TO: Y. SHIROMA  
F. Ching  
R. Jinnai  
M. Ohye  
I. Kunimura  
S. Swanson  
S. Kokubun

INIT: Lenore

PLEASE: See Me  
Call  
Review & Comment  
Take Action  
Investigate & Report  
Draft Reply  
Acknowledgment Receipt  
Type Draft  
Type Final  
Xerox copies

FOR YOUR: Approval  
Signature  
Information

DATE: 11/6/84  
FILE IN: 2153-07-08

REMARKS:

Ed - WUP approved for 0.609 mgd on 9/11/81.

-365-day moving average is:

0.410 mgd as of 12/93 from reported monthly water use.

Ranji's from 0.31 to 0.42 mgd.

Actual use is about 1/2 to 2/3 of permitted use.

Pump capacities not available in well index, but registration/declared forms list 1300 gpm capacity for both pumps.

Lenore - please call Kathy B. and give her info. Thanks, Ed

I called Kathy & gave her the info. can we file this titled a water...
Doing EIS for Tripler Hospital Expansion

1. Would like to verify their existing use to see if they are using all of their allocation — or whether they will need to request more. 0.31 to 0.42 mgd exist. 
   a. She said that they don't have meters therefore they just use their pump capacities which would indicate there is no extra available.

2. Can we check if they are submitting monthly water use reports? Yes.

3. Can we verify that their allocation is 0.609 mgd? Yes.

4. Can we verify their existing wells pump capacities are 2-1300 gpm. Yes.

   Thanks

   EH

Note: Other Water Hgmt Plan shows use of 0.36 - 0.40 mgd (attached sheet)
## EXISTING WATER USE
### BY AQUIFER SYSTEM

<table>
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<tr>
<th>USER</th>
<th>SOURCE</th>
<th>WELL NO.</th>
<th>TOTAL AUTHORIZE USE (MGD)</th>
<th>80-88 USE (MGD)</th>
<th>85-89 USE (MGD)</th>
<th>1990/LATEST USE (MGD)</th>
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**TOTAL -- KALIHI**

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TO ____________________________

DATE June 17, 1981 TIME ______

WHILE YOU WERE OUT

Mr. __________________________
of U.S. Army at Schofield
Phone __________________________

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<tr>
<th>TELEPHONED</th>
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<tr>
<td>CALLED TO SEE YOU</td>
<td>WILL CALL AGAIN</td>
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<tr>
<td>WANTS TO SEE YOU</td>
<td>URGENT</td>
</tr>
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Message: Well No. 2092-09
well is located in a tunnel
and has been unused for years.

Operator
WATER USE PERMIT NO. 029

This report has been prepared in accordance with 13-171-22(b) of the Hawaii Revised Statutes requiring a 20-year review of issued water use permits to determine permit compliance. Following is a summary of permit information, site characteristics, methodology, findings, and recommendations for this State permit file.

**Permit Information**

| Water User: | United States Army  
| U.S. Army Support Command  
| Fort Shafter, HI 96858 |
| Landowner of Source: | United States Army  
| U.S. Army Support Command  
| Fort Shafter, HI 96858 |
| Permitted Withdrawal Rate: | 0.609 mgd (Based upon a 12-month moving average) |
| Water Management Area: | Moanaloa |
| Island: | Oahu |
| Aquifer Sector/System: | Honolulu/Moanaloa |
| System Sustainable Yield: | 18 mgd |
| Water Type: | Fresh, Potable |
| Original CWRM Date: | September 11th, 1981 |
| Standard Conditions: | 20 |
| Special Conditions: | 51 |

**Water Source**

| State Well Number(s): | 2153-07, 2153-08 |
| Well Name: | Tripler |
| Water Source TMK Number(s): | 1st Division, 1-1-029:019 |
| State Land Use Classification(s): | Urban |
| County Zoning Classification(s): | R-7.5 |
| Geographical Coordinates: | Well No. 2153-07 (Well 1): Latitude 21° 21' 05.0" North  
| | Longitude 157° 53' 36.1" West |
| | Well No. 2153-08 (Well 2): Latitude 21° 21' 05.2" North  
| | Longitude 157° 53' 35.8" West |
End Use
- End Use TMK Number(s): 1st Division, Various
- State Land Use Classification(s): Various
- County Zoning Classification(s): Various
- Beneficial Use Explanation: Domestic water use for the Tripler Army Medical Center (hospital, housing, etc.)

Background Information
Water has been drawn from State Well Nos. 2153-07 and 2153-08 since at least the early 1980's. Records indicating use prior to that date are unavailable. Consistent water use reporting records are available up until March of 2006, when reporting was abruptly halted. The permittee's 12-month moving average had not exceeded the permitted amount of 0.609 mgd during that time. There are no salinity records on file for State Well Nos. 2153-01 or 2153-08. Reference the permit file for additional information on reporting history.

Water Use Permit 029 was approved during the September 11th, 1981 Commission on Water Resource Management meeting. This water source has been in use for at least 25 years by the United States Army. Standard condition 20 and special condition 51 are the governing conditions for this water use permit. A complete list of all standard and special conditions is given in the final summary report to the Legislature for this 20-year Water Use Permit Review.

Field Investigation Information
- Contact: Wayde Nakai
- Site Address: Tripler Army Medical Center, Building 94
  Honolulu, HI

Brown and Caldwell conducted a field investigation on February 12th, 2008 from 10:00 a.m. until 10:30 a.m. with Mr. Wayde Nakai. During this time, type of water usage was verified, GPS coordinates of well head(s) were recorded, flow meter installation and functionality were documented, and property TMK information was verified. The wellhead, its related appurtenances, and water usage area were visually inspected to assess compliance with permit conditions. Visual inspection of water loss/waste was limited to outdoor areas within the usage boundary. The physical location of this site is near Tripler Hospital on the corner of Jarrett White Road and Mahiole Street. Reference the TMK and GIS maps in the permit file for a visual representation of the site.
Summary of Findings for Water Use Permit No. 029

State Well Nos. 2153-07 and 2153-08 are located on TMK parcel 1-1-029:019 at 21° 21’ 05.0” N, 157° 53’ 36.1” W (±18 ft), and 21° 21’ 05.2” N, 157° 53’ 35.8” W (±15 ft), respectively. Water is drawn from this well battery, treated with chlorine, and metered at the well site. It is then pumped up to several storage tanks in the Tripler Medical Center vicinity and fed into the domestic water system that serves the hospital and housing in the area. Because water from this well is used on private residences and primarily indoors, end use inspection was not conducted during this field investigation. Reference the Appendix for photographs of the previously described system components. Note that photographs at this site were limited to the confidentiality concerns expressed by the United States Army.

Based upon visual inspection of the system, all components appear to be in full working order. The permittee demonstrated functionality of an installed flowmeter and provided access to the site grounds where no wasting of water or water loss was observed. Although consistent water use and salinity records are not available for either well, no permit violation has occurred since the original water use permit does not include a condition that mandates such reporting. It is worth noting, however, that lack of reporting still constitutes a lawful disobedience to the State Water Code.

Recommendations

- Address the following discrepancies between the Commission’s electronic database and actual field investigation findings:
  - Landowner address
  - Water source TMK parcel number
  - Beneficial use explanation
20-Year Water Use Permit Review
Water Use Permit No. 029

APPENDIX

Field Investigation Photographs
Figure 3 – Control system for well pumps

Figure 4 – Functional system flowmeter
# Water Use Permit Survey

(Complete one survey form for each WUP)

**WUP Number:** 029  
**Well Number(s):** 2157-07,08

**Contact Information (of the person who will be present at site visit):**

- **Name:** Karl Santa, or Wayne Nakai
- **Phone (for phone interview):** 656-1410 x1122, 584-0837  
  Fax: 656-8200
- **Email:** karl.santa@us.army.mil
- **Best time to reach for phone interview:** M-F 0730-1530

**Property Information (of the water use/well location):**

- **Address:** Tripler Army Medical Center building 94
- **City:** Honolulu
- **Zip:**
- **Well Location TMK (list all if multiple wells present):**
- **Water Use TMK (list all if used on multiple lots):**

**Water Use/Well Information:**

**Is the water source currently in use?**  
Yes [x]  
No [ ]

If no, please explain:

**What are you currently using the water for?** (example: "Use for 45 acres of diversified agriculture and 3 residences"):  
Domestic water use for the Tripler Army Medical Center (hospital, housing, etc.)

**Is a flow meter installed and working properly?**  
Yes [x]  
No [ ]

If no, please explain:

**Do you submit monthly water use reports to the State?**  
Yes [x]  
No [ ]

If no, please explain: We have been submitting reports sporadically

**Field Investigations:**

A representative from Brown and Caldwell will be visiting wells in your area over the next several months between the times of 9:00 am and 5:00 pm. Each site investigation will take approximately 1-2 hours. Please indicate up to three potential days of the week and availability times for an on-site inspection of the well location and verification of water use compliance. The permit holder must provide Brown and Caldwell with at least five (5) working days notice of the need to reschedule.

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<tr>
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<tr>
<td>Option 2</td>
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<td>Time: 9:00 am [ ] 12:00 pm [ ] 3:00 pm [ ]</td>
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<td>Option 3</td>
<td>Date (M-F):___________</td>
<td>Time: 9:00 am [ ] 12:00 pm [ ] 3:00 pm [ ]</td>
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</tbody>
</table>

Once this survey is returned, a Brown and Caldwell representative will be contacting you to conduct a phone interview and finalize the exact date and time of your field investigation. Please fax/mail completed surveys by **December 12**, 2007 and direct any questions related to this survey to Mr. Milo Smith of Brown and Caldwell at:

1099 Alakea Street, Suite #2400  
Honolulu, HI 96813  
Tel: (808) 203-2661  
Fax: (808) 533-0226  
msmith@brwncald.com

For Official Use Only

**Phone Interview Complete:** 2/7/08

**Received:** 12/12/07  
**Information Updated:** 12/12/07

Notes/Comments:
Phone Interview

WUP Number: 029  Well Number(s): 2163-07, 08

Contact Name: Kori Sato
Phone Number: 656-1110 (x 1122)

Attempt #1: Date/Time: 2/7/08 (10:30 a.m.) Result: Reached
Attempt #2: Date/Time: N/A Result: N/A

Well Location TMK(s): ___________________________
Water Use TMK(s): ___________________________

Water Source Address: Tripler Army Medical Center, Building 94
City: Honolulu Zip Code: 96816

Currently using water source? Yes ☒ No ☐
Notes/Comments: Domestic use for Tripler Medical Center

How often is the water source being used? Daily ☒ Weekly ☐ Monthly ☐
Notes/Comments:

How long have you been using this water source?: ___________________________

Has there been any rezoning of the water source/water use properties? Yes ☐ No ☐
Have you reported the rezoning to the State? Yes ☐ No ☐ N/A ☐
If no, explain:

Scheduled field investigation day/time: 2/12/08 @ 11:30 a.m.

Notes (Special directions, site conditions, potential hazards, general notes, etc.):
See directions from WUP list-1, Meeting w/ Wayne Nakai for several sites in this day
* Who is contact for this well/WUP? (None listed currently).

Comments To Make:
- Although we prefer that you do not change your scheduled field investigation time, if you require a reschedule, you must provide Brown and Caldwell with at least five (5) working days notice of the need to reschedule.
- A representative from Brown & Caldwell will be making a reminder phone call to you sometime during the week prior to your scheduled field investigation.
- It is very important that you provide access to the site at the day and time agreed upon. Due to a very tight schedule, if you fail to provide access at the agreed upon time and/or do not reschedule with at least a five (5) working day notice, a makeup date will not be allowed.
- If for some reason you don’t know where your well head is located, it would be a good idea to locate it prior to your field investigation to help make the visit go quickly and smoothly.

Interviewed By: M.S. Date: 2/7/08 Time: 10:30 a.m.
Field Investigation Checklist

WUP Number: 029  Well Number(s): 2153-07, 08

Water Source
Well Location TMK(s): 1-1-029.019
Well Head GPS Coordinates:   Latitude:  Below  Longitude:  Below
Well Type:  Well Pump
Currently using water source?  Yes ☒  No ☐
Notes/Comments: ___________________________________

Is there a flow meter installed?  Yes ☒  No ☐
Is the flow meter operational?  Yes ☒  No ☐
Notes/Comments: ___________________________________

Water Use
Water Use TMK(s):  Vontab (Trailer Area)
What is the water being used for?  Trailer Army Medical Center Use (Housing/Hospital Etc.)

Is the water being used within the permitted boundaries?  Yes ☒  No ☐
If no, explain:  Unable to verify because usage is all indoors (for domestic/hospital purposes)

Is there any observed wasting of water or water loss?  Yes ☐  No ☒
If no, explain:  None at well site

Are the permit conditions being complied with?  Yes ☒  No ☐
If no, explain:  Upon TMK verification

Other
Photographs of:  Water Source ☒  Water Meter ☒  Usage Area ☐  Pump/Motor ☒

General Notes/Comments:

Investigated By:  M.S  Date:  2/12/09  Time:  10:00 am
Standard Conditions List

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 <Insert Date> 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.

Variations of Standard Condition (8) are as follows:
   i. Modification of any permit condition shall be approved by the Commission. Modification of any permit condition without notification may result in the revocation of the water use permit.
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).

Variations of Standard Condition (10) are as follows:
   i. The applicant shall keep monthly pumpage estimates to be submitted annually to the Commission.
   ii. An approved flowmeter(s) need not 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 yearly basis (attached).
   iii. An approved flowmeter(s) must be installed to measure withdrawals and a monthly record of withdrawals, water-levels, salinity, and temperature must be kept and reported to the Commission on a monthly basis in accordance with the Commission's September 16, 1992 action on reporting requirements.
   iv. Approved flowmeters must be installed to measure monthly withdrawals and a monthly record of withdrawals must be kept and reported to the Commission on Water Resource Management on a monthly basis.
   v. 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 quarterly/yearly basis (attached).
   vi. An approved flowmeter shall be installed to measure water withdrawals
   vii. An approved flowmeter(s) must be installed to measure withdrawals; and a record of the withdrawals must be kept and reported to the Department of
Land and Natural Resources, Division of Water and Land Development, P.O. Box 373, Honolulu, HI 96809, on a monthly basis.

viii. Although not stated as a condition of the permit §13-168-7 HAR requires you to keep a record of your monthly total pumpage, water level, salinity, and water temperature. This information must be submitted to the Commission on a regular monthly basis using the enclosed water use report form.

ix. An approved flowmeter shall be installed and the withdrawal from Well 1851-73 shall be recorded and reported to DLNR on a monthly basis by the owner and/or operator of the well.

x. The withdrawals from these wells shall be recorded and reported to the DLNR on a monthly basis by the BWS.

xi. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting water usage on a monthly basis.

xii. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage. Water usage shall be measured on a monthly basis and reported to the Commission.

xiii. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage. Water usage shall be measured on a monthly basis and reported to the Commission along with water level and salinity measurements.

11. This permit shall be subject to the Commission's periodic review of the <Aquifer> 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 <Aquifer> 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 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 uses(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 that 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 conservations, 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 or 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 <Aquifer>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. 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.

19. Special conditions in the attached cover transmittal letter or attached exhibits are incorporated herein by reference.

20. If the ground-water source does not presently exist, the new well shall be completed, i.e. able to withdraw water for the proposed use on a regular basis, within twenty-four (24) months from the date the water use permit is approved.

Variations of Standard Condition (20) are as follows:

i. The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.

21. This permit may not be transferred or the use rights granted by this permit sold or in any other way alienated. Pursuant to HRS § 174C-59 and the requirements of Chapter 174C, the Commission on Water Resource Management has the authority to allow the transfer of the permit and the use rights granted by this permit in a manner consistent with HRS § 174C-59. Any such transfer shall only occur with the Commission’s prior express written approval. Any sale, assignment, lease, alienation, or other transfer of any interest in this permit shall be void.

22. The water use permit granted shall be an interim water use permit, pursuant to HRS § 174C-50. The final determination of the water use quantity shall be made within five (5) years of the filing of the application to continue the existing use.

23. The water use permit shall be issued only after agricultural review.

24. That scheduled adjustments to Oahu Sugar Co. permitted use shall be initiated upon discontinuance of agricultural uses.
25. The issuance of this permit was approved by the Commission on Water Resource Management at its meeting on <Insert Date>.

26. The permit shall be subject to the review by the Attorney General.

27. The permit holder may be required to relinquish this permit at any time or specified time after issuance to the Board of Land and Natural Resources in accordance with Chapter 166 of Title 13.

28. The applicant shall obtain the necessary land acquisition documents from the Hawaii Housing Authority.
Special Conditions List

1. Should an alternate permanent source of water be found for this use, then the Commission reserves the right to revoke this permit, after a hearing.

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.

3. The applicant shall contact the Environmental Management Division, State Department of Health, at 586-4304, concerning “GUIDELINES APPLICABLE TO GOLF COURSES IN HAWAII” date <Insert Date & Version #>.

4. Standard Condition 10 is emphasized, to report consumption on a regular basis.

5. The applicant may continue this existing use of ground water within the limits approved by the Commission, and the actual issuance of the interim permit shall not be a reason to interrupt this existing use.

6. This interim water use permit shall cease to become interim and shall be subject to HRS § 174C-55 upon administrative review of the quantity within five (5) years, provided that all conditions of the use (including the review of the quantity which shall not be greater than the amount initially granted) remain the same. Enforcement of the allocation limit shall be stayed pending staff’s review and issuance of a permanent water use permit.

7. As-built drawings of the well and pump, and a complete pumping test record shall be submitted within sixty (60) days.

8. In the event the pump tests show that aquifer boundary conditions do not support the requested withdrawals, the Commission reserves the right to amend this permit, after a hearing, to a level that is supported by the pump tests.

9. The existing use may be continued within the levels approved by the Commission, and the actual issuance of the permit document shall not be a reason to interrupt the approved level of use.

10. The filing of an application by Kukui, Inc. for a new or modified water use permit for the Kualapuu Aquifer in excess of 2.0 mgd (total system withdrawal) shall be just cause for re-consideration of this interim permit by the Commission.

11. Upon completion of a new transmission line for the transport of water use by Well #17, the permit shall be modified to reduce the allocation amount by the additional 79,220 gallons per day allocated for use of the Molokai Irrigation System.

12. Within six (6) months from the date of approval of a water use permit for the well, the applicant shall conduct a feasibility study and submit a report describing
alternative sources of nonpotable water for irrigation uses at the resort area. It is suggested that the developer consider use of dual lines in the subdivisions so that effluent may be used in the existing reuse system. Another consideration is the development of brackish water wells in the Kaluakoi Aquifer system for mixing with the effluent generated at the resort.

13. Within six (6) months from the date of approval of a water use permit for the well, the application shall evaluate the filter back discharges into Kakaako Gulch to determine if excessive preventable waste is occurring and identify possible measures to eliminate or reduce such waste. The evaluation shall be conducted in cooperation with the Commission staff and staff of the Department of Health’s Safe Drinking Water Branch, which regulates the drinking water system.

14. Within six (6) months from the date of approval of a water use permit for the well, the applicant shall 1) implement a leakage control and detection system and compete repairs to prevent such leakage and 2) implement use of xeriscaping and low-flow fixtures.

15. Action on the future use portion of the water use permit application for Well #17 (Well No. 0901-01) is deferred pending the establishment of existing uses in the aquifer. Kukui Inc.’s application for uses in excess of those uses existing on July 15, 1992 will be considered "new" uses and will be taken up by the Commission as soon as other existing use applications have been decided. In the interim,
   a. The Commission shall recognize that there is disagreement between the applicant’s staff calculations of reasonable-beneficial existing use
   b. The Applicant will have the burden of proof to show within six (6) months reasonable-beneficial existing use calculations that support the applicant’s request as opposed to staff’s calculations.
   c. The Commission’s enforcement of the approved existing use allocation will be suspended for six (6) months.

16. The permittee shall submit a notice of intent and written request to continue the use at least ninety (90) days prior to the expiration of the interim five-year permit.

17. The Commission shall delegate to Maui Department of Water Supply the authority to allocate the use of water for municipal purposes, as provided in §174C-48(b).

18. Maui Department of Water Supply shall be exempt from the requirements for permit modifications, as provided in §174C-57(c).

19. The permittee must meter water use and monitor chloride concentrations on a monthly basis and submit monthly reports of water use and chloride concentrations to the Commission.

20. Standard Condition 16 is waived for saltwater wells.

21. The permit will be revoked if (1) stream monitoring shows that pumping the well reduces stream flow, or (2) the electromagnetic resistivity survey indicates that the
well was drilled into a dike compartment, unless the applicant submits a petition for an amendment to the interim instream flow standard with the well completion report. However, no use of the water may be made without a Pump Installation Permit, which cannot be issued during consideration of the amendment of the interim instream flow standard.

22. The applicant shall present the results of the electromagnetic resistivity survey, pump tests, and stream monitoring to a community meeting as well as to the Commission.

23. A final determination of water use quantity shall be made within five (5) years of the filing date of the application (<Insert Date>) to continue existing use.

24. The applicant shall implement, by December 31, 1995, a biological and hydraulic monitoring program for a minimum 2-year period that: 1) documents the existing operating procedure, 2) seeks to identify the impacts of all operating alternatives on Waikolu Stream, and 3) seeks to identify the effectiveness of weir modifications (Dam No. 1). This program shall incorporate the three new wells, Wells #4-6 (Well Nos. 0855-06, -05, &-04, respectively), which may be pumped within the approved limits, for monitoring and testing purposes only. Further, semi-annual reports summarizing data and preliminary findings shall be submitted to the Commission. It is suggested that the Department of Agriculture work with the State Division of Aquatic Resources and other affected agencies to prepare the monitoring program in light of the difficult technical questions raised by this application. A particular concern is the coordination of this monitoring program with the ongoing National Park Service study by Anne Brasher. A draft of this plan shall be submitted to the Commission staff within ninety (90) days for technical review and comment. Results of the monitoring program shall be used to make recommendations to the Commission on any additional use of the wells, and shall be made readily available to all interested parties.

25. That the Commission approves the well construction permit for the Kamiloloa-Waiola Well (Well No. 0759-01), subject to the standard well construction conditions and the special conditions for the pumping well for the aquifer tests.

26. That the Commission authorizes the Chairperson to approve and issue a pump installation permit upon acceptance of adequate pump test result, subject to the standard pump installation conditions.

27. Should the well be used for back-up domestic supply, applicant is advised to contact DOH or otherwise ensure safe drinking water quality is maintained.

28. The applicant shall follow the agreed monitoring plan.

29. If pesticides used by the applicant are found in ground or surface water and can be traced to the applicant's use, the CWRM may revoke the permit immediately upon such finding.
30. Issuance of the interim permit shall be withheld until the reservation of water for DHHL is set by rule. Applicant may continue this existing use within the approved limits.

31. The applicant shall submit well modification and pump installation permit applications for administrative approval by chairperson prior to beginning any work required to complete well.

32. Should any stream flow impacts result from use, petition to amend interim instream flow standards shall be submitted.

33. Should any dewatering result from use, pumping shall cease immediately.

34. Shall submit accurate schematic diagram of distribution system for the battery of 5 wells.

35. Shall be subject to a 6-month independent audit & monitoring.

36. Final pump capacity shall be determined from pump test results & approved administratively by signature of chair.

37. The permittee shall seek and submit to the Commission within ninety (90) days written confirmation from the Department of Land Utilization of the non-conforming use.

38. Pumping shall cease immediately if the chloride reports show that the brackish water developed in the well exceeds 1,000 mg/l of chloride, unless a variance from the chloride limit has been granted. The authority to approve future variance requests is delegated to the chairperson.

39. The duration of the interim permit shall be:
   a. To July 1, 2006, or
   b. Until treated wastewater is available and acceptable for use, or
   c. Until such time that a significant change in permitted, actual, or projected uses or water supply occurs.

40. Action on any interim permit may be initiated by the Commission or any permittee upon letter request or pursuant to §174C-57 Haw. Rev. Stat. (Modification of permit terms).

41. This permit is approved under the assumption that wastewater will become available for reuse as an alternative supply source.

42. Require adherence to the chloride sampling protocol and the submittal of weekly chloride data. The authority to approve variances from the weekly reporting requirement is delegated to the Chairperson.

43. Require adherence to the Conservation Conditions.
44. In the event a water shortage is declared by the Commission, permittees in the <Insert Aquifer System> shall comply with the <Insert Aquifer System> water shortage plan adopted by the Commission.

45. The permittee shall contact the Department of Health, Clean Water Branch and obtain the necessary discharge permit(s).

46. Permit shall be interim and replaces existing WUP for 2051-07 & 11.

47. Applicant shall submit an acceptable archaeological inventory survey report to DHP. If historic sites affected, a plan to mitigate these affects must be accepted by DHP and completed by applicant.

48. Should the well be used for back-up domestic supply, applicant is advised to contact DOH or otherwise ensure safe drinking water quality is maintained.

49. (The permittee) may report monthly pumpage on yearly basis.

50. Prior to issuance of any permits, must submit filing fee for after-the-fact pump installation permit.

51. The term of this permit shall be twenty years from the date of issuance of the permit with a five-year Board review to determine compliance with the provisions of the permit.

52. The amount of water to be withdrawn under this permit shall be 0.19 mgd, averaged annually, for irrigation use. This permitted use of 0.19 mgd when added to a preserved use of 0.27 mgd amounts to a total of 0.46 mgd, averaged annually, which may be withdrawn from well 1646-01.

53. The use authorized by the permit must not interfered substantially and materially with existing individual household uses and existing uses.

54. The use of this well shall be subject to the shortage and emergency powers of the Board of Land and Natural Resources (BLNR).

55. This permit may be suspended or revoked, in accordance with Chapter 166.

56. The permit holder may be required to relinquish this permit to BLNR, in accordance with Chapter 166

57. The withdrawal from Well 1646-10 shall be recorded and reported to DLNR on a monthly basis by the permittee.

58. In the event that emergency water use occurs, the permittee shall notify the Commission in writing within one (1) day of pumping, to in form the Commission as to the nature of the emergency and the expected duration of the emergency. A water
use report shall also be filed pursuant to Standard Condition 10 and Administrative Rule 13-168-7.

59. Note DOH's requirements related to non-potable water systems (attached to original permit).

60. Standard Condition 16 requiring the submittal of a water shortage plan is waived.

61. All non-potable spigots and piping shall be clearly labeled as "DO NOT DRINK, NON-POTABLE" to prevent direct human consumption.

62. Standard Condition 10 is modified. Due to the inability to take water level measurements, the requirement to measure monthly water levels is waived. In addition, as long as the U.S. Geological Survey is collecting and analyzing the chloride content of the well water, the requirement for the permittee to measure and report chlorides is also waived.

63. Well elevation components must be surveyed by a licensed surveyor and this information must be submitted to commission prior to issuance of permanent permit.

64. The permittee shall obtain approvals from the Department of Health and the U.S. Environmental Protection Agency prior to use of the water.

65. This water use permit, WUP No. <Insert #>, shall supersede WUP No. <Insert #>.

66. WUP No. <Insert #> is revoked

67. Standard Condition 17 is waived.

68. Standard Condition 22 for interim water use permits shall not apply.

69. To supplement our records, we request that you provide a map of the Galbraith Est. lands west of Wahiawa (2100 ac+-) and the associated TMK's for use area.

70. Deferred action on portion requested for golf course irrigation pending further refinement of irrigation requirement and a feasibility study for utilization of surface water sources, including Wahiawa Reservoir.

71. Written justification be provided for any 'cushion' of 0.5 mgd.

72. The water use permit shall be an interim permit. The duration of the interim permit shall be until treated wastewater is available and acceptable for use. The permittee shall continue discussions with Honolulu Board of Water Supply regarding the use of reclaimed water.

73. The permittee is put on notice that this is a qualified approval in that this permit may be modified or revoked prior to the expiration of the interim permit if the
Commission decides that the use of additional basal ground water for dust control and landscape irrigation is not reasonable-beneficial use.

74. The permittee encouraged to use drought-tolerant landscaping to conserve water.

75. Should the applicant provide written evidence that the county DHCD approves a 201E exemption for the elderly affordable housing project then the applicant may modify a corresponding portion of their existing aquacultural use to be used by the exemption approved project within the Commission approved water use permit limits under recommendation 5.

76. The applicant shall obtain a water lease/permit from Land Division prior to actual use of the well water.

77. Require the permittee to sign a contract by May 14, 1998 with the City Department of Wastewater Management to buy and use 0.400 mgd of R-1 water for a corresponding reduction in allocation for Well Nos. 1900-02, 17 to 20, and 1901-03.

78. Standard Condition 9 is waived.

79. Standard Condition 10 is modified to exempt the permittee from monthly measurements of salinity and temperature.

80. Standard Condition 10 is waived.

81. Applicant must seek a determination from BLNR and Land Mgt Div as to whether water license required. If required, license must be obtained prior to issuance of permit. If not, permit will be issued w/out further action.

82. Commission defers action on use in excess of 452,000 gpd pending additional info from BWS and further staff analysis.

83. The permit shall be subject to the Commission’s sustainable yield review by December 1990.

84. The Commission shall delegate to the Honolulu Board of Water Supply the authority to allocate the use of water for municipal purposes, in accordance with §174C-48(b) HRS.

85. Honolulu Board of Water Supply shall be exempt from the requirements of permit modifications as provided in §174C-57.

86. BWS must participate in discussions, to be coordinated by Commission Staff, regarding a monitoring program to address impacts to Kaneohe Bay water quality, prior to any action on applications for future municipal uses.

87. A pump installation permit application must be made and approved prior to the installation of a permanent pump.
88. The water withdrawn shall be 0.7 mgd for municipal use.

89. The installed pump capacity of the well shall not be more than 700 gpm or 1.01 mgd.

90. The term of permit shall automatically expire twelve months from the date of issuance.

91. The Honolulu Board of Water Supply may continue to submit monthly water data on their own form, provided that the data are submitted in a format that is acceptable to the Commission staff.

92. Standard Condition 7 shall not apply.

93. Standard Condition 22 shall not apply.

94. Standard Condition 10 is modified to exempt the permittee from monthly measurements of salinity and temperature.

95. This permit shall be subject to conditions providing for stream restoration if the Commission determines that additional water should be returned to the streams.

96. HECO 1 mgd for industrial use

97. Campbell Estate 1 mgd for municipal use through BWS, by separate agreement with HECO

98. BWS 1 mgd for municipal use.

99. The permit shall be subject to the Commission's sustainable yield review by <Insert Date>.

100. The applicant shall obtain the current version of the Department of Health's Guidelines Applicable to Golf Courses in Hawaii. Where relevant and viable, items of the guidelines should be implemented and sustained appropriately. To obtain the current version, contact the Safe Drinking Water Branch, Environmental Management Division at 808-586-4258 (Honolulu).

101. The future use portion of the application shall be deferred until existing uses in the Koolauloa area are established.

102. The water to be withdrawn under this permit shall be a total of 0.03 mgd (0.02 mgd preserved plus an additional 0.01 mgd permitted use), averaged annually, for domestic and irrigation use.

103. Existing well 1851-09 shall be properly sealed by a licensed drilling contractor. A well modification permit application, enclosed, shall be submitted to the Department for approval of the well sealing. A filing fee for sealing the well will not be required.
104. The permittee is required to test the source using a certified private laboratory and submit the test results to the Commission within three (3) months. The Commission will then forward the results to the Department of Health for their review. The Department of Health recommends that the well be routinely tested for microbiological and chemical parameters thereafter.

105. The permittee is required to submit a completed Registration of Well and Declaration of Water use by <Insert Date>.

106. The permittee shall contact the Department of Health for a written determination on the status of their water system and comply with any Department of Health requirements for monitoring and testing.

107. In the event that the original spring source decontaminates, the new well authorized will be shut down.

108. That within each aquifer the total permitted use shall not exceed the sustainable yield.

109. That any water available for allocation shall be for in-district use.

110. That scheduled reductions to Oahu Sugar Co. permitted use shall be initiated upon final termination of an Osco lease or sub-lease, whichever occurs later.

111. That permits for water use issued in accordance with the proposed schedule shall be interim permits subject to review and adjustment by 1995.

112. That the permit shall be an interim permit for a new use which is afforded to existing users as specified in §13-171-20.

113. That the original allocation of 0.200 mgd shall be taken to hearing for possible revocation at a later date to complete the transfer of the water use permit entirely to Well No. 3407-02. This revocation would reduce the current allocation afforded to the Kunihiro Well (Well No. 3406-06) to zero.

114. This allocation incorporates the unspecified domestic needs of the applicant and therefore necessitates a single meter be installed at the well.

115. Should any impacts to nearby wells or streams be established by the use of this well, the applicant shall address these issues to the satisfaction of the Commission.

116. If an economically feasible nonpotable source is identified, the applicant shall convert to the alternative nonpotable source.

117. The permit shall be subject to the Chairperson’s approval of a water use plan recommending possible measures to prevent or minimize saltwater contamination and establish courses of action to follow should the aquifer become to saline to use.
118. Permittee shall provide the necessary end-use information on the 10th residence to allow regulation of the use under Chapter 174C.

119. Standard Conditions 10 & 18 shall not apply.

120. Standard Condition 10 is modified to exempt the permittee from the requirement to install a flowmeter. Salt water withdrawals may instead be estimated based on pumping capacity and run time.

121. The applicant shall review the existing year long period of pumpage and streamflow data and provide analysis on ground and surface water interaction. Deadline is January 25, 1994.

122. The water use permit for Well Nos. 2301-27 to -32 for 0.75 mgd (WUP No. 419) shall be revoked upon issuance of a pump installation permit for the well.

123. The permittee shall use mulching to decrease evaporative losses and manage irrigation scheduling to minimize water demand.

124. The permittee shall submit a detailed agricultural plan to support any future water use permit application for increased agricultural use at this parcel.

125. If not already obtained, the permittee shall seek and obtain any necessary permits from the Department of Health for the proposed discharge to Malaekahana Stream.

126. Standard Condition 10 is modified to waive the requirement for installing a water meter on Well Nos. 2358-21, 22, and 29. The permittee shall install a water meter on Well No. 2358-26 to measure total monthly flow through the discharge line. This quantity should then be assumed to be the rate of natural flow from the other three wells for monthly reporting purposes.

127. The permit shall be effective upon submittal of documentation by Navy that it has met the DOH requirements for a public system.

128. This WUP shall be subject to Army's application for a WUP to reduce the permitted use of the Army's Schofield Shaft (2901-02 to 04, 10) by 0.208 mgd to a new total of 5.648 mgd. The Army's application shall be submitted within 60 days after the approval of this WUP or this WUP shall be void. Approval of the modification request shall be obtained from the CWRM prior to use of Well No. 3100-02 and issuance of this WUP.

129. Navy shall submit an after-the-fact PIPA, and approval of the permit shall be obtained prior to use of the well.

130. The well shall not be used for drinking water purposes unless it is properly tested and treated.
131. This permit is approved subject to reclaimed water becoming a practical alternative and provided that the Department of Health approves the reuse application.

132. Should any opae ula be recovered in the well water, the permittee shall notify the Division of Aquatic Resources and provide specimens to the Division of Aquatic Resources for analysis.

133. If a single meter at the well is used, the Commission shall allow an additional 1,000 gallons per day to the water use permit amount for the domestic needs of two residences, although a permit for individual domestic consumption is not required. Otherwise, the applicant must provide a meter to separately measure the irrigation consumption.

134. This permit is approved under the requirement that conversion to either: 1) treated wastewater becoming available for reuse as an alternative supply source, provided that Department of Health concerns over the use of treated effluent over the potable water aquifer have been addressed; and/or 2) other nonpotable source becoming available will occur in a timely manner.

135. These permits shall be subject to a review of actual use within four years for possible modification of the permitted amount.

136. The permit shall be reviewed in two (2) years for possible additional revocation due to nonuse.

137. The allocation is based on the projects listed in Exhibit 5 (of Item 10 of the May 20, 1998 Staff Submittal), except for the Queen’s Beach GC (TMK 139-11-2,3), Lot 9 (TMK 139-17-51), and Varsity Place (TMK 128-24-35).

138. Kamehameha Schools Bishop Estate/Honolulu Board of Water Supply shall transfer the water use permit within ninety (90) days of the effective date of the transfer of the pump station to the Honolulu Board of Water Supply, pursuant to §174C-59 Hawaii Revised Statutes.

139. The permittee shall ensure that the water is recycled by either directing it into the Waiahole Ditch for use by downstream farmers (subject to the approval of the Agribusiness Development Corporation’s Board) or into Waikele Farm’s existing irrigation system.

140. The permittee shall file a completed application to modify WUP No. 758 to reduce the allocation by 0.100 mgd within 60 days. If a completed water use permit modification application is not received within 60 days from this submittal’s date, then the subject water use permit application (WUPA No. 767) shall be deemed denied without prejudice without the need for another hearing.

141. The water withdrawn shall be for municipal use. No improvements to the existing sources are required as the existing source capacities are greater than the increase.
142. Water license must be determined through LM.

143. Proposed other uses will be considered at a later date.
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Water and Land Development
Honolulu, Hawaii

June 10, 1982

Chairman and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Gentlemen:

RESUBMITTAL
Terms of Water Withdrawal and Use Permits

The Department's Administrative Rules on ground water control require that the Board specify the period or duration of permits and the commencement and completion dates for the construction of ground water sources. After investigation and study of this matter, DOWALD is ready to make specific recommendations for adoption by the Board of Land and Natural Resources.

The Ground Water Use Law specifies that permits may be issued up to a maximum of 50 years and allows for extension of the permit after one-half of the permit period has lapsed. The staff is recommending that the duration of each permit be established at twenty (20) years with a review every five years by the Board to determine compliance with provisions of the permit. The staff feels that 20 years is a reasonable time for regulating ground water withdrawals and uses at this early stage of the program. As the Department gains experience in ground water regulation, the duration of the permits may be reviewed and adjusted as appropriate in the future.

On the commencement and completion dates, the staff recommends that a period of 24 months be established for completing the development of the ground water source. This construction period is a reasonable time for drilling, testing, and for the installation of permanent pumps and controls to fully bring the ground water source into operation. The period may be extended upon a showing of good cause and good faith performance. The permit and construction dates should commence on the date the permit is issued by the Department.

It is recommended that the above terms be standardized for all water withdrawal and use permits issued by the Board, subject to adjustments required by the Board for any permit.

RECOMMENDATION:

That the Board establish the terms of ground water withdrawal and use permits at 20 years from the date of issuance of the permit with a five-year Board review to determine compliance with the provisions of the permit and that the development of the ground water source be completed within 24 months from the date of permit issuance for all permits issued by the Board, subject to adjustments required by the Board for any permit.

Respectfully submitted,

ROBERT T. CHUCK
Manager-Chief Engineer

APPROVED FOR SUBMITTAL

[Signature]
Chairman
Chairman and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Gentlemen:

Certification of Ground Water Withdrawals and Uses,
Honolulu Ground Water Control Area, Cahu

The Honolulu Ground Water Control Area was designated by the Board of
Land and Natural Resources on February 21, 1981 under authority of Chapter 177,  
HRS, and Chapter 166 of Title 13, Administrative Rules entitled "Rules for the  
Control of Ground Water Use in the State of Hawaii". The Department's regulatory  
procedures provide for water users to declare their existing water uses within a 
ninety-day period which ended June 4, 1981 and allows the Board 180 days to  
certify the declared uses.

The recommended certification of total annual, average daily, and maximum  
daily withdrawals for individual wells and/or well fields is tabulated in the attach- 
ment, "Certification of Ground Water Withdrawals and Uses, Honolulu Ground  
Water Control Area", for the Moanalua-Kaimuki Subarea and Wai'alea-Hawaii Kai  
Subarea. A comparison of the recommended quantity for certification and the 
sustainable yield adopted by the Board on July 24, 1981 is tabulated below:

<table>
<thead>
<tr>
<th>Subarea</th>
<th>Sustainable Yield (mgd)</th>
<th>Recommended Certification (mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moanalua-Kaimuki</td>
<td>55</td>
<td>41.827</td>
</tr>
<tr>
<td>Wai'alea-Hawaii Kai</td>
<td>5</td>
<td>1.100</td>
</tr>
</tbody>
</table>

The remaining ground water supplies may be withdrawn by obtaining  
permits from the Board of Land and Natural Resources.

RECOMMENDATION:

That the Board certify the existing withdrawals and uses for each well  
tabulated on the attached "Certification of Ground Water Withdrawals and Uses,  
Honolulu Ground Water Control Area" dated September 12, 1981, subject to any 
special conditions and applicable laws, rules and regulations.

Respectfully submitted,

[Signature]

ROBERT T. CHUCK  
Manager-Chief Engineer

APPROVED FOR SUBMITTAL:

[Signature]

SUSANO ONO, Chairman

Approved by the Board of  
Land & Natural Resources  
at the meeting held on  

ITEM D-4
**State of Hawaii**

**DEPARTMENT OF LAND AND NATURAL RESOURCES**

**CERTIFICATION OF GROUND WATER WITHDRAWALS AND USES**

**Honolulu Ground Water Control Area**

| User/Source | State Well No. | Total Wells | Source Use | 5-yr. Ave. Withdrawal | Source Use | 5-yr. Ave. Withdrawal | Preserved Use
|-------------|----------------|-------------|------------|----------------------|------------|----------------------|----------------
| **MOANALUA-KAIMUKI Subarea** | | | | | | | |
| Board of Water Supply | | | | | | | |
| Kaimuki Station | 1748-03 to 10 | 8 Mun. | 22.32 | 3.69 | Mun. | 14.17 | 1,246.85 | 3.69 |
| Palolo Well | 1847-01 | 1 Mun. | 1.51 | 1.31 | Mun. | 1.70 | 478.15 | 1.31 |
| Wilder Station | 1849-13 to 16 | 4 Mun. | 10.08 | 5.75 | Mun. | 10.68 | 2,096.75 | 5.75 |
| Beretania Station | 1851-12, 13, 24, 31 to 35, 67 | 9 Mun. | 22.53 | 6.64 | Mun. | 18.14 | 2,422.60 | 6.64 |
| Kalili Pump | 1852-06 to 08, 18 to 18, 22 | 8 Mun. | 14.11 | 4.93 | Mun. | 11.82 | 1,762.35 | 4.93 |
| Kalili Shaft | 2052-08 | 1 Mun. | 17.28 | 8.11 | Mun. | 17.28 | 2,960.15 | 8.11 |
| Maudalen Station | 2153-10 to 12 | 2 Mun. | 0.918 | 2.29 | Mun. | 6.048 | 1,200.85 | 2.29 |
| **Subtotal (BWS Wells)** | | 24 | | | | 93.886 | 33.62 | 79.228 | 12,271.30 | 33.62 |
| **Private Users** | | | | | | | |
| Morano H. C. & D. | 2053-05 | 1 Ind. | 0.576 | 0.139 | Ind. | 0.576 | 50.74 | 0.139 |
| Army - Ft. Shafter | 2053-10, 11 | 2 Dom. | 2.6 | 1.025 | Dom. | 3.6 | 377.78 | 1.025 |
| Army - Tripler | 2153-07, 08 | 2 Dom. | 1.555 | 0.609 | Dom. | 1.555 | 222.28 | 0.609 |
| Bishop Trust | 1851-26 | 1 Ind. | 1.15 | 0.06 | Ind. | 1.15 | 21.90 | 0.06 |
| Del Monte Corp. | 1852-13 | 1 Ind. | 1.296 | 0.244 | Ind. | 1.296 | 89.06 | 0.244 |
| Castle & Cooke Foods | 1852-11, 13, 20, 21 | 4 Ind. | Nat. flow | 2.11 | Ind. | 7.17 | 730.00 | 2.11 |
| Hawaii Meat Co., Ltd. | 2053-09 | 1 Ind. | 0.144 | 0.082 | Ind. | 0.144 | 20.93 | 0.082 |
| Honolulu Gas Co. | 1952-14 | 1 Ind. | 14.0 | 2.5 | Ind. | 14.6 | 910.50 | 2.5 |
| Honolulu Int. C.C. | 2254-01 | 1 Irr. | Nat. flow | 3.34 | Irr. | 0.346 | 126.29 | 0.346 |
| Kamehameha Schools | 2052-07, 11 | 2 Dom. | 1.728 | 0.189 | Dom. | 1.728 | 68.98 | 0.189 |
| Kawailoa Church | 1851-08 | 1 Irr. | 0.100 | No data | Irr. | 0.100 | 7.30 | 0.02 |
| Kokoai Koygo | 1749-19 | 1 Dom. | 0.576 | 0.356 | Dom. | 0.576 | 122.64 | 0.356 |
| Love's Bakery | 1749-18 | 1 Ind. | No data | 0.043 | Ind. | No data | 15.70 | 0.043 |
| NTL, Inc. | 1851-20 | 1 Ind. | No data | No data | Ind. | 0.03 | 7.30 | 0.02 |
| 27 | 27.848 | 8.807 | 35.625 | 2,995.55 | 8.207 |
| **TOTAL - Moanalua-Kaimuki Subarea** | 61 | 121.774 | 41.257 | 114.873 | 15,266.85 | 41.257 |
| **WAIALAE-HAWAII KAI Subarea** | | | | | | | |
| Board of Water Supply | | | | | | | |
| Alaka Koa | 1746-01 | 1 Mun. | 0.504 | 0.40 | Mun. | 0.504 | 146.00 | 0.40 |
| Waialua Iki Station | 1746-02 | 1 Mun. | 0.504 | 0.19 | Mun. | 0.504 | 60.35 | 0.19 |
| Waialua Shool | 1747-02 | 1 Mun. | 2.900 | 0.24 | Mun. | 0.09 | 87.60 | 0.24 |
| **Subtotal (BWS Wells)** | | 3 | | | | 3.964 | 0.83 | 1.698 | 302.95 | 0.83 |
| **Private Users** | | | | | | | |
| Waialua Country Club | 1646-01 | 1 Irr. | 0.864 | 0.270 | Irr. | 0.864 | 98.55 | 0.270 |
| **TOTAL - Waialae-Hawaii Kai Subarea** | 4 | 4.752 | 1.100 | 2.562 | 401.50 | 1.100 |
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
WATER METER INSTALLATION REPORT

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96829. The Commission may not accept incomplete reports. This form shall be submitted within 90 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-0225. For updates to this form or additional information, please visit our website at http://www.hawaii.gov/dlnr/cwm/

Method of flow measurement:

- Flowmeter Manufacturer:______ Transmitter:______ Model no.:______ Size:______
- Weir
- Open Pipe
- Orifice
- Other, explain below

*attach schematic

Remarks/comments:

TAMC WATER PLANT 94
WELL NO. 253-07, 08

Landowner (print) ______________________________
Signature ______________________________ Date ______________________________

Water Meter Report 4/28/2005

DEC-15-2005 08:34AM FAX:8086568200 ID:DLNR_CWRM PAGE:002 R=95%
MEMORANDUM FOR THE RECORD

FROM: Lenore Nakama
SUBJECT: Flowmeter for 2153-08

11/15/05 Keith Yamanaka w/Army called re: our 10/26/05 letter. He said the 2 wells (07 & 08) are connect to a common pipe and he thinks there is a flowmeter on the pipe. He will check the meter & provide as much documentation as possible. He will also try to provide a picture. He said they provide quarterly reports of monthly water use.

He suggested that CWRM should require meters to be calibrated regularly and that certain requirements should be waived based on annual use amounts. He said the Army has a lot of large capacity standby sources and if they had to put a flowmeter on each one, it would be very costly. Told him I would pass his suggestions along to appropriate staff.
MEMO and ROUTE SLIP (ver. 5/25/05)

WCR 2 Check for Well No. 2153-08 (survey to regulation memo)

1. **Pump Tests Check** (special condition of PIP? Yes/No)  
   Glenn Bauer [initial] if yes
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
   - Step-Drawdown Test:  
     - followed WCPI Stds  
     - analysis attached  
     - proposed pump cap o.k.
   |     |    |                           |
   - Aquifer Pump Test:  
     - followed WCPI Stds  
     - T & S analysis attached
   |     |    |                           |
   - Well Interference:  
     - estimated Steady-State  
     - drawdown at 1-mile radius is [ ] ft.
     - analysis attached
   |     |    |                           |

2. **Pump Installation Check**  
   Mitch Ohye [initial]
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
   - data complete  
   - followed Special Cond & Elev.  
   - well database updated
   |     |    |                           |

3. Charley/ Lenore/ Ryan [initial] take action based on above analysis

ATTACHMENTS FOR ACCEPTANCE:
1. WCR2 ACCEPTANCE LETTER  
2. PUMP INST. COMPLETION CERTIFICATE  
3. METER INSTALL. REPORT (if necessary)  
4. WUR FORM (if necessary)  
5. USGS MAP UPDATED  
6. PARCEL CHECK  
7. WELL DATABASE INPUT CHECK  
8. GLENN'S PUMP TEST WORKSHEET  
9. PUMP As-Built CHECK PRINT

4. Roy [initial] check(Entered WCR 2/PICC accept date into database)
5. Subia [initial] finalize
6. Charley/ Lenore/ Ryan File

To be sent to driller
To be sent to landowner/operator
Staff internal checks

ATTACHMENTS FOR ACCEPTANCE:
1. WCR2 ACCEPTANCE LETTER  
2. PUMP INST. COMPLETION CERTIFICATE  
3. METER INSTALL. REPORT (if necessary)  
4. WUR FORM (if necessary)
5. USGS MAP UPDATED  
6. PARCEL CHECK  
7. WELL DATABASE INPUT CHECK  
8. GLENN'S PUMP TEST WORKSHEET  
9. PUMP As-Built CHECK PRINT

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3. METER INSTALL. REPORT (if necessary)
4. WUR FORM (if necessary)
5. USGS MAP UPDATED  
6. PARCEL CHECK  
7. WELL DATABASE INPUT CHECK  
8. GLENN'S PUMP TEST WORKSHEET  
9. PUMP As-Built CHECK PRINT
new well form, I think prog. offset = 2K
October 26, 2005

Mr. Dwight Ho
Beylik Drilling & Pump Service, Inc.
91-259A Olai St.
Kapolei, HI 96707

Dear Mr. Ho:

Well Completion Report for Well No. 2153-08

We received your Well Completion Report Part II for the pump replacement for the TAMC Well No. 2 (Well No. 2153-08) on September 23, 2005 and acknowledge that it is complete.

If you have any questions, please contact Lenore Y. Nakama of the Commission staff at

DEAN A. NAKANO
Acting Deputy Director

LYN:ss
October 26, 2005

Directorate of Public Works

Wheeler Army Airfield, Bldg. 442
United States Army Garrison
Schofield Barracks, HI 96857-5013

Dear [Name):

Water Meter Requirement for Well No. 2153-08

We have received the Well Completion Report Part II from your pump installation contractor for the replacement of the pump in TAMC Well (Well No. 2153-08). The report is acceptable with the exception of the installation of a water meter. We acknowledge that the pump installer’s responsibilities for this pump installation are complete, and no further action is required from the pump installer at this time. We have written a letter to the contractor to this effect and you will receive a copy.

However, because the pump installer has indicated that no water meter has been installed for this well, you are responsible for installing a water meter. After you install a water meter, you must complete the attached form and return it to our office. Upon the completion and return of this form, we will send you a certificate of pump installation completion, which will then allow you to use the water from this well. You cannot use water from this well without a certificate of pump installation completion. Use of water from this well (for purposes other than testing) without a certificate of pump installation completion is a violation and is subject to fines of up to $5,000 per day.

If you have any questions, please contact Lenore Y. Nakama of the Commission staff at

Sincerely,

DEAN A. NAKANO
Acting Deputy Director

LYN:ss
Encl: Water Meter Installation Report

c: Beylik Drilling and Pump Service, Inc.
<table>
<thead>
<tr>
<th>1. State Well No.:</th>
<th>2153-08</th>
<th>Well Name:</th>
<th>TAMC Well No. 2</th>
<th>Island:</th>
<th>Oahu</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Address:</td>
<td>Moanalua, Oahu, Hawaii</td>
<td>Tax Map Key:</td>
<td>1-1-012:005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Date Pump Installed:</td>
<td>8/12/2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. PERMANENT PUMP INFORMATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump Type, Make, Serial No.:</td>
<td>Vertical, Goulds, 498575</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated Capacity:</td>
<td>1300 gpm at head of:</td>
<td>580 ft.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Type, H.P., Voltage, rpm:</td>
<td>Vertical, 250 HP, 460V, 1785 RPM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump type (check one):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Deep Well Turbine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Submersible</td>
<td>□ Rotary</td>
<td>□ Propeller</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Centrifugal</td>
<td>□ Rotary-Displacement</td>
<td>□ Reciprocating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Rotary-Gear</td>
<td>□ Impulse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Method of flow measurement:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Flowmeter</td>
<td>Manufacturer</td>
<td>Model no.</td>
<td>Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Weir</td>
<td>□ Open Pipe</td>
<td>□ Orifice</td>
<td>□ Other*, explain below</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*attach schematic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Fill in the as-built section on the other side of this sheet.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Attach the rating curve for the installed pump.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Attach photograph of well clearly showing the benchmark on the concrete pad, the well head, and the method of flow measurement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Other remarks/comments:</td>
<td>Pump Replacement:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Previous Cap. 1300 gpm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Signature: [Signature]  Date: 9/20/2005
7. AS-BUILT P SECTION (Please attach as-built if different from diagram provided below.)

- Benchmark elevation surveyed to nearest 0.01 ft. = 29 ft. mean sea level

Elevation of top of chase tube N/A ft. mean sea level

Pump intake depth = -0.5 ft. (referenced to benchmark) ground elevation

Chase tube depth = N/A ft. (referenced to benchmark) ground elevation

If airline installed, bottom of airline elevation = +0.5 ft. mean sea level

3-2158-08 TAME 2
ITT - Goulds Pumps
Turbine Operations

Certified Test Results

SO: 498575
Model: 12CHC/9
Flow - GPM
Imp Dia: 8.56 in
Certified Test Results
Speed: 1770 RPM

Design

By:          
Title:       Engineer
Date:        July 7, 2005
TO
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HI 96809

WE ARE SENDING YOU  

[ ] Attached  [ ] Under separate cover via _______________ the following items:

- [ ] Shop drawings
- [ ] Prints
- [ ] Plans
- [ ] Samples
- [ ] Specifications
- [ ] Copy of letter
- [ ] Change order
- [ ] Change order
- [ ] Change order
- [ ] Change order
- [ ] Change order

<table>
<thead>
<tr>
<th>COPY</th>
<th>DATE</th>
<th>NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>WELL COMPLETION REPORT - PART II</td>
</tr>
</tbody>
</table>

THESE ARE TRANSMITTED as checked below:

- [ ] For approval
- [ ] Approved as submitted
- [ ] Resubmit _______ copies for approval
- [ ] For your use
- [ ] Approved as noted
- [ ] Submit _______ copies for distribution
- [ ] As requested
- [ ] Returned for corrections
- [ ] Return _______ corrected prints
- [ ] For review and comment
- [ ] FOR BIDS DUE
- [ ] PRINTS RETURNED AFTER LOAN TO US

REMARKS

COPY TO 1375T/C FILE

SIGNED: TONI GONSALVES, PROJ. MGR.

If enclosures are not as noted, kindly notify us at once.
**REGISTRATION OF WELL AND DECLARATION OF WATER USE**

**INSTRUCTIONS:** Please type or print. If information is not available or not applicable, indicate as N/A. Fill out as completely as possible. Sign, and file form with the Division of Water Resource Management, P.O. Box 373, Honolulu, Hawaii 96809. Phone 548-3045 or 548-7545 for assistance.

**BATTERY OF WELLS:** For a battery of wells, on the surface, in a tunnel, or in a shaft, submit a registration form for each well together with a single map or plot plan showing layout of wells.

**STATE WELL NO.: 2153-08**  
**WELL NAME OR DESIGNATION: Moanalua**  
**ISLAND: Oahu**  
**SOURCE OR STATION NAME:** Trippe Wells

### A. WELL OPERATOR
- **Firm name:** US Army Support Command
- **Contact person:**
- **Address:**
- **Zip:** 96858  
- **Phone:**

### B. OWNER OF WELL SITE
- **Firm name:**
- **Contact person:**
- **Address:**
- **Zip:**  
- **Phone:**

### C. WELL LOCATION
- **Tax Map Key:**
- **Town, Place, District:**

Attach USGS "Quad" map (scale 1:24,000), tax map, or other map showing the well location.

### D. WELL DATA

For drilled wells, submit "as-built" drawings, driller's log, and pump test results, and complete items below. For tunnels and shafts, submit construction drawings, plot plan, or sketch map.

- **Ground elevation (mean sea level):** NA ft.
- **Elevation (used to measure depth to water):** NA ft.
- **Description:** NA
- **Well contractor:**
- **Year drilled or constructed:** 1985
- **Casing diameter:** 14 in.
- **Solid casing depth (below ground):** 27 ft.
- **Total depth of well:** 339 ft.
- **Perforated casing depth (below ground):** NA ft.
- **Minimum chloride in 1987:** NA ppm
- **Maximum recorded chloride:** NA ppm
- **Maximum recorded chloride in 1987:** 62 (ppm)
- **Depth to water (below reference point):** NA ft.
- **Maximum recorded chloride:** NA ppm
- **Minimum recorded chloride:** 0 ppm

### E. INSTALLED PUMP DATA

- **Pump type:** Vertical shaft
- **Power:** Electric, 250 HP
- **Pump capacity:** 13,000 gallons per minute
- **Pump installation contractor:**

(continued over)
F. DECLARATION OF WATER USE

NOTE: The purpose of the Declaration of Water Use is to obtain information necessary for the management of the State's water resources. The Declaration does not confer a legal right to water or its use.

Water use data are recorded: □ Daily □ Weekly □ Monthly

Method of measurement: □ Flow Meter □ Orifice
☑ Other (Describe): [ ]

Quantity of Use (Report metered or estimated monthly water use from the well described on the reverse side of this form, for the calendar years 1980 through 1987. For a battery of wells which are not individually metered, but which are connected to a single meter or other measuring device, report total use from the battery): [ ]

WATER USE, IN GALLONS x 1000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>1776</td>
<td>1894</td>
<td>10720</td>
<td>13716</td>
<td>8736</td>
</tr>
<tr>
<td>February</td>
<td>19440</td>
<td>12724</td>
<td>8114</td>
<td>12072</td>
<td>8034</td>
</tr>
<tr>
<td>March</td>
<td>15054</td>
<td>15623</td>
<td>10724</td>
<td>12634</td>
<td>8458</td>
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<tr>
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<td>14274</td>
<td>15678</td>
<td>12948</td>
<td>13584</td>
<td>9252</td>
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<tr>
<td>May</td>
<td>15793</td>
<td>17972</td>
<td>12681</td>
<td>13110</td>
<td>9458</td>
</tr>
<tr>
<td>June</td>
<td>1872</td>
<td>13174</td>
<td>15280</td>
<td>11584</td>
<td>9752</td>
</tr>
<tr>
<td>July</td>
<td>18468</td>
<td>15444</td>
<td>17379</td>
<td>11076</td>
<td>7232</td>
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<tr>
<td>August</td>
<td>21040</td>
<td>15188</td>
<td>18094</td>
<td>11159</td>
<td>1076</td>
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<tr>
<td>September</td>
<td>19890</td>
<td>16130</td>
<td>17160</td>
<td>11154</td>
<td>1060</td>
</tr>
<tr>
<td>October</td>
<td>2094</td>
<td>19244</td>
<td>18848</td>
<td>11021</td>
<td>7252</td>
</tr>
<tr>
<td>November</td>
<td>18990</td>
<td>13479</td>
<td>15586</td>
<td>10764</td>
<td>8520</td>
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<tr>
<td>December</td>
<td>21890</td>
<td>11154</td>
<td>14586</td>
<td>9048</td>
<td>10062</td>
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<tr>
<td>ANNUAL</td>
<td>12690</td>
<td>11154</td>
<td>14586</td>
<td>9048</td>
<td>10062</td>
</tr>
</tbody>
</table>

Minimum day's use: [ ] gallons
Maximum day's use: [ ] gallons

Typical times of usage: [ ]

Type of Use (Check all category boxes that apply and provide additional information as indicated):

☐ Municipal (including resorts, hotels, businesses)
☐ Domestic (systems serving 25 people or less)
☐ Irrigation

☐ Industrial
☐ Military
☐ Other

Category

Additional Information

Number of service connections: [ ]

Acres Irrigated:

Crop(s): ☐ Sugar ☐ Pineapple
☐ Other (specify): [ ]

Non-Crop: ☐ Landscape ☐ Golf Course
☐ Other (specify): [ ]

Method: ☐ Drip ☐ Furrow ☐ Sprinkler

☐ Other (specify): [ ]

Specify (livestock, aquaculture, etc.): [ ]

I declare that the contents of the above Declaration of Water Use are, to the best of my knowledge and belief, true, correct, and complete.

Water User's Signature: [ ] Date: [ ]
Printed Name: [ ]
Firm or Title (Well Operator, etc.): [ ]
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Water and Land Development
Honolulu, Hawaii

June 10, 1982

Chairman and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Gentlemen:

RESUBMITTAL
Terms of Water withdrawal and Use Permits

The Department's Administrative Rules on ground water control require that the Board specify the period or duration of permits and when the commencement and completion dates for the construction of ground water sources. After investigation and study of this matter, Donald is ready to make specific recommendations for adoption by the Board of Land and Natural Resources.

The Ground Water Use Law specifies that permits may be issued up to a maximum of 50 years and allows for extension of the permit after one-half of the permit period has lapsed. The staff is recommending that the duration of each permit be established at twenty (20) years with a review every five years by the Board to determine compliance with provisions of the permit. The staff feels that 20 years is a reasonable time for regulating ground water withdrawals and uses at this early stage of the program. As the Department gains experience in ground water regulation, the duration of the permits may be reviewed and adjusted as appropriate in the future.

On the commencement and completion dates, the staff recommends that a period of 24 months be established for completing the development of the ground water source. This construction period is a reasonable time for drilling, testing, and for the installation of permanent pumps and controls to fully bring the ground water source into operation. The period may be extended upon a showing of good cause and good faith performance. The permit and construction dates should commence on the date the permit is issued by the Department.

It is recommended that the above terms be standardized for all water withdrawal and use permits issued by the Board, subject to adjustments required by the Board for any permit.

RECOMMENDATION:

That the Board establish the terms of ground water withdrawal and use permits at 20 years from the date of issuance of the permit with a five-year Board review to determine compliance with the provisions of the permit and that the development of the ground water source be completed within 24 months from the date of permit issuance for all permits issued by the Board, subject to adjustments required by the Board for any permit.

Respectfully submitted,

ROBERT T. CHUCK
Manager-Chief Engineer

APPROVED FOR SUBMITTAL

Chairman

ITEM D-1

attachment

ITEM D-1

B12
State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
Division of Water and Land Development  
Honolulu, Hawaii  

September 11, 1981

Chairman and Members  
Board of Land and Natural Resources  
State of Hawaii  
Honolulu, Hawaii

Gentlemen:

Certification of Ground Water Withdrawals and Uses,  
Honolulu Ground Water Control Area, Cahu

The Honolulu Ground Water Control Area was designated by the Board of  
Land and Natural Resources on February 27, 1981 under authority of Chapter 177,  
HRS, and Chapter 188 of Title 13, Administrative Rules entitled "Rules for the  
Control of Ground Water Use in the State of Hawaii". The Department's regulatory  
procedures provide for water users to declare their existing water uses within a  
ninety-day period which ended June 4, 1981 and allows the Board 180 days to  
certify the declared uses.

The recommended certification of total annual, average daily, and maximum  
daily withdrawals for individual wells and/or well fields is tabulated in the attach-  
ment. "Certification of Ground Water Withdrawals and Uses, Honolulu Ground  
Water Control Area", for the Moanalua-Kaimuki Subarea and Waialae-Hawaii Kai  
Subarea. A comparison of the recommended quantity for certification and the  
sustainable yield adopted by the Board on July 24, 1981 is tabulated below:

<table>
<thead>
<tr>
<th>Subarea</th>
<th>Sustainable Yield (mgd)</th>
<th>Recommended Certification (mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moanalua-Kaimuki</td>
<td>53</td>
<td>41.827</td>
</tr>
<tr>
<td>Waialae-Hawaii Kai</td>
<td>1.100</td>
<td>41.827</td>
</tr>
</tbody>
</table>

The remaining ground water supplies may be withdrawn by obtaining  
permits from the Board of Land and Natural Resources.

RECOMMENDATION:

That the Board certify the existing withdrawals and uses for each well  
tabulated on the attached "Certification of Ground Water Withdrawals and Uses,  
Honolulu Ground Water Control Area" dated September 11, 1981, subject to any  
special conditions and applicable laws, rules and regulations.

Respectfully submitted,

[Signature]

ROBERT T. CHUCK  
Manager-Chief Engineer

[Signature]

Approved for Submittal:

[Signature]

Approved by the Board of Land & Natural Resources at the meeting held on  

ITEM D-4

B8
## DEPARTMENT OF LAND AND NATURAL RESOURCES

### CERTIFICATION OF GROUND WATER WITHDRAWALS AND USES

#### Honolulu Ground Water Control Area

<table>
<thead>
<tr>
<th>User/Source</th>
<th>State Well No.</th>
<th>Total Wells</th>
<th>Source Use</th>
<th>5-yr Ave. Withdrawal (mgd)</th>
<th>Use</th>
<th>Maximum Daily Withdrawal (mgd)</th>
<th>Total Annual Withdrawal (mgd)</th>
<th>Average Daily Withdrawal (mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOANALUA-KAIMUKI Subareas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Board of Water Supply</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaimuki Station</td>
<td>1749-10</td>
<td>3</td>
<td>Mun.</td>
<td>1.80</td>
<td>1.80</td>
<td>Mun.</td>
<td>1.80</td>
<td>5.40</td>
</tr>
<tr>
<td>Palolo Well</td>
<td>1847-01</td>
<td>1</td>
<td>Mun.</td>
<td>1.51</td>
<td>1.51</td>
<td>Mun.</td>
<td>1.51</td>
<td>4.53</td>
</tr>
<tr>
<td>Wilder Station</td>
<td>1849-13 to 16</td>
<td>4</td>
<td>Mun.</td>
<td>1.08</td>
<td>1.08</td>
<td>Mun.</td>
<td>1.08</td>
<td>3.24</td>
</tr>
<tr>
<td>Hauula Station</td>
<td>1851-12, 13, 24, 25 to 87</td>
<td>9</td>
<td>Mun.</td>
<td>2.32</td>
<td>2.32</td>
<td>Mun.</td>
<td>2.32</td>
<td>6.96</td>
</tr>
<tr>
<td>Kalihi Pump</td>
<td>1952-08 to 09</td>
<td>8</td>
<td>Mun.</td>
<td>1.12</td>
<td>1.12</td>
<td>Mun.</td>
<td>1.12</td>
<td>3.36</td>
</tr>
<tr>
<td>Kalihi Shaft</td>
<td>2052-08</td>
<td>1</td>
<td>Mun.</td>
<td>1.28</td>
<td>1.28</td>
<td>Mun.</td>
<td>1.28</td>
<td>3.84</td>
</tr>
<tr>
<td>Mokulua Station</td>
<td>2153-10 to 12</td>
<td>3</td>
<td>Mun.</td>
<td>0.48</td>
<td>0.48</td>
<td>Mun.</td>
<td>0.48</td>
<td>1.44</td>
</tr>
<tr>
<td><strong>Subtotal (BWS Wells)</strong></td>
<td>24</td>
<td>93.86</td>
<td>33.62</td>
<td>79.33</td>
<td>2,717.30</td>
<td>33.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Private Users</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amoros H.C. &amp; D.</td>
<td>2053-05</td>
<td>1</td>
<td>Ind.</td>
<td>0.576</td>
<td>0.139</td>
<td>Ind.</td>
<td>0.576</td>
<td>1.74</td>
</tr>
<tr>
<td>Army - Ft. Shafter</td>
<td>2053-10, 11</td>
<td>2</td>
<td>Dom.</td>
<td>3.60</td>
<td>1.035</td>
<td>Dom.</td>
<td>3.60</td>
<td>10.05</td>
</tr>
<tr>
<td>Army - Tripler</td>
<td>2153-07, 08</td>
<td>2</td>
<td>Dom.</td>
<td>1.555</td>
<td>0.609</td>
<td>Dom.</td>
<td>1.555</td>
<td>4.66</td>
</tr>
<tr>
<td>Bishop Trust</td>
<td>1951-26</td>
<td>1</td>
<td>Ind.</td>
<td>1.15</td>
<td>0.08</td>
<td>Ind.</td>
<td>1.15</td>
<td>0.30</td>
</tr>
<tr>
<td>Del Monte Corp.</td>
<td>1951-12</td>
<td>1</td>
<td>Ind.</td>
<td>1.296</td>
<td>0.244</td>
<td>Ind.</td>
<td>1.296</td>
<td>0.74</td>
</tr>
<tr>
<td>Castle &amp; Cooke Foods</td>
<td>1952-11, 21, 21, 21</td>
<td>4</td>
<td>Ind.</td>
<td>0.092</td>
<td>0.092</td>
<td>Ind.</td>
<td>0.092</td>
<td>0.37</td>
</tr>
<tr>
<td>Hawaii Meat Co., Ltd.</td>
<td>2053-09</td>
<td>1</td>
<td>Ind.</td>
<td>0.144</td>
<td>2.5</td>
<td>Ind.</td>
<td>0.144</td>
<td>7.30</td>
</tr>
<tr>
<td>Honolulu Gas Co.</td>
<td>1953-14</td>
<td>1</td>
<td>Ind.</td>
<td>14.6</td>
<td>2.5</td>
<td>Ind.</td>
<td>14.6</td>
<td>41.50</td>
</tr>
<tr>
<td>Honolulu Int. C.C.</td>
<td>2554-01</td>
<td>1</td>
<td>Irr.</td>
<td>0.346</td>
<td>0.346</td>
<td>Irr.</td>
<td>No data</td>
<td>12.25</td>
</tr>
<tr>
<td>Kamehameha Schools</td>
<td>2052-07, 11</td>
<td>2</td>
<td>Dom.</td>
<td>0.208</td>
<td>0.189</td>
<td>Dom.</td>
<td>0.208</td>
<td>0.57</td>
</tr>
<tr>
<td>Kawaialae Church</td>
<td>1851-08</td>
<td>1</td>
<td>Irr.</td>
<td>0.100</td>
<td>0.043</td>
<td>Irr.</td>
<td>No data</td>
<td>0.04</td>
</tr>
<tr>
<td>Kokua Kogyo</td>
<td>1749-19</td>
<td>1</td>
<td>Dom.</td>
<td>0.576</td>
<td>0.036</td>
<td>Dom.</td>
<td>0.576</td>
<td>0.11</td>
</tr>
<tr>
<td>Levee’s Kukui</td>
<td>1749-19</td>
<td>1</td>
<td>Ind.</td>
<td>0.043</td>
<td>0.043</td>
<td>Ind.</td>
<td>No data</td>
<td>0.04</td>
</tr>
<tr>
<td>MTL Inc.</td>
<td>1851-20</td>
<td>1</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.045</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.13</td>
</tr>
<tr>
<td>Paradise Hotel</td>
<td>1750-09</td>
<td>1</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.045</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.13</td>
</tr>
<tr>
<td>Pacific Club</td>
<td>1851-07</td>
<td>1</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.045</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.13</td>
</tr>
<tr>
<td>Pacific Laundry</td>
<td>1851-58</td>
<td>1</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.045</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.13</td>
</tr>
<tr>
<td>Palama Settlement</td>
<td>1952-15</td>
<td>1</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.045</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.13</td>
</tr>
<tr>
<td>Punahou School</td>
<td>1840-10</td>
<td>1</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.045</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.13</td>
</tr>
<tr>
<td>Queen’s Med. Ctr</td>
<td>1951-54</td>
<td>1</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.045</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.13</td>
</tr>
<tr>
<td>S.M. Damon Estate</td>
<td>2153-02</td>
<td>1</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.045</td>
<td>Dom.</td>
<td>0.045</td>
<td>0.13</td>
</tr>
<tr>
<td><strong>Subtotal (Private Users)</strong></td>
<td>27</td>
<td>27.80</td>
<td>8.00</td>
<td>10.35</td>
<td>2,925.55</td>
<td>20.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL - Moanalua-Kaimuki Subareas</strong></td>
<td>61</td>
<td>121.77</td>
<td>41.63</td>
<td>114.87</td>
<td>3,266.85</td>
<td>41.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAI-ALAE-IIHAWAI KAI Subareas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Board of Water Supply</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aina Koa</td>
<td>1749-01</td>
<td>1</td>
<td>Mun.</td>
<td>0.504</td>
<td>0.40</td>
<td>Mun.</td>
<td>0.504</td>
<td>1.50</td>
</tr>
<tr>
<td>Waialua Iki Station</td>
<td>1749-02</td>
<td>1</td>
<td>Mun.</td>
<td>0.504</td>
<td>0.19</td>
<td>Mun.</td>
<td>0.504</td>
<td>1.50</td>
</tr>
<tr>
<td>Waialua Shaft</td>
<td>1747-02</td>
<td>1</td>
<td>Mun.</td>
<td>0.880</td>
<td>0.24</td>
<td>Mun.</td>
<td>0.880</td>
<td>2.64</td>
</tr>
<tr>
<td><strong>Subtotal (BWS Wells)</strong></td>
<td>3</td>
<td>3.98</td>
<td>0.83</td>
<td>1.09</td>
<td>302.95</td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Private Users</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waialua Country Club</td>
<td>1646-01</td>
<td>1</td>
<td>Irr.</td>
<td>0.864</td>
<td>0.270</td>
<td>Irr.</td>
<td>0.864</td>
<td>2.56</td>
</tr>
<tr>
<td><strong>TOTAL - Waialua-IIhawaikai Subareas</strong></td>
<td>4</td>
<td>4.75</td>
<td>1.10</td>
<td>2.56</td>
<td>401.50</td>
<td>1.10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B9
The following additional information is forwarded for your possible use:

US ARMY HAWAII WATER SOURCES

ISLAND OF OAHU

1) Ft. Shafter Mil Res:
   a) Active well - drilled 1914 - No. 146 (next to the pump house)
   b) Active well - drilled 1960 - No. 146-2 (located south of well 146 near the pump house)
   c) Inactive well - drilled 1948 - No. 146-1 (located in tunnel)

2) Tripler Army Hospital:
   a) Active well - drilled Jan 1945 - No. 154-1A
   b) Inactive well - drilled Apr 1945 - No. 154-1B
      (Well put out of service until well casing is repaired)

3) Aliamanu Mil Res:
   a) Active well - drilled 1941 - No. 160 (2155-04-560?)

4) Schofield Barracks Mil Res:
   a) Four (4) active wells in one shaft - shaft No. 4

5) Other Installations: Water is purchased from the C&C of Hon - BWS;
   Oahu Sugar Co; Mokuleia Ranch & Land Co; Kahuku Sugar Co.
ISOPHETIC AREA 4
15-4-1A  Tripler Genral Hospital Well #1

FROM
BM - Top of Mauka Rim of Manhole
Subj.

Ladder E1. 30.56
T. B. Yim (operator)

When pump is operated, and pumping at the
rate of about 1300 GPM at the adjacent
well # 154-1B, the drawdown of this
well is from 6 to 8 inches.

The other well is about 50 ft. far away.

Pump - Elec. pump 300 HP
Located in Bldg. #94, Tripler Genral Hosp.

1964
4/21/69 @ 1110

Jno-1 23:22

Loss = 0.27
(tower)

No. of sheets 11

GPO: 1964-0-749-409
March 16, 1981

Col. Adolph A. Hight  
Director of Engineering & Housing  
Department of the Army  
Headquarters U.S. Army Support Command  
Ft. Shafter, Hawaii 96858

On February 27, 1981, the Board of Land and Natural Resources designated the Honolulu and Waialua Districts as the Honolulu Ground Water Control Area and the Waialua Ground Water Control Area. By this action, the Department of Land and Natural Resources is now responsible for regulating all uses of ground water in these areas.

If you are currently using ground water from any well or spring source, you are required to declare such water use to the Department of Land and Natural Resources if you wish to continue your present use. Specifically, you must fill out, sign, and return the enclosed Declaration of Existing Water Withdrawal and Use form to the Department by June 4, 1981, in accordance with Regulation 9 of the Department of Land and Natural Resources.

According to our records, you have 6 well(s) located on your property (Tax Map Key ____________). Please complete the enclosed form and return it as soon as possible to: Department of Land and Natural Resources, P.O. Box 373, Honolulu, Hawaii 96809.

If you have any questions or need help in filling out the form, please call the Division of Water and Land Development at 548-7619. Thank you for your cooperation.

Very truly yours,

[Signature]

Chairman of the Board

Enc.
WELL INFORMATION SHEET

Instructions: The following information is currently on file at the Department of Land and Natural Resources, Division of Water and Land Development. If there are any changes, please make the necessary corrections and return to the Department of Land and Natural Resources, P.O. Box 373, Honolulu, Hawaii 96809.

<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Number</td>
<td>2159-07</td>
</tr>
<tr>
<td>Name or Location</td>
<td>Moanalua</td>
</tr>
<tr>
<td>Owner or User</td>
<td>U.S. Army</td>
</tr>
<tr>
<td>Year drilled</td>
<td>1949</td>
</tr>
<tr>
<td>Driller</td>
<td>U.S. Army</td>
</tr>
<tr>
<td>Ground Surface Elevation</td>
<td>28</td>
</tr>
<tr>
<td>Casing Diameter in inches</td>
<td>10</td>
</tr>
<tr>
<td>Total depth of well in feet</td>
<td>302</td>
</tr>
<tr>
<td>Casing depth in feet</td>
<td>92</td>
</tr>
<tr>
<td>Major Use</td>
<td>Domestic</td>
</tr>
<tr>
<td>Static Water Level in feet</td>
<td>20.0</td>
</tr>
<tr>
<td>Chloride content of water</td>
<td>62-76</td>
</tr>
<tr>
<td>Installed pump capacity</td>
<td></td>
</tr>
<tr>
<td>Average annual draft</td>
<td>0.6</td>
</tr>
</tbody>
</table>
**WELL INFORMATION SHEET**

Instructions: The following information is currently on file at the Department of Land and Natural Resources, Division of Water and Land Development. If there are any changes, please make the necessary corrections and return to the Department of Land and Natural Resources, P.O. Box 373, Honolulu, Hawaii 96809.

<table>
<thead>
<tr>
<th>Information</th>
<th>Details</th>
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</thead>
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<tr>
<td>Well Number:</td>
<td>2193-08</td>
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<tr>
<td>Name or Location:</td>
<td>Moanalua</td>
</tr>
<tr>
<td>Owner or User:</td>
<td>U.S. Army</td>
</tr>
<tr>
<td>Year drilled:</td>
<td>1948</td>
</tr>
<tr>
<td>Driller:</td>
<td>U.S. Army</td>
</tr>
<tr>
<td>Ground Surface Elevation in feet referenced to mean sea level:</td>
<td>28</td>
</tr>
<tr>
<td>Casing Diameter in inches:</td>
<td>16</td>
</tr>
<tr>
<td>Total depth of well in feet:</td>
<td>386</td>
</tr>
<tr>
<td>Casing depth in feet:</td>
<td>57</td>
</tr>
<tr>
<td>Major Use:</td>
<td>Domestic, Disposal, Municipal, Irrigation, Industrial, Unused, Sealed, Observation, Other (specify)</td>
</tr>
<tr>
<td>Static Water Level in feet:</td>
<td>23.8</td>
</tr>
<tr>
<td>Chloride content of water in milligrams/liter:</td>
<td>88 - 69</td>
</tr>
<tr>
<td>Installed pump capacity in million gallons per day:</td>
<td></td>
</tr>
<tr>
<td>Average annual draft in million gallons per day:</td>
<td></td>
</tr>
</tbody>
</table>
WELL INFORMATION SHEET

Instructions: The following information is currently on file at the Department of Land and Natural Resources, Division of Water and Land Development. If there are any changes, please make the necessary corrections and return to the Department of Land and Natural Resources, P.O. Box 373, Honolulu, Hawaii 96809.

Well Number: 2052-09

Name or Location: Ft. Shafter

Owner or User: U.S. Army

Year drilled: 1942

Driller: Mullin

Ground Surface Elevation in feet referenced to mean sea level: 202

Casing Diameter in inches: 12

Total depth of well in feet: 235

Casing depth in feet: 210

Major Use: ☑ Domestic ☐ Disposal

☐ Municipal ☐ Unused ☐ Lost

☐ Irrigation ☐ Sealed ☐ Recharge

☐ Industrial ☐ Observation ☐ Other (specify) ______

Static Water Level in feet: ____________________________

Chloride content of water in milligrams/liter: 100

Installed pump capacity in million gallons per day: ____________________________

Average annual draft in million gallons per day: ____________________________
HONOLULU GWCA

Ft. Shafter
2053-10
2053-11
2052-09 (No material received. Telephone conversation w/ George Keys reveals well unused)

Tripler
2153-07
2153-08

WAI'ALI'A GWCA

Army @ Mokuleia 3412-02

Air Force @ Kaena Pt. 3314-03

SCHOFFIELD SHAFT
