.

5. The ground water use here must not interfere with interim or permanent instream flow standards. If it does, then:

   a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
   b. The interim or permanent instream flow standard, as applicable, must be amended.

6. The water use authorized here is subject to the requirements of the Hawaiian Homes Commission Act, as amended, if applicable.

7. The water use permit application and submittal, as amended, approved by the Commission at its July 17, 2013 meeting are incorporated into this permit by reference.

8. Any modification of the permit terms, conditions, or uses may only be made with the express written consent of the Commission.

9. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:

a. protect the water sources (quantity or quality);
b. meet other legal obligations including other correlative rights;
c. insure adequate conservation measures;
d. require efficiency of water uses;
e. reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
f. meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
g. carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

Prior to any reduction, the Commission shall give notice of its proposed action to the permittee and provide the permittee an opportunity to be heard.

10. An approved flowmeter(s) must be installed to measure monthly withdrawals and a monthly record of withdrawals, salinity, temperature, and pumping times must be kept and reported to the Commission on Water Resource Management on forms provided by the Commission on a monthly basis (attached).

11. This permit shall be subject to the Commission's periodic review of the **Kaluakoi** Aquifer System's sustainable yield. The amount of water authorized by this permit may be reduced by the Commission if the sustainable yield of the **Kaluakoi** Aquifer System, or relevant modified aquifer(s), is reduced.

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

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

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

13. The use(s) authorized by law and by this permit do not constitute ownership rights.

14. The permittee shall request modification of the permit as necessary to comply with all applicable laws, rules, and ordinances which will affect the permittee's water use.

15. The permittee understands that under HRS § 174C-58(4), that partial or total nonuse, for reasons other than conservation, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period of forfeiture.

16. The permittee shall prepare and submit a water shortage plan within 30 days of the issuance of this permit as required by HAR § 13-171-42(c). The permittee's water shortage plan shall identify what the permittee is willing to do should the Commission declare a water shortage in the **Kaluakoi** Ground Water Management Area.

17. The water use permit shall be subject to the Commission's establishment of instream standards and policies relating to the Stream Protection and Management (SPAM) program, as well as legislative mandates to protect stream resources.

18. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

19. The permittee understands that any willful violation of any of the above conditions or any provisions of HRS § 174C or HAR § 13-171 may result in the suspension or revocation of this permit.

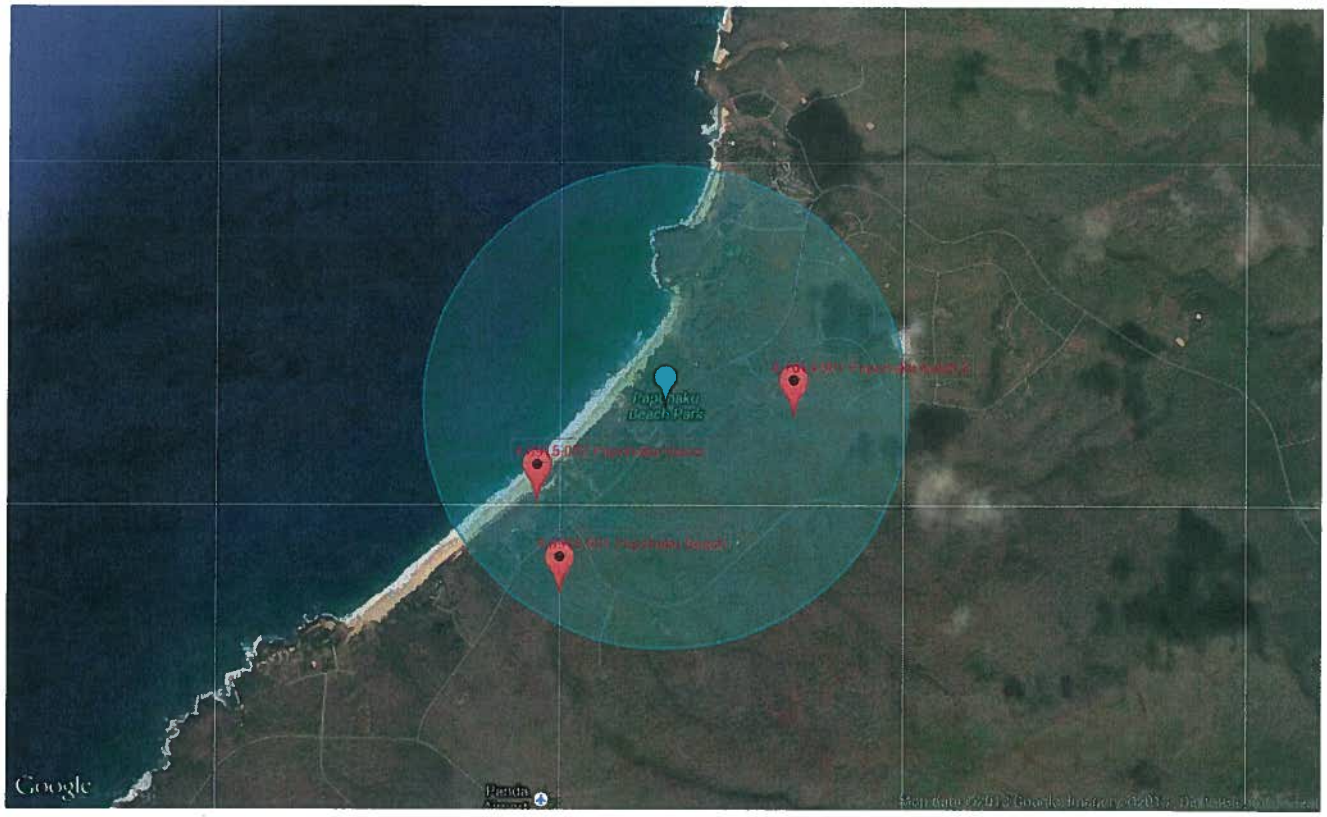
Main Menu | Contacts | Well Index | Well Application | Water Use Permit | SWIM System | General Files | Reports | Converter | Links | Logged In: Cicechf | ver.2.002

1-Mile Radius Tool

1. Move the blue pin or right click on the map to select a center position.
2. Click on "Go" button to find a well within the specified radius from the center position.

Latitude: 21.172334 Longitude: -157.251542 Radius: 1 mile Go

3 wells found. Download KML | Download Excel



3 matching results found. Sort By: Well Number

Well Number	Aquifer System	Well Name	Well Owner	Water Use Reporter	Land Owner	TMK	Use	Year Drilled	Distance (miles)
4-0915-001	40101 Kaluakoi	Papohaku Beach	Molokai Acquisition, LLC	Molokai Acquisition, LLC	Molokai Acquisition, LLC	(2) 5-1-007:011	UNU	1974	0.89
4-0915-002	40101 Kaluakoi	Papohaku-Harris	Pamela Harris	Pamela Harris	Pamela Harris	(2) 5-1-007:068	IRR	2010	0.66
4-1014-001	40101 Kaluakoi	Papohaku Gulch 2	Kevin Judice	Kevin Judice	Kevin Judice	(2) 5-1-006:030	IRR	1974	0.53

Papohaku-Rizk (1015-001)

EXHIBIT 1a

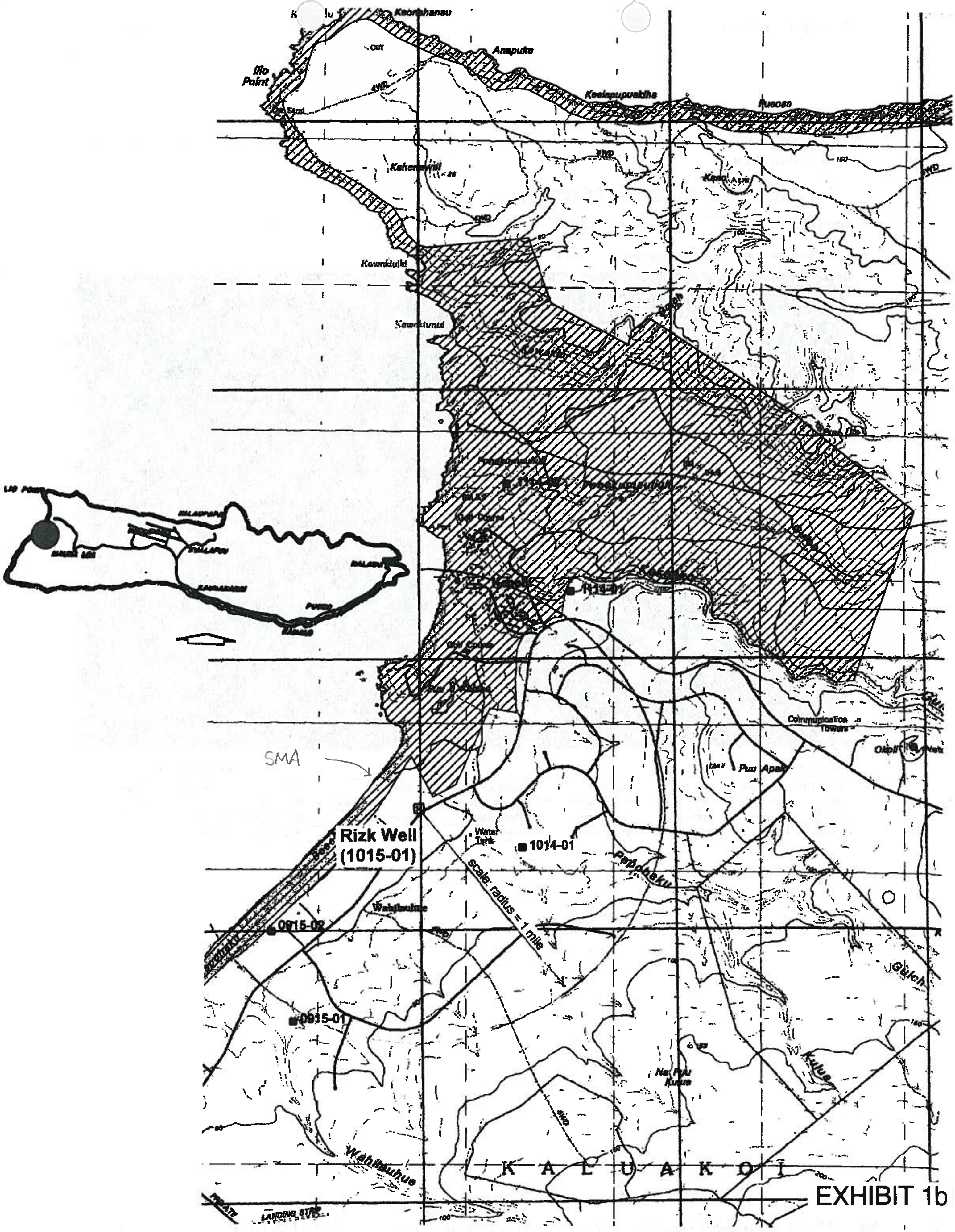

Ilio Point
Anapuke
SMA
Rizk Well
(1015-01)
Water Tank
1014-01
scale: radius = 1 mile
0915-02
0915-01
Wahilauhue
Communication Towers
Puu Apali
Na Puu Kulua
Kulua
Gulch
K A L U A K O I
LANDING STRIP

EXHIBIT 1b

RIZK, NORMAN
TMK (2) 5-1-006:072
NOT TO SCALE

Source and Location of Proposed Uses Map

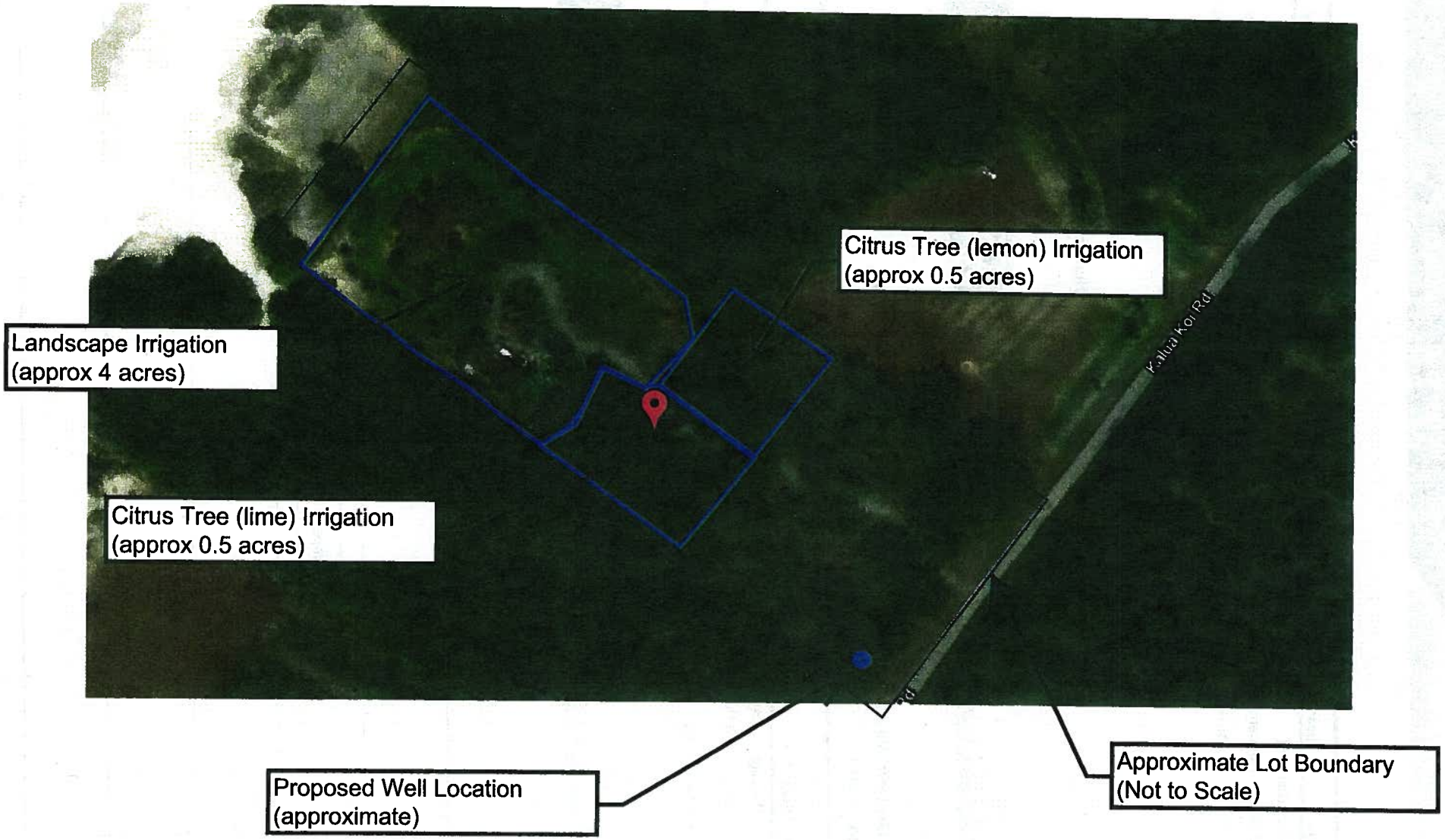


EXHIBIT 1c

Pending Water Use Applications

WUPA No	Well No.	Applicant	Well Name	mgd	Received	Accept
Aquifer System: 40101 Kaluakoi						
937	4-1015-001	Norman Rizk		0.015	10/06/2011	05/13/2013
977	4-0916-002	Richard Foster		0.011	05/01/2013	05/13/2013
			2 WUPAs totalling	**0.026**		

Number of Wells: 2

Water Use Permit

Island of Molokai

Aquifer System Ground Water Management Area: 40101 Kaluakoi
Sustainable Yield (mgd): 2

WUP No	Approved	Permittee	Well No	Well Name	WUP (mgd)
869	02/18/2009	Pierluigi Zappacosta	4-0916-001	Papohaku Zappacosta	0.008
878	11/18/2009	Terry & Pam Harris	4-0915-002	Papohaku-Harris	0.008
Summary for Kaluakoi (2 detail records)				**Total:**	0.016
				SY Available:	1.984

Monthly Pumpage Chart
12 Month Moving Average

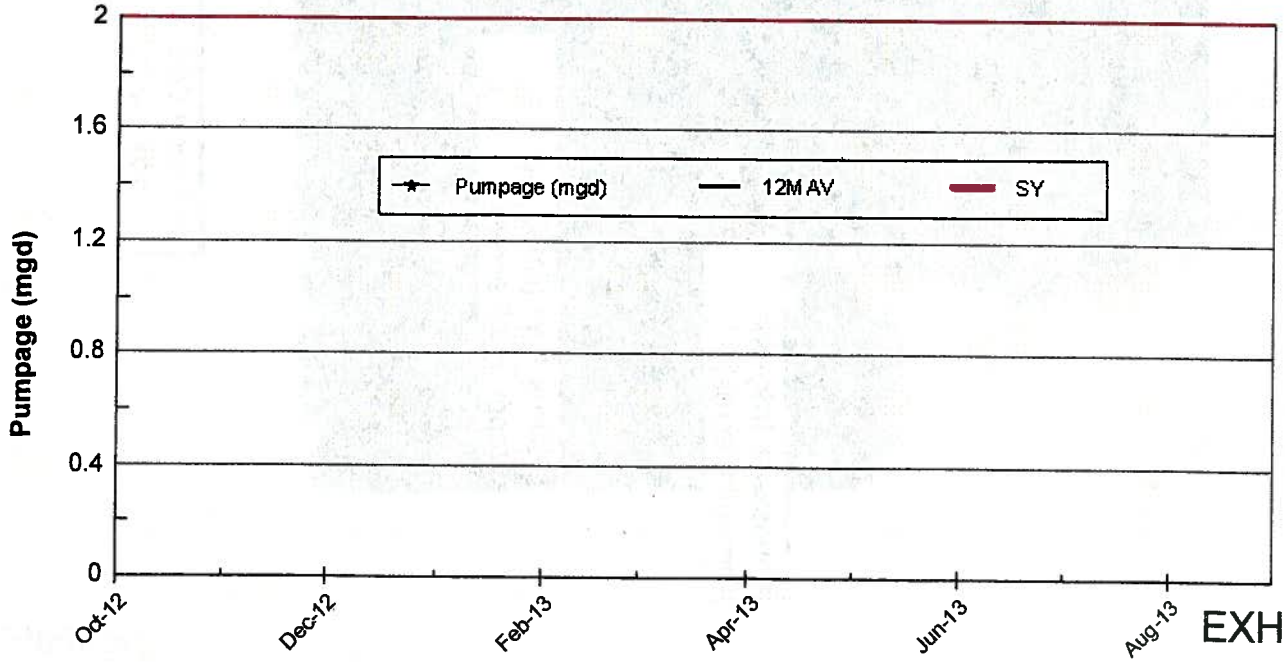


EXHIBIT 2

Well Reviewed in Report

Island:	Molokai
Well Owner:	All
Well Reporter	All
Land Owner:	All
Aquifer:	40101 Kaluakoi
TMK:	All
Well Use:	All

Well No	Well Name	Aquifer	Well Owner	Year Drilled	Coordinates(NAD83) Latitude DD	Coordinates(NAD83) Longitude DD	Physical Data Type	Casing Dia in.	Total Depth ft.	Elevations in feet (msl) Ground	Bottom Solid Casing	Bottom Perf Casing	Bottom of Hole	Initial Static Head	Cl	Temp	Spec Cap	Pump Test Result T	Installed Capacity	Use
Island: Molokai																				
40101 Kaluakoi																				
4-0915-001	Papohaku Beach	40101	Molokai Acquisition, LLC	1974	21.161111	-157.258333	ROT	4	60	48			-12	6.70						UNU
4-0915-002	Papohaku-Harris	40101	Pamela Harris	2010	21.166667	-157.259722	DUG	12	11					1.00	1,000				0.032	IRR
4-0916-001	Papohaku Zappacosta	40101	Tellos, L.P.	2010	21.151944	-157.261111	PER	6	57	50	0	-10	-17	1.30	9,800					IRR
4-1011-001	Kakaako Gulch	40101	Spencer Bevill	1945	21.169167	-157.195833		6	540	503	106	-14	-37	5.80	2,900				0.100	UNU
4-1014-001	Papohaku Gulch 2	40101	Kevin Judice	1974	21.171667	-157.243333	ROT		70	63			-7	5.60						IRR
4-1109-001	Moomomi	40101	Molokai Properties Limited, MPL		21.193889	-157.161111	DUG		31	29			-2		4,840					UNU
4-1114-001	Kakaako Gulch 3	40101	Kaluakoi Real Estate, LLC	1974	21.187500	-157.240000	ROT		93	76			-17	1.00						IRR
4-1114-002	Pohakumaululi 4	40101	Kaluakoi Golf Course, LLC	1974	21.194167	-157.244167	ROT		70	63			-7	9.40						IRR

Total Installed Pump Capacity in Aquifer in mgd: 0.132

Total Number of wells in Aquifer: 8

EXHIBIT 3

```
*   Commission on Water Resources Management IWREDSS Summary   *
*****************************************************************

IWREDSS estimates that irrigation needs for the application is:
---------------------------------------------------------------
UNIT              /          *DROUGHT FREQUENCY          /          OTHER STATISTICS
                  / 1 in 2    1 in 5    1 in 10   1 in 20 /
                  /  year      year       year      year  /   Mean     Median      Max       Min
inch/acre           49.518    53.885     55.856    57.350    48.896    49.216    60.525    31.845
Thou. gpd/acre       3.684     4.009      4.155     4.267     3.638     3.661     4.503     2.369
Total thou. gpd     10.966    11.933     12.370    12.701    10.828    10.899    13.404     7.052
---------------------------------------------------------------
     *Drought frequency of 2, 5, 10 and 20 year return periods are GIR values of 50%, 80%, 90% and 95%
probabilities, respectively.
     *GIR of 1 in 5 year return period is recommended by CTAHR for design or water use allocation purposes.

where:
Irrigation season                    = 1-1 TO 12-31
Irrigation total days                = 365 days


Irrigation system:
TYPE                                 = TRICKLE, SPRAY
Design Application Efficiency        =  80 %
Fraction of Soil Surface Irrigated   =  50 %
Fraction extracted from irigated zone =  40 %


Climate Data Base:
Location                             = MOLOKAI AP Latitude  21.15
Length of Record                     = 55 YEARS (1957~2011)
No. of missing rainfall days         = 0
No. of missing ET days               = 0


TMK                                  = 251006072
TMK Area (Acre)                      = 5.954
Soil Series                          = Jaucas(0.076), Mala(0.924)
SCS Curve Number                     = 80
Net Irrigated Area (Acre)            = 2.977
Depth to water table (feet)          = 50.00


Crop type                            = CITRUS
```


EXHIBIT 4

NEIL ABERCROMBIE
GOVERNOR
STATE OF HAWAII

JOBIE M. K. MASAGATANI
CHAIRMAN
HAWAIIAN HOMES COMMISSION

DARRELL T. YOUNG
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P. O. BOX 1879
HONOLULU, HAWAII 96805

June 18, 2013

MEMORANDUM

TO: The Honorable William J. Aila, Jr., Chairperson
Commission on Water Resource Management

FROM: Jobie M. K. Masagatani, Chairman
Hawaiian Homes Commission

SUBJECT: Water Use Permit Application (WUPA No. 937)
Kaluakoi Ground Water Management Area, Molokai

The Department of Hawaiian Home Lands (DHHL) reviewed the subject Water Use Permit Application, WUPA No. 937 by Mr. Norman Rizk for use of 6,000 gallons per day from Well No. 1015-001 (Papohaku-Rizk Well TMK (2)5-1-006:072). We appreciate the applicant trying to address the specific requirements that water uses in designated water management areas do not harm Hawaiian rights, including the rights of DHHL to water and the traditional and customary practices of Native Hawaiians that depend directly on water or the use of water-dependent species. We offer the following comments:

The State, and particularly the Commission on Water Resource Management (CWRM), has a duty to protect the rights of DHHL to water, as enumerated in the Hawaiian Homes Commission Act (HHCA) §§ 101(4), 220, 221; the Hawaii Constitution Article XI, §§ 1 and 7 and Article XII, § 7; and Hawaii Revised Statutes Chapter 174C, the State Water Code.

DHHL owns approximately 25,899 acres of land on the island of Molokai, some of which do not currently have allocations or reservations of water, e.g., Ualapue. The State Water Projects Plan (SWPP), now underway, will estimate the foreseeable water demands on Hawaiian home lands and those will be used as the

EXHIBIT 5

basis for seeking further reservations. DHHL has an existing reservation for 2.905 million gallons per day of ground water from State lands in the Kualapuu aquifer system for use on Hawaiian home lands on Molokai. This amount shall be in excess of the existing uses of water on Hawaiian home lands as of June 10, 1995 (§13-171-63 HAR). Based on these facts, we believe the applicant's responses to Items 15 - "*Interference with the Rights of the Department of Hawaiian Home Lands*" and Item 16 are incomplete.

Since the entire Island of Moloka'i is a designated ground water management area, the WUPA provides no analysis of the potential impacts that water withdrawal from the Kaluakoi aquifer system has on the other Ground Water Management Areas, more specifically, the Kualapuu aquifer system.

With these points in mind, we further specifically note that the applicant's responses to questions 15 and 16 of the WUPA form contain inaccuracies and omissions. In particular we note:

- **DHHL lands and water needs.** The applicant notes that the source property is over ten miles from property of the Hawaiian home lands trust. It is presumed that the applicant is inferring that the distance is sufficient to establish that there will be no impact on DHHL. We must note that DHHL is not restricted to withdrawing water from beneath or on its own properties; if it were so restricted, the majority of DHHL lands could not be used for their intended purposes.

- **Gathering rights.** We first observe that gathering rights are distinct from the rights of DHHL to water (though our beneficiaries hold both sets of rights); the language in this section would have been more properly placed in response to question 16. We further note that the issue at question here would not be what may exist on the property or immediately adjacent properties, but rather what practices may be impacted down gradient from this water withdrawal. Finally, in this regard, we note that the effects of groundwater withdrawals on the near-shore environment and related practices have been established during litigation on

this island; the applicant offers no argument to address this issue.

- **Comments on aquifers and "designation."** We note that the applicant conflates issues of designation, the degree to which water is brackish, and the relationship of Hawaiian rights to water.

DHHL, therefore, seeks, as is described in HRS 174C-101(a), CWRM's decision on this WUPA:

> "...shall, to the extent applicable and consistent with other legal requirements and authority, incorporate and protect adequate reserves of water for current and foreseeable development and use of Hawaiian home lands as set forth in section 221 of the Hawaiian Homes Commission Act."

On Molokai, it is critical that sufficient water be reserved for foreseeable needs of Hawaiian home lands. We recommend that CWRM adopt an interim policy to achieve this purpose until the SWPP is completed and approved.

While we are not objecting to this application, we are concerned that CWRM staff accepted this application as complete, when it clearly did not fully or accurately address the rights of DHHL. We would strongly encourage CWRM to not accept applications as complete, until the applicant address these issues properly. We note, that Hawaii water law is clear that the burden of demonstrating no harm to public trust interest lies on the applicant, not on agencies who defend the public trust interests, or any one else.

Mahalo for the opportunity to comment on this WUPA. If you have any questions or require additional information, please call me at (808) 620-9501, or Kaleo Manuel in our Planning Office at (808) 620-9485.

c: Norman Rizk

PHONE (808) 594-1888 FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

June 26, 2013

Commission on Water Resources
Department of Land and Natural Resources
Contact: Charley Ice
P.O. Box 321
Honolulu, Hawaii 96809

Re: Request for Comments on Norman Rizk's and Richard Foster's Ground Water Use Permit Applications – New Use, Kaluako'i Ground Water Management Area, WUPA Nos. 00937 and 00977

Aloha e Charley Ice,

The Office of Hawaiian Affairs (OHA) is in receipt of the public notices for the Norman Rizk and Richard Foster ground water use permit applications dated May 21, 2013. Without delving into questions regarding the propriety of creating inland shrimp/fish ponds or landscaping in an area devoid of ground water or surface water sources, we provide the following comments and concerns on these two applications.

OHA is the constitutionally-established body responsible for protecting and promoting the rights of Native Hawaiians.[1] OHA is required to serve as the principal public agency in the State of Hawai'i responsible for the performance, development, and coordination of programs and activities relating to native Hawaiians and Hawaiians; assess the policies and practices of other agencies impacting native Hawaiians and Hawaiians; and conduct advocacy efforts for native Hawaiians and Hawaiians.[2] Accordingly, OHA has substantive obligations to protect the cultural and natural resources of Hawai'i for the agency's beneficiaries.[3] It is with this kuleana in mind that OHA provides the following comments.

[1] HAW. CONST. ART. XII SEC. 5
[2] HRS § 10-3.
[3] *See* Haw. Rev. Stat. ("HRS") Chapter 10.

EXHIBIT 6

Pumping brackish water from the Kaluako'i aquifer may reduce discharge into the nearshore marine area. Although the applications reference salt water in one instance, it is not clear whether the applicants intend to pump brackish water or salt water, the latter of which would require deeper drilling. If the applicants intend to pump brackish water, OHA notes that pumping brackish ground water will likely reduce discharge into the nearshore marine area.[4] The closer to the shoreline that the ground water is pumped, the more concentrated the decrease in coastal discharge may be in the coastal area immediately downgradient from the well. Coastal discharge is critical to sustaining the livelihood of the abundant marine resources found off the coast of the Kaluako'i ahupua'a.

The failure of the applicants to fulfill their burden to show that their water use will not abridge or deny constitutionally protected Native Hawaiian traditional and customary rights and practices provides the commission with sufficient grounds for immediate denial of the permit applications.[5] This heightened burden requires more than a mere recitation that "there are no existing or pre-exiting Hawaiian gathering rights located within the boundaries of [the] property or other properties bordering [the] lot," a statement which itself is questionable. The application does not include ***any*** information on the research or inquiries that were performed to identify cultural resources and practices that exist in the immediate vicinity of the proposed well site or in the nearby nearshore area. Accordingly, it also does not include any information on whether these resources or practices would be impacted. **The Hawai'i Supreme Court has reversed commission decisions that were rendered without applicants showing that they met their burdens.** In one such case, *In re Wai'ola O Moloka'i Inc.*, the Hawai'i Supreme Court made it clear that "the absence of evidence that the proposed use would affect native Hawaiian rights was insufficient to meet the" applicant's burden and held that the commission had erred in finding that the applicant had satisfied the requisite conditions to obtain a permit for a new use.[6]

It is well known that the west coast of Moloka'i has historically been and continues to be an important place for Native Hawaiians. Although it was "sparely inhabited, Kaluako'i has several significant natural and cultural resources which Moloka'i residents utilized on a seasonal basis or for specific purposes[.]"[7] Archaeological evidence, mo'olelo and traditional knowledge support that Native Hawaiians relied upon the coastline for fishing and gathering of marine resources. This continues to be the case today, as a substantial number of Native Hawaiian families on Moloka'i engage in subsistence living by fishing, diving, hunting and gathering land and marine flora and fauna for as much as 38 percent of their diet.[8] Subsistence is not only essential to Native Hawaiian people's diet and health, but also to the maintenance of the Native Hawaiian people's religious and spiritual relationship to the land and nearshore environment, and the perpetuation of their commitment to mālama 'āina.[9] Native Hawaiian practitioners have

---

[4] *See* Generally USGS Scientific Investigations Report 2006-5177 (2006); USGS Scientific Investigations Report 2007-5128 (2007).
[5] *In re Wai'ola O Moloka'i, Inc.* ("Waiola"), 103 Hawai'i 401 (2004).
[6] *Id.*
[7] McGregor, Davianna Dr., Cultural Impact Assessment for the La'au Point Rural-Residential Development (2006).
[8] The Governor's Moloka'i Subsistence Task Force Study (1994); *Wai'ola* 103 Hawai'i 401, 439 (2004).
[9] *Wai'ola* 103 Hawai'i 401, 439 (2004).

specifically identified the west coast, including the coastline closest to the applicants' proposed well site, as important subsistence sites. Furthermore, with little effort, we were able to locate known historic settlement villages of Kepuhi (Village of the Eel) and Pāpōhaku (the Stone Wall) not far from one of the applicants' parcels, increasing the likelihood that other resources and practices exist in these areas.[10]

The ground water use permit applications raise other important issues and questions. OHA has questions about the applicants' plans related to the desalting process and the disposal of the brine. The proposed shrimp farm raises important questions about protection of our bird life and marine life from diseases and impacts from effluent discharging into the nearshore waters. Finally, the controversy over the source and transmission of fresh water for Kaluako'i residents, including the unpermitted pumping of Well 17 and the month to month lease of the Molokai irrigation system, highlight the need to identify and ensure planning for this community.

Thank you for the opportunity to provide comments on the ground water use permit applications. We are particularly grateful that you have allowed us an extension on the time to provide our comments. Should you have any questions please contact Jocelyn Doane by phone at 594-1834 or by email at jocelynd@oha.org.

Sincerely,

Kamana'opono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer

JD

[10] McGregor, Davianna Dr., Cultural Impact Assessment for the Lā'au Point Rural-Residential Development (2006).

ARCHITECTURAL DRAFTING SERVICE
P.O. BOX 1718
KAUNAKAKAI, HI 96748
Phone: (808) 553-9045 - Fax: (808) 553-3952 - Mobile: (808) 870-3499
Email: luigis@hawaiiantel.biz

June 26, 2013

State Of Hawaii
Department of Land and Natural Resources
Commission on Water Resource Management
Attention: Charley Ice
P.O. Box 621
Honolulu, Hawaii 96809

Subject: Ground Water Use, Well Construction/Pump Installation Permit Applications
Well No. 0916-002, Kaluakoi, Island of Molokai
Mr. Richard Foster and Norman Rizk
P.O. Box 1949
Kaunakakai, HI 96748

Dear Mr. Ice,

On June 24, 2013, the applicant received a letter from the Department of Hawaiian Home Lands dated June 18, 2013 and postmarked June 19, 2013.

In response to the comments we offer the following:

COMMENT:
Page 2, second paragraph states:
"Since the entire Island of Moloka'i is a designated ground water management area, the WUPA provides no analysis of the potential impacts that water withdrawal from the Kaluakoi aquifer system has on the other Ground Water Management Areas, more specifically, the Kualapuu aquifer system."

REPLY: In a report titled:
AQUIFER IDENTIFICATION AND CLASSIFICATION
FOR MOLOKA'I: Groundwater Protection
Strategy for Hawai'i
John F. Mink
L. Stephen Lau
Technical Report No. 187
October 1992
On page 12 within the section titled "AQUIFER SECTOR: WEST (401), Aquifer System: Kaluakoi (40101)" it states " GROUNDWATER. Groundwater is predominantly basal and occurs in both flank lavas and dike compartments. To date no fresh groundwater has been discovered, and it is improbable that domestic quality water is developable. Brackish water permeates the entire region, most of it having salinity in excess of 1000 mg/l chloride. Test borings have been drilled, but groundwater is not yet being developed."

Since at the time of this report there had not been a discovery of any fresh groundwater and it is improbable that domestic quality water is developable, it is unlikely that this well would have any effect on the Kualapuu aquifer system because it has no relationship to freshwater or the Kualapuu aquifer. We have attached this report and it's findings for your review.

EXHIBIT 7

The intent is to utilize desalinated salt water for the purposes of irrigation, and untreated salt water for a fish pond. We appreciate the comments of the Department of Hawaiian Home Lands but cannot see how they are germane to the specific application of the proposed well.

In a recently completed report for a similar well in the near vicinity, which has received all necessary statutory approvals, the salinity levels found were at readings above that of brackish water. We have attached the report and findings for your review.

If during the construction we encounter any brackish water we will disclose the findings and facts before the well goes into production and any desalination takes place. There has been no discovery of fresh ground water on the west end of Molokai whatsoever. All of the previously approved wells in the vicinity have found only salt water.

There is no limu in the vicinity of the proposed wells, no salt gathering activity, and the only fishing activity is in deep water. We would like to note that the proposed well site is over 1000 feet from the shoreline.

Thank you for your time in reviewing our response to the Department of Hawaiian Home Lands comments.

Should you require any additional information about this project, please contact me at the above address or by my cell phone 808 870 3499.

Sincerely,

Luigi Manera

ARCHITECTURAL DRAFTING SERVICE
P.O. BOX 1718
KAUNAKAKAI, HI 96748
Phone: (808) 553-9045 - Fax: (808) 553-3952 - Mobile: (808) 870-3499
Email: luigis@hawaiiantel.biz

July 24, 2013

State Of Hawaii
Department of Land and Natural Resources
Commission on Water Resource Management
Attention: Charley Ice
P.O. Box 621
Honolulu, Hawaii 96809

Subject: Ground Water Use, Well Construction/Pump Installation Permit Applications
GWUPA 00977
Well No. 0916-002, Kaluakoi, Island of Molokai
Mr. Richard Foster
P.O. Box 1949
Kaunakakai, HI 96748

Dear Mr. Ice,

We are in receipt of a letter to your office from the Office of Hawaiian Affairs dated June 26, 2013 referencing the following:

> Request for Comments on Norman Rizk's and Richard Foster's Ground Water Use Permit Applications - New Use, Kaluako'i Ground Water Management Area, WUPA Nos. 00937 and 00977

In response to the comments we offer the following:

COMMENT:
Page 2, Paragraph 1:
Pumping brackish water from the Kaluako'i aquifer may reduce discharge into the nearshore marine area. *Although the applications reference salt water in one instance, it is not clear whether the applicants intend to pump brackish water or salt water, the latter of which would require deeper drilling. If the applicants intend to pump brackish water, OHA notes that pumping brackish ground water will likely reduce discharge into the nearshore marine area.[4] The closer to the shoreline that the ground water is pumped, the more concentrated the decrease in coastal discharge may be in the coastal area immediately downgradient from the well. Coastal discharge is critical to sustaining the livelihood of the abundant marine resources found off the coast of the Kaluako'i ahupua'a.*

> **REPLY:** The intent is to pump salt water. In previous wells in the vicinity there has not been any brackish water found. Only salt water.

EXHIBIT 8

COMMENT:
Page 2, Paragraph 2, 3, continued to Page 3:
The failure of the applicants to fulfill their burden to show that their water use will not abridge or deny constitutionally protected Native Hawaiian traditional and customary rights and practices provides the commission with sufficient grounds for immediate denial of the permit applications.[5] *This heightened burden requires more than a mere recitation that "there are no existing or pre-exiting Hawaiian gathering rights located within the boundaries of [the] property or other properties bordering [the] lot," a statement which itself is questionable. The application does not include any information on the research or inquiries that were performed to identify cultural resources and practices that exist in the immediate vicinity of the proposed well site or in the nearby nearshore area. Accordingly, it also does not include any information on whether these resources or practices would be impacted.* ***The Hawai'i Supreme Court has reversed commission decisions that were rendered without applicants showing that they met their burdens.*** *In one such case, In re Wai'ola O Moloka'i Inc., the Hawai'i Supreme Court made it clear that "the absence of evidence that the proposed use would affect native Hawaiian rights was insufficient to meet the" applicant's burden and held that the commission had erred in finding that the applicant had satisfied the requisite conditions to obtain a permit for a new use.*[6]

It is well known that the west coast of Moloka'i has historically been and continues to be an important place for Native Hawaiians. Although it was "sparely inhabited, Kaluako'i has several significant natural and cultural resources which Moloka'i residents utilized on a seasonal basis or for specific purposes[.][7] *Archaeological evidence, mo'olelo and traditional knowledge support that Native Hawaiians relied upon the coastline for fishing and gathering of marine resources. This continues to be the case today, as a substantial number of Native Hawaiian families on Moloka'i engage in subsistence living by fishing, diving, hunting and gathering land and marine flora and fauna for as much as 38 percent of their diet.*[8] *Subsistence is not only essential to Native Hawaiian people's diet and health, but also to the maintenance of the Native Hawaiian people's religious and spiritual relationship to the land and nearshore environment, and the perpetuation of their commitment to mālama 'āina.*[9] *Native Hawaiian practitioners have specifically identified the west coast, including the coastline closest to the applicants' proposed well site, as important subsistence sites. Furthermore, with little effort, we were able to locate known historic settlement villages of Kepuhi (Village of the Eel) and Pāpōhaku (the Stone Wall) not far from one of the applicants' parcels, increasing the likelihood that other resources and practices exist in these areas.*[10]

REPLY: The nearest known archaeological and culturally important site is more than 0.5 miles away from both properties. Each of the proposed well sites are located on private property which is fenced and occupied by the respective owners. There are nearby points of public access to the beach.

In the second paragraph, second line of the comment above it states *"sparely inhabited, Kaluako'i has several significant natural and cultural resources which Moloka'i residents utilized on a seasonal basis or for specific purposes[.]*[7]
The full quote from the source is "Although sparsely inhabited, Kaluako'i has several significant natural and cultural resources which the Moloka'i residents utilized on a seasonal basis or for specific purposes, as described below."[1] In the following pages of the report there are specific mentions of cultural resources.

- Kaiaka Rock - "This major outcropping between Kepuhi and Papohaku is home to a heiau facing Papohaku Beach and was used as an oservation tower for fishing and scouting purposes. Just below Kaiaka Rock, facing Papohaku Beach is a canoe heiau (Kaopuiki, 2005). Kaopuiki though is not sure of the name nor of any other such site located on the island. To the south of Papohaku Beach is Pu'u Koa'e, this area was used to strip the flesh of bodies prior to burial."[2]

[1, 2] McGregor. Davianna Dr .• Culturallmpact Assessment for the La'au Point Rural-Residential Development (2006) .

- This observation tower, canoe heiau and burial preparation area are far to the north of the subject property and would not be affected by the proposed well.

- Papohaku Stone Wall - This stone wall was erected to protect a burial site from being washed away by the waves. "The grave was on shore; when the tide was high, the waves would wash sand from the grave. Thus, in a very short time, the body would be exposed. In respect and remembrance, the chief ordered his men to build a stone wall about fifty feet long. All with gratitude of their fellow, the chief ordered the wall to continue for another two hundred feet. The chief himself put the last stone on the wall, saying as he did so, "I call this place Papohaku, 'Stone Wall.' " "[3]
  - The Papohaku Stone Wall is a monument to protect a burial site and is not known to be associated with any traditional gathering practices. It is therefore concluded it would not be affected by the proposed well.

According to the *Molokai Subsistence Task Force: Final Report – June 1994*, Pages 77-84[4], the maps as indicated by practitioners indicate there is no gathering down gradient from the proposed well sites other than fishing.[4]

The findings in the Wai Ola Case provide relevant information on the potential impact of the pumping of 8000 gallons per day of deep well source salt water on the marine resources of Papohaku Beach.

The findings were based on the pumping of 1.25 mgd of ground water and thus the impact would be less than that projected in the Wai Ola Case.
"Ground-water models showed that pumping 1.25 mgd of ground water would reduce ground-water flux to the nearshore area by about 3% to 15%. At that magnitude, the resultant change in salinity in the fishponds would be virtually indistinguishable from the initial values."

The above example indicates a virtually indistinguishable change in salinity at pumping 1.25 mgd of ground water. The proposed well intends to pump 8000 gallons per day of deep well source salt water. Not only is the proposed use not going to pump fresh or brackish groundwater, it is merely 0.0064% of the volume of water per day as the Wai Ola Case example. Based upon this rationale, it is not anticipated the proposed well will have any effect on a change in the salinity of the nearshore waters or affect the fish harvested from the nearshore areas.

Being that the proposed wells are intended to pump salt water from deep well sources and the relatively small amount being proposed, it is unlikely that there will be a decrease of salt water discharge into the near shore area. If there were a decrease of salt water discharge into the near shore area it would most likely remain unnoticeable due to the normal tidal variations and precipitation/evaporation.

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[3]McGregor. Davianna Dr .• Culturallmpact Assessment for the La'au Point Rural-Residential Development (2006) .
[4]The Governor's Moloka'j Subsistence Task Force Study (1994); Wai'ola 103 Hawai'i 401, 439 (2004).

COMMENT:
Page 3, Paragraph 2:
The ground water use permit applications raise other important issues and questions. OHA has questions about the applicants' plans related to the desalting process and the disposal of the brine. The proposed shrimp farm raises important questions about protection of our bird life and marine life from diseases and impacts from effluent discharging into the nearshore waters. Finally, the controversy over the source and transmission of fresh water for Kaluako'i residents, including the unpermitted pumping of Well 17 and the month to month lease of the Molokai irrigation system, highlight the need to identify and ensure planning for this community.

REPLY: The brine resulting from the desalting process will be disposed of via an injection well. No effluent from the desalting process will be discharged into the nearshore waters. The proposed shrimp/fish pond will be constructed with a geotex liner to prevent any water from seeping into the ground or effluent being discharged into the nearshore waters. Best management practices will be employed to keep the pond disease free and the pond will be monitored on a regular basis and any necessary corrective action will be taken immediately should a disease be found.
Although we appreciate the comments regarding the fresh water transmission, well 17 and the Molokai irrigation system, we feel they are not germane to the specific proposed well applications

CONCLUSION:
The intent is to utilize desalinated salt water for the purposes of irrigation, and untreated salt water for a fish pond. We appreciate the comments of the Office of Hawaiian Affairs and feel the items germane to the specific application of the proposed well have been addressed.

In a recently completed report for a similar well in the near vicinity, which has received all necessary statutory approvals, the salinity levels found were at readings above that of brackish water. We have attached the report and findings for your review.

If during the construction we encounter any brackish water we will disclose the findings and facts before the well goes into production and any desalination takes place. There has been no discovery of fresh ground water on the west end of Molokai whatsoever. All of the previously approved wells in the vicinity have found only salt water.

There is no limu in the vicinity of the proposed wells, no salt gathering activity, and the only fishing activity is in deep water. We would like to note that the proposed well site is over 1000 feet from the shoreline.

Thank you for your time in reviewing our response to the Office of Hawaiian Affairs comments.

Should you require any additional information about this project, please contact me at the above address or by my cell phone 808 870 3499.

Sincerely,

Luigi Manera

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

APPLICATION FOR GROUND WATER USE PERMIT FOR *PROPOSED NEW USE* IN A DESIGNATED GROUND WATER MANAGEMENT AREA

FORM GWUPA-N

☒ Application for New Use
☐ Application to Modify WUP No. _____

For Official Use Only:

RECEIVED
09/13/13
COMMISSION ON WATER RESOURCE MANAGEMENT

For detailed instructions on filling out this application form completely, refer to the attached instructions. Incomplete applications will not be accepted for processing.

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) with source location labeled and include the name of the quad map.
- Property tax map, showing source location referenced to established property boundaries.
- Photograph(s) of the source(s) and location(s) of proposed end use(s), if applicable.

APPLICANT INFORMATION

Note 1: In accordance with HRS § 174C-51(1), the landowner shall be the joint applicant in the event the applicant is a lessee, licensee, developer or any person with a terminable interest or estate in the land that is the water source of the permitted water.

1. APPLICANT'S INFORMATION			2. SOURCE LANDOWNER'S INFORMATION		
Name/Company Norman Rizk	Contact Person same		Name/Company Norman Rizk	Contact Person same	
Mailing Address PO Box 71 Maunaloa, Hi 96770			Mailing Address PO Box 71 Maunaloa, HI 96770		
Phone 650-996-0127	Fax 650-725-7368	E-mail Nrizk@stanford.edu	Phone same	Fax same	E-mail same

SOURCE INFORMATION

3. ISLAND
Molokai

4. GROUND WATER MANAGEMENT AREA	4A. SUSTAINABLE YIELD FOR ITEM 4 MGD

5. SOURCE INFORMATION
Attach additional sheets, if necessary.

Well Number (if known)	Well Name	Existing or Proposed?	TMK (zone - section - plat - parcel)	Flowmeter installed?
		Proposed	5 - 1 - 006 - 072	☐ Yes, date installed ___/___/___ ☒ No
			___ - ___ - ___ - ___	☐ Yes, date installed ___/___/___ ☐ No
			___ - ___ - ___ - ___	☐ Yes, date installed ___/___/___ ☐ No
			___ - ___ - ___ - ___	☐ Yes, date installed ___/___/___ ☐ No
			___ - ___ - ___ - ___	☐ Yes, date installed ___/___/___ ☐ No
			___ - ___ - ___ - ___	☐ Yes, date installed ___/___/___ ☐ No

PROPOSED USE INFORMATION §§174C-51(4), (5), (6), HRS

6. TOTAL QUANTITY OF WATER REQUESTED: In the space below, enter total from Box M in Item 11 (Table 1) of this application.
15,000 gallons per day, averaged over 1 year

7. PROPOSED USE(S): Check all that apply.
☒ Agriculture ☐ Domestic ☐ Industrial
☒ Irrigation ☐ Military ☐ Municipal

8. LOCATION OF PROPOSED WATER USE(S): Show the location of the proposed use on the same USGS and TMK maps as the proposed source location. Otherwise, attach similar maps. See Item 11 (Table 1, column B) of this application.

Note 2: 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. Further, 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 is subject to any existing legal uses, changes in sustainable yields and instream flow standards, reserved uses as defined by the Commission, and Hawaiian Home Lands' future uses; and ***(3) the applicant is responsible for paying the public notice fees associated with this application.*** Additionally, as stated in Note 1, above, HRS § 174C-51(1) the landowner shall be the joint applicant in the event the applicant is a lessee, licensee, developer or any person with a terminable interest or estate in the land that is the water source of the permitted water.

9. APPLICANT		10. SOURCE LANDOWNER/JOINT APPLICANT (if applicable)	
Norma W. Rizk		Susan D Smith	
Signature		Signature	
NORMAN WADE RIZK	9/2/11	SUSAN DANA SMITH	9/2/11
Print Name	Date	Print Name	Date

EXHIBIT 9

PROPOSED NEW USE OR MODIFIED USE INFORMATION

11. TABLE 1: LAND USE CONSISTENCY / EFFICIENCY OF USE (Attach additional copies, if necessary.)

LAND USE CONSISTENCY						EFFICIENCY OF USE			
A	B	C	D	E	F	G	H	I	J
PURPOSE / WATER USE CATEGORY (See the instructions for water use category descriptions.)	TMK FOR PROPOSED LOCATION OF USE ATTACH THE FOLLOWING: • Property tax map, showing proposed location of use referenced to established property boundaries. • Photograph of the area of proposed use.	STATE LAND USE DISTRICT	CDUP REQUIRED? Check the appropriate box, and write in the date approved, if applicable.	COUNTY ZONING CODE	SMAP REQUIRED? Check the appropriate box, and write in the date approved, if applicable.	UNITS OR NET ACREAGE	GPD/UNIT or GPD/ACRE	QUANTITY OF USE (GPD)	JUSTIFICATION FOR QUANTITY OF WATER REQUESTED (If applicable, attach additional sheets showing how the quantity was calculated.) For irrigation uses, fill in Table 2.
USES THAT REQUIRE POTABLE (DRINKING) WATER									
	__ - __ - __ : __ (zone, sector, plat, parcel)		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No				
	__ - __ - __ : __ (zone, sector, plat, parcel)		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No				
	__ - __ - __ : __ (zone, sector, plat, parcel)		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No				
	__ - __ - __ : __ (zone, sector, plat, parcel)		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No				
							TOTAL POTABLE USE	K	GPD
USES THAT DO NOT REQUIRE POTABLE WATER									
AGRCP	5 - 1 - 006 : 072 (zone, sector, plat, parcel)	AG	☐ Yes, date approved: / / ☐ Yes, not acquired ☒ No	AG	☐ Yes, date approved: / / ☐ Yes, not acquired ☒ No	1 Acre	~5000*	5000	35,000 GALLONS OF WATER/WEEK/ACRE
IRRLA	5 - 1 - 006 : 072 (zone, sector, plat, parcel)	AG	☐ Yes, date approved: / / ☐ Yes, not acquired ☒ No	AG	☐ Yes, date approved: / / ☐ Yes, not acquired ☒ No	4 Acre	~2500**	10,000	17,500 GALLONS OF WATER/WEEK/ACRE
	__ - __ - __ : __ (zone, sector, plat, parcel)		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No				
	__ - __ - __ : __ (zone, sector, plat, parcel)		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No		☐ Yes, date approved: / / ☐ Yes, not acquired ☐ No				
							TOTAL NON-POTABLE USE	L 15,000	GPD
TOTAL QUANTITY OF WATER REQUESTED (sum of total potable use and total non-potable use) =								M 15,000	GPD

Please explain if there are any limitations (e.g., legal, contractual) on the proposed water use(s) described in Table 1. Ref. HRS § 174C-51(5).

* Based on 2000 gpd/acre before desalination. Sparsely placed citrus trees not in commercial production explains water demand lower than UH/CTAHR models.

** Based on 1000 gpd/acre before desalination. Xeriscaping, gravel, sparsely placed native & drought tolerant plants explains water demand lower than UH/CTAHR models.

PROPOSED NEW USE OR MODIFIED USE INFORMATION (continued)

12. TABLE 2: IRRIGATION INFORMATION

List all crops that will be grown, including landscape and golf course irrigation uses. Copy Table 2 and attach additional sheets to complete your list, if necessary.

A TMK FOR PROPOSED LOCATION OF USE ATTACH THE FOLLOWING: • Property tax map with an outline around the area of each proposed irrigation use listed in this table. • Photograph of the area of each proposed use.	B CROP	C TOTAL ACREAGE	D NET IRRIGATED ACREAGE	E BEGIN GROWTH PERIOD (month)	F END GROWTH PERIOD (month)	G IRRIGATION SYSTEM (refer to instructions)	H IRRIGATION PRACTICE (refer to instructions)	I COMMENTS (Continue comments below, if more space is needed.)
5 - 1 - 006 : 072 zone sector plat parcel	CITRUS, FRUIT TREES	5.952	1	ONGOING	ONGOING	TRICKLE,SPRAY	IRRIGATE TO FIELD CAPACITY	
5 - 1 - 006 : 072 zone sector plat parcel	LANDSCAPING	5.952	4	ONGOING	ONGOING	MULTIPLE SPRINKLERS	IRRIGATE TO FIELD CAPACITY	
zone - sector - plat : parcel								
zone - sector - plat : parcel								
zone - sector - plat : parcel								
zone - sector - plat : parcel								
zone - sector - plat : parcel								
zone - sector - plat : parcel								
zone - sector - plat : parcel								
zone - sector - plat : parcel								

Comments (continued from Column I). Please clearly indicate the crop (i.e., the row in table) these comments relate to.

OTHER PERTINENT INFORMATION

13. TABLE 3: ALTERNATIVES ANALYSIS

	A. Analysis of *potable* alternatives Attach additional sheets if necessary.	B. Analysis of *non-potable* alternatives Attach additional sheets if necessary.
Municipal sources		N/A
Wastewater reuse		No wastewater reuse is available in the area owned by Molokai Ranch
Ditch system		There is no existing ditch system
Desalinization		This is the proposed system of use. It will take 2.5 gallons of well water to produce 1 gallon of fresh water
Surface water		No surface water present
Conservation Measures		Drip irrigation to be used on fruit and ornamental trees, drought tolerant plants installed, large shade trees (monkeypod, royal poincietta) minimize sun-induced losses. Naupaka hedge doesn't require irrigation.
Other (specify)		N/A

14. PUBLIC INTEREST

§174C-2(C), HRS states: *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 how the proposed new use(s) in your application are consistent with the public interest.

An independent water source will be created and utilized for irrigation (non-potable) purposes

15. INTERFERENCE WITH THE RIGHTS OF THE DEPARTMENT OF HAWAIIAN HOME LANDS

Explain how the proposed new use(s) of water will not interfere with the rights of the Department of Hawaiian Home Lands, as provided in section 221 of the Hawaiian Homes Commission Act.

The property is located in excess of 10 statute miles from Hawaiian Homelands properties. There are no existing or pre-existing Hawaiian gathering rights located within the boundaries of this property or other properties bordering this lot. No water for the irrigation of the above referenced trees will be taken from any fresh water aquifer currently in use designated for the betterment of the Hawaiian population. All lands intended for the production of fruit are currently designated as agricultural.

16. INTERFERENCE WITH ANY EXISTING LEGAL USES

Explain how the proposed new use(s) of water will not interfere with any other existing legal use(s) of water.

There is no ground water or surface water available for use or present in the area. Salt water will undergo a desalinization process to produce water for irrigation.

17. PUBLIC WATER SYSTEM INFORMATION

Check the appropriate box or boxes.

☒ PUC-Regulated Private System / ☐ Non-PUC-Regulated Private System / ☐ Not a Public Water System

☐ Intended dedication to Honolulu Board of Water Supply or to County of Maui, Department of Water Supply.

ARCHITECTURAL DRAFTING SERVICE
P.O. BOX 1718
KAUNAKAKAI, HI 96748
Phone: (808) 553-9045 - Fax: (808) 553-3952 - Mobile: (808) 870-3499
Email: luigis@hawaiiantel.biz

September 13, 2013

State Of Hawaii
Department of Land and Natural Resources
Commission on Water Resource Management
Attention: Charley Ice
P.O. Box 621
Honolulu, Hawaii 96809

Subject: Re-Submit of
Ground Water Use, Well Construction/Pump Installation Permit Applications for:

- GWUPA 00977
  Well No. 0916-002, Kaluakoi, Island of Molokai
  Mr. Richard Foster
  P.O. Box 1949
  Kaunakakai, HI 96748

- GWUPA 00937
  Well No. 1015-001, Kaluakoi, Island of Molokai
  Mr. Norman Rizk
  P.O. Box 1949
  Kaunakakai, HI 96748

Dear Mr. Ice,

Thank you for the opportunity to re-submit our applications to be heard at the October 16, 2013 CWRM meeting.

The owners would like to explain their motivation in asking for approval of the above mentioned well permits. The reasons are as follows:

- Fear of Loss of Water Supply. The owners are concerned that at some point in the future the existing source providing water will become unavailable. This is a very real possibility being that there are several unresolved issues between the current water operator, DHHL and the PUC. Should these issues remain unresolved and a judgment against either party is issued that would cause them to be without access to water, they desire to maintain their respective property in its current state as they have invested substantial resources in landscaping and citrus trees.
- Elevated Water Rates. Due to the elevated water rates, the owners expend substantial financial resources to maintain his landscaping and citrus trees. Since there is no guaranteed stability in the water rates they want to ensure they are able to maintain their respective property in its current state with a reliable water source.
- Removal of Burden from DHHL. The owners both believe in practicing sustainability and in utilizing the salt water well and desalination process, they will actually be removing a water draw burden from the wells and other water sources that benefit DHHL and it's beneficiaries. Since there is no physical connection between the aquifer supplying DHHL and the proposed source of basal lens water, there will be an equal amount of surplus water left in the fresh water aquifer as being utilized for fresh water irrigation purposes on each owners property.

EXHIBIT 10

Additionally, we met with Dr. Daviana McGregor on July 18th 2013 to discuss the comments and concerns raised in the original OHA and DHHL letters to CWRM. Dr. McGregor provided us with the information and reference sources cited in both of the letters. On July 1, 2013 we prepared and sent a response to CWRM regarding the DHHL letter. On July 24, 2013 we prepared and sent a response to CWRM regarding the OHA letter, but it was not received until after the commission meeting on July 17th 2013. The objections raised in the July 17, 2013 OHA comments in OPPOSITION to water use permit applications No. 937 and No. 977 were addressed in our July 24 2013 reply. We completed an exhaustive and complete analysis of all the information provided to us, which is the same information cited in the DHHL and OHA letters and are confident that there will be no impact to Native Hawaiian traditional and customary practices, nor any impact to DHHL or its beneficiaries.

Should you require any additional information about this project, please contact me at the above address or by my cell phone 808 870 3499.

Sincerely,

Luigi Manera

WEST END PROJECT

FOR

Luigi Manera

Desalinization/Integrated Aquaculture Facility

- Industry Protocol:

In the aquaculture industry, there is no better way to start a business than to initially design your facility following strict disease-free protocols. One of the main issues, especially in these times, is securing a reliable source of water. With the rise of pollutants in the rivers, lakes and ocean today, implementing measures to protect water quality is extremely important for aquaculture. A well source provides the best protection from surface contamination, and provides the most control.

Twenty years ago, the Oceanic Institute gathered a team to research and collect pathogen free shrimp from the wild. They targeted White Shrimp, scientific name *Litopenaeus Vannamei*, from the Gulf of Mexico. They successfully collected sixty-eight pathogen free families of shrimp. Currently, pathogen free shrimp cannot be found in the wild. All shrimp in the wild are affected by pathogens including the Gulf area. These worldwide viruses are directly related to surface contamination, or pollutants that change water quality.

- Disease prevention:

The key component to maintaining a disease free facility is implementing a well water source. A completed well includes housing over the well, which limits access, but includes a removable skylight for maintenance. Electrical panels and pump motors for the well are maintained inside the pump house structure. This will protect the well from outside contamination. Pathogen free farms that use a well source are highly recommended as a source for certified pathogen-free broodstock shrimp or post larvae shrimp.

Common daily practices that prevent diseases, and should be implemented into every disease-free protocol are disinfection and chlorination prior to entry of any facility. All

EXHIBIT 11

vehicles that enter the facility are required to go through a wash-down station prior to entry. Any seafood purchased from the store, or caught off premises must be contained properly, and not allowed near any open water sources. Also, any fishing gear that was used in the ocean cannot be allowed to enter the facility, unless properly disinfected and chlorinated prior to entry.

- Disease Education:

Being one of the first disease free farms in the world, we were required by the State to test our facility every 6 months to maintain a State certified disease-free status. State Aquatic Veterinarians collected random samples and tested for pathogens like Infectious Hypodermal and Hematopoietic Necrosis Virus (IHHN), Taura Syndrome (TSV), White Spot Virus (WSV), and Yellow Head Virus (YHV). Farms that passed these tests received a license to sell broodstock and post-larval shrimp. Our certified pathogen-free status gave us the opportunity to assist large shrimp companies around the globe to restart their shrimp production after being affected by pathogens.

Although Molokai is considered disease-free, and there have been no documented cases of infected shrimp on island, the imported shrimp found in markets have tested positive. In the mid 90's, the State Department of Agriculture, Aquatic Veterinarian tested random samples of imported shrimp and discovered traces of various shrimp pathogens in the product. A call was made to initiate a ban on imported shrimp to prevent further contamination of Hawaii's shrimp farms. Because there is no impact to consumers, the State did not implement restrictions on the importing of shrimp products. As a result, having a source of pathogens through imported shrimp is a risk that warrants implementation of these strict protocols.

- Water Quality Management:

Seventy-five percent of all aquaculture success is water quality management. Part of daily maintenance is managing salinity, alkalinity, nitrogen, PH, and dissolved oxygen levels in a system. Proper water quality management promotes healthy animals, as well as promotes proper algae culture. This is an important part for growing any aquatic species, as it serves as a supplemental food source.

- Sustainability:

  Molokai has been trying to move in the direction of diversified agriculture to produce food for our island for years. Integrating a small desalinization plant with an aquaculture component, can be a very successful project. This combination of these components will enhance both features by creating a system which is efficient and sustainable for the life of the project.

- Facility overview:
  1. Site selection
     - Water Temperature 28° C
       - The proposed site is warm enough to grow shrimp, fish, and bi-valves
     - Soil test will determine how you build your facility
       - Pond Liners
       - Above ground tanks
       - Raceway system
  2. Well Source
     - Well Salinity = 17 ppt
     - Bi-product salinity = 30 ppt
     - Desalinization ratio is 2.5 gallons of well water @ 17ppt, can produce 1 gallon of fresh water
  3. Aquatic Species – Shrimp, fish, algae, bivalves, salt

- Closed aquaculture system:

  There are many closed systems today that can be created by filtering nitrogen from discharged or effluent water. In freshwater systems, extracted nitrogen can be captured and processed into fertilizer. For salt water systems, extracted nitrogen must be first processed through a fresh water rinse, and then processed for fertilizer. After the nitrogen is filtered out, the water is re-used within the system. Circulating water mixed with aeration will eliminate high nitrogen levels, and stabilize water quality. Seaweed cultures act as natural "scrubbers" for nitrogen rich effluent water, by naturally removing nitrogen. The seaweed can then be sold as a by-product. Seaweed and bivalves are great natural "scrubbers" and provide natural filtration within the system. They also impact the feasibility of the project, by providing a sellable by-

product and no cost filtration system. Seaweed and bivalves also enable zero waste in a low density system.

- Desalinization Plant with Aquaculture:

  This desalinization plant will Produce (1) one gallon of fresh water, and the by-product equals (1.5) gallons of 30 ppt water. This is a perfect match to cultivate shrimp, fish, seaweed, bivalves and or other aquatic species. Ocean strength salinity is 35 ppt. Having access to water sources of different salinities is highly beneficial to an aquaculture facility. (Example: As the salinity rises in a system due to evaporation, water with lower salinities can be used to dilute the balance in a system.) Higher salinities can be used for producing high quality salt. Molokai Salts is producing high quality salt by filtering ocean water, which is very cost effective. By using the by-product of desalinated water, we can partner with salt farmers to provide another source of filtered salt water, or we can produce our own salt.

- Re-circulative system:

  With lined ponds and raceways, the water will always be circulated by aeration pumps and diffusers. Low stocking densities are implemented to reduce nitrogen levels in a system for best management practice. Cultivating micro-algae is used to filter nitrogen levels within the system. Micro-algae and sawdust can also be used to break down and neutralize anaerobic bacteria. Natural enzymes in the sawdust act as a neutralizer in aquaculture to breakdown bacteria. To maintain a sustainable system, we must introduce bivalves as additional natural filters. This design provides for cleaner water that after processing through a charcoal, sand or micro-filter can be either discharged or re-circulated in the system.

- Aquaculture Background & Experience

  D & J Ocean Farms, Inc.

  Through my 20 years of experience in the field of aquaculture, I have cultivated many different species. This included marine shrimp *(Litopenaeus vannamei)*, seaweed, better known as "ogo" *(Gracilaria parvispora)* and various fish species. Our system was designed to incorporate all three types of species into a fully integrated system. We

integrated the first round pond design system ever used in aquaculture. The design ensured the highest quality water, which provided higher yields in a smaller area, and high quality products. The effluent water was also used to cultivate the ogo, which became a no-cost by-product for market. Our ogo was sold to various wholesale markets throughout Hawaii. We developed a system that was able to supply approximately 3000 pounds of ogo per week to market.

Our main product, marine shrimp, was sold as fresh Molokai shrimp in many restaurants and markets throughout Hawaii. Because of our certified disease-free status, we were also able to sell broodstock, and post-larval shrimp to farms in Hawaii, the U.S. Mainland, South America and Asia. The superior quality of our shrimp helped us enter the Japanese market, which is exclusive to only the highest quality seafood.

Because of our success and expertise in the shrimp grow-out business we were constantly sought out for consultation on design and production. We helped create and implement disease-free protocols for various companies internationally. We also helped design whole aquaculture systems for new facilities that were to be built in India.

We partnered with Oceanic Institute in conducting research for their Fin Fish program. We opened up our facility for the studies on the beginning stages of tank culture for moi (pacific threadfin) production. The information gathered from that study was later used to implement moi tank culture in Hawaii. We also used our facility to hold disease free shrimp collected by Oceanic Institute, to study grow-out of post larval white shrimp in nursery tanks and earthen ponds. We also worked with the Oceanic Institute to collect various Hawaiian deep sea fish species, such as Opakapaka, Onaga, Ehu, and Weke Ula, for a study in rearing these fish to supplement wild stocks that were impacted by overfishing.

Main areas of expertise:

- Plan design
- Permitting
- Construction
- Production

References:

- Dr. Robert Howerton, Aquaculture Extension Specialist – UH Sea Grant
- James N. Sweeney, President – Kauai Shrimp
- Dr. Clyde S. Tamaru, Extension Specialist - University of Hawaii CTAHR

RESUME

Desmund J. Manaba

P.O. Box 1856 Kaunakakai, HI 96748
(808) 553-5172
(808) 646-0853
desmundmanaba@yahoo.com

PROFILE

LIVESTOCK AND EXOTIC GAME EXPERIENCE:

- Over 18 years experience in farming axis deer
- Highly knowledgeable in herd management and cultivation of various species including axis deer, Indian blackbuck, wild boar and domestic pigs
- Construction and design of high game fences, trap gates, feeders and irrigation systems for axis deer
- Extensive research in Hawaii, Texas and Florida on axis deer habitat
- Research and development of marketing axis deer with a national and international customer base
- Developing a controlled breeding program utilizing pen-raised axis deer, and knowledgeable of gestation periods of wild axis deer populations
- Research done on wild deer herds during extreme drought conditions, and environmental damage due to axis deer
- Implemented holistic management and permaculture design to reverse environmental impacts caused by axis deer

AQUACULTURE EXPERIENCE:

- Over 20 years experience as Vice-President, owner and operator of corporate business
- Highly knowledgeable in cultivation of various aquatic species including marine shrimp, seaweed, fish and crab
- Managed disease free aquaculture facility specializing in producing certified pathogen-free aquatic species
- Hatchery technician work for breeding aquatic species
- Extensive experience in marketing, with a national and international customer base
- Strong background in construction and designing of aquatic facilities, with emphasis on heavy equipment operating
- Construction experience in masonry, plumbing, permitting, carpentry, and general contracting
- Established an environmental non-profit organization focusing on ocean and land restoration, and conservation
- Performed disease free aquaculture consultant work with various facilities worldwide
- Partnership research with Oceanic Institute for shrimp and fish grow-out
- Collecting, treating and shipping of sharks and sting-rays to aquariums in Hawaii and Guam

EXPERIENCE

A. Trigon Energy Ventures, LLC 2010 – Present
Independent Consultant

- Presenting solar system solutions to communities in Hawaii, at both State and County levels
- Coordinate key contacts for local solar projects
- Developing power purchase agreements with local utilities

B. Kamehameha Environmental, LLC 2008 – 2010
Independent Consultant

- Presenting waste management technologies to various locations worldwide
- Coordinate key contacts for environmental technology presentations
- Developing power purchase agreements with local utilities NUG forms

C. DJC Ranch, Inc. 2007 – Present
Owner & Operator

- Performs daily maintenance of ranch, fence lines, animals, etc
- Responsible for value-added food product development
- Handles all marketing, for farm products, as well as agri-tours

D. D & J Ocean Farm, Inc. 1986 – 2008
Vice-President, Owner, Manager

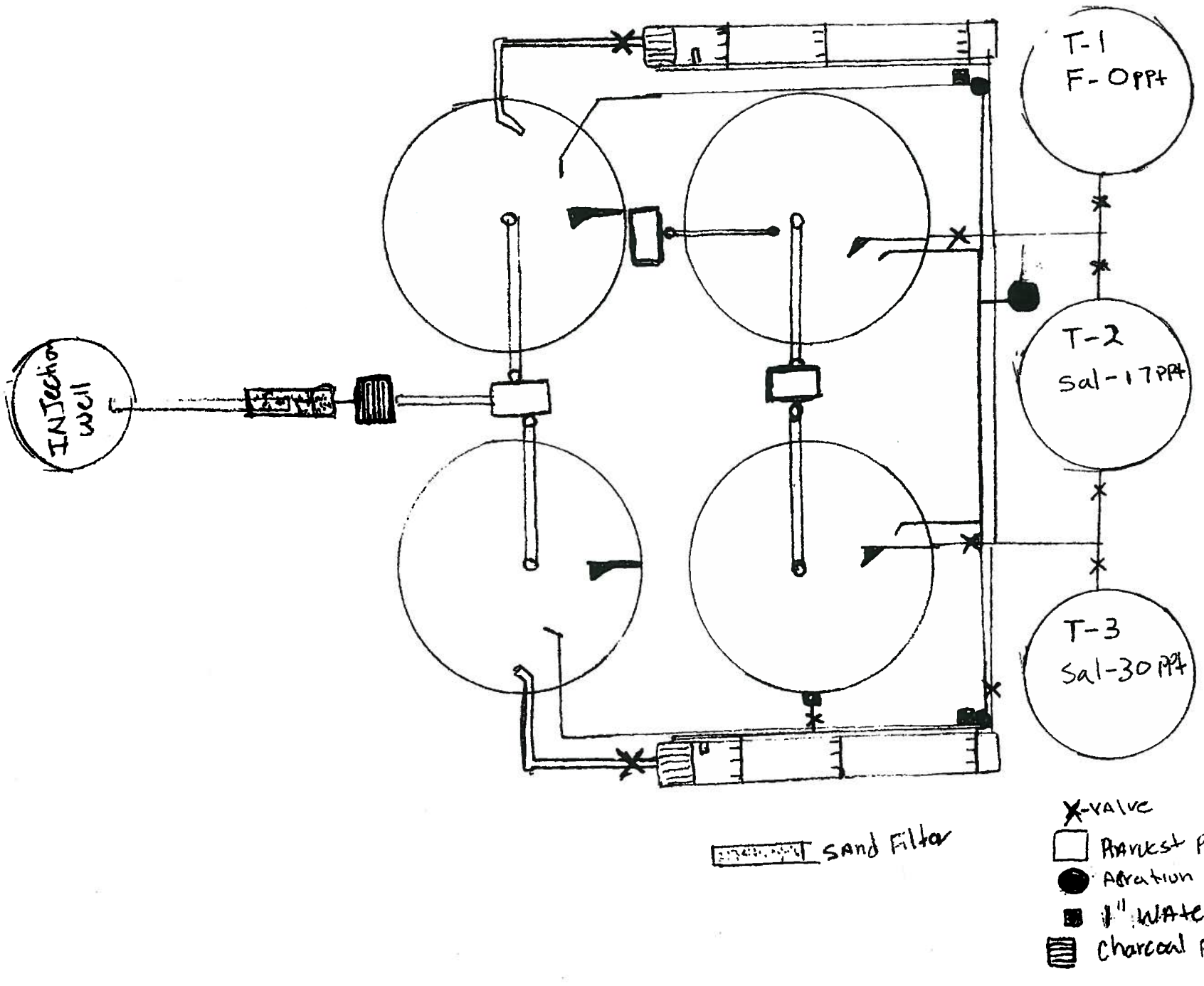
- Established business as the first aquaculture farm in Hawaii to utilize a round-pond design system, which proved to be optimal for animal health and growth rates.
- Built entire facility from ground up, including initial groundwork, building design and construction, in-ground pond design and construction.
- Responsible for all facets of aquaculture facility management, including hatchery management, grow-out of various aquatic species, harvesting, packing and shipments, daily maintenance, personnel supervision, security, etc.
- Handled all marketing and customer accounts, including local, national and international markets. (Customer locations: China, Taiwan, Singapore, Thailand, Jamaica, Vietnam, Korea, Malaysia, Iran, Ecuador, India, Texas, Florida, California, and Hawaii)
- Created an independent non-profit organization to promote responsible and sustainable community aquaculture projects *(KHM INTERNATIONAL)*, and facilitated obtaining $750,000 in grant funds from Washington to support this project
- Revitalization of ancient Hawaiian fishponds
- Stock enhancement program for Hawaiian fishponds
- Community and schools education and interaction in fishpond workshop, and provided aquaculture-based educational tours of farm to promote business, sustainable aquaculture and environmental responsibility to various schools throughout Hawaii (Preschool, K-12, and college students)

EDUCATION

Hawaii Pacific University, *Honolulu, HI* 1983 – 1984
Liberal Arts courses

Merced Junior College, *Merced, CA* 1982 – 1983
Liberal Arts courses

Mid-Pacific Institute, *Honolulu, HI* 1979 – 1982
High School Diploma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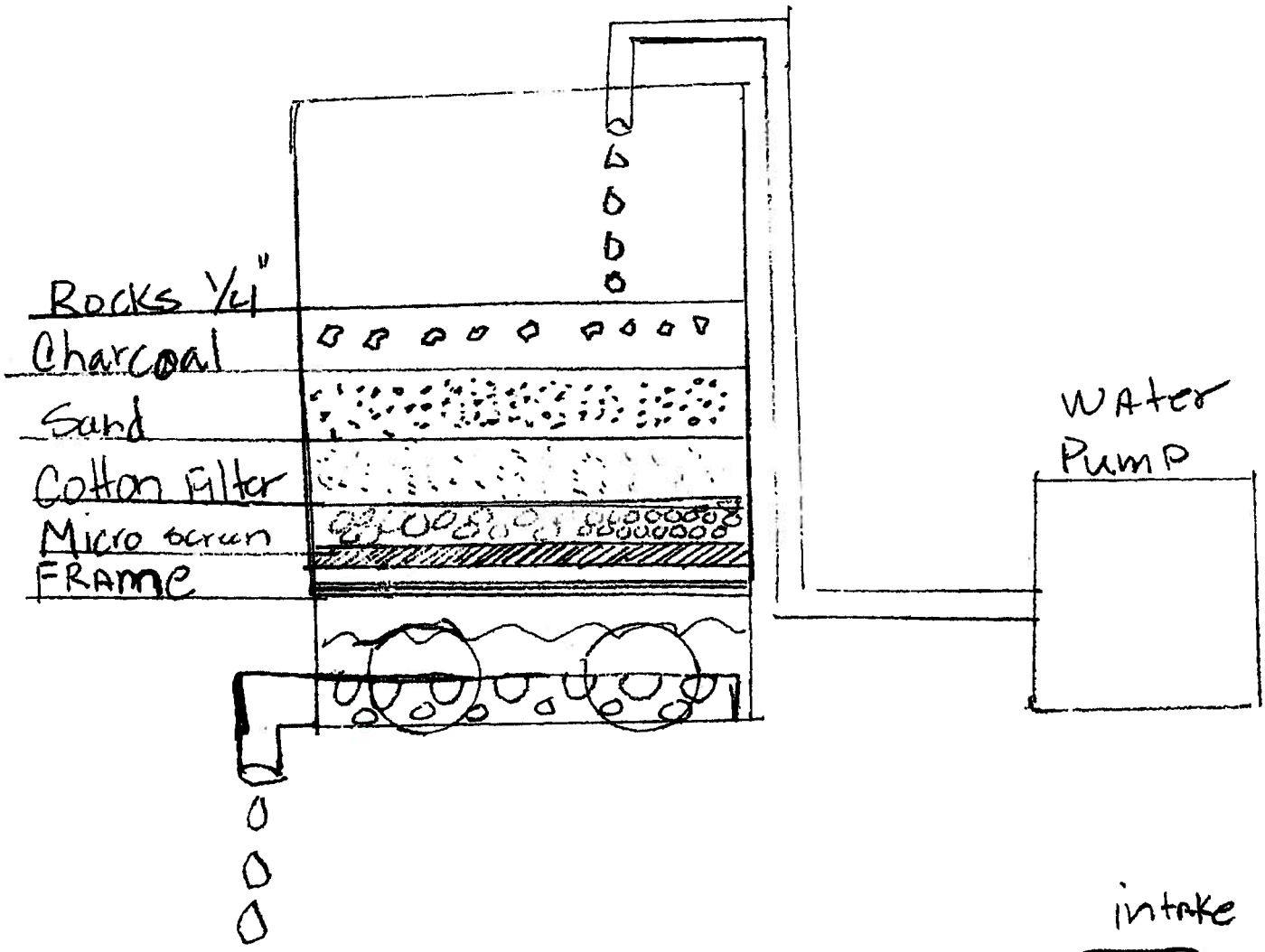
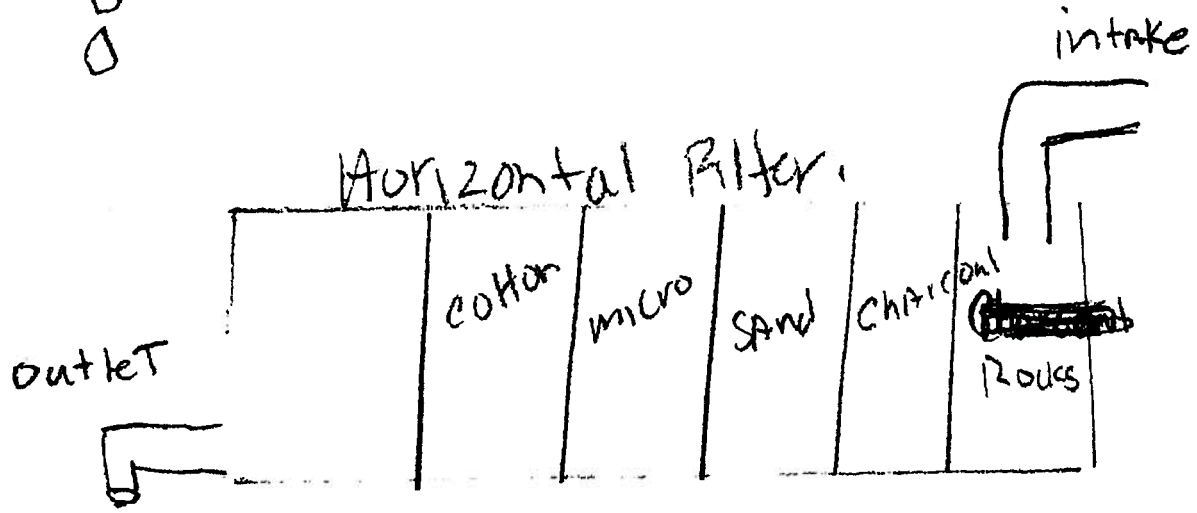
Harvest Pump
Aeration Pump
1" water Pipe
Charcoal Filter

Vertical Filter





OCTOBER 16, 2013

TESTIMONY – ADOLPH HELM

P.O. BOX 391, HOOLEHUA, HI 96729

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

COMMISSION OF WATER RESOURCE MANAGEMENT

SUBJECT: Water Use Permit Applications (WUPA NO. 977 and WUPA NO.937) Kaluakoi Ground Water management Area

POSITION: Request to Approve Application

Aloha: Chairperson William J. Aila Jr, and Fellow Commission Members.

My name is Adolph Helm and I was born and raised on Molokai and live on the Homestead Lands of Ho'olehua with my Ohana. I have over 30 years of farming experience in all types of farm practices including water system design and installation, managing a potable and non potable private water system, former Chairman of the Molokai Irrigation System Advisory Board, former Co-Chair of the Maui County Board of Water Supply and a member of the Molokai Water Working Group.

Not having an adequate as well as affordable supply of water on Molokai prevents many residents as well as farmers to grow more food and agriculture crops on the island.

Mr. Rizk and Mr. Foster's ability to think out of the box and seek innovative approaches to the water challenges on Molokai is to be commended. The salt water they are planning to withdraw from the aquifer and the fresh water quantities derived from the desalination process I feel are insufficient amounts to impact others, the environment and Native Hawaiian rights.

I would hope as commissioners you would encourage and support such forward and innovative thinking to the water issues on Molokai and humbly ask you to approve WUPA NO. 977 and WUPA NO.937.

Mahalo,

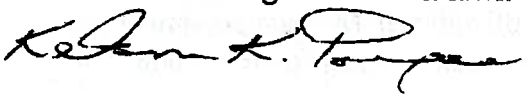
Adolph Helm

EXHIBIT 12

Desalination:

After a site visit to the project area I don't see any way in which this project can have a negative impact on fishing activity adjacent or near to the proposed sites. I have lived on Molokai all of my life and I've also been a fisherman all my life. My present work status is retired from Maui county fire department and I spend most of my time educating communities about conservation and preservation of our natural resources (focusing on marine resources). I am also a firm believer in keeping Molokai, Molokai and I feel this project is a good example that can help us to improve our relationship with nature while moving forward towards sustainability. The potential for desalination as a viable water source that can alleviate the overburdened water system is a worthy consideration in itself. The way in which we manage this potential potable water source needs to be worked out for appropriate and not exploitative usage.
Condemnation of these desalination projects will not allow us to learn or reap the benefits that this project can potentially offer.

Kelson K. Poepoe
Resource Manager: Hui Malama o Mo'omomi



recd at CWRM via email
23 October 2013

EXHIBIT 13