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**COMMISSION ON WATER RESOURCE MANAGEMENT**

(11/08)

Is this same as water shortage Plan?

Water conservation plan. Shortage plan waive for this permit.
March 16, 2009

Mr. Ken C. Kawahara, Deputy Director
State of Hawaii
Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Kawahara:

Re: Water Use Permits, Puuloa Ground-Water Management Area, Oahu
- WUP No. 855 for Well No. 1901-08 (new permit)
- WUP No. 857 for Well No. 2001-12 (supersedes WUP No. 793)
- WUP No. 858 for Well No. 1901-05 (supersedes WUP No. 794)
- WUP No. 859 for Well Nos. 1900-24 and 2000-06 (new permit)

As required by the Conservation Conditions Ewa Caprock Water Use Permits attached to your February 12, 2009 letter, enclosed please find the Water Conservation Program and Plan for irrigation of landscaped areas in Ewa by Gentry. The plan was prepared by our landscape architects, Brownlie and Lee, for the Ewa by Gentry development.

Please call me at 599-8229 if you require additional information.

Very truly yours,

GENTRY HOMES, LTD.

Michael J. Brant, P. E.
Vice President – Engineering

cc: T. Nance, TNWRE

Attachment

560 N. Nimitz Hwy., Honolulu, Hawaii 96817 P.O. Box 295, Honolulu, Hawaii 96809 (808) 599-5558
EWA BY GENTRY EWA CAPROCK WATER CONSERVATION PROGRAMS AND PLANS

Ewa by Gentry shall minimize demand for non-potable water by:

1. Utilizing low maintenance water efficient plants which are brackish water, drought, wind and pest tolerant. Planting shall have minimal susceptibility to insect and disease to minimize usage of insecticides and fungicides. Groundcover species shall densely cover the ground to minimize weed establishment and germination and thus minimize the application of herbicides.

2. Planting trees, shrubs and groundcovers which have proven themselves in the growing environment at Ewa by Gentry including:

<table>
<thead>
<tr>
<th>Native Trees</th>
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<tbody>
<tr>
<td>Alahee</td>
<td>Autograph</td>
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<tr>
<td>Coconuts</td>
<td>Beach Heliotrope</td>
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<tr>
<td>Dwarf Hau</td>
<td>Bridal Veil Plumeria</td>
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<tr>
<td>Hala</td>
<td>California Pepper</td>
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<td>Lonomea</td>
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<td>Loulu</td>
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<table>
<thead>
<tr>
<th>Native Shrubs</th>
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<tr>
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<td>Ahu‘awa</td>
<td>Podocarpus</td>
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<tr>
<td>Akoko</td>
<td>Silver Buttonwood</td>
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<tr>
<td>Hawaiian Cotton, Ma'o</td>
<td>Silver Trumpet</td>
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<tr>
<td>Hibiscus</td>
<td>Travelers Tree</td>
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<tr>
<td>Hinahina</td>
<td>White Bird of Paradise</td>
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<td>Kului</td>
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<td>Mountain Naupaka</td>
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<td>Naio</td>
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<td>Nanu</td>
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<td>Naio Papa</td>
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<td>Ohai (Sesbania molokaiensis)</td>
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<td>Pa‘u o Hi‘aka</td>
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<td>Native Plumbago, Ilie‘e</td>
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<td>Ulei</td>
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<td>Vitex rotundifolia</td>
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Palm
Areca Palm
Bottle Palm
Coconut
Dwarf Date
Giant Cycad
Manila Palm
Neodypsis
Royal Palm
Washingtonia Palm
Woodyetia

Shrubs
Agave
Bird-of-Paradise
Caricature Plant
Copperleaf
Croton Mame
Dwarf Spider Lily
Eldorado
Galphimia
Green Eranthemum
Lilinol Ti
Natal Plum
Purple Eranthemum
Sago
Spider Lily
Yucca
3. Utilizing plant material which develops a minimum of undesired or excessive growth or foliage which must be frequently trimmed.

4. Installing and maintaining organic mulch in groundcover areas where feasible and beneficial to plant growth to reduce evaporation and for weed and erosion control. Mulch shall be spread to a thickness of 2-inches in wide beds below hedge planting to minimize weed establishment and eliminate the need for groundcover and related water and maintenance. Mulch shall not be installed to excessive depths which will inhibit plant growth or present an environment which creates insect or slug problems.

5. Maintaining landscaping with minimal application of pesticides and fertilizer. Fertilizer shall not be applied on established planting more frequently than on a quarterly basis. Fertilizer shall not be applied if it will result in excessive plant growth or where current plant condition is excellent.

6. Improving land management plans to conserve water, this includes at least annual laboratory soil analysis to determine current soil fertility levels and necessary nutrient supplements. Rainfall and run-off shall be captured thru site and landscape grading to create sump areas and minimize the use of berms.

Ewa by Gentry shall improve efficiency in use of non-potable water and reduce losses and waste of non-potable water by:

1. Utilizing efficiently designed landscaping and irrigation systems.

2. Monitoring irrigation requirements and controlling usage by checking the condition of all landscaping on at least a weekly basis and adjusting irrigation duration and frequency accordingly.

3. Managing irrigation scheduling to minimize water demand by monitoring the weather on both a daily and seasonal basis and adjusting irrigation schedules and operating times and duration of irrigation cycles accordingly. Turning off irrigation controllers when raining.

4. Eliminating water wastage by checking irrigation system and promptly repairing leaks and breaks in irrigation pipes. Irrigation system shall be checked at least monthly to ensure that the radius and arc of each irrigation head is correct and that each head is not overthrowing pavement or spraying onto structures. Leaks and malfunctioning irrigation equipment reported by residents to the Homeowners Association or the landscape maintenance contractor shall be repaired no later than the following day, excluding Sunday.

5. Maintaining and improving irrigation system as necessary. Consult with Landscape Architect who designed the existing irrigation system prior to making modifications to the irrigation system which will change existing flow rates or equipment application rates or area of coverage.
March 2, 2009

Mr. Wayne M. Hashiro, P.E., Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, HI 96843

Dear Mr. Hashiro:

Ewa by Gentry, Irrigation Source Contingency Plan
Water Use Permit Nos. 855, 857, 858, and 859

Enclosed for your information is a copy of the irrigation water supply contingency plan submitted by Gentry Homes, Ltd. Gentry Homes submitted this plan in accordance with Special Condition 4 of the captioned water use permits, which states:

4. The permittee shall submit a contingency plan for water use in the event the chloride concentration in the permitted well(s) exceeds the 1,000 mg/l sustainable capacity limit established for Ewa caprock aquifer sources, in which case the permittee shall seek an alternative source of supply. The contingency plan shall be submitted to the Commission within 30 days of the issuance of this permit.

The Commission included Special Condition 4, as a condition of permit approval on January 22, 2009, in response to a comment received from the Board of Water Supply on Gentry Homes’ applications for these permits.

If you have any questions, please contact Denise Mills of the Commission staff at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DEM:ss
Enclosure
c: Mike Brant, Gentry Homes
COMMISSION ON WATER RESOURCE MANAGEMENT

FROM: ROY
TO: CHENG, C.
CHING, F.
CHONG, R.
DANBARA, S.
ENGLAND, D.
FUJII, N.
HARDY, R.
HOAGBIN, S.
ICE, C.
IMATA, R.
KAWAHARA, K.
KIMURA, J.
KUNIMURA, I.
MILLS, D.
OHYE, L.
OHYE, M.
OSHIRO, K.
SAKODA, E.
SWANSON, S.
TORRES, R.
UYENO, D.
YODA, K.
YOSHINAGA, M.

DATE: FEB 23 2009
SUSPENSE DATE: __________

INIT. TO: INIT. FOR: PLEASE:

Approval
Signature
Information

See Me
Review & Comment
Take Action
Type Draft
Type Final
File
Xerox ___ copies

- Copy to BWS
- still waiting for WVP 856 plan.
February 20, 2009

Mr. Ken C. Kawahara, Deputy Director
State of Hawaii
Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii  96809

Dear Mr. Kawahara:

Subject: Water Use Permits, Puuloa Ground-Water Management Area, Oahu
WUP No. 855 for Well No. 1901-08 (new permit)
WUP No. 857 for Well No. 2001-12 (supersedes WUP No. 793)
WUP No. 858 for Well No. 1901-05 (supersedes WUP No. 794)
WUP No. 859 for Well Nos. 1900-24 and 2000-06 (new permit)

In response to your February 12, 2009 letter, Special Condition 4, should the chloride concentration in any of the permitted wells exceed the 1,000 mg/l limit, the following action will be taken:

1. The amount of water drawn from the non-performing well (well exceeding chloride limit) will be reduced. The irrigation system of the nearby area will be adjusted to allow nearby wells to supplement shortfall in system with reduced amount of water drawn.

2. If adjustment of water use fails or is not feasible, Gentry will apply for a variance to exceed the specified chloride limit.

3. If a variance is not granted, a new well(s) will be developed to provide additional sources of water for use in the irrigation system.

If you require additional information, please feel free to call me at 599-8229.

Very truly yours,

GENTRY HOMES, LTD.

Michael J. Brant, P.E.
Vice President – Engineering

/sacm

cc: T. Nance, TNWRE

h:\selinam\windword\ewa\wells\dlhrwaterusepermits2009.doc
COMMISSION ON WATER RESOURCE MANAGEMENT

FROM: Denise    DATE: 2/9/09    SUSPENSE DATE: __________________________

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Corrections to Gentry permits - yellow highlight & strike out kept. (Track changes caused the whole merge file to show as changed?)

O.K.
Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
Print your name and address on the reverse so that we can return the card to you.
Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: Mr. Mike Brant
   - Gentry Homes, Ltd.
   - Honolulu, HI

2. Article Number (Transfer from service label) 7006 2150 0003 3953 9463

3. Service Type
   - Certified Mail
   - Express Mail
   - Registered
   - Return Receipt for Merchandise
   - Insured Mail
   - C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

Mr. Mike Brant
- Gentry Homes, Ltd.
- Honolulu, HI
UNITED STATES POSTAL SERVICE

* Sender: Please print your name, address, and ZIP+4 in this box *

COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. Box 621
Honolulu, Hawaii 96809

Attn: Denise
U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com.

OFFICIAL USE

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FEB 1, 2009

Mr. Mike Brant
Gentry Homes, Ltd.
Honolulu, HI
Certified Mail Provides:

- mailing receipt
- unique identifier for your mailpiece
- A record of delivery kept by the Postal Service for two years

Important Reminders:

Certified Mail may ONLY be combined with First-Class Mail® or Priority Mail®. Certified Mail is not available for any class of international mail.

- NO INSURANCE COVERAGE IS PROVIDED with Certified Mail. For valuables, please consider Insured or Registered Mail.

- For an additional fee, a Return Receipt may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to cover the fee. Endorse mailpiece "Return Receipt Requested". To receive a fee waiver for a duplicate return receipt, a USPS® postmark on your Certified Mail receipt is required.

- For an additional fee, delivery may be restricted to the addressee or addressee's authorized agent. Advise the clerk or mark the mailpiece with the endorsement "Restricted Delivery".

- If a postmark on the Certified Mail receipt is desired, please present the article at the post office for postmarking. If a postmark on the Certified Mail receipt is not needed, detach and affix label with postage and mail.

IMPORTANT: Save this receipt and present it when making an inquiry

PS Form 3800, August 2006 (Reverse) PSN 7530-02-000-9047
February 12, 2009

Chairperson

Mr. Mike Brant
Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

Dear Mr. Brant:

Water Use Permits Approved

WUP No. 855 for Well No. 1901-08 (new permit)
WUP No. 857 for Well No. 2001-12 (supersedes WUP No. 793)
WUP No. 858 for Well No. 1901-05 (supersedes WUP No. 794)
WUP No. 859 for Well Nos. 1900-24 and 2000-06 (new permit)

Puuloa Ground-Water Management Area, Oahu

This letter transmits your water use permits for the following Gentry Homes irrigation wells: Gentry Area 45 (Well No. 1901-08); Gentry Area 13 (Well No. 1901-05); Keaunui Area 30 (Well No. 2001-12); and Gentry Area 35 #1 and #2 (Well Nos. 1900-24 and 2000-06, respectively). This transmittal corrects the permits that we issued to you on January 27, 2009, notably, that you are not required to submit a water shortage plan for the four wells subject to these permits. Your permits, which were approved by the Commission on Water Resource Management on January 22, 2009, authorize the following quantities of water use on a 12-month moving average basis.

<table>
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<tr>
<th>Well Number and Name</th>
<th>1901-08 Gentry Area 45</th>
<th>2001-12 Keaunui Area 30</th>
<th>1901-05 Gentry Area 13</th>
<th>1900-24 Gentry Area 31, #1</th>
<th>2000-06 Gentry Area 35, #2</th>
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<td>855</td>
<td>857</td>
<td>858</td>
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<tr>
<td>Quantity permitted (mgd)</td>
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<td>0.225</td>
<td>0.037</td>
<td>0.255</td>
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<tr>
<td>Permitted use area (acres)</td>
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<td>36.09</td>
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<td>Pump capacity (gpm)</td>
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<td>430</td>
<td>355</td>
<td>150</td>
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As part of the Commission's approval, the following special conditions were added to each of the enclosed permits under Standard Permit Condition 19:

**Special Conditions**

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

2. This permit is approved under the assumption that reclaimed wastewater will become available for reuse as an alternative supply source.
3. Pumping shall cease immediately if chloride measurements show that the brackish water drawn by the well(s) exceeds 1,000 mg/l of chloride, unless a variance from the chloride limit has been granted. The authority to approve variance requests is delegated to the Chairperson.

4. The permittee shall submit a contingency plan for water use in the event the chloride concentration in the permitted well(s) exceeds the 1,000 mg/l sustainable capacity limit established for Ewa caprock aquifer sources, in which case the permittee shall seek an alternative source of supply. The contingency plan shall be submitted to the Commission within 30 days of the issuance of this permit.

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

6. Standard Condition 16 is waived for brackish water wells.

7. The permittee shall comply with the conservation conditions for Ewa caprock water use permits, attached to this permit.

Enclosed with this approval letter are the following:

1. Water Use Permit No. 855
2. Water Use Permit No. 857
3. Water Use Permit No. 858
4. Water Use Permit No. 859
5. Conservation Conditions – Ewa Caprock Water Use Permits
6. Your monthly water use report form (for five irrigation supply wells)

The special conditions listed above and the Ewa Caprock water use permit conservation conditions should be kept with each of the subject permits. Please be sure to read all the conditions of your approved permits.

We draw your attention to two specific conditions of each permit that require your response. First, Standard Condition 10 requires you to keep a record of your monthly total pumpage, water level in the well, chloride concentration, and water temperature measurements. This information must be submitted to the Commission on a monthly basis using the enclosed water use report form. You may make copies of the enclosed report form or download blank forms, as needed, from our website at http://www.hawaii.gov/dlnr/cwnl/resources_permits.htm.

Second, Special Condition 4 requires you to submit a contingency plan for water use in the event that chloride concentrations in the wells covered by these permits exceeds the 1,000 mg/l chloride limit established for Ewa caprock irrigation water supply sources. Your contingency plan must be submitted within thirty (30) days of the issuance date of this permit.

If you have any questions, please call Denise Mills of the Commission staff at 587-0251.

Sincerely,

LAURA H. THEILEN
Chairperson

Attachments: WUP Nos. 855, 857, 858, and 859
Conservation Conditions – Ewa Caprock Water Use Permits
Water Use Report Form
GROUND-WATER USE PERMIT
WUP NO. 855

PERMITTEE

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<td>________________</td>
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<tr>
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PERMITTED SOURCE INFORMATION

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<tr>
<td>Water Management Area</td>
<td></td>
</tr>
<tr>
<td>Aquifer Sector</td>
<td>Ewa Caprock</td>
</tr>
<tr>
<td>Aquifer System</td>
<td>Puuloa</td>
</tr>
<tr>
<td>System Sustainable Yield</td>
<td>N/A (1,000 mg/l chloride concentration limit for irrigation uses)</td>
</tr>
<tr>
<td>Well Name</td>
<td>Gentry Area 45</td>
</tr>
<tr>
<td>State Well Nos.</td>
<td>1901-08</td>
</tr>
</tbody>
</table>

PERMITTED USE INFORMATION

<table>
<thead>
<tr>
<th>Reasonable beneficial use</th>
<th>Irrigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawal (12 month moving ave.)</td>
<td>0.066 mgd</td>
</tr>
</tbody>
</table>

Location of water use

| TMK(s)     | 9-1-069:005, por (10.62 acres)     |
| State land use classification | Urban       |
| County zoning classification   | R-5 and A-1  |

Pursuant to Hawaii's State Constitution, Article XI, Section 7, Hawaii Revised Statutes, Chapter 174C; Hawaii Administrative Rules, Chapters 13-167 through 13-171; and Hawaii decisional law and custom, the permittee is hereby authorized to use ground water from the sources and in the amount and from and upon the locations described above; subject however, to the requirements of law including but not limited to the following conditions:
1. The water described in this water use permit may only be taken from the location described and used for the reasonable beneficial use described at the location described above. Reasonable beneficial uses means "the use of water in such a quantity as is necessary for economic and efficient utilization which is both reasonable and consistent with State and County land use plans and the public interest." (HRS § 174C-3)

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

3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
   a. Can be accommodated with the available water source;
   b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
   c. Will not interfere with any existing legal use of water;
   d. Is consistent with the public interest;
   e. Is consistent with State and County general plans and land use designations;
   f. Is consistent with County land use plans and policies; and
   g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).

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

5. The ground-water use here must not interfere with interim or permanent instream flow standards. If it does, then:
   a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
   b. The interim or permanent instream flow standard, as applicable, must be amended.

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

7. The water use permit application and submittal, as amended, approved by the Commission at its January 22, 2009, meeting are incorporated into this permit by reference.

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

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

Prior to any reduction, the Commission shall give notice of its proposed action to the permittee and provide the permittee an opportunity to be heard.
10. Approved flowmeters must be installed to measure monthly ground-water 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 (see attached form).

11. This permit shall be subject to the Commission's periodic review of the Puuoloa 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 Puuoloa Aquifer System, or relevant modified aquifer(s), is reduced.

12. A permit may be transferred, in whole or in part, from the permittee to another, if:
   a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
   b. The Commission is informed of the transfer within ninety days.

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

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

14. The permittee shall request modification of the permit as necessary to comply with all applicable laws, rules, and ordinances 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 conservation, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period of forfeiture.

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

[Signature]

LAURA H. THIELEN, Chairperson
Commission on Water Resource Management

Attachments: Conservation Conditions – Ewa Caprock Water Use Permits
COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. Box 621
Honolulu, Hawaii 96809

ATHN: Denise

09 FEB 4 A 8: 54
SENDERS: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
   
   Mr. Mike Brant  
   Gentry Homes, Ltd.  
   P.O. Box 295  
   Honolulu, HI 96809

2. Article Number
   (Transfer from service label)  
   7006 2150 0003 3953 9432

COMPLETE THIS SECTION ON DELIVERY

A. Signature  
X  

B. Received by (Printed Name)  
Geo Lum

C. Date of Delivery

D. Is delivery address different from item 1?  
   Yes  
   No  

E. Service Type
- Certified Mail  
- Registered  
- INSURED MAIL  
- Express Mail  
- Return Receipt for Merchandise  
- C.O.D.

F. Restricted Delivery? (Extra Fee)  
   Yes  
   No

PS Form 3811, February 2004  
Domestic Return Receipt  
102595-02-M-15c
Certified Mail Provides:

- A mailing receipt
- A unique identifier for your mailpiece
- A record of delivery kept by the Postal Service for two years

Important Reminders:

- Certified Mail may ONLY be combined with First-Class Mail® or Priority Mail®.
- Certified Mail is not available for any class of international mail.
- NO INSURANCE COVERAGE IS PROVIDED with Certified Mail. For valuables, please consider Insured or Registered Mail.
- For an additional fee, a Return Receipt may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to cover the fee. Endorse mailpiece "Return Receipt Requested". To receive a fee waiver for a duplicate return receipt, a USPS® postmark on your Certified Mail receipt is required.
- For an additional fee, delivery may be restricted to the addressee or addressee's authorized agent. Advise the clerk or mark the mailpiece with the endorsement "Restricted Delivery".
- If a postmark on the Certified Mail receipt is desired, please present the article at the post office for postmarking. If a postmark on the Certified Mail receipt is not needed, detach and affix label with postage and mail.

IMPORTANT: Save this receipt and present it when making an inquiry.

S Form 3800, August 2006 (Reverse) PSN 7530-02-000-9047
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<th>Description</th>
<th>Amount</th>
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<td>Return Receipt Fee (Endorsement Required)</td>
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<tr>
<td>Restricted Delivery Fee (Endorsement Required)</td>
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</tr>
<tr>
<td><strong>Total Postage &amp; Fees</strong></td>
<td>$16.58</td>
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</table>

**Sent To**

Mr. Mike Brant  
Gentry Homes, Ltd.  
Honolulu, HI
Mr. Mike Brant  
Gentry Homes, Ltd.  
P.O. Box 295  
Honolulu, HI 96809

Dear Mr. Brant:

Water Use Permits Approved  
WUP No. 855 for Well No. 1901-08 (new permit)  
WUP No. 857 for Well No. 2001-12 (supersedes WUP No. 793)  
WUP No. 858 for Well No. 1901-05 (supersedes WUP No. 794)  
WUP No. 859 for Well Nos. 1900-24 and 2000-06 (new permit)  

Puuloa Ground-Water Management Area, Oahu

This letter transmits your water use permits for the following Gentry Homes irrigation wells:  
Gentry Area 45 (Well No. 1901-08); Gentry Area 13 (Well No. 1901-05); Keaunui Area 30 (Well No. 2001-12); and Gentry Area 35 #1 and #2 (Well Nos. 1900-24 and 2000-06, respectively). Your permits, which were approved by the Commission on Water Resource Management on January 22, 2009, authorize the following quantities of water use on a 12-month moving average basis:

<table>
<thead>
<tr>
<th>Well Number and Name</th>
<th>1901-08</th>
<th>2001-12</th>
<th>1901-05</th>
<th>1900-24</th>
<th>2000-06</th>
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<tr>
<td>Gentry Area 45</td>
<td>855</td>
<td>855</td>
<td>858</td>
<td>859</td>
<td>859</td>
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<tr>
<td>Keaunui Area 30</td>
<td>0.066</td>
<td>0.225</td>
<td>0.037</td>
<td>0.255</td>
<td>Battery w/1900-24</td>
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<tr>
<td>Gentry Area 13</td>
<td>10.62</td>
<td>36.09</td>
<td>5.94</td>
<td>41.00</td>
<td>-</td>
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<tr>
<td>Gentry Area 35 #2</td>
<td>100</td>
<td>430</td>
<td>355</td>
<td>150</td>
<td>-</td>
</tr>
</tbody>
</table>

As part of the Commission's approval, the following special conditions were added to each of the enclosed permits under Standard Permit Condition 19:
Special Conditions

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

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

3. Pumping shall cease immediately if chloride measurements show that the brackish water drawn by the well(s) exceeds 1,000 mg/l of chloride, unless a variance from the chloride limit has been granted. The authority to approve variance requests is delegated to the Chairperson.

4. The permittee shall submit a contingency plan for water use in the event the chloride concentration in the permitted well(s) exceeds the 1,000 mg/l sustainable capacity limit established for Ewa caprock aquifer sources, in which case the permittee shall seek an alternative source of supply. The contingency plan shall be submitted to the Commission within 30 days of the issuance of this permit.

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

6. The permittee shall comply with the conservation conditions for Ewa caprock water use permits, attached to this permit.

Enclosed with this approval letter are the following:

1. Water Use Permit No. 855
2. Water Use Permit No. 857
3. Water Use Permit No. 858
4. Water Use Permit No. 859
5. Conservation Conditions – Ewa Caprock Water Use Permits
6. Your monthly water use report form (for five irrigation supply wells)

The special conditions listed above and the Ewa Caprock water use permit conservation conditions should be kept with each of the subject permits. Please be sure to read all the conditions of your approved permits.

We draw your attention to three specific conditions of each permit that require your response. First, Standard Condition 10 requires you to keep a record of your monthly total pumpage, water level in the well, chloride concentration, and water temperature measurements. This information must be submitted to the Commission on a monthly basis using the enclosed water use report form. You may make copies of the enclosed report form or download blank forms, as needed, from our website at http://www.hawaii.gov/dlnr/cwrml/resources_permits.htm.

Second, you are required to submit a water shortage plan to the Commission within thirty (30) days of the issuance date of these permits (see Standard Condition 16). Your water shortage plan should state what you are willing to do if the Commission declares a water shortage situation in the Ewa Caprock Ground-Water Management Area, and can be as concise as a one-page letter. In a water shortage situation, the Commission may require temporary reductions in pumpage from some or all sources. The Commission is required by law to formulate a plan to implement
such area-wide reductions, which should accommodate, include, and be consistent with your plan. Therefore, we need your water shortage plan to assist us in formulating the Commission's overall Water Shortage Plan.

Third, Special Condition 4 requires you to submit a contingency plan for water use in the event that chloride concentrations in the wells covered by these permits exceeds the 1,000 mg/l chloride limit established for Ewa caprock irrigation water supply sources. Your contingency plan must be submitted within thirty (30) days of the issuance date of this permit. This plan may be combined with your water shortage plan, although the contingency plan is expected to cover longer-range supply needs than would normally be covered by a water shortage plan.

If you have any questions, please call Denise Mills of the Commission staff at 587-0251.

Sincerely,

[Signature]

LAURA H. THIELEN
Chairperson

Attachments: WUP Nos. 855, 857, 858, and 859
Conservation Conditions – Ewa Caprock Water Use Permits
Water Use Report Form
GROUND-WATER USE PERMIT
WUP NO. 855

PERMITTEE

<table>
<thead>
<tr>
<th>Permittee/Water User</th>
<th>Landowner of Source</th>
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</thead>
<tbody>
<tr>
<td>Gentry Homes, Ltd.</td>
<td>Gentry Homes, Ltd.</td>
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<tr>
<td>Address</td>
<td>Address</td>
</tr>
<tr>
<td>P.O. Box 295</td>
<td>P.O. Box 295</td>
</tr>
<tr>
<td>Honolulu, HI 96809</td>
<td>Honolulu, HI 96809</td>
</tr>
</tbody>
</table>

PERMITTED SOURCE INFORMATION

<table>
<thead>
<tr>
<th>Island</th>
<th>Oahu</th>
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<tbody>
<tr>
<td>Water Management Area</td>
<td>Ewa Caprock</td>
</tr>
<tr>
<td>Aquifer Sector</td>
<td>Puuloa</td>
</tr>
<tr>
<td>Aquifer System</td>
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</tr>
<tr>
<td>System Sustainable Yield</td>
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</tr>
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<td>State Well Nos.</td>
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</tr>
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   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;
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   e. reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
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11. This permit shall be subject to the Commission's periodic review of the Puuloa 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 Puuloa Aquifer System, or relevant modified aquifer(s), is reduced.

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

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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 are incorporated herein by reference.

[Signature]
LAURA H. THIELEN, Chairperson
Commission on Water Resource Management

Attachments: Conservation Conditions - Ewa Caprock Water Use Permits
AGENDA
FOR THE MEETING OF THE
COMMISSION ON WATER RESOURCE MANAGEMENT

DATE: January 22, 2009
TIME: 9:00 a.m.
PLACE: Kalanikou Building, Conference Room 132
1151 Punchbowl Street
Honolulu, Hawaii 96813

A. APPROVAL OF MINUTES
1. December 17, 2008

B. ANNOUNCEMENTS

C. GROUND WATER REGULATION
1. Gentry Homes, Ltd. and Ewa by Gentry Community Association, APPLICATIONS FOR WATER USE PERMITS: WUP No. 855, Future Irrigation Use, 66,085 gpd (Well No. 1901-08); WUP No. 856, Modify Existing Irrigation Use to 194,768 gpd (Well No. 2001-05); WUP No. 857, Modify Existing Irrigation Use to 224,615 gpd (Well No. 2001-12); WUP No. 858, Modify Existing Irrigation Use to 36,975 gpd (Well No. 1901-05); WUP No. 859, Future Irrigation Use, 255,108 gpd (Well Nos. 1900-24 and 2000-06); Puuloa Ground Water Management Area, Oahu

2. Oasis Water Systems, Inc., REQUEST TO EXCEED MAXIMUM PERMITTED WELL DEPTH: Lanikai Condominium Irrigation Well, “Welly 1” (Well No. 0319-01), TMK (4) 4-3-002:003, Wailua, Kauai

D. NON-ACTION ITEMS
1. Report to the Twenty-Fifth Legislature, 2009 Regular Session: 20-Year Review of Water Use Permits

E. NEXT COMMISSION MEETINGS (TENTATIVE)
1. February 18, 2009
2. March 18, 2009

The Commission on Water Resource Management’s monthly meeting agenda and staff submittals are now available on our website at http://www.hawaii.gov/dlnr/cwrm. Materials related to items on this agenda are available for review at our office at 1151 Punchbowl Street, Room 227, and also will be available at the meeting. Any person may testify or present information on any meeting agenda item, unless the item involves a proceeding in an existing contested case. In addition, if you have a legal interest that may be adversely affected by the proposed action, you may have a right to an administrative contested case hearing. You must make the request for such a hearing either orally or in writing at the public hearing or meeting for which this notice is given. Hawaii Administrative Rules (H.A.R.) Section 13-167-52(a). If you request a contested case hearing, you will have the opportunity to present to the Commission oral or written evidence or testimony or both to establish your standing. You may present your testimony or evidence on standing at the meeting or public hearing described above or, alternatively, at a hearing set by the Commission at a later date. If you request a contested case hearing either orally or in writing, you must also complete and file (or mail and postmark) a written petition for a contested case with the Commission within ten days after the date of the public hearing or meeting noticed here. Petition forms are available from the Commission. H.A.R. Section 13-167-52(a). If you do not make such a request or fail to file a timely written petition with the Commission, the consequence is that you will be precluded from later obtaining a contested case hearing and seeking judicial review of any adverse decision. H.A.R. Chapter 13-167. Disabled individuals planning to attend the public hearing or meeting are asked to contact the Commission at the above address or phone (Kauai) 274-3141 ext. 70214, (Maui) 984-2400 ext. 70214, (Hawaii) 974-0500 ext. 70214, (Molokai or Lanai) 1-800-GOV-INHI ext. 70214 or 587-0214 at least three days in advance of the public hearing or meeting to indicate if they have special needs which require accommodation.
Barry said BWS's concern is really having to deal with the Community Associations in the future once Gentry hands management over to them and if and when the wells start consistently going over 1000 mg/l. The gentry non-potable systems have been designed to use the caprock wells and currently the WW reuse has some other issues to overcome as follows:

1. The WW reuse can only deliver about 50 psi if they were to hook up and various booster pumps would be necessary to bring the gentry irrigation systems up to the 70 psi they require. Seems kinda high to me but that's what Gentry's irrigation systems need.
2. Although nearby, the hook up would have to occur on Fort Weaver Rd and is a bit far away from the demand areas (part of the booster pump need).
3. Honouliuli can only deliver 10 mgd of WW reuse and the short of it is that BWS has other users projected to use what little remains in the reuse system. BWS could probably handle 100,000 gpd or so but not much more.

Barry offered to be at the CWRM mtg to help answer other WW reuse questions should they arise.

--- Forwarded by Roy Hardy/DLNR/StateHiUS on 01/07/2009 02:27 PM ---

Roy Hardy/DLNR/StateHiUS
01/07/2009 01:25 PM
To Denise E Mills/DLNR/StateHiUS
cc
Subject Re: Submittal for Gentry WUPs

I'll touch base with him - haven't spoken to him in awhile and I'd like to discuss some other things with him as well. Still waiting on his call back.

Denise E Mills/DLNR/StateHiUS

Do you want me to call Barry?
Roy Hardy/DLNR/StateHiUS

Ken just raised a question about the BWS comments and ww reuse based on Commissioner Kiyosaki's comments from the last mtg. Though we included the 'contingency plan' condition for approval, we should probably ask BWS if the BWS could actually deliver water or if they've got some contractual agreements in place already with Gentry. Several of the wells are bouncing around 1,000 mg/l where they should be stopping pumping until they go down. In the meantime, they would need ww reuse to make up any deficits or face fines if we raise enforcement priority on the caprock. I can check with Barry Usagawa at
I think they are good to go.
Denise E Mills/DLNR/StateHiUS

To Roy Hardy/DLNR/StateHiUS@StateHiUS
cc
Subject Re: Submittal for Gentry WUPs

Just want to confirm that no further work is needed to complete the submittal for the Gentry WUPs. Submittals are due on Thurs. this week, so I wanted to make sure I don't miss anything this time.
STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

January 22, 2009
Honolulu, Oahu

Gentry Homes, Ltd. and Ewa by Gentry Community Association
APPLICATIONS FOR WATER USE PERMITS
WUP No. 855, Future Irrigation Use, 66,085 gpd (Well No. 1901-08)
WUP No. 856, Modify Existing Irrigation Use to 194,768 gpd (Well No. 2001-05)
WUP No. 857, Modify Existing Irrigation Use to 224,615 gpd (Well No. 2001-12)
WUP No. 858, Modify Existing Irrigation Use to 36,975 gpd (Well No. 1901-05)
WUP No. 859, Future Irrigation Use, 255,108 gpd (Well Nos. 1900-24 and 2000-06)
Puuloa Ground Water Management Area, Oahu

APPLICANTS:
WUP Nos. 855, 857, 858, 859
Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

WUP No. 856
Ewa by Gentry Community Association
91-1795 Keaunui Drive
Ewa Beach, HI 96706

SUMMARY OF REQUEST:

Gentry Homes, Ltd. and the Ewa by Gentry Community Association (hereinafter referred to as “Gentry,” except when discussing details of an individual application or referring to only one applicant) are requesting approval to:

- Modify three existing water use permits (WUPA Nos. 856, 857, and 858) to increase the use of brackish water for irrigation of landscaped areas along roadways within the Ewa by Gentry
development project in Ewa Beach. The total quantity of water requested in these applications is 456,358 gallons per day (gpd). The existing permits allow use of 371,000 gpd for the same purposes.

- Obtain two new water use permits (WUPA Nos. 855 and 859) for new irrigation uses within the Ewa by Gentry development project. The total quantity of water requested in these two applications is 321,293 gpd.
- The total water use requested is 777,551 gpd (0.778 million gallons per day [mgd]).

LOCATION MAP: See Exhibit 1.

BACKGROUND:

On March 3, 1993, the Commission adopted the boundary of the Ewa caprock aquifer as a separate aquifer system area overlying the designated ground water management areas of the Waipahu-Waiawa, Ewa-Kunia, and Makaiwa aquifer system areas. Because of uncertainties regarding the nonpotable utility and sustainable yield of the caprock formation, the Commission had not adopted a sustainable yield estimate for the Ewa caprock aquifer.

Designation of the Ewa caprock aquifer as a water management area was precipitated by the City and County of Honolulu’s (City’s) urbanization plans for the Ewa Plain and adoption by the City of a local ordinance that requires dual water systems for all new developments. Potable water was to be provided through the municipal system, with non-potable water supply provided by two sources: (1) wells designed to pump from the caprock and (2) treated effluent from the Honouliuli Wastewater Treatment Plant. The projected future demand when this ordinance was adopted was 25 mgd, which is higher than the estimated natural recharge to the caprock aquifer of less than 16 mgd.¹

In 1993, the Commission began approving 1-year temporary permits for new uses of caprock ground water. Temporary rather than permanent permits were issued in response to concerns about the future viability of the caprock to serve as a reliable water source of nonpotable water supply consequent to the loss of return of irrigation recharge from sugar cane agriculture. From 1993 until 2006, the Commission approved only 1-year temporary permits (later called interim permits) for the caprock aquifer. In analyzing water availability, the Commission used guidelines for estimating sustainable yields for the Puuloa, Kapolei, and Malakole aquifer system areas of the Ewa Caprock Aquifer Sector (hereinafter referred to as the caprock aquifer).

On March 13, 1996, the Commission adopted the following policy statement, clearing the way for application of reclaimed water on lands overlying the Ewa Caprock Aquifer Sector Area:

_It is the policy of the Commission on Water Resource Management (Commission) to promote the viable and appropriate reuse of reclaimed water in so far as it does not compromise beneficial uses of existing water resources._

I. Ewa Caprock

Recognizing that reclaimed water is a valuable resource in the Ewa Plain, direct or indirect reuse will be championed by the Commission. It is the policy of the Commission that the water resources of the Ewa Caprock Aquifer will be allocated only for nonpotable uses.

On May 14, 1997, the Commission adopted a chloride concentration limit of 1,000 milligram per liter (mg/l) as a basis for regulating water use from wells completed in the caprock aquifer and to prevent degradation of the natural quality of ground water in the caprock aquifer. The intent was to restrict pumpage in any caprock well with a chloride concentration approaching 1,000 mg/l to prevent a build up of sodium in the clayey soils and to protect other adjacent users of caprock water from drawing water with chloride concentrations above 1,000 mg/l. This limit corresponds to the generally accepted upper limit of irrigation-quality water. Thus, in lieu of an aggregate sustainable yield figure, usually expressed as a volume of water, brackish ground water pumped from irrigation wells is required to have chloride concentrations below 1,000 mg/l.

In conjunction with extending annual interim permits during the 1990s and after the millennium, the Commission tracked progress on developing reclaimed water as an alternate source of non-potable supply for well owners in the Puuloa, Kapolei, and Malakole aquifer system areas. On July 20, 2000, an agreement was reached between the Honolulu Board of Water Supply (BWS), the City, and U.S. Filter, allowing the BWS to purchase the Honolulu Wastewater Treatment Plant and become a purveyor of reclaimed water, with a goal of securing customers for 10 mgd by July 1, 2001. U.S. Filter would operate the plan for BWS under a 20-year service agreement. The City was to provide secondary effluent to the facility and take back 4 mgd of the reclaimed water for reuse by the City. Some of the reclaimed water was intended for use at the Campbell Industrial Park.

On July 18, 2001, the Commission extended the interim water use permits, subject to the standard water use permit conditions and certain special conditions for the caprock aquifer. At that time, the Commission also approved a new special condition that specified the term of interim permits to be through “...July 1, 2006 or (1) until treated wastewater is available and acceptable for use, or (2) until such time that a significant change in permitted, actual, or projected uses of water supply occurs.” Additionally, at the July 18, 2001 Commission meeting, staff recommended that the total allocation for the Puuloa Aquifer System Area should not exceed 15 mgd. The quantity of water currently allocated in this system is 14.817 mgd; however, actual pumpage on a 12-month moving average basis (12-MAV) is about one-fourth of this amount (see Exhibit 2).

On July 12, 2006, the Commission converted a total of 26 interim water use permits to permanent permits. This included the three existing permits for Gentry Homes, Ltd. (for Well Nos. 1901-05 and 2001-12) and Ewa by Gentry Community Association (for Well No. 2001-05). The total quantity of water use allowed by these three permits was 0.371 mgd (see Attachment A).

On October 8, 2008, the Commission received four complete water use permit applications from Gentry Homes, Ltd. and one water use permit application from the Ewa by Gentry Community Association. Three of these applications are to modify the existing water use permits that were made permanent on July 12, 2006. Two applications (WUPA No. 855 and 859) are for proposed new uses.
Brackish water is requested for irrigating landscape plantings along roadways within the Ewa by Gentry project and two park areas. The details of Gentry’s five water use permit applications, including source information and a summary of public notices made, are provided in Attachment A. All of the applications are for water that will be used for irrigation of landscape plantings along roadways and some park irrigation within the Ewa by Gentry development. The locations of Gentry's existing and proposed new wells and the corresponding water use permit application (WUPA) number are shown in Exhibit 3. The areas of existing and proposed new uses are delineated in a site plan prepared as part of the Ewa by Gentry Irrigation Master Plan (Exhibit 4).

**Applications to Modify Existing Permits**

The water use permit modifications requested can be summarized as follows:

- **WUPA No. 856** – The Ewa by Gentry Community Association is seeking to increase the allocated quantity for Well No. 2001-05 (under WUP No. 792) from 66,000 gallons per day (gpd) up to 194,768 gpd, for a net change of 128,768 gpd. This part of the development is known as the Sun Terra Tot Lot.
  - The water would be used on multiple TMKs within an area along Kapolei Parkway and within areas generally bounded by Kapolei Parkway, Geiger Road, Fort Weaver Road, and Keaunui Drive. The total land area proposed for irrigation under this permit is 31.3 acres. (See also Exhibit 4.)
  - The proposed use TMKs for WUPA No. 856 are listed in Exhibit 5.

- **WUPA No. 857** – Gentry Homes, Ltd. is seeking a modification that will decrease the allocated quantity for Well No. 2001-12 (under WUP No. 793) from 249,000 down to 224,615, for a net reduction of 24,385 gpd. This part of the development is known as Keaunui Area 30.
  - The area covered by this application is bounded generally by Arizona Road to the north, Fort Weaver to the west, Iroquois Road and East-West Loch Road to the south, and various lots around Keaunui Drive. The total land area proposed for irrigation under this permit is 36.09 acres. (See Exhibit 4.)
  - The proposed use TMKs for WUPA No. 857 are listed in Exhibit 6.

- **WUPA No. 858** – Gentry Homes, Ltd. is seeking a modification that will decrease the allocated quantity for Well No. 1901-05 (under WUP No. 794) from 56,000 gpd down to 36,975 gpd, for a net reduction of 19,025 gpd. This part of the development is known as Gentry Area 13.
  - The area covered by this application is roadway landscaping along Geiger Road west of Kapolei Parkway, and within the area bounded generally by Geiger Road to the north, Kapolei Parkway to the east, Launahale Street to the south, and the eastern boundary of the Coral Creek Golf Course. The total land area proposed for irrigation under this permit is 5.94 acres. (See Exhibit 4.)
  - The proposed use TMKs for WUPA No. 858 are listed in Exhibit 7.
Applications for New Water Use Permits

The applications for new water uses, both requested by Gentry Homes, Ltd., are for a total of 321,108 gpd that would be supplied by three new wells (Well Nos. 1901-08, 1900-24, and 2000-06), which are not yet constructed.

- **WUPA No. 855** – The quantity of water requested is 66,085 gpd, for irrigation uses within the Gentry Area 45 portion of the Ewa by Gentry development.
  - The area covered by this application is within parcels along Kapolei Parkway. The total land area proposed for irrigation under this permit is 10.62 acres. (See Exhibit 4.)
  - The proposed use TMKs for WUPA No. 855 are listed in Exhibit 8.

- **WUPA No. 859** – The quantity of water requested is 255,108 gpd, for use on a total of 41.0 acres of roadway landscaping within the Gentry Area 35 portion of the Ewa by Gentry development.
  - The use area covered by this application is bounded generally by the north boundary of the Hawaii Prince Golf Club (located to south of the proposed use area), Fort Weaver Road to the west, Iroquois Road and East-West Loch Road to the north, and Makalea Street and Hoowalea Street to the east. (See Exhibit 4.)
  - The proposed use TMKs for WUPA No. 859 are listed in Exhibit 9.

The specific plant materials proposed for the Ewa by Gentry development, in each of the areas covered by Gentry's five water use permit applications, are listed in Exhibit 10.

Gentry's Water Use Under Existing Permits

A review of Gentry's past water use from the Ewa by Gentry Community Association well (Well No. 2001-05) was 0.052 mgd through September 30, 2008, on a 12-month moving average basis (12-MAV), which is slightly under its allocation of 0.066 mgd (see Exhibit 11) Pumpage from this well has been increasing since approximately April 2008. If the current pattern of increased pumpage continues, water use under this permit could exceed the permitted quantity and lead to a permit violation. The quantity of water requested under WUPA No. 856 is approximately 3 times more than the current permitted quantity. Chloride concentrations in this well have ranged from 754 to 988 mg/l from January 2007 through September 2008, with an average concentration of 852 mg/l.

Pumpage records for the other two wells (Well Nos. 2001-12 and 1901-05) show that Gentry has pumped more water than the amount allocated under its existing permits. The quantity of water drawn from Well No. 2001-12 through September 30, 2008, on a 12-MAV basis, was 0.247 mgd, which is below the current allocation of 0.249 mgd (Exhibit 12). However, before September 2008, the 12-
MAV exceeded the permitted quantity with the average pumpage ranging from 0.276 to 0.303 between December 2007 and August 2008, which is a violation of the permit. Chloride concentrations in this well have ranged from 742 to 928 mg/l from January 2007 through September 2008, with an average concentration of 797 mg/l.

The quantity of water pumped from Well No. 1901-05 through September 30, 2008, on a 12-MAV basis, was 0.123 mgd (Exhibit 13). This is more than double the permitted quantity of 0.056 mgd for this well. Between December 2007 and August 2008, the 12-MAV for this well ranged between 0.140 and 0.168 mgd. These quantities are almost consistently 2.5 to 3 times higher than the allocated quantity; however, Gentry Homes' application to modify the existing permit for this well seeks to reduce the allocation from 0.056 mgd to 0.037 mgd. Chloride concentrations in this well have ranged from 864 to 1,110 mg/l from January 2007 through September 2008, with an average concentration of 987 mg/l. The concentration reported for three months in this period was 1,000 mg/l, and two measurements, reported in March and April 2008, were 1,026 mg/l and 1,110 mg/l, respectively. Concentrations in this well have remained in this range at least since the start of 2007.

ANALYSIS/ISSUES:

Section 174C-49(a) of the State Water Code establishes seven criteria that must be met to obtain a water use permit. An analysis of the proposed permits in relation to these criteria follows.

(1) Water availability

In establishing a sustainable capacity for irrigation wells, the Commission found the following:

1. The Ewa caprock aquifer is a thin basal aquifer vulnerable to salinity intrusion (most salinity profiles indicate sharp salinity changes). Therefore, the quantity of developable water supply depends entirely on well location.

2. Because the caprock aquifer lens is thin, salinity intrusion is a significant limitation, particularly for wells in the makai portion of the aquifer. If ground water withdrawal from the aquifer occurs primarily in mauka areas, more developable supply may be available.

3. The aquifer's main source of recharge is ground water inflow (leakage) from the basalt aquifer at the inland margin of the interbedded coralline rock formations that comprise the Ewa caprock aquifer system. The amount of leakage cannot easily be quantified and is, in part, dependent upon the water levels in the basal aquifer.

4. Sustainable yield is a theoretical number that assumes optimal well placement in an aquifer. The spatial distribution of chloride in the caprock aquifer, however, doesn't fit the notion of managing ground water allocations and withdrawals on the basis of a single sustainable yield pumpage number.
Staff Submittal
January 22, 2009

6. The magnitude of tidal influences are equal to or greater than pumping influences and thus makes water-level monitoring as a means for estimating sustainable yield and regulating water use extremely difficult.

7. The caprock aquifer is para-basal inland, which means that the bottom of the aquifer is truncated by the low-permeability clay layer that underlies the upper limestone aquifer.

8. The hydrology of the Ewa caprock aquifer is sufficiently unique to warrant consideration of alternative regulatory considerations. This is particularly appropriate given the change in irrigation returns and availability of reclaimed water to supplement the naturally-occurring recharge.

To respond to concerns about the viability of the caprock aquifer to meet future non-potable water demands in the Ewa region, staff performed quarterly monitoring of water levels and chloride concentrations in select caprock wells from 1994 to 2001. The monitoring network initially included some Malakole aquifer system area wells, but those wells were later dropped due to mainly industrial needs not dependent upon chloride concentrations and the focus placed on irrigation wells in the Kapolei and Puuloa aquifer systems in response to irrigation development pressures within the eastern portion of the Ewa Plain.

A total of 63 permitted and registered wells are known to be within the Puuloa Aquifer System Area (see Exhibit 14). Wells in the vicinity of the Ewa by Gentry development project are included in Exhibit 1. Brackish water from the caprock aquifer within this area is used primarily for a variety of irrigation purposes, as follows:

- Landscape and/or park irrigation (IRRLA, IRRPA) – 19 wells
- Golf course irrigation (IRRGC) – 19 wells
- Agriculture (crops and processing) (AGRCP) – 1 well (U.S. Navy)
- Habitat maintenance (IRRHM) – 1 well (U.S. Fish and Wildlife Service)

Of the remaining wells, two are permitted for industrial use (Well Nos. 1902-03 and -04), one is permitted for domestic use (Well No. 1901-02), ten are recorded as unused, four are maintained as observation (monitor) wells, and six are abandoned.

The total permitted quantity of water from the Puuloa Aquifer System Area is 14.817 mgd, allocated through 24 active water use permits (see Exhibit 2). The water use from wells within this system is 3.274 mgd (12-MAV), based on reports filed with the Commission; actual use of ground water in this area could be higher. For some wells, the 12-MAV was calculated from pumpage data through only December 2005; more recent quantities could not be calculated. Pumpage could not be calculated and is not known for 11 permits (noted as “N/R” in Exhibit 15) because there are no reports on record.
As noted in the Background section, above, at the July 18, 2001 Commission meeting, staff recommended that the total allocation for the Puuloa Aquifer System Area should not exceed 15 mgd. On this basis, then the quantity available for allocation is only 0.183 mgd. Gentry’s water use applications propose to increase water use within the Ewa by Gentry development by 0.407 mgd. Although this increase, if approved, would bring the total permitted water use for the Puuloa system to 15.224 mgd, staff does not believe this would cause the aquifer to be overused nor at risk of becoming degraded for several reasons, including the examples given in the following paragraphs.

First, staff expects that follow-up on the findings of the 20-year review report, which will be provided to the Legislature in January 2009, will involve some combination of revocations or partial revocations for non-use, enforcement of the requirement for permittees to submit annual or monthly reports of their water use and chloride concentrations measured in their well water, or other actions. Staff anticipates re-examining the status of water use permits and water usage for the caprock aquifer to bring the permitted quantities in line with actual use. As noted earlier, available records indicate that actual use is approximately one-fourth the total permitted quantity. Though slightly less than one-half have not reported use, of those that have some have reported either no use or use at a rate that is a fraction of the permitted quantity. For example, the U.S. Navy’s average use through December 2007 was 0.238 mgd, which is only 4 percent of the quantity of 5.890 mgd allocated in WUP No. 189 (see Exhibit 2).

Second, as more reclaimed water from the Honouliuli Wastewater Treatment Plant becomes available for irrigation and other non-potable uses in the area, permitted quantities of and demand for ground water should be reduced. As water users in the area shift to reclaimed water as a source of non-potable water, demand for brackish ground water is expected to decline further. HASEKO (Ewa), for example, has entered into an agreement with the BWS to provide up to 0.600 mgd of reclaimed water, which offsets HASEKO’s ground water use by that amount. The quantity of water currently allocated for HASEKO’s use is 3.3 mgd. The availability of 0.600 mgd of reclaimed water effectively reduces HASEKO’s need for ground water to 2.7 mgd. Additionally, HASEKO’s reported water use (12-MAV) is only 0.079 mgd, which represents approximately 2 percent of its allocation (see Exhibit 2).

Pump test data show that the caprock aquifer is capable of producing large quantities of brackish water without causing much drawdown of the water table.

Staff believes that the quantity of water is available in the caprock aquifer is sufficient to meet the proposed uses for the following reasons:

- The aquifer is a thin basal aquifer, and the salinity impacts of withdrawals at an individual well site will likely be confined to the immediate vicinity of the pumping well.
Although the recommended total permitted quantity for the Puuloa Aquifer System Area is 15 mgd (a staff recommendation made at the October 18, 1998 Commission meeting), several factors indicate that there is sufficient brackish water available to permit the quantity requested in Gentry's applications. These factors include:

- Water use records show that actual water use under existing permits issued for area wells is much lower;
- It is anticipated that, to follow up on the findings of the 20-year review, staff will identify and recommend to the Commission permits that should be revoked in whole or in part for nonuse; and
- Some users have already or are shifting to reclaimed water as a source of non-potable water supply, which leads to a corresponding reduction in demand for brackish ground water to meet their needs.

Based on the hydraulic properties of the caprock aquifer and an assessment of other uses in the vicinity of Ewa by Gentry project, it is unlikely that the proposed withdrawal of up to 0.778 mgd will interfere with other users in the area.

(2) Reasonable-beneficial

Section 174C-3 HRS defines "reasonable-beneficial use" as

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

I. Purpose of Use

The applicant is requesting approval to use a total of 0.778 mgd of brackish ground water to irrigate landscape plantings along roadways and in community park areas within the Ewa by Gentry development.

II. Quantity Justification

A letter included with each of the applications, provided by Browlie & Lee (see Exhibit 15), a firm that provides landscape and irrigation services for the Ewa by Gentry development, explains the basis for the water use quantities requested in Gentry’s applications. According to this letter, for 18 years Brownlie & Lee has dealt with the requirement to provide low maintenance and drought-tolerant plantings within the development. The firm also cites its experience in applying water conservation efforts. Their estimates include a 15 percent inefficiency factor to account for the high percentage of small irregular planting areas among
the residential lots in the subdivision. The small size and density of lots shown on the irrigation master plan (Exhibit 4) and the accompanying inventory of proposed use TMKs listed in Exhibits 5 through 9, illustrate the disaggregated nature of the areas the planned irrigation systems will serve.

In comments submitted by OHA (see Exhibit 16), OHA agrees that potable water should not be used for the proposed purpose. Also, OHA asks whether the landscaping “will use drought-tolerant local or endemic [plant] species common to the area.” The plant materials provided as part of Gentry’s applications (see Exhibit 10) are drought-tolerant plants.

III. Efficiency of Use

Gentry states that spray heads will be used in its irrigation system for all of the use areas proposed in its water use permit applications. The proposed irrigation practice is to apply the amount of water needed to meet the demand. (This is stated as “irrigate to demand” on each of the applications.) Efficiency is also discussed in the preceding section, Quantity Justification.

IV. Analysis of Practical Alternatives

Gentry’s analysis of alternative potable and non-potable sources is summarized below.

1. Municipal Sources – The Board of Water Supply requires the use of non-potable water for irrigation in the Ewa region. The use of brackish water from the caprock aquifer effectively reduces the amount of potable water needed for the development.

2. Wastewater Reuse (Reclaimed Water) – Treated effluent from the Honouliuli Wastewater Treatment Plant is not available in this area.

3. Ditch System – No ditch system water is available for this area.

4. Desalinization – Desalinization is not financially practical.

5. Surface Water – A source of surface water for alternate supply is not available in this area.

The 2000 Legislature amended the Water Code to include a new section, §174C-51.5 HRS that provides the Commission with the authority to require dual line (potable and non-potable) water supply systems in new industrial and commercial developments located in water management areas. The statute (§174C-51.5(3)(b) HRS) requires county boards of water supply, in consultation with the state Department of Health, to adopt standards for non-potable water distributed through dual-line water supply systems and rules regarding the use of non-potable water. The City and County of Honolulu has addressed this requirement through the Ewa Development Plan and various project approvals.

The consistency of this application with other beneficial-reasonable use criteria is discussed in the following sections.
(3) **Interference with other existing legal uses**

A discussion of other ground water users in the vicinity of the Ewa by Gentry development and within the Puuloa Aquifer System Area is provided above in Section 1, Water Availability.

All of Gentry’s applications state that there are no known conflicts with any existing legal uses. Staff does not believe Gentry’s proposed use will interfere with other legal water uses in the area.

(4) **Public interest**

In each of its applications, Gentry explains that the use of brackish water [for the proposed irrigation uses] preserves potable water that would otherwise be used for irrigation. This assessment is consistent with the Ewa Development Plan, which requires non-potable water use in the Ewa region for the purpose of preserving potable water supplies for other uses that require lower levels of chloride and total dissolved solids.

No public comments and no objections were received on any of Gentry’s applications.

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

Based on comments received from the State Land Use Commission (LUC) and from the City and County of Honolulu, Department of Planning and Permitting (DPP), the proposed uses are consistent with state and county general plans and land use designations.

The LUC confirms that the Ewa by Gentry development is located within the State Land Use Urban District. Activities and uses with the Urban District are under the jurisdiction of the City and County of Honolulu, Department of Planning and Permitting (DPP).

In the DPP’s comments on Gentry’s water use permit applications (Exhibit 17), it states that the proposed use for roadway landscaping irrigation and park irrigation (proposed only in WUPA No. 856 and 857) is consistent with local zoning. The DPP further notes that the proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan, which requires (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

Comments from the BWS are included in the comment letter provided by the DPP (Exhibit 17). The BWS requests contingency plans for the new proposed wells, Well Nos. 1901-08, 1900-24, and 2000-06, in the event that chloride levels in these wells exceeds the 1,000 mg/l limit.
(6) **County land use plans and policies**

The proposed uses are consistent with local land use plans and policies, as discussed under Section 5, above.

(7) **Interference with Hawaiian home lands rights**

All permits approved by the Commission are subject to the prior rights of Hawaiian home lands, as set forth in the Hawaiian Homes Commission Act (§221 HRS).

Gentry’s applications state that the proposed water uses will not interfere with the rights of Hawaiian home lands. The Department of Hawaiian Home Lands (DHHL) and OHA were provided a copy of Gentry’s applications for review and comment. In its comments (see Exhibit 15), OHA asks for assurances from the Commission that uses from each of the proposed sources “will not adversely affect constitutionally protected Native Hawaiian uses in the area as protected in the state water code.”

Standard conditions 3.g., 6., and 9.f. of all water use permits (see Attachment B) provide notice to all permittees that the Commission’s approval is subject to the requirements of the Hawaiian Homes Commission Act, as amended, and cannot interfere with Hawaiian home land rights, in accordance with §174C-101(a) HRS. Given these conditions, it is unlikely that Gentry’s proposed water uses will interfere with Hawaiian home land rights, provided it fully complies with these and other permit conditions. The assurance requested by OHA, therefore, can be addressed by monitoring Gentry’s performance with respect to the permit conditions and promptly addressing any violations that have the potential to interfere with the rights of Hawaiian home lands.

**OTHER**

As noted in the Background section, Gentry’s water use under two existing permits has exceeded the allocated quantities. These pumpage violations are identified in the report on the 20-year review of the water use permits that will be provided to the Legislature in January 2009. These documented violations exceeded the 1,000,000 CFIL limit.

The results of the 20-year review provide an opportunity to look at the permit process, permit compliance, and information management (maintenance) in a holistic way, rather than addressing issues such as overpumping on a case-by-case basis. For example, a comprehensive review of active caprock permits and pumpage records would aid reassessment and refinement of the quantity of ground water available for allocation. This would help identify permits in which the allocation should be adjusted to reflect actual use, and which permits and how many permits should be revoked in whole or in part.

**RECOMMENDATION:**

Staff recommends that the Commission approve issuance of five water use permits, as follows:
1. Water use permit no. 855 to Gentry Homes, Ltd., for the reasonable and beneficial use of 66,085 gallons per day of brackish water from the Ewa caprock aquifer (Well No. 1901-08, a proposed new well).

2. Water use permit no. 856 to the Ewa by Gentry Community Association for the reasonable and beneficial use of 194,768 gallons per day of brackish water from the Ewa caprock aquifer (Well No. 2001-05, an existing well). This modifies and supersedes water use permit no. 792.

3. Water use permit no. 857 to Gentry Homes, Ltd., for the reasonable and beneficial use of 224,615 gallons per day of brackish water from the Ewa caprock aquifer (Well No. 2001-12, an existing well). This modifies and supersedes water use permit no. 793.

4. Water use permit no. 858 to Gentry Homes, Ltd., for the reasonable and beneficial use of 36,975 gallons per day of brackish water from the Ewa caprock aquifer (Well No. 1901-05, an existing well). This modifies and supersedes water use permit no. 794.

5. Water use permit no. 859 to Gentry Homes, Ltd., for the reasonable and beneficial use of 255,108 gallons per day of brackish water from the Ewa caprock aquifer (Well Nos. 1900-24 and 2000-06, two proposed new wells).

Approval of these permits should be subject to (1) the standard water use permit conditions listed in Attachment B; (2) the following special conditions, and (3) the conservation conditions Ewa caprock water use permits listed in Attachment C.

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

3. Pumping shall cease immediately if chloride measurements show that the brackish water drawn by the well exceeds 1,000 mg/l of chloride, unless a variance from the chloride limit has been granted. The authority to approve variance requests is delegated to the Chairperson.

4. The permittee shall submit a contingency plan for water use in the event the chloride concentration in the permitted well(s) exceeds the 1,000 mg/l sustainable capacity limit established for Ewa caprock aquifer sources, the permittee shall seek an alternative source of supply. The contingency plan shall be submitted to the Commission within 30 days of the issuance of this permit.

5. In the event that the tax map key(s) at the location(s) of the water use is changed, the permittee shall notify the Commission in writing of the tax map key change(s) within thirty (30) days after the permittee receives notice of the change(s).
6. Standard Condition 16 is waived for brackish water wells.

Respectfully submitted,

KEN C. KAWAHARA, P.E.
Deputy Director

Attachment(s):
A Water Use Permit Detailed Information
B Water Use Permit Standard Conditions
C Conservation Conditions for Ewa Caprock Water Use Permits

Exhibit(s):
1 Location Map
2 Active Water Use Permits in the Puuloa Aquifer System Area
3 Ewa by Gentry Well Locations
4 Ewa by Gentry Irrigation Master Plan
5 Proposed Irrigation Plan and Use TMKs for WUPA No. 856
6 Proposed Irrigation Plan and Use TMKs for WUPA No. 857
7 Proposed Irrigation Plan and Use TMKs for WUPA No. 858
8 Proposed Irrigation Plan and Use TMKs for WUPA No. 855
9 Proposed Irrigation Plan and Use TMKs for WUPA No. 859
10 Proposed Plant Materials and Irrigated Acres
11 Well No. 2001-05 Pumpage Data, Ewa by Gentry Community Association
12 Well No. 2001-12 Pumpage Data, Gentry Homes, Ltd.
13 Well No. 1901-05 Pumpage Data, Gentry Homes, Ltd.
14 Nearby Wells and Water Uses
15 Basis for Quantity Estimate Prepared by Brownlie & Lee for Gentry
16 Comments from Office of Hawaiian Affairs
17 Comments from C&C Honolulu, Department of Planning and Permitting

APPROVED FOR SUBMITTAL:

LAURA H. THIELEN
Chairperson
### WATER USE PERMIT DETAILED INFORMATION

<table>
<thead>
<tr>
<th>Well Number and Name</th>
<th>1901-08 Gentry Area 45 soda Creek III</th>
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<td>New</td>
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<td>Owner/Operator</td>
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<td>Casing diameter (in.)</td>
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<td>30</td>
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<td>-2</td>
<td>--</td>
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<td>Total depth (ft)</td>
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<td>39</td>
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<td>Grouted annulus depth (ft)</td>
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<td>27</td>
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<td>Pump capacity (gpm)</td>
<td>100 (proposed)</td>
<td>200 (proposed)²</td>
<td>430</td>
<td>355</td>
<td>150 (proposed)</td>
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</table>

**Notes:**

¹ Ewa by Gentry Community Association

² The current permitted pump capacity is 110 gpm. Applicant has applied for a new pump installation permit to increase the capacity to 200 gpm.

---

** ATTACHMENT A **
Use Information

Quantity Requested

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<th>WUPA No.</th>
<th>Description</th>
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<tr>
<td>855</td>
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<td>66,085 gpd</td>
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<tr>
<td>856</td>
<td>modify use, one existing well</td>
<td>194,768 gpd</td>
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<td>modify use, one existing well</td>
<td>224,615 gpd</td>
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<td>36,975 gpd</td>
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<tr>
<td>859</td>
<td>new use, two new wells</td>
<td>255,108 gpd</td>
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</table>

Total quantity requested: 777,551 gpd

Proposed type of water use: Irrigation (landscaped areas, park)

Place of water use: Multiple TMKs within the Ewa by Gentry development (proposed use TMKs are shown in Exhibits 5 through 9)

Water Usage (12-MAV) Reported by Gentry (Ewa by Gentry development)¹

<table>
<thead>
<tr>
<th>Well Details</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>Ewa by Gentry Community Association (Well No. 2001-05)</td>
<td>0.066 mgd</td>
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<tr>
<td>Gentry Homes (Well No. 2001-12)</td>
<td>0.249 mgd</td>
</tr>
<tr>
<td>Gentry Homes (Well No. 1901-05)</td>
<td>0.056 mgd</td>
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</tbody>
</table>

Puuloa Aquifer System Area

Current 12-MAV Withdrawal (See Exhibit 2) | 3.274 mgd

¹ Also see Exhibit 2 for water usage reported by other well operators within the Puuloa Aquifer System Area.

Nearby Surrounding Wells and Other Registered Ground Water Use

Exhibit 14 lists other permitted and registered wells that are constructed within the Puuloa Aquifer System Area, and Exhibit 15 shows the well locations. A total of 63 wells are known to be in the area. Brackish ground water drawn from the Ewa caprock aquifer in this area is primarily used for a variety of irrigation purposes, as follows:

- Landscape and/or park irrigation (IRRRA, IRRPA) – 19 wells
- Golf course irrigation (IRRGC) – 19 wells
- Agriculture (crops and processing) (AGRCP) – 1 well (U.S. Navy)
- Habitat maintenance (IRRHM) – 1 well (U.S. Fish and Wildlife Service)

Of the remaining wells, two are permitted for industrial use (Well Nos. 1902-03 and -04), one is permitted for domestic use (Well No. 1901-02), ten are recorded as unused, four are maintained as observation (monitor) wells, and six are abandoned.

The total permitted quantity of water from the Puuloa Aquifer System Area is 14.817 mgd (see Exhibit 2), allocated through 25 active water use permits. The reported water use from wells within this system is 3.274 mgd (12-MAV), based on water use reports filed with the Commission; actual existing use of ground water in this area could be higher.

ATTACHMENT A
Public Notice

In accordance with §13-171-17, HAR, public notices were published in the Honolulu Star Bulletin on October 29, 2008 and November 5, 2008, and a copy of both notices sent to Mayor Hannemann's office.Copies of the completed application were sent to the Honolulu Board of Water Supply, the City and County of Honolulu Department of Planning and Permitting, the state Departments of Health and Department of Hawaiian Home Lands, various divisions of the Department of Land and Natural Resources, the Land Use Commission, and the Office of Hawaiian Affairs. Comments and objections to the proposed permit were to be filed with the Commission by November 20, 2008.

Comments were received from most of the review agencies and are addressed in the analysis of the application and the recommended permit special conditions. No comments were received from the general public or other interest groups.

Objections

The public notice specifies that an objector meet the following requirements: (1) state property or other interest in the matter; (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; (3) state all grounds for objections to the proposed permits, (4) provide a copy of the objection letter(s) to the applicant, and (5) submit objections meeting the previous requirements to the Commission by November 20, 2008.

No objections were filed.
STANDARD WATER USE PERMIT CONDITIONS

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

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

3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
   a. Can be accommodated with the available water source;
   b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
   c. Will not interfere with any existing legal use of water;
   d. Is consistent with the public interest;
   e. Is consistent with State and County general plans and land use designations;
   f. Is consistent with County land use plans and policies; and
   g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).

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

5. The ground-water use here must not interfere with interim or permanent instream flow standards. If it does, then:
   a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
   b. The interim or permanent instream flow standard, as applicable, must be amended.

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

7. The water use permit application and submittal, as amended, approved by the Commission at its December 17, 2008 meeting are incorporated into this permit by reference.

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

9. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
   a. Protect the water sources (quantity or quality);
   b. Meet other legal obligations including other correlative rights;
   c. Insure adequate conservation measures;
   d. Require efficiency of water uses;
   e. Reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
   f. Meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
   g. Carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

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

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

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

12. A permit may be transferred, in whole or in part, from the permittee to another, if:
   a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
   b. The Commission is informed of the transfer within ninety days.

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

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

14. The permittee shall request modification of the permit as necessary to comply with all applicable laws, rules, and ordinances 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 conservation, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period of forfeiture.

16. The permittee shall prepare and submit a water shortage plan within 30 days of the issuance of this permit as required by HAR § 13-171-42(c). The permittee’s water shortage plan shall identify what the permittee is willing to do should the Commission declare a water shortage in the Puuloa 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 are incorporated herein by reference.

ATTACHMENT B
1. The permittee shall adopt self-administered water conservation programs and plans with collective monitoring to protect and maintain the caprock resource. Water conservation programs and plans shall be submitted to the Commission within 60 days from the date of Commission approval.

2. Water conservation programs and plans shall address (as applicable) but not be limited to the following:
   
a. Reduce the demand for non-potable water by:
      - Identifying and utilizing water efficient plants and drought tolerant plants for landscaping and quantifying their demands (Xeriscape);
      - Mulching planting areas with organic materials, etc., to minimize evaporation;
      - Efficiently maintaining the plants;
      - Improving land management practices to conserve water.
   
b. Improve efficiency in use and reduce losses and waste of non-potable water by:
      - Using efficiently designed landscaping and irrigation systems;
      - Monitoring irrigation requirements and controlling usage accordingly;
      - Managing irrigation scheduling to minimize water demand;
      - Eliminating opportunities for water wastage;
      - Maintaining and improving irrigation systems as necessary.
   
c. Industrial users should employ the recirculation of cooling water and the reuse of cooling and process water.

3. The permittee shall pursue and participate in alternative non-potable water source development and use such as wastewater reuse (direct reuse and/or recharge injection).

4. In the event that water conservation programs and plans are not complied with or that a waste of water is occurring, the Commission shall proceed with the necessary actions to revoke this permit.

ATTACHMENT C
Aquifer System Water Use Permit Index (caprock)

**ISLAND OF OAHU**

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<th>Applicant</th>
<th>Well No.</th>
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<th>WUP (mqd)</th>
<th>12-MAV (mqd)</th>
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Tuesday, December 02, 2008

EXHIBIT 2
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<th>Applicant</th>
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<td>0.123</td>
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<td>795</td>
<td>7/12/2006</td>
<td>U.S. DOC/NOAA/NWS</td>
<td>1900-23</td>
<td>PACIFIC TSUNAMI</td>
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<td>796</td>
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<td>CORAL CREEK GOLF, INC.</td>
<td>2002-17</td>
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<td>0.800</td>
<td>0.384 (6/08)</td>
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<td>CORAL CREEK GOLF, INC.</td>
<td>2001-14</td>
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<td>2002-15</td>
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<td>2002-17</td>
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<td>AOAO SUNCREST/SHORES/LOM</td>
<td>2001-10</td>
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Summary for 'SYSTEM' = PUULOA (44 detail records)

 Totalling 14.817 3.244 reported

Available
EWA BY GENTRY

Water Supply Wells for Irrigation Master Plan

WUPA Nos. 855 through 859

Existing wells: 1901-01, 2001-05, 2001-12

New proposed wells: 1900-24, 1901-08, 2000-06

EXHIBIT 3
### Table 1: LAND USE CONSISTENCY / EFFICIENCY - Soda Creek III Well

#### LAND USE CONSISTENCY

<table>
<thead>
<tr>
<th>Purpose/Water Use Category</th>
<th>Development Designation</th>
<th>USE TMK</th>
<th>Land Use District</th>
<th>State Land Use District</th>
<th>CDUP Reqd Y(date app)</th>
<th>County Zoning Code</th>
<th>SMAP Reqd Y(date app)</th>
<th>Quantity of Use (GD)</th>
<th>Sub-Metered (YN)</th>
<th>Units or Net Acreage</th>
<th>Applicant's Justification for Quantity of Requested Use for Item 7.</th>
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<tr>
<td>USES THAT DO NOT REQUIRE POTABLE WATER</td>
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<tr>
<td>Roadway/Park Irr - IRRLA &amp; PA</td>
<td>Sun Terra</td>
<td>9-1-70:42 &amp; 132</td>
<td>Urban</td>
<td>NA</td>
<td>R-5</td>
<td>NA</td>
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<td>All irrigation use is based on actual use for Ewa by Gentry, see attached Brownlie and Lee letter dated July 2, 2008 for application rate.</td>
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<td>For overall irrigation area locations see attached Ewa By Gentry Irrigation Master Plan, dated 4-22-08</td>
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**TOTAL USE REQUESTED** (the sum of total potable use and non-potable use in the table above) = 194,768

**31.3**
### Table 1: LAND USE CONSISTENCY / EFFICIENCY - Gentry Keaunui Well

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<th>USE TMK</th>
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<td>9-1-102 (Keaunui ROW)</td>
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<td>All irrigation use is based on actual use for Ewa by Gentry, see attached Brownlie and Lee letter dated July 2, 2008 for application rate. For overall irrigation area locations see attached Ewa By Gentry Irrigation Master Plan, dated 4-22-08</td>
<td></td>
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<td>Area 28 frontage</td>
<td>9-1-107:052 (buffer strip lot)</td>
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**TOTAL USE REQUESTED** (the sum of total potable use and non-potable use in the table above) = 224,615

36.09
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<th>Quantity of Use (GPD)</th>
<th>Sub-Metered (YN)</th>
<th>Units or Net Acreage</th>
<th>Applicant's Justification for Quantity of Requested Use for Item 7</th>
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<td>USES THAT DO NOT REQUIRE POTABLE WATER</td>
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<td>Area 13 Huelani</td>
<td>9-1-116:13</td>
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TOTAL USE REQUESTED (the sum of total potable use and non-potable use in the table above) = 36,976

5.84
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<th>CDUP Req'd Y(date app) NA (not acquired)</th>
<th>County Zoning Code</th>
<th>SMAP Y(date app) NA (not acquired)</th>
<th>Quantity of Use (GPD)</th>
<th>Sub-Metered (YN)</th>
<th>Units or Net Acreage</th>
<th>Applicant's Justification for Quantity of Requested Use for Item 7.</th>
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<td>Urban</td>
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<td>All irrigation use is based on actual use for Ewa by Gentry, see attached Brownlie and Lee letter dated July 2, 2008 for application rate.</td>
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TOTAL USE REQUESTED (the sum of total potable use and non-potable use in the table above) = 66,085 10.62

*Corrected per phone conversation w/ Greg Fukumitsu (TNWRE) on 10/14/08*
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<td>All irrigation use is based on actual use for Ewa by Gentry, see attached Brownlie and Lee letter dated July 2, 2008 for application rate. For overall irrigation area locations see attached Ewa By Gentry Irrigation Master Plan, dated 4-22-08</td>
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* Asterisk denotes use of the following shrubs (drought/salt-tolerant) used but not listed

Hibiscus
Croton
Spider Lily
Eldorado
Eranthemum
Dwarf Date Palm
Monstera
12 Month Moving Average

Well ID: 3-2001-005  
Well Name: Soda Creek III  
WUP MGD: 0.066  
Beginning: 1/1/2007  
Ending: 12/31/2008  

Compute 12-Month Moving Average

EXHIBIT 11

Thursday, December 04, 2008
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EXHIBIT 14
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<th>WELL NO</th>
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<td>U S Fish &amp; Wildlife</td>
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</tr>
</tbody>
</table>
July 2, 2008

Mr. Greg Fukumitsu  
Tom Nance  
Water Resources Engineering  
680 Ala Moana Boulevard, Suite 406  
Honolulu, Hawaii 96813  

Subject: EWA WUP PERMIT  

Dear Greg:  

We have been responsible for virtually all of the landscape and irrigation system design at Ewa by Gentry since 1990. Based on our 18 years of experience with this development and dealing with the requirement for low maintenance, drought and brackish water tolerant planting we have found through our water conservation efforts that the average daily irrigation requirement is approximate 1.0 gallons per square foot of planting area per week. We have established this irrigation water demand through both on site field experimentation and the following calculation:

\[
\text{Irrigation Application Rate Calculation}
\]

\[
\begin{align*}
\text{Ewa 15-year average annual pan evaporation rate:} & \quad 86.56 \text{ inches per year} \\
\text{Less Ewa Gentry average annual rainfall (18.75-inches), derated 25%} & \quad (14.06) \text{ inches per year} \\
\text{Evapotranspiration Rate} & \quad 72.50 \text{ inches per year} \\
\text{15% irrigation inefficiency factor, high percentage of small irregular planting areas} & \quad 0.87 \text{ gals./s.f./week} \\
\text{Total weekly irrigation demand} & \quad 1.0 \text{ gals./s.f./week}
\end{align*}
\]

We have found that the rainfall contribution to irrigation must be derated at least 25% based on field experience and the irrigation inefficiency factor is approximately 15% due in large part to the high percentage of small irregular planting areas within the housing parcels.

The irrigation well service areas are outlined on the Irrigation Master Plan prepared by our office. The bulk service area irrigation demand are as follows:

Landscape Architecture  
Site Planning  
Irrigation Consultants  
City Financial Tower • 201 Merchant Street • Suite 1930 Honolulu, Hawaii 96813 • Tel: (808) 528-4363 • Fax: (808) 531-8191  

EXHIBIT 15
<table>
<thead>
<tr>
<th>Area  Well</th>
<th>Service Area</th>
<th>Gallons per day</th>
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<td>Area 35 Well</td>
<td>1,785,756 s.f.</td>
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<tr>
<td>Keaunui Well</td>
<td>1,572,305 s.f.</td>
<td>224,615</td>
</tr>
<tr>
<td>Sun Terra Tot Well</td>
<td>1,363,373 s.f.</td>
<td>194,768</td>
</tr>
<tr>
<td>Area 13 Well</td>
<td>258,825 s.f.</td>
<td>36,975</td>
</tr>
<tr>
<td>Area 45 Well</td>
<td>462,595 s.f.</td>
<td>66,085</td>
</tr>
</tbody>
</table>

If you have questions regarding this information, please contact me.

Sincerely,
BROWNLEE & LEE

Richard C. Brownlie, ASLA
Principal

cc: Darian Chun
    Gentry Homes, Ltd.
November 19, 2008

Denise Mills
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawai‘i 96809


Aloha e Denise Mills,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-mentioned letter dated October 28, 2008. OHA has reviewed the project and offers the following comments.

OHA notes that the proposed use is for irrigation and landscaping purposes and that the applicant seeks to use brackish water for this purpose. OHA asks if the landscaping is with drought tolerant local or endemic species common to the area. If there has been little to no effort to reasonably conserve this scarce resource in terms of landscaping, it could cast this request in questionable or unreasonable lighting. If thirsty exotics are being watered, that would also not be compatible with the city Watershed Management Plan and Ewa Development Plan. (Ewa Development Plan, page 4-21)

The applicant is proposing to use a total of 582,783 gallons per day of water for irrigation. If these WUPAs are combined with the nearly identical WUPA No. 856, then this total goes up to 777,551 gallons per day. This amount of water for accessory irrigation should be scrutinized to ensure that the request is reasonable and the use is beneficial. Certainly we agree that potable water should not be used for this proposed purpose.

We request that the applicant use recycled water if possible, or be required to do so when it does become available for this proposed use. OHA notes that the Ewa Development Plan projects future nonpotable demand for this area to be 31 mgd. (Ewa Development Plan, page 4-
19) The demand for this use is to be met with uses such as this proposal, from low chloride irrigation water sources. However, strategies in the city Watershed Management Plan for this area include development of infrastructure not currently in existence or proposed and sources which have since been abandoned such as the Kalaeloa desalinization plant. (Honolulu Advertiser article, 11-17-08 *Kalaeloa desalination plant put on hold*).

We request assurances that uses from this source will not adversely affect constitutionally protected Native Hawaiian uses in the area as protected in the state water code. We also ask if this nonpotable source is low in total dissolved solids that may affect water quality in the quantities requested.

Thank you for the opportunity to comment. If you have further questions, please contact Grant Arnold by phone at (808) 594-0263 or e-mail him at granta@oha.org.

‘O wau iho nō me ka 'oia‘i‘o,

Clyde W. Nāmu‘o
Administrator
November 19, 2008

Denise Mills
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawai‘i 96809

RE: Request for comments on the proposed Water Use Permit Application (WUPA), Pu‘uloa Ground Water Management Area, O‘ahu, TMK: 9-1-70: 132.

Aloha e Denise Mills,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-mentioned letter dated October 28, 2008. OHA has reviewed the project and offers the following comments.

OHA notes that the proposed use is for irrigation and landscaping purposes and that the applicant seeks to use brackish water for this purpose. OHA asks if the landscaping is with drought tolerant local or endemic species common to the area. If there has been little to no effort to reasonably conserve this scarce resource in terms of landscaping, it could cast this request in questionable or unreasonable lighting.

We request that the applicant use R-2 water if possible, or be required to do so when it does become available for this proposed use. We request assurances that uses from this source will not adversely affect constitutionally protected Native Hawaiian uses in the area as protected in the state water code.

Thank you for the opportunity to comment. If you have further questions, please contact Grant Arnold by phone at (808) 594-0263 or e-mail him at granta@oha.org.

‘O wau iho nō me ka ‘oia’i’o,

Clyde W. Nāmu‘o
Administrator
November 18, 2008

Ms. Laura H. Thielen, Chairperson  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, Hawaii 96809

Subject: Water Use Permit Application, Puuloa Ground Water Management Area, Ewa Beach, Oahu, Tax Map Keys: 9-1-116:013, 9-1-102:064, 9-1-136:064, and 9-1-069:005

We have reviewed Water Use Permit Applications (WUPA) 855, 857, 858, and 859 submitted by Gentry Homes, Ltd. and have the following comments to offer.

1. **WUPA 855:** The area identified by the TMK in Table 1 of the application is zoned A-2 Medium Apartment District as stated in Table 1. The proposed use of water for roadway landscaping irrigation in areas of the Ewa by Gentry development is consistent with supporting A-2 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

2. **WUPA 857:** The areas identified by the TMKs in Table 1 of the application are zoned R-5 Residential District, A-1 Low Density Apartment District, and P-2 General Preservation District as stated in Table 1. The proposed use of water for roadway landscaping and park irrigation in areas of the Ewa by Gentry development is consistent with supporting R-5, A-1, and P-2 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

EXHIBIT 17
3. **WUPA 858**: The areas identified by the TMKs in Table 1 of the application are zoned A-1 Low Density Apartment District as stated in Table 1. The proposed use of the water for roadway landscaping in areas of the Ewa by Gentry development is consistent with supporting A-1 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

4. **WUPA 859**: The areas identified by the TMKs in Table 1 of the application are zoned R-5 Residential District and A-1 Low Density Apartment District as stated in Table 1. The proposed use of water for roadway landscaping and park irrigation in areas of the Ewa by Gentry development is consistent with supporting R-5 and A-1 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

The locations of the two (2) existing and three (3) proposed wells, and the areas identified by the TMKs in all four (4) applications are not in the Special Management Area.

The Board of Water Supply requests contingency plans for well nos. 1901-08, 1900-24, and 2000-06, should the chloride levels of these wells exceed the 1,000 ppm CWRM limit.

Should you have any questions, please contact Tim Hata of our staff at 768-8043.

Very truly yours,

[Signature]

Henry Eng, FAICP, Director
Department of Planning and Permitting

HE: lh
p:DivFunction/WUP/2008elog2678

cc: Board of Water Supply, Attn: Glenn Oyama
November 10, 2008

Ms. Laura H. Thielen, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
Box 621
Honolulu, Hawaii 96809

Dear Ms. Thielen:

Subject: Water Use Permit Application, Puuloa Ground Water Management Area, Ewa Beach, Oahu, Tax Map Key: 9-1-070:132

We have reviewed the application and have the following comments to offer.

The areas identified by the TMKs in Table 1 of the application are zoned R-5 and A-1 as stated in Table 1. The proposed use of the water for roadway landscaping and park irrigation in areas of the Ewa by Gentry development is consistent with supporting the R-5 and A-1 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when required) a dual water system and non-potable water use to conserve potable water in the Ewa region.

The Soda Creek Well (Well No. 2001-05) and those parcels in Table 1 are not in the Special Management Area.

Should you have any questions, please contact Tim Hata of our staff at 768-8043.

Very truly yours,

Henry Eng, FAICP, Director
Department of Planning and Permitting

HE:js

p:DivFunctionWUP/2008elog2679
### WATER USE PERMIT DETAILED INFORMATION

<table>
<thead>
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<th>2001-05 (Soda Creek III)</th>
<th>2001-12 (Keaumui Area 30)</th>
<th>1901-05 (Gentry Area 13)</th>
<th>1900-24 (Gentry Area 35, 1)</th>
<th>2000-06 (Gentry Area 35, 2)</th>
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<td>856</td>
<td>857</td>
<td>858</td>
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<td>66,000</td>
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<td>36,975</td>
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<td>Ewa by Gentry¹</td>
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<td>Ground surface</td>
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<td>Bottom of solid casing</td>
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<td>Bottom of perforated casing</td>
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<td>Bottom of open hole</td>
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<td>200 (proposed)²</td>
<td>430</td>
<td>355</td>
<td>150 (proposed)</td>
<td>150 (proposed)</td>
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**Notes:**

¹ Ewa by Gentry Community Association
² The current permitted pump capacity is 110 gpm. Applicant has applied for a new pump installation permit to increase the capacity to 200 gpm.
<table>
<thead>
<tr>
<th>F YR</th>
<th>APP</th>
<th>D</th>
<th>OBJ</th>
<th>ACT</th>
<th>AMOUNT</th>
<th>NAME/DESCRIPTION (WANG INPUT)</th>
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<td>C</td>
<td>4000</td>
<td>0752</td>
<td>$580.77</td>
<td>Gentry Homes, Ltd.</td>
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**REMARKS:**

LINE (1) Reimbursement for Public Notice costs for WUP No. 855, 857, 858 & 859

| LINE (2) |       |
| LINE (3) |       |
| LINE (4) |       |
| LINE (5) |       |
| LINE (6) |       |
| LINE (7) |       |
| LINE (8) |       |
| LINE (9) |       |
| LINE (10)|       |

**TOTAL** $580.77
<table>
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Check totals: 580.77 580.77
CWRM Water Use Permit
Reviewer Comments / Routing

WUPA No.:  855
CWRM Contact:  Denise Mills, Hydrologist
Review start date:  28-Oct-08
Comment deadline:  20-Nov-08
Public notice publication:  October 29 and November 5, 2008

<table>
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<th>Reviewer</th>
<th>Comments Received</th>
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<td>Land Division, Atta</td>
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<td>11/4/08</td>
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<td>State Parks</td>
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<td>11/10/08</td>
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<td>LUC (Dave Davidson)</td>
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<td>DHHL (Hon. Micah Kane)</td>
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<td>DOH (Hon. C.L. Fukino)</td>
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<td>WW Branch (T. See)</td>
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<td>11/5/08</td>
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<tr>
<td>SDW Branch (S. Yamada)</td>
<td>✓</td>
<td>10/30/08</td>
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<tr>
<td>Office of Hawaiian Affairs</td>
<td>✓</td>
<td>12/3/08</td>
<td>See letter</td>
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<td>Honolulu BWS (Clifford Lum)</td>
<td>✓</td>
<td>11/29/08</td>
<td>New Wells 1901-08, 1900-24, 2000-06-Reg.</td>
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<td>Chester Lao</td>
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<td>Barry Usegawa</td>
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<tr>
<td>C&amp;C of Honolulu</td>
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<tr>
<td>Mayor's Office</td>
<td></td>
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<tr>
<td>Dept of Planning &amp; Permitting</td>
<td>✓</td>
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</table>

Other interested parties
1
2
3
4
5
November 19, 2008

Denise Mills
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawai‘i 96809


Aloha e Denise Mills,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-mentioned letter dated October 28, 2008. OHA has reviewed the project and offers the following comments.

OHA notes that the proposed use is for irrigation and landscaping purposes and that the applicant seeks to use brackish water for this purpose. OHA asks if the landscaping is with drought tolerant local or endemic species common to the area. If there has been little to no effort to reasonably conserve this scarce resource in terms of landscaping, it could cast this request in questionable or unreasonable lighting. If thirsty exotics are being watered, that would also not be compatible with the city Watershed Management Plan and Ewa Development Plan. (Ewa Development Plan, page 4-21)

The applicant is proposing to use a total of 582,783 gallons per day of water for irrigation. If these WUPAs are combined with the nearly identical WUPA No. 856, then this total goes up to 777,551 gallons per day. This amount of water for accessory irrigation should be scrutinized to ensure that the request is reasonable and the use is beneficial. Certainly we agree that potable water should not be used for this proposed purpose.

We request that the applicant use recycled water if possible, or be required to do so when it does become available for this proposed use. OHA notes that the Ewa Development Plan projects future nonpotable demand for this area to be 31 mgd. (Ewa Development Plan, page 4-
19) The demand for this use is to be met with uses such as this proposal, from low chloride irrigation water sources. However, strategies in the city Watershed Management Plan for this area include development of infrastructure not currently in existence or proposed and sources which have since been abandoned such as the Kalaeloa desalinization plant. (Honolulu Advertiser article, 11-17-08 Kalaeloa desalination plant put on hold)

We request assurances that uses from this source will not adversely affect constitutionally protected Native Hawaiian uses in the area as protected in the state water code. We also ask if this nonpotable source is low in total dissolved solids that may affect water quality in the quantities requested.

Thank you for the opportunity to comment. If you have further questions, please contact Grant Arnold by phone at (808) 594-0263 or e-mail him at granta@oha.org.

'O wau iho nō me ka 'oia'i'o,

Clyde W. Nāmu'o
Administrator
November 20, 2008

Ken C. Kawahara, P.E., Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
P.O. BOX 621
Honolulu, Hawai'i 96813

Dear Mr. Kawahara:

SUBJECT: Chapter 6E-42 Historic Preservation Review –
Four Water Use Permit Applications – Pu'uloa Ground Water Management Area
Honouliuli Ahupua'a, 'Ewa District, Island of O'ahu
TMK: (1) 9-1-069:005, 9-1-136:064, 9-1-102:064, 9-1-116:013

Thank you for the opportunity to comment on the aforementioned project. We received the submittal on October 30, 2008. The proposed undertaking involves using water from Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24 for irrigation purposes.

We determine that no historic properties will be affected by this undertaking because:

- Intensive cultivation has altered the land
- Residential development/urbanization has altered the land
- Previous grubbing/grading has altered the land
- An accepted archaeological inventory survey (AIS) found no historic properties
- SHPD previously reviewed this project and mitigation has been completed
- Other: Water will be used from existing wells and no ground disturbing activities are proposed.

However, in the event that historic resources, including human skeletal remains, are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, O'ahu Section, needs to be contacted immediately at (808) 692-8015.

Please contact Teresa Kaneakua-Davan at (808) 692-8015 if you have any questions or concerns regarding this letter.

Aloha,

Nancy McMahon, Archaeology and Historic Preservation Manager
State Historic Preservation Division

ED
November 19, 2008

TO: Laura H. Thielen, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources

FROM: Orlando Davidson, Executive Officer

SUBJECT: Water Use Permit Application
Puuloa Groundwater Management Area, Oahu

We have reviewed the subject applications forwarded by your transmittal dated October 28, 2008. Based on the representation of Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, 1900-24 on the accompanying maps, we find that they are located within the State Land Use Urban District.

With respect to your request as to whether the current designation is appropriate for the proposed project, please be advised that pursuant to section 205-2(b), Hawaii Revised Statutes, activities or uses within the Urban District are the jurisdiction of the respective counties as provided by their ordinances or regulations. As such, we suggest that you contact the City and County of Honolulu Department of Planning and Permitting directly for their comments on this matter.

Thank you for the opportunity to comment on the subject applications. As requested, we are returning the cover memo for the subject applications.

Please feel free to contact Bert Saruwatari of my office at 587-3822, should you require clarification or any further assistance.

Enclosure
TO: Mr. Dan Davidson, Executive Officer
Land Use Commission

FROM: Laura H. Thielen, Chairperson
Commission on Water Resource Management

SUBJECT: WATER USE PERMIT APPLICATION
Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008.

We would appreciate your review of the proposed uses is described in the attached (see application Items 6, 7, 11, and 12). Specifically, we request that you inform us of the current state land use designation for the TMK parcels listed or TMK portions for the proposed use areas. Please also tell us whether the current state land use designation is appropriate for the project. Two maps are included with each application that show the proposed use areas: (1) a TMK map and (2) a map illustrating the Ewa by Gentry Irrigation Master Plan.

Please respond by returning this cover memo along with your review comments by November 20, 2008, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to these applications.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

Response:

[ ] We have no objections or comments.
[ ] Objections attached.
[ ] Only comments attached.

Contact person: Bert Saruwatari

Signed: Bert Saruwatari

Phone: 587-8624

Date: November 18, 2008
Ref: WUP 855 857 858 859.invoice

Mr. Mark Brant, P.E.
Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

Dear Mr. Brant:

Invoice for Public Notice – Water Use Permit Applications
WUPA No. 855 (Well No. 1901-08)
WUPA No. 857 (Well No. 2001-12)
WUPA No. 858 (Well No. 1901-05)
WUPA No. 859 (Well Nos. 1900-24 and 2000-06)

We are attaching a copy of the Affidavit of Publication and the Invoice/Receipt for the subject notice. Please submit a check payable to the Department of Land and Natural Resources at the address shown above for the amount due by the date specified below.

Amount Due: $580.77
Due Date: December 1, 2008

All water use permit applicants are required to pay the cost to publish the public notice(s) of their application(s). Payment is required to complete your application. Failure to submit the full amount due by December 1, 2008 will result in a rejection of your application. If you decide to proceed with this project in the future, a new water use permit application must be made, and you will be required to pay for the costs of both this public notice and the new public notice.

If you have any questions, please contact Denise Mills at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DEM:ss
Enclosure

c: Suzanne Alawa
       Tom Nance
Ms. Laura H. Thielen, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Subject: Water Use Permit Application, Puuloa Ground Water Management Area, Ewa Beach, Oahu, Tax Map Keys: 9-1-116:013, 9-1-102:064, 9-1-136:064, and 9-1-069:005

We have reviewed Water Use Permit Applications (WUPA) 855, 857, 858, and 859 submitted by Gentry Homes, Ltd. and have the following comments to offer.

1. **WUPA 855**: The area identified by the TMK in Table 1 of the application is zoned A-2 Medium Apartment District as stated in Table 1. The proposed use of water for roadway landscaping irrigation in areas of the Ewa by Gentry development is consistent with supporting A-2 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

2. **WUPA 857**: The areas identified by the TMKs in Table 1 of the application are zoned R-5 Residential District, A-1 Low Density Apartment District, and P-2 General Preservation District as stated in Table 1. The proposed use of water for roadway landscaping and park irrigation in areas of the Ewa by Gentry development is consistent with supporting R-5, A-1, and P-2 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.
Ms. Laura H. Thielen, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
November 18, 2008
Page 2

3. **WUPA 858:** The areas identified by the TMKs in Table 1 of the application are zoned A-1 Low Density Apartment District as stated in Table 1. The proposed use of the water for roadway landscaping in areas of the Ewa by Gentry development is consistent with supporting A-1 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

4. **WUPA 859:** The areas identified by the TMKs in Table 1 of the application are zoned R-5 Residential District and A-1 Low Density Apartment District as stated in Table 1. The proposed use of water for roadway landscaping and park irrigation in areas of the Ewa by Gentry development is consistent with supporting R-5 and A-1 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

The locations of the two (2) existing and three (3) proposed wells, and the areas identified by the TMKs in all four (4) applications are not in the Special Management Area.

The Board of Water Supply requests contingency plans for well nos. 1901-08, 1900-24, and 2000-06, should the chloride levels of these wells exceed the 1,000 ppm CWRM limit.

Should you have any questions, please contact Tim Hata of our staff at 768-8043.

Very truly yours,

Henry Eng, FAICP, Director
Department of Planning and Permitting

HE: lh
p:DivFunction/WUP/2008elog2678

cc: Board of Water Supply, Attn: Glenn Oyama
TO: Aquatic Resources
Forestry and Wildlife/Natural Area Reserve System
Historic Preservation
State Parks

FROM: Ken C. Kawahara, P.E., Deputy Director
Commission on Water Resource Management

SUBJECT: Request for Comments
Four Water Use Permit Applications
Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008.

We would appreciate your review of the attached applications for any conflicts or inconsistencies with the programs, plans, and objectives specific to your division only. Please respond by returning this cover memo form by November 20, 2008 which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

DM:ss
Attachment(s)

Response:

[ ] We have no objections or comments.
[ ] Objections attached.
[ X] Only comments attached.

Contact person: Glenn Higashi
Signed: [Signature]

Phone: 587-0112
Date: 11/18/08
MEMORANDUM

TO: Dan A. Polhemus, Administrator
FROM: Glenn R. Higashi, Aquatic Biologist
SUBJECT: Comments on Water Use Permit Application (WUPA No. 855)

Comments: Ken C. Kawahara
Requested By: Commission on Water Resource Management
Date of Request: 10/28/08 Date Received: 10/29/08

Summary of Project

Title: Water Use Permit Application (WUPA No. 855) submitted by Gentry Homes, Ltd. for Well No. 1901-08.

Project By: Gentry Homes, Ltd.
Kapolei, HI 96707

Location: Puuloa System, Ewa Caprock Sector, Kapolei, Oahu TMK: (1) 9-1-069: 005

Brief Description:

The applicant, Gentry Homes, Ltd. is proposing a new brackish water well (Well No. 1901-08) to be constructed about 250 ft. south of Keaunui Dr. and west of Fort Weaver Rd., Oahu, Tax Map Key (1) 9-1-069: 005, portion (Kapolei Parkway extension). The quantity of water requested for the new well is 0.066 millions gallons per day and will be used for irrigation of 10.62 acres of roadway landscaping.

Comments:

The Division of Aquatic Resources (DAR) has no objections to this request since the proposed project is not expected to have significant adverse impact on aquatic resources values in the area and there are no anchialine ponds in the area.
October 28, 2008

TO: Morris Atta, Administrator
Land Division

FROM: Ken C. Kawahara, P.E., Deputy Director
Commission on Water Resource Management

SUBJECT: Request for Comments
Water Use Permit Application
Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008. (Copies of the well construction/pump installation permit applications for Well Nos. 1901-08, 2000-06, and 1900-24 will be sent to you under separate cover for review and comment. We plan to process the well permit applications concurrently with the associated water use permit applications.)

We would appreciate your review of the attached water use permit applications for any conflicts or inconsistencies with the programs, plans, and objectives specific to your division only. Please respond by returning this cover memo form by November 20, 2008, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

Response:

[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.

[ x] A water lease/permit is not required of this applicant.

[ ] A water lease/permit has been obtained by the applicant through lease no.

[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.

[ ] No objections

[ ] Other comments:

Contact person: Gary Martin

Phone: 587-0421

Signed: Gary Martin

Date: Nov 18, 2008
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809
October 28, 2008

TO: Aquatic Resources
Forestry and Wildlife/Natural Area Reserve System
Historic Preservation
State Parks

FROM: Ken C. Kawahara, P.E., Deputy Director
Commission on Water Resource Management

SUBJECT: Request for Comments
Four Water Use Permit Applications
Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008.

We would appreciate your review of the attached applications for any conflicts or inconsistencies with the programs, plans, and objectives specific to your division only. Please respond by returning this cover memo form by November 20, 2008 which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

Response:
[ ] We have no objections or comments.
[ ] Objections attached.
[ ] Only comments attached.

Contact person: Phone: 7-4175
Signed: Date: NOV 17 2008
TO: Aquatic Resources  
Forestry and Wildlife/Natural Area Reserve System  
Historic Preservation  
State Parks  

FROM: Ken C. Kawahara, P.E., Deputy Director  
Commission on Water Resource Management  

SUBJECT: Request for Comments  
Four Water Use Permit Applications  
Puuloa Ground Water Management Area, Oahu  

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008.

We would appreciate your review of the attached applications for any conflicts or inconsistencies with the programs, plans, and objectives specific to your division only. Please respond by returning this cover memo form by November 20, 2008 which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

DM:ss  
Attachment(s)  

Response:  
[ ] We have no objections or comments.  
[ ] Objections attached.  
[ ] Only comments attached.

Contact person: Daniel S. Quinn  
Signed:  

Phone: 587-0290  
Date: 11/6/08
TO: Honorable Micah Kane, Chairperson
   Department of Hawaiian Home Lands

   Honorable Chiyome L. Fukino, M.D., Director
   Department of Health
   Attn: Mr. Tomas See, Chief, Wastewater Branch
   Attn: Stuart Yamada, Chief, Safe Drinking Water Branch

   Mr. Clyde W. Namu'o, Administrator
   Office of Hawaiian Affairs

   Mr. Clifford Lum, Manager
   Honolulu Board of Water Supply
   Attn: Mr. Chester Lao
   Attn: Mr. Barry Usugawa

FROM: Laura H. Thielen, Chairperson
       Commission on Water Resource Management

SUBJECT: Water Use Permit Application
         Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008.

We would appreciate your review of the proposed use that is described in the attached applications for any conflicts or inconsistencies with the land use designations, plans, policies, programs, or objectives specific to your organization or department only. Please respond by returning this cover memo form by November 20, 2008, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to these applications.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

DM:ss
Attachment(s)

Response:
[ ] We have no objections or comments.
[ ] Objections attached.
[ ] Only comments attached.

Contact person: Johnny Ong, Eng. on Oahu 586-4294

Signed: Ron Montani

Date: 10-31-08
Wastewater Branch
919 Ala Moana Blvd. Room 309
Honolulu, Hawaii 96814-4920
Phone (808) 586-4294 Fax (808) 586-4300

STATE MESSENGER DELIVERY

Date: 10-31-08

To: Commission on Water Resource Management
Department of Land & Natural Resources
State of Hawaii

Attn: Denise Mills

From: Lori Morikami, Planner
Planning & Design Section
Ph. 586-4294 Fax 586-4300
Email: lori.morikami@doh.hawaii.gov

Subject: Well Construction/Pump Installation Permit/Water Use Permit for
Well No. 1901-08, 2001-12, 1901-05, 2000-06 9/1900-24
Well No. 1806-09, 1910 Nalakole Grd water
Well No. 2001-05 Puu Loa Grd water

Please find enclosed the application of the above subject project.

STATE MESSENGER DELIVERY
TO: Honorable Micah Kane, Chairperson
Department of Hawaiian Home Lands

Honorable Chiyome L. Fukino, M.D., Director
Department of Health
Attn: Mr. Tomas See, Chief, Wastewater Branch
Attn: Stuart Yamada, Chief, Safe Drinking Water Branch

Mr. Clyde W. Namu’o, Administrator
Office of Hawaiian Affairs

Mr. Clifford Lum, Manager
Honolulu Board of Water Supply
Attn: Mr. Chester Lao
Attn: Mr. Barry Usugawa

FROM: Laura H. Thielen, Chairperson
Commission on Water Resource Management

SUBJECT: Water Use Permit Application
Wainee Ground Water Management Area, Oahu

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 1900-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star-Advertiser issues of October 29, 2008, and November 5, 2008.

We would appreciate your review of the proposed use that is described in the attached applications for any conflicts or inconsistencies with the land use designations, plans, policies, programs, or objectives specific to your organization or department only. Please respond by returning this cover memo form by November 20, 2008, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to these applications.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

DM:ss
Attachment(s)

Response:

[X] We have no objections or comments.
[ ] Objections attached.
[ ] Only comments attached.

Contact person: [Signature]

Signed: [Signature]  Phone: ____________________________
Date: 10/30/08

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 521
HONOLULU, HAWAII 96806

OCT 30, 2008
Review transmittals for 5 WUPAs:
Ewa by Gentry Comm. Assoc. WUPA 8556
Gentry Homes WUPAs 855, 857, 858, 859 (I still have the copies of these applications, making corrections/notations on them for reviewers.)

Shall we try for Oct 29 & Nov 5 with Nov 20 deadline. Shall we try ASAP to allow maybe 60 days before 12/17 comm mtg.

COMMISSION ON WATER RESOURCE MANAGEMENT

FROM: Denise
DATE: 10/14/08
SUSPENSE DATE: 

TO: CHENG, C.
    CHING, F.
    CHONG, R.
    DANBARA, S.
    ENGLAND, D.
    FUJII, N.
    HARDY, R.
    HOAGBIN, S.
    ICE, C.
    IMATA, R.
    KAWAHARA, K.
    KIMURA, J.

INIT: LEROUX, E.
      MILLS, D.
      OHYE, L.
      OHYE, M.
      OSHIRO, K.
      SAKODA, E.
      SWANSON, S.
      TORRES, R.
      UYENO, D.
      YODA, K.
      YOSHINAGA, M.

FOR: Approval
     Signature
     Information
     Review & Comment
     Take Action
     Type Draft
     Type Final
     File

PLEASE: See Me
        Xerox ___ copies

Type Draft
File
Mr. Mark Brant, P.E.
Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

Dear Mr. Brant:

We acknowledge receipt, on October 8, 2008, of your completed water use permit applications for two new water use permits and modification of two existing water use permits, as follows:

1. WUPA No. 855 for Gentry Area 45 (new use; new Well No. 1901-08)
2. WUPA No. 857 for Keaunui Area 30 (application to modify WUP No. 793; Well No. 2001-12)
3. WUPA No. 858 for Gentry Area 13 (application to modify WUP No. 794; Well No. 1901-05)
4. WUPA No. 859 for Gentry Area 35 (new use; two new wells, Well Nos. 1900-24 and 2000-06)

You can expect your applications to be processed within ninety (90) days from the date of receipt unless there are objections to one or all of your the applications.

Enclosed is a copy of the public notice for your water use permit application which will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008. You will be required to pay the cost to publish the public notice. The cost in most cases is around $400, but can be expected to be more for yours since we are combining the information for all four permits into one notice. We will send an invoice shortly after the notice has been published.

Please be aware that there could be objections to your application. If objections are made, the objector is required to file such objections with the Commission and is required to send you a copy of the objections.

You or any other party, may respond to any objections filed with the Commission by filing a brief in support of your application with the Commission within ten (10) days after an objection has been filed. You or the other party, must also send a copy of your response to the objector.

If you have any questions about the permit process, please contact Denise Mills at 587-0251.

Sincerely,

Ken C. Kawahara, P.E.
Deputy Director

DM:ss
Enclosure
c: Suzanne Alawa
    Tom Nance
TO: Aquatic Resources
Forestry and Wildlife/Natural Area Reserve System
Historic Preservation
State Parks

FROM: Ken C. Kawahara, P.E., Deputy Director
Commission on Water Resource Management

SUBJECT: Request for Comments
Four Water Use Permit Applications
Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008.

We would appreciate your review of the attached applications for any conflicts or inconsistencies with the programs, plans, and objectives specific to your division only. Please respond by returning this cover memo form by November 20, 2008 which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

DM: ss
Attachment(s)

Response:

[ ] We have no objections or comments.
[ ] Objections attached.
[ ] Only comments attached.

Contact person: ____________________________________________ Phone: _______________________
Signed: ____________________________________________ Date: ________________________
TO: Morris Atta, Administrator  
Land Division.

FROM: Ken C. Kawahara, P.E., Deputy Director  
Commission on Water Resource Management

SUBJECT: Request for Comments  
Water Use Permit Application  
Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008. (Copies of the well construction/pump installation permit applications for Well Nos. 1901-08, 2000-06, and 1900-24 will be sent to you under separate cover for review and comment. We plan to process the well permit applications concurrently with the associated water use permit applications.)

We would appreciate your review of the attached water use permit applications for any conflicts or inconsistencies with the programs, plans, and objectives specific to your division only. Please respond by returning this cover memo form by November 20, 2008, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

DM:ss  
Attachment(s)  
Response:  

[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.  
[ ] A water lease/permit is not required of this applicant.  
[ ] A water lease/permit has been obtained by the applicant through lease no.  
[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.  
[ ] No objections  
[ ] Other comments:

Contact person: ____________________________ Phone: ____________________________

Signed: ____________________________ Date: ____________________________
TO: Honorable Micah Kane, Chairperson
Department of Hawaiian Home Lands

Honorable Chiyome L. Fukino, M.D., Director
Department of Health
Attn: Mr. Tomas See, Chief, Wastewater Branch
Attn: Stuart Yamada, Chief, Safe Drinking Water Branch

Mr. Clyde W. Namu'o, Administrator
Office of Hawaiian Affairs

Mr. Clifford Lum, Manager
Honolulu Board of Water Supply
Attn: Mr. Chester Lao
Attn: Mr. Barry Usugawa

FROM: Laura H. Thielen, Chairperson
Commission on Water Resource Management

SUBJECT: Water Use Permit Application
Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008.

We would appreciate your review of the proposed use that is described in the attached applications for any conflicts or inconsistencies with the land use designations, plans, policies, programs, or objectives specific to your organization or department only. Please respond by returning this cover memo form by November 20, 2008, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to these applications.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

DM:ss
Attachment(s)

Response:

[ ] We have no objections or comments.
[ ] Objections attached.
[ ] Only comments attached.

Contact person: ____________________________ Phone: ____________________________
Signed: ____________________________ Date: ____________________________
TO: Mr. Dan Davidson, Executive Officer
   Land Use Commission

FROM: Laura H. Thielen, Chairperson
       Commission on Water Resource Management

SUBJECT: WATER USE PERMIT APPLICATION
          Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment are copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. Public notice of these applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008.

We would appreciate your review of the proposed uses is described in the attached (see application Items 6, 7, 11, and 12). Specifically, we request that you inform us of the current state land use designation for the TMK parcels listed or TMK portions for the proposed use areas. Please also tell us whether the current state land use designation is appropriate for the project. Two maps are included with each application that show the proposed use areas: (1) a TMK map and (2) a map illustrating the Ewa by Gentry Irrigation Master Plan.

Please respond by returning this cover memo along with your review comments by November 20, 2008, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to these applications.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

DM:ss
Attachment(s)

Response:

[ ] We have no objections or comments.

[ ] Objections attached.

[ ] Only comments attached.

Contact person: ___________________________ Phone: ___________________________
Signed: ________________________________ Date: ___________________________
TO: Mr. Henry Eng, FAICP, Director
Department of Planning and Permitting
City and County of Honolulu

FROM: Laura H. Thielen, Chairperson
Commission on Water Resource Management

SUBJECT: WATER USE PERMIT APPLICATION
Puuloa Ground Water Management Area, Oahu

For your review and record, we are forwarding a copy of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24, for confirmation of the zoning designation for the proposed uses on the attached application, confirmation of the consistency of the proposed projects with the current zoning designation, and any special management area issues. Public notice of these applications will be published in the Honolulu Star Bulletin on October 29, 2008 and November 5, 2008.

Please respond by returning this cover memo form by November 20, 2008, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period, please contact Denise Mills at 587-0251.

DM:ss
Attachment(s)
Response:

[ ] The proposed water use(s) is consistent with the current zoning designation(s).

[ ] This well project [ ] requires [ ] does not require an SMA permit.
If an SMA permit is required, it [ ] has been approved [ ] has not been approved and [ ] is currently active [ ] is not currently active.

[ ] Comments attached.

Contact person: ______________________ Phone: ______________________
Signed: ____________________________ Date: ______________________
October 28, 2008

Honorable Mufi Hannemann, Mayor
City & County of Honolulu
City Hall
Honolulu, HI 96813

Dear Mayor Hanneman:

Notice of Water Use Permit Applications
Ewa by Gentry Project
Puuloa Ground-Water Management Area, Oahu

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-171-17(a), we are sending you copies of the public notice and four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24, which will be published in the Honolulu Star Bulletin.

In addition, Section 13-171-13(b), of our Administrative Rules, states:

"Within sixty days after receipt of notice of a permit application, the county shall inform the commission if the proposed use is inconsistent with the county land use plans and policies."

In accordance with the procedure that has been established between our staff and the City’s Department of Planning and Permitting (DPP), we have sent copies of the four applications to DPP and the Board of Water Supply for review and comment. We look forward to receiving comments from DPP and BWS within the next sixty (60) days, on whether the proposed water use is consistent with the City’s plans, policies, land use designations, and zoning.

Sincerely,

Laura H. Thielen
Chairperson

DM:ss
Enclosures
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 821
HONOLULU, HAWAII 96809

October 28, 2008

TO: Other Interested Parties

FROM: Ken C. Kawahara, P.E., Deputy Director
Commission on Water Resource Management

SUBJECT: Request for Comments
Water Use Permit Applications for the Ewa by Gentry Project
Puuloa Ground Water Management Area, Oahu

In addition to serving you notice, as required by 174C-52 (a), Hawaii Revised Statutes, we transmit for your review and comment copies of four water use permit applications (WUPA Nos. 855, 857, 858, and 859) submitted by Gentry Homes, Ltd. for Well Nos. 1901-08, 2001-12, 1901-05, 2000-06, and 1900-24. (Well Nos. 1901-08, 2000-06, and 1900-24 are proposed new sources of water supply for the project.) Public notice of the attached applications will be published in the Honolulu Star Bulletin issues of October 29, 2008 and November 5, 2008.

We would appreciate your review of the attached applications for any conflicts or inconsistencies with the programs, plans, and objectives of the organization or agency that you represent. Written objections should be made in accordance with Section 13-171-18, Hawaii Administrative Rules, and must be filed by the November 20, 2008 deadline. If we do not receive your comments by this date, we will assume you have no objections to these applications.

If you have any questions, require additional information, or would like to request an extension of the review period for these applications, please contact Denise Mills at 587-0251.

DM:ss
Attachment(s)

Response:

[ ] We have no objections or comments.
[ ] Objections attached.
[ ] Only comments attached.

Contact person: ________________________________ Phone: ________________________________

Signed: ________________________________ Date: ________________________________
PUBLIC NOTICE

Applications for Water Use Permits
Puuloa Ground Water Management Area, Oahu

The Commission on Water Resource Management has received four water use permit applications from Gentry Homes, Ltd. Two of these applications are for new water use supplied by three new water supply wells, and two are to modify existing water use supplied by two existing water supply wells. The Commission's receipt of these applications is hereby made public in accordance with Section 13-171, Hawaii Administrative Rules, "Designation and Regulation of Water Management Areas."

Applicant: Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

Landowner: Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

Date Applications Filed as Complete: October 8, 2008
Hydrologic Unit: Aquifer Areas: Puuloa System, Ewa Caprock Sector, Oahu

The two applications for new water use permits are:

- **WUPA No. 855**
  Water Source: Gentry Area 45 Well (Well No. 1901-08)
  Gentry Area 45 (Well No. 1901-08), a proposed new well to be constructed about 250 ft south of Keaunui Dr and west of Fort Weaver Rd, Oahu, Tax Map Key (1) 9-1-069:005
  Quantity Requested: 0.066 million gallons per day
  Existing/New Use: New / Irrigation of 10.62 acres of roadway landscaping
  Place of Water Use: Tax Map Key (1) 9-1-069:005, portion (Kapolei Parkway extension).

- **WUPA No. 859**
  Water Source: Gentry Area 35 (Well Nos. 1900-24 and 2000-06)
  Gentry Area 35, Wells #1 and #2 (Well Nos. 1900-24 and 2000-06). Two proposed new wells to be constructed near Hoowalea St (2000-06) and near the intersection of Kuanoo St and Hoomahana St (1900-24), Oahu, Tax Map Key (1) 9-1-136-064
  Quantity Requested: 0.255 million gallons per day
  Existing/New Use: New / Irrigation of 41.0 acres of roadway landscaping
  Place of Water Use: Multiple TMKs or portions of TMKs. Roadway landscaping within the area bounded generally by the Hawaii Prince Golf Club north boundary to the south, Ft Weaver Rd to the west, Iroquios Rd and East-West Loch Rd to the north, and Makalea St and Hoowalea St to the east.

The two applications to modify existing water use permits are:

- **WUPA No. 857**
  Water Source: Keaunui Area 30 (Well No. 2001-12)
  Keaunui Area 30 (Well No. 2001-12) on Keaunui Dr at Ma'ana St, Oahu, Tax Map Key (1) 9-1-102:064
  Quantity Requested: 0.225 million gallons per day.
  Existing/New Use: Existing / Irrigation of 36.09 acres of roadway landscaping
  Place of Water Use: Multiple TMKs or portions of TMKs. Roadway landscaping within the area bounded generally by Arizona Rd to the north, Ft Weaver Rd to the west, Iroquios Rd and East-West Loch Rd to the south, and various lots around Keaunui Dr.
- **WUPA No. 858**
  - **Water Source:** Gentry Area 13 (Well No. 1901-05) Gentry Area 13 (Well No. 1901-05) on Launahele St near Kapolei Parkway, Oahu, Tax Map Key (1) 9-1-116:013
  - **Quantity Requested:** 0.035 million gallons per day.
  - **Existing/New Use:** Existing / Irrigation of 5.94 acres of roadway landscaping
  - **Place of Water Use:** Multiple TMKs. Roadway landscaping along Geiger Rd west of Kapolei Parkway, and within the area bounded generally by the Geiger Rd to the north, Kapolei Parkway to the east, Launahele St to the south, and the eastern boundary of the Coral Creek Golf Course.

A map showing the Irrigation Master Plan for the Ewa by Gentry project with specific irrigation zones to covered by these water use permit applications is available for public viewing on the Commission's website at [http://www.hawaii.gov/dlnr/cwrm/](http://www.hawaii.gov/dlnr/cwrm/) or at 1151 Punchbowl Street, Room 227, Honolulu, Hawaii.

Written objections or comments on the above application may be filed by any person who has property interest in any land within the hydrologic unit of the source of water supply, any person who will be directly and immediately affected by the proposed water use, or any other interested person. Written objections shall: (1) state property or other interest in the matter (provide TMK information); (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; and (3) state all grounds for objections to the proposed permit. Written objections must be received by November 20, 2008. Objections must be sent to (1) the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809; and (2) the applicant at the above address.

COMMISSION ON WATER RESOURCE MANAGEMENT

KEN C. KAWAHARA, P.E., Deputy Director for LAURA H. THIELSEN, Chairperson

Dated: October 23, 2008

Thanks for your help on this. I have finished my part to begin processing the permits, and we estimate it will be 1-2 weeks before all the paperwork is done on our end and notices are submitted for publishing. You'll receive a copy of our acceptance letters to Mike Brant and Suzanne Alawa. We accepted the applications as complete on Oct. 8, which triggers the 90-day timeline for processing unless there are objections.

I'll contact you if we have questions about the irrigation plans for each area.

-Denise

"Greg Fukumitsu" <greg@tnwre.com>

Denise,

The client confirmed its OK to proceed with the Public Notice.

Thanks,

Greg Fukumitsu

--
Tom Nance Water Resource Engineering
680 Ala Moana Blvd., Suite 406
Honolulu, Hawaii 96813
Ph: 808-537-1141
Fax: 808-538-7757
Roy— The notices as drafted are OK’d by Gentry. So it looks like they’re ready to move forward. --dm

Denise,  
The client confirmed its OK to proceed with the Public Notice.

Thanks,

Greg Fukumitsu  
--  
Tom Nance Water Resource Engineering  
680 Ala Moana Blvd., Suite 406  
Honolulu, Hawaii 96813  
Ph: 808-537-1141  
Fax: 808-538-7757
FYI-- Hopefully we'll hear from Gentry soon if any corrections are needed on the notices.

--Denise

----- Forwarded by Denise E Mills/DLNR/StateHiUS on 10/15/2008 07:00 AM -----

Denise,

Thanks, I'm sending this to Gentry for their review.. it looks OK.. wait till I hear from them.

Thank, Greg

On Tue, Oct 14, 2008 at 8:00 AM, <Denise.E.Mills@hawaii.gov> wrote:

Hi Greg,

I've drafted the public notices for the Gentry Homes and Ewa by Gentry water use permit applications. We will combine the four Gentry Homes applications into one notice, and will have a second notice for the Ewa by Gentry Community Association application. I would appreciate it if you would review the draft notices for accuracy and let me know if corrections are needed.

Rather than listing use TMKs on the notices (there are too many for all but one of the applications), I have prepared general descriptions of the proposed use areas based on the Irrigation Master Plan. This is just to help public reviewers, those who may be interested, navigate the areas that each application covers. We will also plan to post the Irrigation Master Plan on our website for public viewing--

The draft notices are attached for your review and comment. When you open this document, you will be prompted with a message regarding macros-- select "No." (Dates, noted in these drafts with XXX placeholders, will be added when we are ready to publish the notices.)

Thanks for your help! Denise
Hi Greg,

I've drafted the public notices for the Gentry Homes and Ewa by Gentry water use permit applications. We will combine the four Gentry Homes applications into one notice, and will have a second notice for the Ewa by Gentry Community Association application. I would appreciate it if you would review the draft notices for accuracy and let me know if corrections are needed.

Rather than listing use TMKs on the notices (there are too many for all but one of the applications), I have prepared general descriptions of the proposed use areas based on the Irrigation Master Plan. This is just to help public reviewers, those who may be interested, navigate the areas that each application covers. We will also plan to post the Irrigation Master Plan on our website for public viewing--

The draft notices are attached for your review and comment. When you open this document, you will be prompted with a message regarding macros-- select "No." (Dates, noted in these drafts with XXX placeholders, will be added when we are ready to publish the notices.)

Thanks for your help! Denise

Gentry_WUPA draft notices.doc
PUBLIC NOTICE

Applications for Water Use Permits
Puuloa Ground Water Management Area, Oahu

The Commission on Water Resource Management has received four water use permit applications from Gentry Homes, Ltd. Two of these applications are for new water use supplied by three new water supply wells, and two are to modify existing water use supplied by two existing water supply wells. The Commission's receipt of these applications is hereby made public in accordance with Section 13-171, Hawaii Administrative Rules, "Designation and Regulation of Water Management Areas."

Applicant: Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

Landowner: Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

Date Applications Filed as Complete: October 8, 2008

Hydrologic Unit: Aquifer Areas: Puuloa System, Ewa Caprock Sector, Oahu

The two applications for new water use permits are:

- **WUPA No. 855**
  - **Water Source:** Gentry Area 45 Well (Well No. 1901-08)
  - Gentry Area 45 (Well No. 1901-08), a proposed new water supply well to be constructed about 250 ft south of Keaunui Dr and west of Fort Weaver Rd, Oahu, Tax Map Key (1) 9-1-069:005
  - **Quantity Requested:** 0.066 million gallons per day
  - **Existing/New Use:** New / Irrigation of 10.62 acres of roadway landscaping
  - **Place of Water Use:** Tax Map Key (1) 9-1-069:005, portion (Kapolei Parkway extension).

- **WUPA No. 859**
  - **Water Source:** Gentry Area 35 (Well Nos. 2000-06 and 1900-24)
  - Gentry Area 35, Wells #1 and #2 (Well Nos. 2000-06 and 1900-24). Two proposed new wells to be constructed near Hoowalea St (2000-06) and near the intersection of Kuano St and Hoomahana St (1900-24), Oahu, Tax Map Key (1) 9-1-136-064
  - **Quantity Requested:** 0.255 million gallons per day
  - **Existing/New Use:** New / Irrigation of 41.0 acres of roadway landscaping
  - **Place of Water Use:** Multiple TMKs or portions of TMKs. Roadway landscaping within the area bounded generally by the Hawaii Prince Golf Club north boundary to the south, Ft Weaver Rd to the west, Iroquois Rd and East-West Loch Rd to the north, and Makalea St and Hoowalea St to the east.

The two applications to modify existing water use permits are:

- **WUPA No. 857**
  - **Water Source:** Keaunui Area 30 (Well No. 2001-12),
  - Keaunui Area 30 (Well No. 2001-12) on Keaunui Dr at Ma'ana St, Oahu, Tax Map Key (1) 9-1-102:064
  - **Quantity Requested:** 0.225 million gallons per day
  - **Existing/New Use:** Existing / Irrigation of 36.09 acres of roadway landscaping
  - **Place of Water Use:** Multiple TMKs or portions of TMKs. Roadway landscaping within the area bounded generally by Arizona Rd to the north, Ft Weaver Rd to the west, Iroquois Rd and East-West Loch Rd to the south, and various lots around Keaunui Dr.
PUBLIC NOTICE

Application for Water Use Permit
Puuloa Ground Water Management Area, Oahu

The following application to modify an existing water use permit has been received by the Commission on Water Resource Management. The Commission's receipt of this application is hereby made public in accordance with Section 13-171, Hawaii Administrative Rules, "Designation and Regulation of Water Management Areas."

WUPA No. 856 Soda Creek III (Well No. 2001-05)

Applicants:
Ewa by Gentry Community Association
91-1795 Keaunui Drive
Ewa Beach, HI 96706

Landowners:
Ewa by Gentry Community Association
91-1795 Keaunui Drive
Ewa Beach, HI 96706

Date Application Filed as Complete: October 8, 2008

Hydrologic Unit: Aquifer Areas: Puuloa System, Ewa Caprock Sector, Oahu

Water Source: Soda Creek III (Well No. 2001-05; aka Sun Terra Tot Lot Well) near Launaele Street south of Geiger Road, Oahu, Tax Map Key (1) 9-1-070:132

Quantity Requested: 0.195 million gallons per day

Existing/New Use: Existing / Irrigation of 31.3 acres of roadway and park irrigation

Place of Water Use: Multiple TMKs. Landscaping along Kapolei Parkway and areas bounded generally by Kapolei Parkway, Geiger Road, Fort Weaver Road, and Keaunui Drive. A map showing the Irrigation Master Plan for the Ewa by Gentry project with the irrigation zone covered by this water use permit application is available for public viewing on the Commission's website at http://www.hawaii.gov/dlnr/cwrm/... or at 1151 Punchbowl Street, Room 227, Honolulu, Hawaii.

Written objections or comments on the above application may be filed by any person who has property interest in any land within the hydrologic unit of the source of water supply, any person who will be directly and immediately affected by the proposed water use, or any other interested person. Written objections shall: (1) state property or other interest in the matter (provide TMK information); (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; and (3) state all grounds for objections to the proposed permit. Written objections must be received by XXX. Objections must be sent to: (1) the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809 and (2) the applicant at the above address.

COMMISSION ON WATER RESOURCE MANAGEMENT

LAURA H. THIELEN
Chairperson

Dated:

Publish in: Honolulu Star Bulletin issues of XXX and XXX
Hi Greg,

Based on our conversation yesterday about Table 2, the additional general information we agreed on should be sufficient. For our model assessment, I will extrapolate the information to nearly TMKs, which are very likely to have the same or very similar soil conditions and water needs. I'm trying to keep it simple to make it work with the level of detail you're able to provide.

Based on your new map, I designated the Area 35 Well #1 (the south well) as state well no. 1900-24 and Area 35 #2 as 2000-06. (I had these reversed before getting your updated map yesterday.) Because the wells haven't been constructed yet and the permit hasn't been issued, it's easy to change the state well numbers at this stage in the process. It's messier to do it later, so thank you for checking.

I hope this helps.

-Denise

"Greg Fukumitsu" <greg@tnwre.com>

Denise,

Thanks for the confirmation on my submittal. I'm assuming we're current on all the information you asked for except the Table 2 data for each WUP application. Gentry's landscape architect is currently working on the Table 2 data to complete our initial submittal. So we don't confuse the Area 35 Well Nos. 1 & 2, can you recheck it against your GIS system and confirm which SW # 1900-24 and 2000-06 is Well No. 1 and 2. Note, both skimming wells are on one WCR/PI permit.

Thanks, Greg Fukumitsu

On Fri, Sep 26, 2008 at 9:19 AM, <Denise.E.Mills@hawaii.gov> wrote:

Thank you for the information Greg.

We have updated our well information database with the correct GPS coordinates for the Area 30
Keaunui Well (Well No. 2001-12) and the Area 13 Well (Well No. 1901-05).

As noted in our September 17 letter, we are planning to process the well construction/pump installation permits for the new wells (Nos. 1900-24, 1901-08, and 2000-06) with the Water Use Permit Applications once we receive the landscape irrigation information from you.

--Denise

Denise E. Mills
HYDROLOGIST
Hawaii Department of Land and Natural Resources
Commission on Water Resource Management
1151 Punchbowl Street, Room 227
Honolulu, Hawaii 96813
Phone: (808) 587-0251
Denise.E.Mills@hawaii.gov

"Greg Fukumitsu" <greg@tnwre.com>
09/25/2008 01:52 PM
To "Mills, Denise" <denise.e.mills@hawaii.gov>
cc "Chun, Darian" <DarianC@GentryHawaii.com>, "Nance, Tom" <tom@tnwre.com>

Denise,

We're working on the WUP permit table 2 data with our landscape architect and hope to have it soon. The following will address the other items listed on your September 17, 2008 letter to us:

Water Use Permit Applications:

1. WUP No. 857 (modify WUP No. 793) - Area 30 Keaunui Well (SW# 2001-12). Please note the TMK on the WUP application is correct. Attached is the revised USGS map for this well with the Latitude and Longitude location for this well. GPS location confirmed by field verification on 9-24-08.

2. WUP No. 858 (modify WUP No. 794) - Area 13 Well (SW# 1901-05). Please note the TMK on the WUP application is correct. Attached is the revised USGS map for this well with the Latitude and Longitude location for this well. GPS location confirmed by field verification on 9-24-08.
Well Construction/Pump Installation Permit Application:

3. Gentry Area 35 Well Nos. 1 & 2 (SW Nos. 2000-06 AND 1900-24). I've attached the revised USGS map showing the well locations.

a.) Attached is a pdf with photographs of both wells as requested. Please note Area 35 No. 1 will be the southern well on this map.

b.) Section 23. SHPD approval. See attached Partial EIS.pdf. It contains the SHPD clearance for both Area 35 and 45 proposed irrigation wells.

Please call me if you have any questions on this submittal.

Thanks,

Greg Fukumitsu

Tom Nance Water Resource Engineering
680 Ala Moana Blvd., Suite 406
Honolulu, Hawaii 96813
Ph: 808-537-1141
Fax: 808-538-7757
September 17, 2008

Mr. Tom Nance  
Tom Nance Water Resource Engineering  
680 Ala Moana Boulevard, Suite 406  
Honolulu, HI 96813-5411

Dear Mr. Nance:

Ground Water Use Permit (WUP) Applications for  
WUP No. 855 (new use) – Well No. 1901-08  
WUP No. 856 (modify WUP No. 792) – Well No. 2001-05  
WUP No. 857 (modify WUP No. 793) – Well No. 2001-12  
WUP No. 858 (modify WUP No. 794) – Well No. 1901-05  
WUP No. 859 (new use) – Well Nos. 1900-24 and 2000-06

Well Construction/Pump Installation Permit Applications  
Well Nos. 1901-08, 1900-24, and 2000-06

We received, on August 18, 2008, the five captioned ground water use permit applications (WUPAs), two well construction/pump installation permit applications for three new wells, and the required filing fees. For time and cost efficiency, we would prefer to process your well construction/pump installation permit applications concurrently with the WUPAs, unless there are reasons that we should process your well construction/pump installation applications in advance of the WUPAs. We have reviewed each of these applications for completeness and have identified certain matters that must be addressed before we can accept these applications for processing.

Ground Water Use Permit Applications

1. WUP No. 855 (application for new use) – Item 12 (Table 2) has not been completed. Table 2 is applicable to the proposed use permit and therefore must be completely filled in and submitted to complete this application. Though your cover letter identifies total S.F. serviced and landscape irrigation, we need to know your declared information on irrigation practices (items E through H.) and types of landscape vegetation present (see Table 2 from IWREDSS attached). We enter the information requested on Table 2 as input values for a model that we use to evaluate the quantity(ies) of water requested for irrigation. Please note that the instructions at the top of Table 2 clearly state, "...including landscape and golf course irrigation uses." (emphasis added) The information should include the type(s) of grass (e.g., zoysia, bluegrass) that will be irrigated, or if grasses are not planned, the type(s) of shrubs and trees that may be planted; every plant does not need to be named...
individually. Without this information, we are unable to accurately assess whether the total quantity of water requested is reasonable for the proposed uses and use locations.

2. **WUP No. 856 (application to modify WUP No. 792)** – Item 12 (Table 2) must be completely filled in and submitted as described earlier.

3. **WUP No. 857 (application to modify WUP No. 793)**
   a) Item 12 (Table 2) must be completely filled in and submitted as described previously.
   b) The well location information provided for Well No. 2001-12 on the WUPA and on the maps attached to the WUPA is inconsistent both within your application and with the information contained in our well index. These inconsistencies and the information required to address them include:
      - Our record shows that Well No. 2001-12 is located within TMK 1-9-102:031, not the TMK listed on your application. Please confirm for us that the TMKs within this portion of the Gentry Homes' development have been changed since the well was completed in 1999.
      - The well location shown on the USGS quad map included with your application is different from the location shown on your TMK map. The USGS map location places the well within TMK 1-9-102:009. Please provide the correct map location for this well and submit corrected USGS and TMK maps.
      - The latitude and longitude for this well in our well index are 21°20'22" and 158°01'27" (NAD 83). These coordinates place the well at a location that is approximately 2,200 feet south of the location shown on your application. Please provide a GPS coordinate reading for this well to verify the well location.

4. **WUP No. 858 (application to modify WUP No. 794)**
   a) Item 12 (Table 2) must be completely filled in and submitted as described previously.
   b) The well location information provided for Well No. 1901-05 on the WUPA and on the maps attached to the WUPA is inconsistent both within your application and with the information contained in our well index. These inconsistencies and the information required to address them include:
      - Our record shows that Well No. 1901-05 is located within TMK 1-9-069:008, not the source TMK given on the WUPA. Also, the TMK map included with your application appears to place the well within TMK 1-9-069-019, which is also inconsistent with the location listed on the application. Please provide the correct TMK data for Well No. 1901-05.
      - The latitude and longitude for this well in our well index are 21°19'44" and 158°01'09" (NAD 83). These coordinates place the well at a location that is approximately 3,100 feet southeast of the location shown on your application, east of Fort Weaver Road. Please provide a GPS coordinate reading for this well to verify the well location.
      - Please submit corrected USGS and TMK maps.

5. **WUP No. 859 (application for new use)** – Item 12 (Table 2) must be completely filled in and submitted as described previously.
Well Construction/Pump Installation Permit Applications

1. **Both applications** – Applications for well construction/pump installation permits are required to be made by a contractor with a valid and active C-57, C-57a, or A license and who will perform the work, in accordance with the State Water Code (§ 174C-84(a), HRS). Because you have not identified a qualifying contractor, your application will not be accepted as complete until a qualifying contractor signs and completes sections 24 and 25 on the application form. However, we will process your incomplete application for review and if the review warrants the issuance of a permit, a letter of assurance will be issued in lieu of the permit. The letter of assurance will state that our intention to issue a permit when the contractor signs the application and the following conditions are met: (a) the contractor has no outstanding issues with the Commission; (b) there have been no significant changes to the application; (c) there have been no significant changes to applicable laws, rules, regulations; (d) there have been no significant changes to hydrologic conditions at or near the proposed well location.

2. **Well No. 1901-08 (Gentry Area 45)** – Contractor signatures required in Sections 24 and 25 (see Comment 1, above).

3. **Well Nos. 2000-06 and 1900-24 (Gentry Area 35, #1 and #2)**
   a) Please provide a photograph of the proposed well site.
   b) Section 23. State Historic Preservation Division (SPHD) – Please provide documentation from the SHPD showing the record of Gentry Homes’ consultation with the HPD for the project.
   c) Contractor signatures required in Sections 24 and 25 (see Comment 1, above).

We will accept the captioned WUPAs as complete upon receipt of the information outlined above, and we will accept your well construction/pump installation permit applications for processing upon receipt of the required information to complete the application for Well Nos. 2000-06 and 1900-24. You can expect these applications to be processed within 90 days from the date we receive the required information. You should be aware that WUPA processing could take longer if there are objections from the public and that pump installation permits cannot be issued until WUPs associated with those wells are first obtained.

Please contact Denise Mills of the Commission staff at 587-0251 if you have any questions concerning these applications.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DM:ss
Attachment

c: Mike Brant, Gentry Homes, Ltd
  Suzanne Alawa, Ewa by Gentry Community Association
Mr. Ken Kawahara
Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Kawahara:

Well Construction/Pump Installation Permit Application
and
Ground Water Use Permit Application for New Use
for the Gentry Area 45 Well in the Puuloa Aquifer System

On behalf of Gentry Homes, Ltd., I am pleased to submit the Well Construction/Pump Installation Permit and Ground Water Use Permit Applications, $50 filing fee, and other attachments for the Gentry Area 45 Well in the Puuloa Aquifer System. Since the drilling contractor has not been selected yet, we understand that a Letter of Assurance would be issued for the Well Construction Permit pending the contractor’s selection.

If you have any questions or need additional information, feel free to call me or Mike Brant of Gentry Homes, Ltd. at 599-8229. Thank you for your attention to this matter.

Sincerely,

Tom Nance

cc: Mike Brant
Darian Chun

Attachments
<table>
<thead>
<tr>
<th>F YR APP D</th>
<th>SRC OBJ</th>
<th>COST CTR</th>
<th>PROJECT</th>
<th>PH ACT</th>
<th>AMOUNT</th>
<th>NAME/DESCRIPTION (WANG INPUT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S 09 326 C 1026 0752</td>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td>$25.00</td>
<td>Wailani Drilling Services, Inc.</td>
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<tr>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
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</tr>
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<td>(5)</td>
<td></td>
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<td></td>
<td>$50.00</td>
<td>TNWRE Inc.</td>
</tr>
</tbody>
</table>

**TOTAL** $175.00

**REMARKS:**

- LINE (1) Manawai-Felton Well
- LINE (2) Gentry 45 Well (WCPA/PIP/WUPA)
- LINE (3) WUP No. 792
- LINE (4) WUP No. 793
- LINE (5) WUP No. 794
- LINE (6) Gentry Area 35 Well Nos. 1 & 2 (WCPA/PIP/WUPA)
- LINE (7)
- LINE (8)
- LINE (9)
- LINE (10)
MISSION ON WATER RESOURCE MANAGEMENT
ROUTE SLIP FOR NEW APPLICATIONS

FROM: DENISE
DATE: 26-Aug-08
SUSPENSE DATE: 2-Sep-08

TO: CHING, F. INIT. TO: KUNIMURA, I. FOR: Approval
FUJII, N. INIT. Mills, D. 1 Approval
GOODING, K. INIT. NAKAMA, L. 3 Signature
1 HARDY, R. INIT. OHYE, M. 4 Information
HIGA, D. INIT. SAKODA, E.
ICE, G. INIT. SWANSON, S.
IMATA, R. INIT. UYENO, D.
KAWAHARA, K. INIT. YODA, K.

PLEASE:
- See Me
- Review & Comment
- Take Action
- Type Draft acknow letter
- Type Final, label file folder, update People.db
- File
- Xerox copies

WELL NUMBER 1901-08
WELL NAME Gentry 45
WUP Number 855

☐ WELL CONSTRUCTION ☑ PUMP INSTALLATION

ATTACHMENTS FOR APPLICATION PROCESSING - Both applicant & staff generated
1. TRANS. LETTER
2. PERMIT PROCESS TABLE
3. CWRM MAP
4. APPL. FORM (11 COPIES)
5. USGS MAPS (11 COPIES)
6. TAX MAPS (11 COPIES)
7. PARCEL OWNER VERIF.
8. CONTRACTOR VERIF.
9. ALL INFO FILLED IN
10. BACKGROUND CHECK
11. $25 FEE DEPOSIT SLIP
12. DHP/CDUP/SMA pre-screen

FOLDER:
☑ MADE NEW FILE FOLDER, ATTACHED
☐ FILE FOLDER ALREADY MADE, IN FILE CABINET

INCOMPLETE ACTION DATES:

DATE ACTION

will need to run IWREDDS model before CWRM mtg.

Request app to complete Table 2 of GWUA-N


## Table 2: IRRIGATION INFORMATION

### LAND USE CONSISTENCY

<table>
<thead>
<tr>
<th>Development Designation</th>
<th>Plant Materials</th>
<th>Total Acreage</th>
<th>Net Irrigated Area</th>
<th>Begin Growth Period</th>
<th>End Growth Period</th>
<th>Irrigation System</th>
<th>Irrigated Practice</th>
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<td><strong>Area 35 Well</strong></td>
<td>Ice Plant</td>
<td>NA</td>
<td>5.71</td>
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<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<tr>
<td></td>
<td>Wedelia &amp; Shrubs *</td>
<td>NA</td>
<td>9.01</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<tr>
<td></td>
<td>Bermuda Grass</td>
<td>NA</td>
<td>1.09</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<tr>
<td></td>
<td>Seashore Paspalum</td>
<td>NA</td>
<td>0.45</td>
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<td>NA</td>
<td>Spray heads</td>
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<tr>
<td></td>
<td>Zoysia 'El Toro'</td>
<td>NA</td>
<td>24.73</td>
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<td>Spray heads</td>
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<tr>
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<td></td>
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<td>41.00</td>
<td></td>
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<td><strong>Area 45 Well</strong></td>
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<td>NA</td>
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<td>Pohinahina &amp; Shrubs *</td>
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<td>NA</td>
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<tr>
<td></td>
<td>Akulikuli &amp; Scrubs *</td>
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<td>0.41</td>
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<td>Irrigate to Demand</td>
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<tr>
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<td>Zoysia 'El Toro'</td>
<td>NA</td>
<td>7.29</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10.62</td>
<td></td>
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<tr>
<td><strong>Area 13 Well</strong></td>
<td>Pink Asystasia &amp; Shrubs *</td>
<td>NA</td>
<td>1.04</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<td>Pohinahina &amp; Shrubs *</td>
<td>NA</td>
<td>0.71</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<td></td>
<td>Seashore Paspalum</td>
<td>NA</td>
<td>2.17</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
</tr>
<tr>
<td></td>
<td>Zoysia 'El Toro'</td>
<td>NA</td>
<td>2.02</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5.94</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Keaunui Well</strong></td>
<td>Pink Asystasia &amp; Shrubs *</td>
<td>NA</td>
<td>0.05</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<tr>
<td></td>
<td>Wedelia &amp; Shrubs *</td>
<td>NA</td>
<td>5.91</td>
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<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
</tr>
<tr>
<td></td>
<td>Laua'e &amp; Monstera</td>
<td>NA</td>
<td>0.09</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
</tr>
<tr>
<td></td>
<td>Bermuda Grass</td>
<td>NA</td>
<td>21.49</td>
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<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<td></td>
<td>Seashore Paspalum</td>
<td>NA</td>
<td>3.91</td>
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<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<tr>
<td></td>
<td>Zoysia 'El Toro'</td>
<td>NA</td>
<td>4.63</td>
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<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<td></td>
<td></td>
<td></td>
<td>36.10</td>
<td></td>
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<tr>
<td><strong>Sun Terra Tot Lot</strong></td>
<td>Pink Asystasia &amp; Shrubs *</td>
<td>NA</td>
<td>2.40</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<tr>
<td></td>
<td>Ice Plant</td>
<td>NA</td>
<td>13.94</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<tr>
<td></td>
<td>Wedelia &amp; Shrubs *</td>
<td>NA</td>
<td>3.26</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
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<tr>
<td></td>
<td>Bermuda Grass</td>
<td>NA</td>
<td>5.82</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
</tr>
<tr>
<td></td>
<td>Zoysia 'El Toro'</td>
<td>NA</td>
<td>5.88</td>
<td>NA</td>
<td>NA</td>
<td>Spray heads</td>
<td>Irrigate to Demand</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>31.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Asterisk denotes use of the following shrubs (drought/salt-tolerant) used but not listed

- Hibiscus
- Croton
- Spider Lily
- Eldorado
- Eranthemum
- Dwarf Date Palm
- Natal Palm
- Naupaka
Denise,

The landscape architect found some minor typos and corrected the plantings. The numbers did not change. So please dump the other table and replace with this one.

Greg

--
Tom Nance Water Resource Engineering
680 Ala Moana Blvd., Suite 406
Honolulu, Hawaii 96813
Ph: 808-537-1141

Fax: 808-538-7757  Table 2 rev 10-8-08.xls
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

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

FORM GWUPA-N

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

The following must be attached before this application is accepted as complete:

- Portion of 7.5-Minute Series USGS topographic map (scale 1:24,000) with source location labeled and include the name of the quad map.
- Property tax map, showing source location referenced to established property boundaries.
- Photograph(s) of the source(s) and location(s) of proposed end use(s), if applicable.

APPLICANT INFORMATION

1. APPLICANT'S INFORMATION

Name/Company: Gentry Homes, Ltd.
Contact Person: Mike Brant

Mailing Address: P. O. Box 295
Honolulu, Hawaii 96809

Phone: 599-8229 Fax: 599-8240
E-mail: mikeb@gentryhawaii.com

2. SOURCE LANDOWNER'S INFORMATION

Name/Company: Gentry Investment Properties
Contact Person: Mike Brant

Mailing Address: P. O. Box 295
Honolulu, Hawaii 96809

Phone: 599-8229 Fax: 599-8240
E-mail: mikeb@gentryhawaii.com

SOURCE INFORMATION

3. ISLAND

Oahu

4. GROUND-WATER MANAGEMENT AREA

Puuloa Aquifer System

5. SOURCE INFORMATION

Attach additional sheets, if necessary.

Well Number (if known) | Well Name | Existing or Proposed? | TMK | Flowmeter installed?
---|---|---|---|---
| 9 1 69 005 | Gentry Area 45 | Proposed | Yes, date installed: 8-13-08 |

6. TOTAL QUANTITY OF WATER REQUESTED: In the space below, enter total from Box M in Item 11 (Table 1) of this application.

66,085 gallons per day, averaged over 1 year

7. PROPOSED USE(S):

☐ Agriculture ☐ Domestic ☐ Industrial
☐ Irrigation ☐ Military ☐ Municipal

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

NOTE: Signing below indicates that the signatories understand and affirm that the information provided on this application is accurate and true to the best of their knowledge. Further, the signatories understand that:

1) if necessary, further information may be required before the application is considered complete;
2) if a water use permit is granted by the Commission, this permit is subject to any existing legal uses, changes in sustainable yields and instream flow standards, reserved uses as defined by the Commission, and Hawaiian Home Lands future uses; and, 3) the applicant is responsible for paying the public notice fees associated with this application.

9. APPLICANT

Gentry Homes, Ltd.
a Hawaii Corporation

Signature: Michael J. Brant, P. E.
Vice President, Engineering

Printed Name: Date: 8-13-08

10. SOURCE LANDOWNER

Gentry Investments Properties

(Gentry Homes, Ltd.)

Signature: Michael J. Brant, P. E.
Vice President, Engineering

Printed Name: Date: 8-13-08

### TABLE 1: LAND USE CONSISTENCY / EFFICIENCY OF USE

<table>
<thead>
<tr>
<th>PURPOSE / WATER USE CATEGORY</th>
<th>TAB FOR PROPOSED LOCATION OF USE</th>
<th>STATE LAND USE DISTRICT</th>
<th>COUNTY ZONING CODE</th>
<th>SPUR REQUIRED?</th>
<th>MAP REQUIRED?</th>
<th>UNITS OR NET ACREAGE</th>
<th>QANTITY OF USE (GPD)</th>
<th>JUSTIFICATION FOR QUANTITY OF WATER REQUESTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>USES THAT REQUIRE POTABLE (DRINKING) WATER</td>
<td>Yes, date approved:</td>
<td>Yes, date approved:</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>Yes, not acquired:</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USES THAT DO NOT REQUIRE POTABLE WATER</td>
<td>Yes, date approved:</td>
<td>Yes, date approved:</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
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<td>Yes, not acquired:</td>
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</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL POTABLE USE** = K GPD

**TOTAL NON-POTABLE USE** = L GPD

**TOTAL QUANTITY OF WATER REQUESTED** = M GPD

Please explain if there are any limitations (e.g., legal, contractual) on the proposed water use(s) described in Table 1. Ref. §174C-51(5), HRS.
Table 1: LAND USE CONSISTENCY / EFFICIENCY - Area 45 Well

<table>
<thead>
<tr>
<th>Purpose/Water Use Category</th>
<th>Development Designation</th>
<th>USE TMK</th>
<th>State Land Use District</th>
<th>CDUP Req'd Y/(date app)</th>
<th>County Zoning Code</th>
<th>SMAP Y/(date app)</th>
<th>Quantity of Use (GPD)</th>
<th>Sub-Metered (YN)</th>
<th>Units or Net Acreage</th>
<th>Applicant's Justification for Quantity of Requested Use for Item 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway Irrigation - HRRLA</td>
<td>Area 41, 45/46, 48, 40, &amp; Keaunui west</td>
<td>9-1-69:portion 005</td>
<td>Urban</td>
<td>NA</td>
<td>NA</td>
<td>N</td>
<td>All irrigation use is based on actual use for Ewa by Gentry, see attached Brownlie and Lee letter dated July 2, 2008 for application rate.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roadway Irrigation - IRRLA</td>
<td>Kapolei Parkway @ Area 14</td>
<td>9-1-69: 069.005, p=54</td>
<td>Urban</td>
<td>NA</td>
<td>NA</td>
<td>N</td>
<td>For overall irrigation area locations see attached Ewa By Gentry Irrigation Master Plan, dated 4-22-08</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL USE REQUESTED (the sum of total potable use and non-potable use in the table above) = 66,085

10.82

* Corrected per phone conversation w/ Greg Fukumitsu (TNWRE) on 10/14/08
12. TABLE 2: Irrigation Information

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

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR PROPOSED LOCATION OF USE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Property map with an outline around the area of each proposed use.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Photograph of the area of each proposed use.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>CROP</td>
<td>TOTAL ACREAGE</td>
<td>NET IRRIGATED ACREAGE</td>
<td>BEGIN GROWTH PERIOD (month)</td>
<td>END GROWTH PERIOD (month)</td>
<td>IRRIGATION SYSTEM (refer to instructions)</td>
<td>IRRIGATION PRACTICE (refer to instructions)</td>
<td>COMMENTS (Continue comments below, if more space is needed.)</td>
<td></td>
</tr>
<tr>
<td>Zone sector</td>
<td>9m</td>
<td>parcel</td>
<td>Zone sector</td>
<td>9m</td>
<td>parcel</td>
<td>Zone sector</td>
<td>9m</td>
<td>parcel</td>
</tr>
</tbody>
</table>

Comments (continued from Column I). Please clearly indicate the crop (i.e., the row in table) these comments relate to.
### 13. TABLE 3: ALTERNATIVES ANALYSIS

<table>
<thead>
<tr>
<th>Municipal sources</th>
<th>A. Analysis of potable alternatives</th>
<th>B. Analysis of non-potable alternatives</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>BWS requires the use of non-potable water for irrigation.</td>
<td>Use of onsite brackish groundwater will reduce potable water use</td>
</tr>
<tr>
<td>Wastewater reuse</td>
<td>Treated effluent from the Honouliuli WWTP is not available in this area.</td>
<td>Not Available</td>
</tr>
<tr>
<td>Ditch system</td>
<td>No ditch system available for this area.</td>
<td>Not Viable</td>
</tr>
<tr>
<td>Desalinization</td>
<td>Not Financially Practical</td>
<td>Not Financially Practical</td>
</tr>
<tr>
<td>Surface water</td>
<td>None is Available</td>
<td>None is Available</td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 14. PUBLIC INTEREST

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

Explain below how the proposed new use(s) in your application are consistent with the public interest.

Use of onsite brackish groundwater preserves potable water which would otherwise be used for irrigation.

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

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

There are no known conflicts or interference with DHHL rights.

### 16. INTERFERENCE WITH ANY EXISTING LEGAL USES

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

There are no known conflicts with any existing legal uses.
<table>
<thead>
<tr>
<th>Details</th>
</tr>
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<tbody>
<tr>
<td>TMK: 9-1-069:005</td>
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<tr>
<td>Historical TMK Sequence: 95</td>
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<tr>
<td>Area (sq ft): 7927920</td>
</tr>
<tr>
<td>Area (acres): 182</td>
</tr>
<tr>
<td>Lot Number: 80000</td>
</tr>
<tr>
<td>Ohana: (None)</td>
</tr>
</tbody>
</table>

**LAND CONTROL CODES**

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>FLOOD ZONE</td>
<td>FIRM ZONE D</td>
</tr>
<tr>
<td>HEIGHT LIMIT</td>
<td>25 FEET</td>
</tr>
<tr>
<td>HEIGHT LIMIT</td>
<td>30 FEET</td>
</tr>
<tr>
<td>HISTORIC SITE REGISTER</td>
<td>NO</td>
</tr>
<tr>
<td>LOT RESTRICTIONS</td>
<td>NONE</td>
</tr>
<tr>
<td>SMA/SHORELINE</td>
<td>NOT IN SMA</td>
</tr>
<tr>
<td>SPECIAL DISTRICT</td>
<td>NOT IN SPECIAL DISTRICT</td>
</tr>
<tr>
<td>STATE LAND USE</td>
<td>URBAN DISTRICT</td>
</tr>
<tr>
<td>STREET SETBACK</td>
<td>NONE</td>
</tr>
<tr>
<td>ZONING (LUO)</td>
<td>A-1 LOW DENSITY APARTMENT</td>
</tr>
<tr>
<td>ZONING (LUO)</td>
<td>P-2 GENERAL PRESERVATION</td>
</tr>
<tr>
<td>ZONING (LUO)</td>
<td>R-5 RESIDENTIAL DISTRICT</td>
</tr>
</tbody>
</table>

**FACILITIES**

<table>
<thead>
<tr>
<th>Facility Code</th>
<th>Year Built</th>
<th>No. of Floors</th>
<th>Total Floor Area</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>No data available.</td>
<td></td>
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**TMK SEPARATIONS**

<table>
<thead>
<tr>
<th>Activity Code</th>
<th>Census Tract</th>
<th>Census Block</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No data available.</td>
<td></td>
</tr>
</tbody>
</table>

Address List:

July 2, 2008

Mr. Greg Fukumitsu
Tom Nance
Water Resources Engineering
680 Ala Moana Boulevard, Suite 406
Honolulu, Hawaii 96813

Subject: EWA WUP PERMIT

Dear Greg:

We have been responsible for virtually all of the landscape and irrigation system design at Ewa by Gentry since 1990. Based on our 18 years of experience with this development and dealing with the requirement for low maintenance, drought and brackish water tolerant planting we have found through our water conservation efforts that the average daily irrigation requirement is approximately 1.0 gallons per square foot of planting area per week. We have established this irrigation water demand through both on site field experimentation and the following calculation:

**Irrigation Application Rate Calculation**

Ewa 15-year average annual pan evaporation rate: 86.56 inches per year
Less Ewa Gentry average annual rainfall (18.75-inches), derated 25%
Evapotranspiration Rate 72.50 inches per year

72.5 inches per year = 0.87 gals./s.f./week
15% irrigation inefficiency factor, high percentage of small irregular planting areas = 0.13 gals./s.f./week
Total weekly irrigation demand = 1.0 gals./s.f./week

We have found that the rainfall contribution to irrigation must be derated at least 25% based on field experience and the irrigation inefficiency factor is approximately 15% due in large part to the high percentage of small irregular planting areas within the housing parcels.

The irrigation well service areas are outlined on the Irrigation Master Plan prepared by our office. The bulk service area irrigation demand are as follows:
<table>
<thead>
<tr>
<th>Area Well</th>
<th>Service Area</th>
<th>Gallons per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 35 Well</td>
<td>1,785,756 s.f.</td>
<td>255,108</td>
</tr>
<tr>
<td>Keaunui Well</td>
<td>1,572,305 s.f.</td>
<td>224,615</td>
</tr>
<tr>
<td>Sun Terra Tot Well</td>
<td>1,363,373 s.f.</td>
<td>194,768</td>
</tr>
<tr>
<td>Area 13 Well</td>
<td>258,825 s.f.</td>
<td>36,975</td>
</tr>
<tr>
<td>Area 45 Well</td>
<td>462,595 s.f.</td>
<td>66,085</td>
</tr>
</tbody>
</table>

If you have questions regarding this information, please contact me.

Sincerely,
BROWNIE & LEE

Richard C. Brownlie, ASLA
Principal

cc: Darian Chun
    Gentry Homes, Ltd.
**MEMO and ROUTE SLIP** (ver. 5/11/10)  

**WCR 1 Check for Well No. 1901-08** (GW regulation route)  

06/29/11

1. **From Roy**  
   - Initial entry in to well index  
   - Ingrid’s spreadsheet updated needed/done

**Pump Tests Check**

- **Step-Drawdown Test**: followed WCPI Stds analysis attached  
  - □  □  □  □  □  □  □  □
  - □  □  □  □  □  □  □  □
  - □  □  □  □  □  □  □  □

- **Constant Rate Test**: followed WCPI Stds analysis attached
  - □  □  □  □  □  □  □  □

- **Potential Well Interference**:  
  - □  □  □  □  □  □  □  □

- **Potential Stream Impacts**:  
  - □  □  □  □  □  □  □  □
  - If yes, stream name(s):

- **Additional Testing Data Required**:  
  - □  □  □  □  □  □  □  □

- **Pump Test Comments Attached**:  
  - □  □  □  □  □  □  □  □

- **Proposed Pump Capacity is OK.**:
  - □  □  □  □  □  □  □  □

2. **Well Log Check**  
   - Geology Code for Well Index:  
   - Fm Name: Jeremy  
   - Initial)

3. **Construction Check**  
   - Charley/Ryan  
   - Initial)

4. **Roy**  
   - Initial check (Entered WCR 1/WCCC accept date into database)

5. **Susan H.**  
   - (initial) finalize

6. **Bill**  
   - (initial) signature

7. **Charley/Ryan**  
   - File, Enter PIP issue date if attached/required

---

**ATTACHMENTS FOR PUMP INSTALLATION PERMIT (2x):**

- 1 COVER LETTER  
- 2 COUNTY COMMENTS (DWS/SMA)  
- 3 DOH COMMENTS  
- 4 DLNR COMMENTS (LD/OCCUDHP)  
- 5 WCR Accept  
- 6 WELL CONST. COMPLETION CERTIFICATE
- 7 USGS MAP UPDATED  
- 8 PARCEL CHECK  
- 9 WELL DATABASE INPUT CHECK  
- 10 PUMP TEST WORKSHEET  
- 11 WELL As-Built CHECK PRINT

---

4. **Called Tam 10/28/11 re: parcel**

5. **Parcel 34 - 01/01/2008**

6. **Red penciled completed location too.**

7. **L3: Center Line, prop.**

8. **not necessary - only WCP or BOTH.**

9. **To be sent to driller/pump installer**

10. **To Landowner**

11. **Staff internal checks**

12. **Thur: 9:1 - 149:028**
Mr. Mike Brant
Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

Dear Mr. Brant:

Certificate of Well Construction Completion for Well No. 1901-08 (TMK 9-1-149:028)

We are pleased to inform you that the Well Construction work permitted for the Gentry 45 Well (Well No. 1901-08) is complete and acceptable.

To protect Hawaii's natural ground water resources for the benefit of all, the following requirements apply to the use of your well:

1. Before this well can be pumped on a regular basis, a certificate of pump installation completion must be obtained.
2. If the well is not in use it must be properly capped.
3. If the well is to be abandoned then the landowner must cause a licensed contractor to apply for a well abandonment permit in accordance with §13-168-12(f), HAR, prior to any well sealing or plugging work.
4. In the event that the well operator and/or landowner changes, the Commission shall be notified prior to the change.
5. In the event the benchmark in the concrete base of the well is altered in any way, an updated version of the Well Elevation page of the Well Completion Report Part I shall be submitted to the Commission. If a licensed surveyor had estimated the original benchmark elevation then a licensed surveyor must establish the new benchmark elevation. The Well Elevation portion of the Well Completion Report Part I can be obtained by contacting Commission staff or at our website at www.hawaii.gov/dlnr/cwrmlresources-permits.htm.

Because ground water in Hawaii is a public trust, and adverse effects at one well may affect other water resources, any violation of the above conditions or any other provision of the Hawaii Administrative Rules may be subject to fines of up to $5,000 per day. The Commission needs your help and asks that you do your part in utilizing this shared resource. We prefer to work with you in meeting the goal of protecting our ground water resources together.

If you have any questions, please contact Ryan Imata of the Commission staff at 587-0255.

Sincerely,

WILLIAM M. TAM
Deputy Director

RI:ss

c: Beylik Drilling and Pump Service
November 14, 2011

Ms. Toni Gonsalves
Beylik Drilling and Pump Service
91-259A Olai Street
Kapolei, HI 96707

Dear Ms. Gonsalves:

Well Completion Report Part I for Well No. 1901-08

We received your Well Completion Report Part I for the Gentry 45 Well (Well No. 1901-08) on November 3, 2011 and acknowledge that it is complete.

This completes your obligation under the well construction permit. A certificate of well construction completion will be issued to the well operator/landowner and you will receive a copy. This certificate transfers responsibility of specific aspects of well usage and maintenance from you to the well operator/landowner.

If you have any questions, please contact Ryan Imata of the Commission staff at 587-0255.

Sincerely,

WILLIAM M. TAM
Deputy Director

RI:ss

c: Gentry Homes Ltd.
      Gentry Investment Properties
<table>
<thead>
<tr>
<th>Taxkey</th>
<th>Subdiv / Condo Tnr</th>
<th>Address</th>
<th>Owner / Lessee</th>
<th>Bds</th>
<th>Bths</th>
<th>Land area</th>
<th>Liv area</th>
<th>Last Sale</th>
<th>Instr</th>
<th>Prh</th>
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<tbody>
<tr>
<td>1-9-1-149-28</td>
<td>F LAULANI IX</td>
<td>Apt 209</td>
<td>GENTRY HOMES</td>
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<td></td>
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<td>0 1/1/1900</td>
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<td>F Apt 212</td>
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<td>1-9-1-149-28-9</td>
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Well Check Program  
4/1/04 - Revised for update to Well Standards (February 2004)

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<th>Data Input</th>
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<tr>
<td>Well Number</td>
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<tr>
<td>Well Name</td>
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<tr>
<td>Ground Elevation</td>
</tr>
<tr>
<td>Cement Grout</td>
</tr>
<tr>
<td>Grouting Method</td>
</tr>
<tr>
<td>Hole Diameter</td>
</tr>
<tr>
<td>Total Depth</td>
</tr>
<tr>
<td>Water Level</td>
</tr>
<tr>
<td>Public Water Supply Well?</td>
</tr>
<tr>
<td>Solid Casing Material</td>
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<tr>
<td>Solid Casing Specification</td>
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<td>Solid Casing Length</td>
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<td>Solid Casing Diameter</td>
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<td>Solid Casing Wall Thickness</td>
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<td>Open Casing Length</td>
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<tr>
<td>Well Depth</td>
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<tr>
<td>Theoretical Thickness of Aquifer</td>
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<tr>
<td>1/4 Aquifer Thickness</td>
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<tr>
<td>Depth of Well below Sea Level</td>
</tr>
<tr>
<td>Well Casing</td>
</tr>
<tr>
<td>Minimum Wall Thickness</td>
</tr>
<tr>
<td>Material</td>
</tr>
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<tr>
<td>Wall Thickness Provided</td>
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<tr>
<td>Minimum Length of Solid Casing</td>
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<td>90% of ground to top of aquifer</td>
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<tr>
<td>Length of solid casing Provided</td>
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<tr>
<td>Casing Material</td>
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<td>(for pvc only - check for 200' limit)</td>
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<td>Annular Space</td>
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<tr>
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<tr>
<td>Calculated Depth of Grouting</td>
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<tr>
<td>Depth of Grouting provided</td>
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<tr>
<td>Minimum Annular Space required</td>
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<tr>
<td>Thickness of Annular Space</td>
</tr>
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</table>
PUBLIC RECORD DATA

TMK # 1-9-1-69-34

FORT WEAVER RD

Owner: GENTRY INVESTMENT PROPERTIES
Tax Payer: GENTRY INVESTMENT PROPERTIES
Tax Bill: PO BOX 295, HONOLULU, HI 96809 USA
Tenure: Fee Simple
Annual Tax (2010): $19,109.00

Land: $5,337,800 $0 23.21 ac Dwellings: 0
Total
Buildings: $0 $0 0 sq ft Subdivision:
Total: $5,337,800 $0

PITT Code: 1-RESIDENTIAL
(hawaii, maui, oahu)

Land Use: 0
Subdivision: 0
Buildings:
Total: $5,337,800 $0

Project:
Bedrooms/Baths: 0/0 Lot#:

BUILDING PERMITS FROM REAL PROPERTY TAX

<table>
<thead>
<tr>
<th>Date</th>
<th>Number</th>
<th>Amount</th>
<th>Status</th>
<th>Purpose</th>
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<tbody>
<tr>
<td>9/9/2009</td>
<td>646602</td>
<td>$300,000</td>
<td>Pending</td>
<td>ELECTRICAL</td>
</tr>
</tbody>
</table>

This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed. Copyright © October 28, 2011
EWA BY GENTRY - AREA 45/46
WELL LOCATION
AT HONOLULU, EWA, OAHU, HAWAII

NAD83:
Latitude: 21 degrees 19 min 13 sec
Longitude: -158 degrees 01 min 19 sec

FUTURE APARTMENT UNITS

N 21' 19' 13"
W 158' 01' 19"
(NAD 83)
Aloha Ryan,

Please see attached revised WCR Part I (page 4 of 5). Good catch.

Please let me know if this is sufficient or if you would like a complete WCR Part I hardcopy mailed to you. Thank you.

v/f,
Fred G. Camero, Jr.

--- Original Message ----­
From: Fred Camero
To: Wayne Teruya
Sent: Wednesday, November 02, 2011 8:46 AM
Subject: RE: Park Engineering

Hi Wayne,

Just checking if I have your email address correct and that you received the below request. Please confirm. Thank you.

v/f,
Fred G. Camero, Jr.
Branch Manager
Beylik Drilling & Pump Service, Inc.
Ph 808 478-7114

Wayne M. Teruya
Licensed Land Surveyor
ParEn, Inc. dba Park Engineering
Pacific Park Plaza
711 Kapiolani Blvd, Suite 1500
Honolulu, Hawaii 96813
Tel: (808) 593-1676 (ext.121)
Cell: (808)-291-9086
Fax: (808) 593-1607

--- Original Message ----­
From: Wayne Teruya [mailto:wteruya@pareninc.com]
Sent: Thursday, November 03, 2011 6:58 AM
To: Fred Camero
Subject: Re: Park Engineering

Fred:
Attached is the corrected plate. Sorry for the delay.

Fred Camero
Branch Manager
Beylik Drilling & Pump Service, Inc.
Aloha Wayne,

Please confirm the correct latitude for the well location (the numbers for the seconds are switched). Thank you.

v/r,

Fred G. Camero, Jr.  Well Location-revised plat.pdf
Ryan,

Gentry confirmed the current TMK is **9-1-149: 028**. The TMK changes because of ongoing subdivision of parcel taking place, this should be the final TMK.

Greg

Tom Nance Water Resource Engineering  
Gentry Pacific Design Center  
560 N. Nimitz Hwy. - Suite 213  
Honolulu, Hawaii 96817  
Ph: 537-1141 Fax: 538-7757
TO

COMMISSION ON WATER RESOURCE MGMT

PO 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

<table>
<thead>
<tr>
<th>COPIES</th>
<th>DATE</th>
<th>NO.</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>WCR PART 1</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
- □ ____________

REMARKS

COPY TO C:FILE / 9429F

SIGNED: _______________

If enclosures are not as noted, kindly notify us at once. FOR: FRED CAMERO
1. State Well No.: 1901-08  
Well Name: Gentry Area 45  
Island: Oahu
2. Address: Keaunui Drive, Ewa Beach, HI 96706  
Tax Map Key: 9-1-069:034
4. Drilling method used during construction: ☑ Rotary  ☐ Percussion  ☐ Other (describe)
5. Date Well Construction (drilled, cased, grouted) completed: 1-27-11
6. Was the subject well cored? ☑ Yes  ☐ No
7. Step-Drawdown Test completed? ☐ No  ☑ Yes  
8. Constant Rate Aquifer Test completed? ☐ No  ☑ Yes
9. Initial encountered during drilling (this should also be filled in on the driller's log)  
   Reference point elevation: 23.87
   Depth to water (feet): 22.04  
   Water Level ft. above mean sea level (see note below): 1.83
10. Just prior to casing installation  
   Reference point elevation: 23.87
    Ground = 22.01  
    Water Level ft. above mean sea level (see note below): 1.86
11. After casing installation  
    (this information should be before any pump tests are performed with casing installed)
   If this reference point is not the benchmark, the difference between this benchmark and the point is: 21.94  
   Chloride: 900 ppm, Temperature: 78.9°F
12. As-built section filled in completely ☑
13. Photograph of well and concrete pad showing benchmark on concrete pad attached ☑
14. GPS coordinates provided in degrees, minutes, seconds ☑
15. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)
16. Remarks: Threaded plug with set screws

Licensed Driller (print): Beylik Drilling & Pump Service, Inc.  
C-57 Lic. No. AC-21896
Signature: [Signature]
Date: 6/21/11
12. AS-BUILT WELL SECTION

(Please attach as-built if different from diagram provided below)

Solid Casing Material:
Carbon Steel: compliant with (check one or more): □ ANSI/AWWA C200 □ API Spec. 5L □ ASTM A63 □ ASTM A139
Stainless Steel: (check one): □ ASTM A409 (production wells) □ ASTM A312 (monitor wells)
ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one): □ Schedule 40 □ Schedule 80
PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one): □ Schedule 40 □ Schedule 80 □ Schedule 120
Thermoset Plastic: (check one) □ Filament Wound Resin Pipe conforming to ASTM D2996 □ Centrifugally Cast Resin Pipe conforming to ASTM D2997 □ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517 □ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950 □ PTFE Fluorocarbon Tubing conforming to ASTM D3296 □ FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
Carbon Steel: compliant with (check one or more): □ ANSI/AWWA C200 □ API Spec. 5L □ ASTM A63 □ ASTM A139
Stainless Steel: (check one): □ ASTM A409 (production wells) □ ASTM A312 (monitor wells)
ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one): □ Schedule 40 □ Schedule 80
PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one): □ Schedule 40 □ Schedule 80 □ Schedule 120
Thermoset Plastic: (check one) □ Filament Wound Resin Pipe conforming to ASTM D2996 □ Centrifugally Cast Resin Pipe conforming to ASTM D2997 □ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517 □ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950 □ PTFE Fluorocarbon Tubing conforming to ASTM D3296 □ FEP Fluorocarbon Tubing conforming to ASTM D3296
DRILLER'S LOG

WELL NUMBER: 1901-08

In addition to the driller's log, if a geologic log was prepared, please submit with this form.

<table>
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<tr>
<th>Depths (ft.)</th>
<th>Rock Description</th>
<th>Water Level</th>
<th>Cl-</th>
<th>Dates</th>
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Remarks:
EWA BY GENTRY - AREA 45/46
WELL LOCATION
AT HONOLULU, EWA, OAHU, HAWAII

NAD83:
Latitude: 21 degrees 19 min 31 sec
Longitude: -158 degrees 01 min 19 sec
I certify that the elevation shown above:

1) Was done in accordance with acceptable surveying practices
2) Is accurate to the nearest 0.01 ft.
3) Is referenced to mean sea level

License No. 6297

Surveyor

Date 2/2/11
# STEP-DRAWDOWN PUMP TEST DATA

**Pumped Well No.** 1901-08  
**Observation Well No.**  

**Pumped Well Name** Gentry Area 45  
**Reference pt. for depth to water** 27.21 ft. msl  
**Target Q** 122 gpm  
**Static Water Level @ start of test** 1.91 ft. msl  

**START TEST**  
**Date** 1/24/2011  
**Time of day:** 12:20PM  

**Flow Meter Reading Start:** 3,070,470 gal  

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<th>Actual Elapsed time (min)</th>
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<th>Drawdown S (unadj) To nearest 0.1 ft</th>
<th>Pumping rate Q (gpm) at least 3 steps</th>
<th>Specific Conductance (μS/cm)</th>
<th>Cl⁺ (mg/l) or Temp. __°F or __°C</th>
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Start Time: 12:50 PM

End Time: 1:20 PM
| Suggested elapsed time (min) | Actual Elapsed time (min) | Depth to water (nearest 0.1 ft) | Drawdown S (unadj. To nearest 0.1 ft) | Pumping rate Q at least 3 steps (gpm) | Specific Conductance (μS/cm) | Temp: °F or °C | Data in this table is for: Pumped Well | Observation Well | Remarks | Start Time: | End Time: |
|---------------------------|--------------------------|--------------------------------|--------------------------------------|--------------------------------------|-----------------------------|--------------------|----------------|----------------|--------------------------|----------------|
|                           |                          |                                |                                      |                                      |                             |                    |                |                            |              |                     | 1:20 PM     | 1:50 PM     |
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<th>Specific Conductance (μS/cm)</th>
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**Final Meter Reading:** 3084970

### Additional Remarks

Person in charge of pump test (print): **MURIS MITCHELL**

Signature: ____________________________

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
CONSTANT RATE PUMP TEST DATA

Pumped Well No. 1901-08

Pumped Well Name Gentry Area 45

Target Q 150 gpm

Reference pt. for depth to water 27.21 ft. msl

Static Water Level @ start of test 1.86 ft. msl

START TEST

Date 1/24/2011

Flow Meter Reading Start: 3,084,970 gal

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<th>Actual Elapsed time (min)</th>
<th>Depth to water (nearest 0.1 ft.)</th>
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<th>Cl⁻ (mg/l) or Temp. °F</th>
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Specific Data in this table is for: Conductance

CI* (mg/l) or _C

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**End Recovery**

**Final Meter Reading** 3302881.5

**END TEST**

Date: 1/25/2011  
Time of Day: 2:55 PM

**ADDITIONAL REMARKS:**

Person in charge of pump test (print): MURIS MITCHELL

Signature: [Signature]

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for Gentry 45 Well (Well No. 1901-08) at TMK 9-1-069:005, Oahu, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules (HAR).

2. No withdrawal of water shall be made other than for testing until a Certificate of Pump Installation Completion has been issued by the Commission.

3. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

4. The pump installation permit shall be for installation of a 100 gpm rated capacity, or less, pump in the well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.

5. A water-level measurement access shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels.

6. The permittee shall install an approved meter or other appropriate means for measuring and reporting withdrawals and appropriate devices or means for measuring chlorides and temperature at the well head.

7. Well Completion Report Part II shall be submitted to the Chairperson within sixty (60) days after completion of work (please contact staff or visit www.hawaii.gov/dlnr/cwrm/resources_permits.htm for current form).

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

9. The pump installation permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.

10. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

11. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

12. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.

13. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

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

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I understand that this permit not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation. Any fines of up to $500 per day starting from the permit date of approval.

Installer's Signature: 

Printed Name: Toni Gonsalves 

Firm or Title: Beylik Drilling and Pump Service, Inc.

Please sign both copies of this permit, return one copy to the Commission office, and retain the other for your records.

Attachments
WELL CONSTRUCTION PERMIT

Gentry 45 Well, Well No. 1901-08

Note: This permit shall be prominently displayed at the construction site until the work is completed.

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Gentry 45 Well (Well No. 1901-08) at TMK 9-1-069:005, Oahu, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-12, Hawaii Administrative Rules (HAR).

2. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

3. The well construction permit shall be for construction and testing of the well only. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the HWCPIS (the latest pump test worksheet can be obtained by contacting Commission staff or at www.hawaii.gov/dlnr/cwrmlresources_permits.htm). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson. No withdrawal of water shall be made for purposes other than testing without a Certificate of Pump Installation Completion. The permitted pump capacity described on the pump installation permit may be reduced in the event that the pump test does not support the capacity.

4. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson. If it can be shown that the well does not tap basal ground water then this condition may be waived after consultation with and acceptance by Commission staff. However, in no instance can the well be drilled deeper than one-half (1/2) of the theoretical thickness without Commission approval.

5. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

6. In the event that historically significant remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and immediately contact the Department of Land and Natural Resources’ State Historic Preservation Division. Work may recommence only after written concurrence by the State Historic Preservation Division.

7. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlating water rights.

8. The Well Completion Report Part I shall be submitted to the Chairperson within sixty (60) days after completion of work (please contact staff or visit www.hawaii.gov/dlnr/cwrmlresources_permits.htm for current form).

9. The permittee shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.

10. The well construction permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.

11. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

12. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

13. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.

14. If the well is not to be used it must be properly capped. If the well is to be abandoned during the course of the project then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f), HAR, prior to any well sealing or plugging work.

15. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

16. This permit shall apply to the location shown on the application only. If the well is to be relocated, the permittee shall apply for a new well construction/pump installation permit in accordance with §13-168-12(f), HAR.

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

Date of Approval: January 7, 2011
Expiration Date: January 11, 2013

WILLIAM J. AILA, JR., Chairperson
Commission on Water Resource Management

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Driller's Signature: [Signature]
C-57 License #: AC-21896
Date: 04/11/2011

Printed Name: Toni Gonsalves
Firm or Title: Beylik Drilling and Pump Service, Inc.

Please sign both copies of this permit, return one copy to the Commission office, and retain the other for your records.

Attachment
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
APPLICATION FOR A WELL CONSTRUCTION / PUMP INSTALLATION PERMIT

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 521, Honolulu, Hawaii 96809. Application must be accompanied by 10 copies and a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-2259. Further information and updates to this application form, visit http://www.hawaii.gov/dlnr/cwrm.

WELL LOCATION INFORMATION

1. STATE WELL NO. (if already assigned) 1401-08
2. WELL NAME Gentry 45 Well
3. ISLAND Oahu
4. TMK 01 69 005

The following must be attached before this application is accepted as complete:
- Portion of 7.5-Minute Series USGS topographic map (scale 1:24,000) with well location label and include the name of the quadrangle
- Property tax map, showing well location referenced to established property boundaries
- Photograph of the proposed well site
- A schematic diagram showing the well site, access road and proposed well infrastructure
- For dug wells, attach a grading plan with cross section profiles showing existing and finish grades

5. WELL OPERATOR’S NAME/COMPANY Gentry Homes, Ltd.
   Well Operator’s Contact Mike Brant
   Landowner’s Name/Company Gentry Investment Properties
   Landowner’s Contact Mike Brant

6. LANDOWNER’S NAME/COMPANY Gentry Investment Properties

7. Well Operators Mailing Address P.O. Box 295
   Honolulu, Hawaii 96809
   Well Operator’s Phone 589-8229
   Well Operator’s Fax 589-8240
   Well Operator’s E-mail mikeb@gentryhawaii.com
   Landowner’s Phone 589-8229
   Landowner’s Fax 589-8240
   Landowner’s E-mail mikeb@gentryhawaii.com

PROPOSED WELL CONSTRUCTION

<table>
<thead>
<tr>
<th>Proposed Work</th>
<th>Proposed Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct New Well</td>
<td>Drilled</td>
</tr>
<tr>
<td>Modify Existing Well</td>
<td>Dug</td>
</tr>
<tr>
<td>Abandon/Seal Well</td>
<td>Shaft</td>
</tr>
<tr>
<td></td>
<td>Tunnel</td>
</tr>
</tbody>
</table>

8. Proposed Work

9. Is this well part of a battery of wells? □ Yes □ No

10. Proposed Work

11. Proposed Pumping Rate, gpm (gallons per minute)

12. Proposed Amount of Withdrawal, gpd (gallons per day)

13. Method of flow measurement

14. Proposed Surveyor name and license number (a surveyor is required for all Well Construction Permits and may be required for some Pump Installation Permits)

15. Municipal (water systems serving greater than 25 individuals or 15 service connections)

16. Domestic Number of units to be served:

17. Industrial (describe)

18. Irrigation (describe crop and no. of acres) Road and Common Area Irrigation, 10.62 Acres

19. Military (describe)

20. Other (describe)

OTHER LEGAL REQUIREMENTS if required, items 21. and 22. must be obtained before the Commission can legally issue a permit:

21. Conservation District Use Permit (CDUP)
   □ Well is in Conservation District
   □ Required, CDUP # date approved
   □ Not Required (attach documentation from OCCL)
   □ I have not checked with OCCL about whether or not a CDUP is required. I understand that checking with OCCL prior to making this application will expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued.

22. Special Management Area Permit (SMAP)
   □ Required, SMA # date approved
   □ Not Required (attach documentation from applicable county agency)
   □ I have not checked with the county about whether or not an SMA Permit is required. I understand that checking with the County prior to making this application may expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued.

23. State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources
   □ I have consulted with the HPD regarding potential impacts of well construction activities on historic sites. I have attached applicable documentation from the HPD.
   □ I have not consulted with the HPD regarding potential impacts of well construction activities on historic sites. I understand that checking with the HPD prior to making this application may expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued. Additionally, the history of past land use is attached.

Additional remarks, explanations, etc. (attach additional sheet if more space is needed)

NOTE: Filling it out indicates that the signatories understand and swear that the information provided is accurate and true to the best of their knowledge. Further, the signatories understand that upon permit approval: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor and/or agent must consult with the Commission a well completion/abandonment report within 60 days after the completion date of the permitted work; 3) in the event that this application is not completed correctly, any permit may be suspended until the item is brought in to compliance, and any work done while the permit is suspended may result in fines of up to $5000/day.

24. WELL DRILLER (Must be filed out if application is for Well Construction)

25. PUMP INSTALLER (Must be filed out if application is for Pump Installation)

For Official Use Only: RECEIVED AUG 18 ALL : 30

For Water Management Use: PUMP INSTALLATION PERMIT NO. 01-08-001 02/26/07

Signature Print Date

Signature Print Date

WCPI Application Form 02/26/2007
COMMISSION ON WATER RESOURCE MANAGEMENT
ROUTE SLIP FOR PERMIT ISSUANCE 3/31/11

FROM: RYAN
DATE: 3/31/11
SUSPENSE DATE: ______________

TO: CHONG, R.
INIT: 
TO: KIMURA, J.
INIT: 
FOR: Approval
PLEASE: See Me

DANBARA, S.
3 TAM, B.

OHYE, L.
3 Signature

FUJII, N.
Information

1 HARDY, R.

UYENO, D.
2 Type Draft

2 HOAGBIN, S.
YODA, K.
2 Type Final

ICE, C.

YOSHINAGA, M.

IMATA, R.


WELL NUMBER 1901-08
WELL NAME Gentry 45 Well

application type BOTH
1 WCP COVER LETTER
2 WCP
3 WELL CHECK PRINTOUT
proposed well section issues?

4 PIP COVER LETTER
5 PIP

COMMENTS: date rec'd issues?

6 SDWB

7 WWB

8 CWB

9 HEER

10 LD

11 HP

12 LUC in OD

13 OCCL in SMA

14 SMA

15 BWS (Oahu)


NOTES:

DRILLER Beylik
Beylik Drilling and Pump Service, Inc.
21896
91-259A Olai Street
Kapolei
HI 96707

phone 682-5554
fax 682-5686
cell 478-7112

TMK 9-1-069:005

PUMP CAPACITY 100

WELL OWNER Gentry Homes, Ltd.

LAND OWNER Gentry Investment Properties

COMMENT DEADLINE 1/0/00

90-DAY DEADLINE 1/0/00
April 4, 2011

Ms. Toni Gonsalves
Beylik Drilling and Pump Service, Inc.
91-259A Olai Street
Kapolei, HI 96707

Dear Ms. Gonsalves:

Pump Installation Permit
Gentry 45 Well (Well No. 1901-08)

Enclosed are two (2) originals of your approved Pump Installation Permit for the captioned well(s) that authorize permanent pump installation work for your well(s). As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 14:

Special Conditions

1. If the elevation benchmark needs to be altered, the permittee, well operator, and/or well owner shall ensure that the benchmark is transferred (or the well resurveyed) and documentation of the new benchmark shall be submitted to the Commission within sixty (60) days after the pump is installed.

2. Attached for your information are copies of the Department of Health's (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities. Also, please contact the Noise Radiation and Indoor Air Quality Branch at 586-4700 to check compliance with construction noise permit requirements for this project.

The permittee is responsible for all conditions of the permit. This includes ensuring the submission of a completed Well Completion Report Part II form within sixty (60) days after the pump installation work is completed. Be advised that you may be subject to fines of up to $5,000 per day for any violations of your permit conditions starting from the permit approval date.

Please sign both permit originals and return one copy to the Commission office for our files.

IMPORTANT - Pump installation shall not commence until a fully signed permit is returned to the Commission.

If you have any questions, please call Ryan Imata of the Commission staff at 587-0255.

Sincerely,

WILLIAM J. AILA, JR.
Chairperson

Enclosure

c: Gentry Homes, Ltd.
PUMP INSTALLATION PERMIT
Gentry 45 Well, Well No. 1901-08

Note: This permit shall be prominently displayed at the site until the work is completed

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management’s Administrative Rules, Section 13-168, entitled “Water Use, Wells, and Stream Diversion Works”, this document permits the pump installation for Gentry 45 Well (Well No. 1901-08) at TMK 9-1-069:005, Oahu, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules (HAR).

2. No withdrawal of water shall be made other than for testing until a Certificate of Pump Installation Completion has been issued by the Commission.

3. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

4. The pump installation permit shall be for installation of a 100 gpm rated capacity, or less, pump in the well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.

5. A water-level measurement access shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels.

6. The permittee shall install an approved meter or other appropriate means for measuring and reporting withdrawals and appropriate devices or means for measuring chlorides and temperature at the well head.

7. Well Completion Report Part II shall be submitted to the Chairperson within sixty (60) days after completion of work (please contact staff or visit www.hawaii.gov/dlnr/cwrm/resources_permits.htm for current form).

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

9. The pump installation permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.

10. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

11. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

12. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.

13. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

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

Date of Approval: January 7, 2011
Expiration Date: January 7, 2013
WILLIAM J. AILA, JR., Chairperson
Commission on Water Resource Management

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Installer’s Signature: ___________________________________ C-57, C-57a, or A License #: AC-21896 Date: _______________________
Printed Name: Toni Gonsalves Firm or Title: Beylik Drilling and Pump Service, Inc.

Please sign both copies of this permit, return one copy to the Commission office, and retain the other for your records.

Attachments
Ms. Toni Gonsalves
Beylik Drilling and Pump Service, Inc.
91-259A Olai Street
Kapolei, HI 96707

Dear Ms. Gonsalves:

Well Construction Permit
Gentry 45 Well (Well No. 1901-08)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for a permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 17:

Special Conditions

1. Attached for your information are copies of the Department of Health’s (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities. Also, please contact the Noise Radiation and Indoor Air Quality Branch at 586-4700 to check compliance with construction noise permit requirements for this project.

Please refer to the Permit Processes Worksheet (transmitted with your acknowledgement letter) for further information regarding the process of drilling a well and installing a pump.

No withdrawal of water shall be made other than for testing purposes until a certificate of pump installation completion has been issued by the Commission.

Please sign both permit originals and return one copy to the Commission office for our files. For copies of the aquifer pump test worksheet, please call staff or visit www.state.hi.us/dlnr/cwm/forms.htm.

IMPORTANT - Drilling work shall not commence until a fully signed permit is returned to the Commission. The permit shall be prominently displayed or made available at the construction site during construction. Be advised that you may be subject to fines of up to $5,000 per day for any violations of your permit conditions starting from the permit approval date.

If you have any questions, please call Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai), extension 70255.

Sincerely,

William J. Aila, Jr.
Chairperson

Enclosures

C: Gentry Homes, Ltd.
WELL CONSTRUCTION PERMIT

Gentry 45 Well, Well No. 1901-08

Note: This permit shall be prominently displayed at the construction site until the work is completed.

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Gentry 45 Well (Well No. 1901-08) at TMK 9-1-069:005, Oahu, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules (HAR).

2. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

3. The well construction permit shall be for construction and testing of the well only. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the HWCPIS (the latest pump test worksheet can be obtained by contacting Commission staff or at www.hawaii.gov/dlnr/cwrmlresources_permits.htm). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson. No withdrawal of water shall be made for purposes other than testing without a Certificate of Pump Installation Completion. The permitted pump capacity described on the pump installation permit may be reduced in the event that the pump test does not support the capacity.

4. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson. If it can be shown that the well does not tap basal ground water then this condition may be waived after consultation with and acceptance by Commission staff. However, in no instance can the well be drilled deeper than one-half (1/2) of the theoretical thickness without Commission approval.

5. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

6. In the event that historically significant remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and immediately contact the Department of Land and Natural Resources' State Historic Preservation Division. Work may recommence only after written concurrence by the State Historic Preservation Division.

7. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.

8. The Well Completion Report Part I shall be submitted to the Chairperson within sixty (60) days after completion of work (please contact staff or visit www.hawaii.gov/dlnr/cwrmlresources_permits.htm for current form).

9. The permittee shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.

10. The well construction permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.

11. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

12. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

13. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.

14. If the well is not to be used it must be properly capped. If the well is to be abandoned during the course of the project then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f), HAR, prior to any well sealing or plugging work.

15. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

16. This permit shall apply to the location shown on the application only. If the well is to be relocated, the permittee shall apply for a new well construction/pump installation permit in accordance with §13-168-12(f), HAR.

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

Date of Approval: January 7, 2011  Expiration Date: January 11, 2013

WILLIAM J. AILA, JR., Chairperson
Commission on Water Resource Management

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Driller's Signature: ____________________  C-57 License #: AC-21896  Date: ____________________

Printed Name: Toni Gonsalves  Firm or Title: Beylik Drilling and Pump Service, Inc.

Please sign both copies of this permit, return one copy to the Commission office, and retain the other for your records.

Attachment
January 27, 2009

Mr. Mike Brant
Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

Dear Mr. Brant:

Letter of Assurance for Well Nos. 1901-08, 1900-24, and 2000-06

We have completed the review process for the three captioned Well Construction/Pump Installation Permit applications, which we accepted as complete on September 25, 2008. Your well construction permit and pump installation permits are ready to be issued. However, in accordance with the State Water Code, HRS § 174C-84(a), these permits can only be issued to a licensed contractor and, to date, one has not been identified for your well work.

Once you have selected a licensed contractor, please have the contractor sign and return to the Commission a copy of the original application. Item 24 on the application must be signed by your contractor before we will issue a well construction permit; Item 25 must be signed before we will issue a pump installation work. Upon receiving a signed application for each of the captioned wells, we will issue permits to your contractor(s) provided that the following conditions are met:

1. The contractor has no outstanding issues with the Commission.
2. There are no significant changes to the application.
3. There have been no significant changes to applicable laws, rules or regulations since the application date.
4. There have been no significant changes to the local hydrogeologic conditions since the application date.

Also, on January 22, 2009, the Commission on Water Resource Management approved your applications for two new existing water use permits for these wells. We will send your water use permits to you under separate cover. As you know, we postponed issuance of this letter of assurance until the Commission acted on your water use permit applications.

If you have any questions, please contact Denise Mills of the Commission staff at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DM:ss

c: Tom Nance Water Resource Engineering
November 18, 2008

Ms. Laura H. Thielen, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Subject: Water Use Permit Application, Puuoa Ground Water Management Area, Ewa Beach, Oahu, Tax Map Keys: 9-1-116:013, 9-1-102:064, 9-1-136:064, and 9-1-069:005

We have reviewed Water Use Permit Applications (WUPA) 855, 857, 858, and 859 submitted by Gentry Homes, Ltd. and have the following comments to offer.

1. **WUPA 855**: The area identified by the TMK in Table 1 of the application is zoned A-2 Medium Apartment District as stated in Table 1. The proposed use of water for roadway landscaping irrigation in areas of the Ewa by Gentry development is consistent with supporting A-2 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

2. **WUPA 857**: The areas identified by the TMKs in Table 1 of the application are zoned R-5 Residential District, A-1 Low Density Apartment District, and P-2 General Preservation District as stated in Table 1. The proposed use of water for roadway landscaping and park irrigation in areas of the Ewa by Gentry development is consistent with supporting R-5, A-1, and P-2 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.
3. **WUPA 858:** The areas identified by the TMKs in Table 1 of the application are zoned A-1 Low Density Apartment District as stated in Table 1. The proposed use of the water for roadway landscaping in areas of the Ewa by Gentry development is consistent with supporting A-1 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

4. **WUPA 859:** The areas identified by the TMKs in Table 1 of the application are zoned R-5 Residential District and A-1 Low Density Apartment District as stated in Table 1. The proposed use of water for roadway landscaping and park irrigation in areas of the Ewa by Gentry development is consistent with supporting R-5 and A-1 zoned areas of the Ewa by Gentry development. The proposed use of brackish caprock water is consistent with Section 4.2.1 of the Ewa Development Plan requiring (when necessary) a dual water system and non-potable water use to conserve potable water in the Ewa region.

The locations of the two (2) existing and three (3) proposed wells, and the areas identified by the TMKs in all four (4) applications are not in the Special Management Area.

The Board of Water Supply requests contingency plans for well nos. 1901-08, 1900-24, and 2000-06, should the chloride levels of these wells exceed the 1,000 ppm CWRM limit.

Should you have any questions, please contact Tim Hata of our staff at 768-8043.

Very truly yours,

[Signature]

Henry Eng, FAICP, Director
Department of Planning and Permitting

HE: lh
p:DivFunction/WUP/2008elog2678

cc: Board of Water Supply, Attn: Glenn Oyama
October 28, 2008

TO: Morris Atta, Administrator  
Land Division

FROM: Ken C. Kawahara, P.E., Deputy Director  
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application  
Gentry Area 45 well (Well No. 1901-08), TMK (1) 9-1-069:005

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by November 20, 2008. If we do not hear from you by that date, we will assume you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Denise Mills of the Commission staff at 587-0251.

RESPONSE:

[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.

XX A water lease/permit is not required of this applicant.

[ ] A water lease/permit has been obtained by the applicant through lease no. ___

[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.

[ ] No objections

[ ] Other comments:

Contact Person: Gary Martin  
Phone: 587-0421

Signed: ________________________________  
Date: Nov 18, 2003
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<th>SUSPENSE DATE:</th>
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WCPIA review transmittals

Gentry Homes - Wells 1901-08, 2000-06, 1900-24
October 28, 2008

Mr. Mike Brant
Gentry Homes, Ltd.
P.O. Box 295
Honolulu, HI 96809

Dear Mr. Brant:

Well Construction/Pump Installation Permit Application for Well No. 1901-08

We acknowledge receipt, on September 25, 2008, of your Well Construction/Pump Installation permit application and filing fee for the proposed Gentry Area 45 well (Well No. 1901-08). However, applications for permits are required to be made by a contractor with a valid and active C-57, C-57a or A license and who will perform the work, in accordance with the State Water Code, § 174C-84(a), HRS.

Because you have not identified a qualified contractor, your application will not be accepted as complete until a qualifying contractor signs and completes items 24 and 25 on the application form. We will, however, process your incomplete application for review, and if the review warrants issuance of a permit, we will issue a letter of assurance in lieu of the permit. The letter of assurance will indicate that a permit will be issued when the contractor signs the application and the following conditions are met: (a) the contractor has no outstanding issues with the Commission; (b) there have been no significant changes to the application; (c) there have been no significant changes to applicable laws, rules or regulations; and (d) there have been no significant changes to hydrologic conditions at the proposed well site.

For your information, the attached table describes the process, responsible parties, and deadline requirements for drilling or modifying a well and installing, modifying, or replacing a pump.

By this letter, we are also notifying you that upon acceptable completion of the well construction and pump installation work required under the permits, we will issue certificates of well construction and pump installation completion to Gentry Homes, Ltd. These certificates will transfer all responsibility for well care, maintenance, and pumpage from to Gentry Homes. Until that time, your drilling and pump installation contractor will be responsible for complying with all permit conditions.

If you have any questions about your permit application, please contact Denise Mills of the Commission staff at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DM:ss
Attachment

c: Tom Nance
October 28, 2008

TO: Morris Atta, Administrator
Land Division

FROM: Ken C. Kawahara, P.E., Deputy Director
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
Gentry Area 45 well (Well No. 1901-08), TMK (1) 9-1-069:005

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by November 20, 2008. If we do not hear from you by that date, we will assume you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Denise Mills of the Commission staff at 587-0251.

DEM:ss
Attachment(s)

RESPONSE:

[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.

[ ] A water lease/permit is not required of this applicant.

[ ] A water lease/permit has been obtained by the applicant through lease no. _____________________.

[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.

[ ] No objections

[ ] Other comments:

Contact Person: ___________________________ Phone: __________

Signed: ___________________________ Date: __________
October 28, 2008

Mr. Clifford Lum, Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, HI 96843

Dear Mr. Lum:

Well Construction/Pump Installation Permit Review
Well Construction/Pump Installation Permit Application
Gentry Area 45 well (Well No. 1901-08)

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application. Please submit any comments on this application, if any, by November 20, 2008. If we do not hear from you by that date, we will assume you have no comments.

If you have any questions about this permit application, please contact Denise Mills of the Commission staff at 587-0251.

Sincerely,

[Signature]

LAURA H. THIELEN
Chairperson

DM:ss
Ewa by Gentry
Water Supply Wells for Irrigation Master Plan
WUPA Nos. 855 through 859

Existing wells: 1901–05, 2001–12
New proposed wells: 1900–24, 1901–08, 2000–06

http://maps.google.com/maps?f=q&hl=en&geocode=&q=keaunui+drive,+ewa+beach&sl=... 10/16/2008
Assessed Values reflect tax year 2008.

Search criteria: TMK Taxkey 1-9-1-69-5

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This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed.

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Ok - saltwater well/irrigation
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
APPLICATION FOR A WELL CONSTRUCTION / PUMP INSTALLATION PERMIT

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Application must be accompanied by 10 copies and a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulations Branch at 587-0226 or visit the Commission’s website, http://www.hawaii.gov/dlnr/cwrm. Further information and updates to this application form, visit http://www.hawaii.gov/dlnr/cwrm.

WELL LOCATION INFORMATION

3. ISLAND Oahu
4. TMK ___________
5. WELL OPERATOR’S NAME/COMPANY Gentry Homes, Ltd.
6. LANDOWNER’S NAME/COMPANY Gentry Investment Properties
7. WELL OPERATOR’S CONTACT Mike Brant
8. LANDOWNER’S CONTACT Mike Brant

WELL OPERATOR’S MAILING ADDRESS
P.O. Box 295
Honolulu, Hawaii 96809

WELL OPERATOR’S PHONE 599-8229
WELL OPERATOR’S FAX 599-8240
WELL OPERATOR’S E-MAIL mikeb@gentryhawaii.com

PROPOSED WELL CONSTRUCTION

7. Proposed Work
- Construct New Well
- Modify Existing Well
- Abandon/Seal Well
- Other (explain)
8. Construction Type
- Drilled
- Augered
- SPT
- Other

PROPOSED PUMP INSTALLATION

10. Proposed Work
- Install New Pump
- Replace Pump
- Other (explain)
11. Proposed Pumping Rate, gpm (gallons per minute)
100 GPM
12. Proposed Amount of Withdrawal, gpd (gallons per day)
66,085
13. Method of flow measurement
- Flowmeter
- Other

PROPOSED USE

- 15. Municipal (water systems serving greater than 25 individuals or 15 service connections)
- 16. Domestic
- 17. Industrial (describe)
- 18. Irrigation (describe crop and no. of acres) Road and Common Area Irrigation, 10.62 Acres
- 19. Military (describe)
- 20. Other (describe)

OTHER LEGAL REQUIREMENTS

21. Conservation District Use Permit (CDUP)
- Well is in Conservation District
- Required, CDUP # ______ date approved ________
- Not Required (attach documentation from OCCL)
- I have not checked with OCCL about whether or not a CDUP is required. I understand that checking with OCCL before making this application will expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued.

22. Special Management Area Permit (SMA)
- Required, SMA # ______ date approved ________
- Not Required (attach documentation from applicable County agency)
- I have not checked with the county about whether or not an SMA Permit is required. I understand that checking with the County prior to making this application may expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued.

23. State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources
- I have consulted with the SHPD regarding potential impacts of well construction activities on historic sites. I have attached applicable documentation from the SHPD.
- I have not consulted with the SHPD regarding potential impacts of well construction activities on historic sites. I understand that checking with the SHPD prior to making this application may expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued. Additionally, the history of past land use is attached.

Additional remarks, explanations, etc. (attach additional sheet if more space is needed)

NOTE: This form indicates that the signatories understand and swear that the information provided is accurate and true to the best of their knowledge.

For Official Use Only:

RECEIVED AUG 18 2007

PUMP INSTALLER

Signature Print
For non-salt water Basal Wells - bottom elevation of well shall not be deeper than 1/4 of aquifer thickness or, 
Bottom Elevation of Well Limit = \( \frac{(\text{Water Elevation} - \text{Well Elevation}_{\text{Bottom}})}{4} \)  
Example: Estimated + 2 ft. Water Level Elev. - Bottom Elevation of Well Limit = \( \frac{(2 - 4)}{4} = -1.5 \) ft.  

**Solid Casing Material:**  
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<td>Schedule 80</td>
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| Stainless Steel | compliant with (check one or more): | ASTM A242 (or A606) | Type E | Type S | Grade B | Other |
| PVC Plastic conforming to ASTM F480 and (ASTM D1785 or D2241): (check one): | Schedule 40 | Schedule 80 | Schedule 120 |

© 2007 WCPI Application Form
**DEPARTMENT**

DPP Home
Honolulu Home

**ACCOUNT**

Sign In

**PERMITTING**

Building Permits
Properties
New Online Permit
Building Permit Application
Subdivisions
Trenching Permits
Calculate BP Fees

### Details

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#### TMK SEPARATIONS

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1. We believe there are no historic properties present, because:

✓ a) intensive cultivation has altered the land
✓ b) residential development/urbanization has altered the land
✓ c) previous grubbing/grading has altered the land
✓ d) an acceptable archaeological assessment or inventory survey found no historic properties
   e) other:  

2. This project has already gone through the historic preservation review process, and mitigation has been completed.

Thus, we believe that “no historic properties will be affected” by this undertaking.

Staff:  

Date:  

Title:  

February 7, 2003

Ms. Elaine Jordane
Assistant Archaeologist
Historic Preservation Division
Department of Land and Natural Resources
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

Dear Ms. Jordane:

Subject: Gentry Ewa Makai
Environmental Impact Statement
Preparation Notice

Thank you for your comments regarding the subject project. We understand your review of the project has determined that no historic properties will be affected because the site has been intensively cultivated, previous grubbing and grading has altered the land, and an acceptable archaeological assessment has found no historic properties.

We appreciate your review of this project and will include your letter in the Draft Environmental Impact Statement that is being prepared for the Ewa Makai development.

Sincerely,

Taeyong Kim
Environmental Communications, Inc.
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Edits o.k. then to Susan

OK - Susan - I made changes above.

Combined WUP Transmittal letter w/ notice of action.

My is attachment.
**Complete This Section on Delivery**

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**Article Addressed to:**

Ms. Yvonne Izu  
Haseko (Ewa) Inc.  
c/o Morihara Lau & Fong, LLP  
841 Bishop Street, Suite 400  
Honolulu, HI 96813

**Article Number (Transfer from service label):**

7006 2150 0003 3953 6257

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**Domestic Return Receipt**

PS Form 3811, February 2004  
102595-02-M-1540
**U.S. Postal Service™ CERTIFIED MAIL™ RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

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**Sent To**

- Ms. Yvonne Izu  
- Haseko (Ewa) Inc.  
- c/o Morihara Lau & Fong, LLP  
- 841 Bishop Street, Suite 400  
- Honolulu, HI 96813

**APPROVED HERE**

- 2-6 2010

**CWP No. 884**
Certified Mail Provides:

- A mailing receipt
- A unique identifier for your mailpiece
- A record of delivery kept by the Postal Service for two years

Important Reminders:

- Certified Mail may ONLY be combined with First-Class Mail® or Priority Mail®.
- Certified Mail is not available for any class of international mail.
- NO INSURANCE COVERAGE IS PROVIDED with Certified Mail. For valuables, please consider Insured or Registered Mail.
- For an additional fee, a Return Receipt may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to over the fee. Endorse mailpiece "Return Receipt Requested". To receive a fee waiver for a duplicate return receipt, a USPS® postmark on your Certified Mail receipt is required.
- For an additional fee, delivery may be restricted to the addressee or the addressee's authorized agent. Advise the clerk or mark the mailpiece with the endorsement "Restricted Delivery".
- If a postmark on the Certified Mail receipt is desired, please present the article at the post office for postmarking. If a postmark on the Certified Mail receipt is not needed, detach and affix label with postage and mail.

IMPORTANT: Save this receipt and present it when making an inquiry.

PS Form 3800, August 2006 (Reverse) PSN 7530-02-000-9047
April 26, 2010

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Yvonne Izu
Haseko (Ewa) Inc.
c/o Morihara Lau & Fong, LLP
841 Bishop Street, Suite 400
Honolulu, HI 96813

Dear Ms. Izu:

Approval of Water Use Permit (WUP No. 884) for Well Nos. 1901-06, 1902-01, -09 to -11
Puuloa Ground-Water Management Area, Oahu

This letter is notification that the Commission approved your Water Use Permit at their meeting on April 21, 2010. Attached is your water use permit for Ocean Pointe 1-4 Wells and EP-27 (Well Nos. 1901-06, 1902-01, -09 to -11) for use of 1.337 million gallons per day (mgd) of water on a 12-month moving average basis that was approved by the Commission on Water Resource Management (Commission) on April 21, 2010. This permit supercedes WUP 784 but extends your chloride cap variance to exceed 1,000 mg/l. As part of the Commission's approval, the following special conditions were added and are part of your permit under Standard Permit Condition 19:

**Special Conditions**

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. The applicant shall contact the Environmental Management Division, State Department of Health, at 586-4304, concerning "GUIDELINES APPLICABLE TO GOLF COURSES IN HAWAII" dated July, 2002 (version 6).

3. Standard Condition 16 for a water shortage plan requirement is waived.

4. The permittee shall submit a contingency plan for water use in the event the chloride concentration in the permitted well(s) exceeds the 1,000 mg/l sustainable capacity limit established for Ewa caprock aquifer sources, the permittee shall seek an alternative source of supply. The contingency plan shall be submitted to the Commission within 30 days of the issuance of this permit.
5. The area that this permit is valid for is defined by the footprint in Exhibit 1 (TMK 9-1:various). The permittee is not required to notify the Commission of TMK changes provided that the change occurs within the footprint and that the uses remain in compliance with state and county general plans and land use designations and county land use plans and policies.

Enclosed with this letter of approval are the following:

1. Your water use permit
2. Your official monthly water use report form

Please be sure to read the conditions of your approved permit.

We draw your attention to two key conditions of your permit that require your response. First, you are required 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. You should make copies of the enclosed report form as needed.

Second, you are required to submit a water shortage plan to the Commission within thirty (30) days of the issuance date of this permit. Your water shortage plan simply identifies what you are willing to do should the Commission declare a water shortage situation in the Puuloa Ground-Water Management Area and can be as short as a one page letter. In a water shortage situation, the Commission may require temporary reductions in pumpage from all sources. The Commission is required, by law, to formulate a plan to implement such area-wide reductions, which should accommodate, include, and be consistent with your plans. Therefore, your help, by submitting your water shortage plan, is greatly needed in formulating the Commission's overall Water Shortage Plan.

If you have any questions, please call Ryan Imata of the Commission staff at 587-0255.

Sincerely,

LAURA H. THIELEN
Chairperson

Attachments: WUR Form
GROUND-WATER USE PERMIT
WUP NO. 884

PERMITTEE

Permittee/Water User
Haseko (Ewa) Inc.
Address c/o Morihara Lau & Fong, LLP
841 Bishop Street, Suite 400
Honolulu, HI 96813

Landowner of Source
Address Same

PERMITTED SOURCE INFORMATION

Island Oahu
Water Management Area
Aquifer Sector Ewa Caprock
Aquifer System Puuloa
System Sustainable Yield 1,000 mg/l
Well Name Ocean Pointe 1-4 Wells and EP-27
State Well No. 1901-06, 1902-01, -09 to -11

PERMITTED USE INFORMATION

Reasonable beneficial use Golf Course and Landscape Irrigation, Dust Control
Withdrawal (12 month moving ave.) 1,337 mgd
Location of water use
TMK # 9-1-various
State land use classification various
County zoning classification various

Pursuant to Hawaii’s State Constitution, Article XI, Section 7, Hawaii Revised Statutes, Chapter 174C; Hawaii Administrative Rules, Chapters 13-167 through 13-171; and Hawaii decisional law and custom, the permittee is hereby authorized to use ground water from the sources and in the amount and from and upon the locations described above; subject however, to the requirements of law including but not limited to the following conditions:
1. The water described in this water use permit may only be taken from the location described and used for
the reasonable beneficial use described at the location described above. Reasonable beneficial uses means
"the use of water in such a quantity as is necessary for economic and efficient utilization which is both
reasonable and consistent with State and County land use plans and the public interest." (HRS § 174C-3)

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

3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
   a. Can be accommodated with the available water source;
   b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
   c. Will not interfere with any existing legal use of water;
   d. Is consistent with the public interest;
   e. Is consistent with State and County general plans and land use designations;
   f. Is consistent with County land use plans and policies; and
   g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in
      section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).

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

5. The ground-water use here must not interfere with interim or permanent instream flow standards. If it does,
   then:
   a. A separate water use permit for surface water must be obtained in the case an area is also
      designated as a surface water management area;
   b. The interim or permanent instream flow standard, as applicable, must be amended.

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

7. The water use permit application and submittal, as amended, approved by the Commission at its April 21,
   2010 meeting are incorporated into this permit by reference.

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

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

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

10. An approved flowmeter(s) must be installed to measure monthly withdrawals and a monthly record of
    withdrawals, salinity, temperature, and pumping times must be kept and reported to the Commission on
    Water Resource Management on forms provided by the Commission on a monthly basis (attached).
11. This permit shall be subject to the Commission's periodic review of the Puuloa 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 Puuloa Aquifer System, or relevant modified aquifer(s), is reduced.

12. A permit may be transferred, in whole or in part, from the permittee to another, if:
   a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
   b. The Commission is informed of the transfer within ninety days.

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

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

14. The permittee shall request modification of the permit as necessary to comply with all applicable laws, rules, and ordinances 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 conservation, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period of forfeiture.

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

[Signature]
LAURA H. THIELEN, Chairperson
Commission on Water Resource Management

Attachment
AGENDA
FOR THE MEETING OF THE
COMMISSION ON WATER RESOURCE MANAGEMENT

DATE: April 21, 2010
TIME: 9:00 am
PLACE: Kalanimoku Building
DLNR Board Room 132
1151 Punchbowl Street
Honolulu, Hawaii 96813

A. APPROVAL OF MINUTES
1. March 15, 2010

B. ANNOUNCEMENTS

C. STREAM PROTECTION AND MANAGEMENT
1. Application for After-the-Fact Stream Channel Alteration Permit (SCAP.2601.3), Emergency Repair of Numana Street Bridge, Kalihi Stream, Kalihi, Oahu, TMKs: (1) 1-4-009:007, 1-4-017:001, 028 and 033
2. Application for Stream Diversion Works Permit (SDWP.2586.6) and Petition to Amend Interim Instream Flow Standard for New Auwai for Irrigation and Domestic Use, Honokala Gulch, Haiku, Maui, TMK: (2) 2-9-002:041

D. GROUND WATER
1. Application for a Water Use Permit, Ocean Point 1-4, EP-27 (Well No. 1902-09,-10,-11, 1901-06, 1902-01), TMK 9-1: various WUP No. 884 (Modification of WUP No. 784), To New (Agricultural) Use for 1.500 mgd, Pualoa Ground Water Management Area, Oahu

E. NEXT COMMISSION MEETINGS (TENTATIVE)
1. May 19, 2010
2. June 16, 2010

Materials related to items on this agenda are available for review at our office at 1151 Punchbowl Street, Room 227, and also will be available at the meeting.

Any person may testify or present information on any meeting agenda item, unless the item involves a proceeding in an existing contested case. In addition, if you have a legal interest that may be adversely affected by the proposed action, you may have a right to an administrative contested case hearing. You must make the request for such a hearing either orally or in writing at the public hearing or meeting for which this notice is given. Hawaii Administrative Rules (H.A.R.) Section 13-167-52(a).

If you request a contested case hearing, you will have the opportunity to present to the Commission oral or written evidence or testimony or both to establish your standing. You may present your testimony or evidence on standing at the meeting or public hearing described above or, alternatively, at a hearing set by the Commission at a later date.

If you request a contested case hearing either orally or in writing, you must also complete and file (or mail and postmark) a written petition for a contested case with the Commission within ten days after the date of the public hearing or meeting noticed here. Petition forms are available from the Commission. H.A.R. Section 13-167-52(a).

If you do not make such a request or fail to file a timely written petition with the Commission, the consequence is that you will be precluded from later obtaining a contested case hearing and seeking judicial review of any adverse decision. H.A.R. Chapter 13-167.

Disabled individuals planning to attend the public hearing or meeting are asked to contact the Commission at the above address or phone (Kauai) 274-3141 ext. 70214, (Maui) 984-2400 ext. 70214, (Hawaii) 974-4000 ext. 70214, (Molokai or Lanai) 1-800-GOV-INHI ext. 70214 or 587-0214 at least three days in advance of the public hearing or meeting to indicate if they have special needs which require accommodation.
Haseko (Ewa), Inc.
APPLICATION FOR A WATER USE PERMIT
Ocean Point 1-4, EP-27 (Well No. 1902-09,-10,-11, 1901-06, 1902-01), TMK 9-1:various
WUP No. 884 (Modification of WUP No. 784)
To New (Agricultural) Use for 1.500 mgd
Puuloa Ground Water Management Area, Oahu

APPLICANT: Haseko (Ewa), Inc.
841 Bishop Street, Suite 400
Honolulu, HI 96813

LANDOWNER:
Same

SUMMARY OF REQUEST:
The applicant requests that the Commission on Water Resource Management (Commission) modify water use permit no. 784 by decreasing the current allocation from 3.300 million gallons per day (mgd) to 1.500 mgd of non-potable caprock ground water from an existing well to supply golf course irrigation, landscape irrigation, and dust control.

LOCATION MAP: See Exhibit 1

BACKGROUND:
On May 14, 1997, the Commission approved water use permit (WUP) no. 192 to Haseko (Ewa) Inc. (Haseko) for 1.800 mgd, with a chloride cap of 1,000 mg/l, for agricultural use. On the same day, the Commission also approved WUP no. 347 to Haseko for 1.500 mgd, with a chloride cap of 1,000 mg/l, for golf course, roadway and maintenance irrigation, and dust control. Both of these water use permits covered the same well source, EP-27.
On July 15, 2002, the Commission approved a variance for the 1,000 mg/l chloride cap, subject to repeal once the R-1 wastewater use started.

On May 15, 2003, the Commission administratively modified and combined WUP nos. 192 and 347 into WUP no. 650, for a total of 3.3 mgd. This modification also added the Ocean Point Wells 1-4 (Well Nos. 1901-06, 1902-09, 10 & 11).

On August 3, 2006, the Commission issued WUP no. 784 to convert WUP no. 650 from interim to permanent status.

On October 1, 2008, the Commission approved a second variance to the chloride cap of 1,000 mg/l, despite starting to use of R-1 water in early 2008 because the available amount of R-1 was not sufficient to meet their irrigation needs and the only alternative was to use potable Board of Water Supply (BWS) water.

On December 29, 2009, the Commission received a completed application from Haseko to modify WUP no. 784. The application requests the following: 1) the reduction of allocation from 3.300 to 1.500 mgd; 2) the modification of the end use area to encompass the entire Ocean Pointe/Hoakalei project area; and 3) the deletion of Special Condition b., which requires reporting TMK changes of end uses.

Additional information regarding the source, use, notification, objections, and field investigation(s) is provided in Attachment A.

ANALYSIS/ISSUES:

Section 174C-49(a) of the State Water Code establishes seven (7) criteria that must be met to obtain a water use permit. An analysis of the proposed permit in relation to these criteria follows:

(1) Water availability

If approved by the Commission, there will be a net reduction of this allocation from 3.300 mgd to 1.500 mgd. Further, as part of the Ewa Caprock Aquifer Sector, the Puuloa Aquifer System is regulated by the maximum allowable chloride concentration limit of 1,000 mg/l, not total pumpage. Current chlorides for these sources have been reported at between 830 and 1,075 mg/l for the period between November 2009 and February 2010, and this reduction in allocation should not increase these concentrations. Therefore, water is available.

(2) Reasonable-beneficial

Section 174C-3 HRS defines "reasonable-beneficial use" is
...the use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and the public interest.

I. Purpose of Use

The applicant is requesting the use of brackish, non-potable ground water for dust control and irrigation. These are considered industrial and irrigation uses of water. The Declaration of Policy section, §174C-2(c) HRS, states that the Water Code shall be liberally interpreted to obtain maximum beneficial use of the waters of the State for various purposes including industrial and irrigation uses.

II. Quantity Justification

The applicant is requesting a total of 1.500 mgd for the following uses: golf course irrigation, landscape irrigation, and dust control.

Golf course irrigation

The current allocation for golf course irrigation is 1.080 mgd. The change in total area covered under this permit request does not affect the golf course net land area. However, there is now 600,000 gpd of R-1 water that is provided for the golf course by the BWS from the Honouliuli Wastewater Treatment Plant. Therefore, the total amount of groundwater that is justifiable for golf course use is now 1.080 - 0.600 = 0.480 mgd.

Landscape irrigation

The current allocation for landscape irrigation is 0.105 mgd. Presently, there are approximately 10 acres of nursery used to provide plants for the development.

Since its presentation to the Commission in April 2008, the Commission staff has used an ArcGIS based numerical simulation irrigation model, created in conjunction with the College of Tropical Agriculture and Human Resources (CTAHR), from the University of Hawaii, as a guideline to help review irrigation requirements for proposed water use permit applications. Most applications do not have the level of irrigation analysis as provided by this application. Nevertheless, it is useful to use the Irrigation Water Requirement Estimation Decision Support System (IWREDSS) model for comparative purposes.

Based on the IWREDSS, staff has calculated that landscape tree irrigation requirements may be on the order of 3,187 gpd/acre. At 10 acres, a reasonable approximation would be 31,870 gpd, or 0.032 mgd.
Dust control

The Commission has used estimates of between 1,500 and 3,500 gpd/acre for dust control in the past. However the higher of this range took composting requirements into account. According to the applicant, approximately 50% of the homes are now constructed. Applying 1,500 gpd/acre for half of the total land area (550 acres), the applicant would require 0.825 mgd.

Therefore, the total projected demand is the sum of golf course irrigation (0.480 mgd) + landscape irrigation (0.032 mgd) + dust control (0.825 mgd) = 1.337 mgd.

III. Efficiency of Use

The golf course is irrigated using sprinklers, and watering is done at night. Nursery irrigation is done using sprinklers. Dust control is done with truck spray. These methods, while not the most efficient, are the most economical and practical.

IV. Analysis of Practical Alternatives

The golf course is already using R-1 reuse water for irrigation, with the remainder coming from the wells under this permit. Surface and ditch water are not available. Desalinization is too expensive. Potable water from the BWS is available, but is more expensive and the use of nonpotable brackish water is more suitable than potable water for irrigation and dust control use.

Given these considerations (I through IV), 1.337 mgd seems to be a reasonable and beneficial quantity.

(3) Interference with other existing legal uses

Because the total amount of proposed water use will decrease and there is currently no interference with other existing legal uses, the potential for interference is less than currently exists.

(4) Public interest

Public interest is defined under §174C-2 - Declaration of policy, as follows:

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

The applicant states that the golf course serves as a greenbelt, as well as retention/detention basins for stormwater flows. Dust control measures are required by the Department of Health. Additionally, irrigation is deemed to be in the public interest. Also, no objections have been made through the agency and public review process. Therefore, this application is consistent with the public interest.

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

The proposed uses are in various state districts and county zones.

Normal agency review includes:

1) the State’s Department of Land and Natural Resources (DLNR) and its State Parks, Aquatic Resources, Historic Preservation, and Land Divisions; the Department of Health (DOH) with its Clean Water, Safe Drinking Water, and Wastewater Branches; the Department of Hawaiian Home Lands (DDHL), and Land Use Commission (LUC); and the Office of Hawaiian Affairs (OHA);
2) the County’s County Council, Department of Planning and Permitting, and the Honolulu Board of Water Supply.

Additionally, no comments or objections have been made through this review. These proposed uses and land use designations have been confirmed and are consistent with the state and county general plans and land use designations.

(6) County land use plans and policies

Again normal County review includes County Council, Department of Planning and Permitting, and the Board of Water Supply and this water use application has been confirmed to be consistent with County land use plans and policies. No comments or objections have been made.

(7) Interference with Hawaiian home lands rights

All permits are subject to the prior rights of Hawaiian home lands. The Department of Hawaiian Home Lands (DHHL) and the Office of Hawaiian Affairs have reviewed this application and made no comments or objections. Further, standard water use permit conditions 3.g., 6., and 9.f. notify all water use permittees that their permits are subject to and cannot interfere with DHHL rights.
Staff Submittal

Other issues

The applicant wishes to have this permit issued for a general defined footprint within TMK 9-1:various rather than individual TMKs down to the normal parcel level. The reason for this request is to reduce the burdensome requirement to notify the Commission when each and every individual new parcel number is assigned. Originally, Haseko was only located on TMKs 9-1-011:various and 9-1-012:various since 2006. The plat numbers have been subdivided into at least 10 additional plats with hundreds of parcel updates for each lot, common areas, and roads. The continued subdivision process and size of the parcels in question would make changes relatively frequent and numerous, within additional changes to be made on the order of as much as 1,000 updates. Therefore, staff believes the intent of tracking TMK changes can be met at the larger plat, TMK 9-1:various, as represented by the map shown on Exhibit 1A.

RECOMMENDATION:

Staff recommends that the Commission modify WUP No. 784 by approving the issuance of WUP No. 884 to Haseko (Ewa), Inc. for the reasonable and beneficial use of 1.337 million gallons per day of non-potable brackish water for golf course and landscape irrigation and dust control from the Ocean Point 1-4, EP-27 Wells (Well Nos. 1902-09,-10,-11, 1901-06, 1902-01), subject to the standard water use permit conditions listed in Attachment B and the following special conditions:

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. The applicant shall contact the Environmental Management Division, State Department of Health, at 586-4304, concerning "GUIDELINES APPLICABLE TO GOLF COURSES IN HAWAII" dated July, 2002 (version 6).

3. Standard Condition 16 for a water shortage plan requirement is waived.

4. The permittee shall submit a contingency plan for water use in the event the chloride concentration in the permitted well(s) exceeds the 1,000 mg/l sustainable capacity limit established for Ewa caprock aquifer sources, the permittee shall seek an alternative source of supply. The contingency plan shall be submitted to the Commission within 30 days of the issuance of this permit.

Approved as written

6
5. The area that this permit is valid for is defined by the footprint in Exhibit 1 (TMK 9-1:various. The permittee is not required to notify the Commission of TMK changes provided that the change occurs within the footprint and that the uses remain in compliance with state and county general plans and land use designations and county land use plans and policies.

Respectfully submitted,

KEN C. KAWAHARA, P.E.
Deputy Director

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

Exhibit: 1 (Location Map)

APPROVED FOR SUBMITTAL:

LAURA H. THIELEN
Chairperson
Staff Submittal

April 21, 2010

WATER USE PERMIT DETAILED INFORMATION

Source Information

AQUIFER: Puuloa System, Ewa Caprock Sector, Oahu
Sustainable Yield: 1000 mg/l

Use Information

Quantity Requested: 1.500 million gallons per day
New Type of Water Use: golf course and landscape irrigation and dust control
Place of Water Use: refer to Exhibit 1

Public Notice

In accordance with HAR §13-171-17, a public notice was published in the Honolulu Advertiser on January 29, 2010 and February 5, 2010 and a copy of the notice was sent to the Mayor's office. Copies of the completed application were sent to the Board of Water Supply, Department of Planning and Permitting, Department of Health, Department of Hawaiian Home Lands, Office of Hawaiian Affairs, the various divisions within the Department of Land and Natural Resources, and other interested parties for comments. Written comments and objections to the proposed permit were to be submitted to the Commission by February 22, 2010.

Objections

The public notice specifies that an objector meet the following requirements: (1) state property or other interest in the matter; (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; (3) state all grounds for objections to the proposed permits, (4) provide a copy of the objection letter(s) to the applicant, and (5) submit objections meeting the previous requirements to the Commission by February 22, 2010.

No objections were submitted. To the best of staff's knowledge there are no objectors who have property interest within the Puuloa Aquifer System or who will be directly and immediately affected by the proposed water use.

Briefs in Support

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

ATTACHMENT A
STANDARD WATER USE PERMIT CONDITIONS

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

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

3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
   a. Can be accommodated with the available water source;
   b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
   c. Will not interfere with any existing legal use of water;
   d. Is consistent with the public interest;
   e. Is consistent with State and County general plans and land use designations;
   f. Is consistent with County land use plans and policies; and
   g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).

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

5. The ground-water use here must not interfere with interim or permanent instream flow standards. If it does, then:
   a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
   b. The interim or permanent instream flow standard, as applicable, must be amended.

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

7. The water use permit application and submittal, as amended, approved by the Commission at its April 21, 2010 meeting are incorporated into this permit by reference.

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

9. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
   a. protect the water sources (quantity or quality);
   b. meet other legal obligations including other correlative rights;
   c. insure adequate conservation measures;

ATTACHMENT B
d. require efficiency of water uses;
e. reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
f. meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
g. carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

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

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

11. This permit shall be subject to the Commission’s periodic review of the Puuloa 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 Puuloa Aquifer System, or relevant modified aquifer(s), is reduced.

12. A permit may be transferred, in whole or in part, from the permittee to another, if:
   a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
   b. The Commission is informed of the transfer within ninety days.

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

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

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

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

ATTACHMENT B
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 Puuloa Ground-Water Management Area.

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

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

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

Sorry for the late notice, this didn't get posted until recently.


Thanks,

Ryan
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**TOTAL** $275.11

**REMARKS:**

- LINE (1) Reimbursement for Public Notice cost for WUPA No.884
- LINE (2)
- LINE (3)
- LINE (4)
- LINE (5)
- LINE (6)
- LINE (7)
- LINE (8)
- LINE (9)
- LINE (10)
TRANSMITTAL MEMORANDUM

TO: Mr. Ryan Imata
Commission on Water Management
Kalanikou Building, Room 227
1151 Punchbowl Street
Honolulu, Hawaii 96813

FROM: Jill K. Velazquez, Legal Assistant

DATE: February 19, 2010

RE: HASEKO (Ewa), Inc. – WUPA No. 884

MAIL (X) HAND DELIVER ( ) COURIER ( ) PICK-UP

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<td>Our firm’s check No. 1120, payable to the Department of Land &amp; Natural Resources in the amount of $275.11, for payment of the Public Notice publication fee; together with a copy of the Honolulu Star-Bulletin-MidWeek Invoice dated 02-05-2010</td>
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( ) For your information ( ) For necessary action
( ) For signature & return (X) Per your request
( ) For signature, forwarding as noted below & return ( ) Per our conversation
( ) For review & comment ( ) For your approval
( ) For correction ( ) Approved as noted
( ) For distribution ( ) Returned for corrections
( ) For recording/filing ( ) Disapproved
( ) For payment ( ) For your files
( ) For payment (X) See remarks below

Ryan, thank you for processing Haseko’s modification request so quickly. Please feel free to call if we can be of further assistance.

c: HASEKO (Ewa), Inc.
**INVOICE**

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**BILLING DATE:** 02/05/2010  
**TERMS OF PAYMENT:** NET 30 DAYS  
**BILLED ACCOUNT NO:** 5828  
**CLIENT NAME:** DLNR, COMM ON WATER RESOURCE MGMT

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**TOTAL AMOUNT DUE:** $0.00

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**REMISE TO:**
Honolulu Star-Bulletin-MidWeek  
Oahu Publications, Inc.  
500 Ala Moana Blvd., Suite #7-500  
Honolulu, HI 96813

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I prefer to pay by: Visa MC AMEX DISC

Name on card:  
Account #:  
Exp Date:  
Amount:  
Signature:  

Make checks payable to: Oahu Publications, INC.

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IN THE MATTER OF
Public Notice

STATE OF HAWAII
City and County of Honolulu

Doc. Date: FEB - 5 2010 # Pages: 1
Notary Name: Patricia K. Reese
First Judicial Circuit
Doc. Description: Affidavit of Publication

Rose Mae Rosales being duly sworn, deposes and says that she is a clerk, duly authorized to execute this affidavit of MidWeek Printing, Inc. publisher of MidWeek and the Honolulu Star-Bulletin, that said newspapers are newspapers of general circulation in the State of Hawaii, and that the attached notice is true notice as was published in the aforementioned newspapers as follows:

Honolulu Star-Bulletin 2 times on:
01/29, 02/05/2010

Midweek Wed. 0 times on:

Midweek Fri. 0 times on:

And that affiant is not a party to or in any way interested in the above entitled matter.

Rose Mae Rosales
Subscribed to and sworn before me this 5th day of Feb, A.D. 2010

Patricia K. Reese, Notary Public of the First Judicial Circuit, State of Hawaii
My commission expires: October 07, 2010

Ad # 0000172553
COMMISSION ON WATER RESOURCE MANAGEMENT
ROUTE SLIP FOR NEW APPLICATIONS

FROM: RYAN
DATE: 30-Dec-09
SUSPENSE DATE: 6-Jan-10

TO: CHING, F. INIT. TO: KUNIMURA, I.
FUJII, N. INIT. FOR: 1 Approval
GOODING, K. INIT. 3 Signature
HARDY, R. INIT. 4 Informatio
HIGA, D. INIT. 5 IMATA, R.
HOAGBIN, S. INIT. 6 IMATA, R.
ICE, C. INIT. 3 KAWAHARA, K.

WELL NUMBER WELL NAME EP 27 & Ocea

☐ WELL CONSTRUCTION ☐ PUMP INSTALLATION

ATTACHMENTS FOR APPLICATION PROCESSING - Both applicant & staff generated
1 TRANS. LETTER
2 PERMIT PROCESS TABLE
3 CWRM MAP
4 APPL. FORM (11 COPIES)
5 USGS MAPS (11 COPIES)
6 TAX MAPS (11 COPIES)
7 PARCEL OWNER VERIF.
8 CONTRACTOR VERIF.
9 ALL INFO FILLED IN
10 BACKGROUND CHECK
11 $25 FEE DEPOSIT SLIP
12 DHP/CDUP/SMA pre-screen

FOLDER:
☐ MADE NEW FILE FOLDER, ATTACHED
☐ FILE FOLDER ALREADY MADE, IN FILE CABINET

INCOMPLETE ACTION DATES:
DATE ACTION

note tab comments while editing
Dec 79, 2009
Ms. Yvonne Izu
Haseko (Ewa) Inc.
c/o Morihara, Lau & Fong, LLC
841 Bishop Street, Suite 400
Honolulu, HI 96813

Dear Ms. Izu:

We acknowledge receipt, on December 29, 2009, of your completed water use permit application (WUPA No. 884) for the EP 27 & Ocean Pt. 1-4 Wells (Well Nos. 1901-06, 1902-01, 09, 10, 11). You can expect your application to be processed within ninety (90) days from the date of receipt unless there are objections to your application.

Enclosed is a copy of the public notice for your water use permit application which will be published in the Honolulu Star Bulletin issues of January 29, 2010 and February 5, 2010. You will be required to pay for the cost of the public notice, which runs about $400. We will send you an invoice shortly after your notice is published.

Please be aware that there may be objections to your application. If objections are made, the objector is required to file such objections with the Commission and is also required to send you a copy of the objections.

You, or any other party, may respond to objections by filing a brief in support of your application with the Commission within ten (10) days of the filing of an objection. You, or the other party, must also send a copy of the response to the objector.

If you have any questions, please contact Ryan Imata at 587-0255.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

RI:ss
Enclosure
January 27, 2010

TO: Aquatic Resources
Forestry and Wildlife/Natural Area Reserve System
Historic Preservation
State Parks

FROM: Ken C. Kawahara, P.E., Deputy Director
Commission on Water Resource Management

SUBJECT: Request for Comments
Water Use Permit Application
Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment is a copy of a water use permit application (WUPA No. 884) for Haseko (Ewa) Inc. for Well Nos. 1901-06, 1902-01,-09,-10,-11. Public notice of this application will be published in the Honolulu Star Bulletin issues of January 29, 2010 and February 5, 2010.

We would appreciate your review of the attached application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your division only. Please respond by returning this cover memo form by February 22, 2010, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period for this application, please contact Ryan Imata at 587-0255.

RI: ss
Attachment(s)

Response:

( ) We have no objections or comments
( ) Objections attached
( ) Only comments attached

Contact person: _____________________________ Phone: _____________________________

Signed: _____________________________ Date: _____________________________
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 821
HONOLULU, HAWAII 96809

January 27, 2010

TO: Morris Atta, Administrator
   Land Division

FROM: Ken C. Kawahara, P.E., Deputy Director
   Commission on Water Resource Management

SUBJECT: Request for Comments
         Water Use Permit Application
         Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment is a copy of a water use permit application (WUPA No. 884) for Haseko (Ewa) Inc. for Well Nos. 1901-06, 1902-01, -09,-10,-11. Public notice of this application will be published in the Honolulu Star Bulletin issues of January 29, 2010 and February 5, 2010.

We would appreciate your review of the attached application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your division only. Please respond by returning this cover memo form by February 22, 2010, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period for this application, please contact Ryan Imata at 587-0255.

RI: ss
Attachment(s)

Response:

( ) A water lease/permit is required of this applicant and an application for such will be requested by our division.
( ) A water lease/permit is not required of this applicant.
( ) A water lease/permit has been obtained by the applicant through lease no.
( ) Other relevant Land Division rules/regulations, information, or recommendations are attached.
( ) No objections
( ) Other comments:

Contact person: __________________________ Phone: __________________________
Signed: __________________________________ Date: __________________________
January 27, 2010

TO: Honorable Kaulana H. Park, Chairperson
   Department of Hawaiian Home Lands

Honorable Chiyoue L. Fukino, M.D., Director
Department of Health
Attn: Mr. Tomas See, Chief, Wastewater Branch
Attn: Mr. Stuart Yamada, Chief, Safe Drinking Water Branch

Mr. Clyde W. Namu'o, Administrator
Office of Hawaiian Affairs

Mr. Wayne M. Hashiro, P.E., Manager and Chief Engineer
Honolulu Board of Water Supply
Attn: Mr. Glenn Oyama
Attn: Mr. Barry Usugawa

FROM: Laura H. Thielen, Chairperson
Commission on Water Resource Management

SUBJECT: Water Use Permit Application
Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment is a copy of a water use permit application (WUPA No. 884) for Haseko (Ewa) Inc. for Well Nos. 1901-06, 1902-01,-09,-10,-11. Public notice of this application will be published in the Honolulu Star Bulletin issues of January 29, 2010 and February 5, 2010.

We would appreciate your review of the proposed use that is described in the attached application for any conflicts or inconsistencies with the land use designations, plans, policies, programs, or objectives specific to your organization or department only. Please respond by returning this cover memo form by February 22, 2010, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period for this application, please contact Ryan Imata at 587-0255.

RI:ss
Attachment(s)

Response:

( ) We have no objections or comments
( ) Objections attached
( ) Only comments attached

Contact person: ____________________________ Phone: ____________________________
Signed: ____________________________ Date: ____________________________
January 27, 2010

TO: Mr. Dan Davidson, Executive Officer
    Land Use Commission

FROM: Laura H. Thielen, Chairperson
      Commission on Water Resource Management

SUBJECT: WATER USE PERMIT APPLICATION
          Puuloa Ground Water Management Area, Oahu

Transmitted for your review and comment is a copy of a water use permit application (WUPA No. 884) for Haseko (Ewa) Inc. for Well Nos. 1901-06, 1902-01,-09,-10,-11. Public notice of this application will be published in the Honolulu Star Bulletin issues of January 29, 2010 and February 5, 2010.

We would appreciate your review of the proposed use that is described in the attached application (i.e. line item 6 or Table 1). Specifically, we request that you inform us of the current state land use designation for the TMK parcel, or portion thereof, for the proposed use area(s) and, secondly, whether the current state land use designation is appropriate for the proposed project.

We have attached a TMK map(s) that covers the proposed use area(s). Where water is proposed for use on only a portion of a TMK parcel, or on parcels with multiple zoning, the proposed use area(s) has been clearly delineated on the attached map. Please respond by returning this cover memo along with your review comments by February 22, 2010, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period for this application, please contact Ryan Imata at 587-0255.

RI: ss
Attachment(s)

Response:

( ) We have no objections or comments
( ) Objections attached
( ) Only comments attached

Contact person: __________________________ Phone: __________________________
Signed: _________________________________ Date: __________________________
January 27, 2010

TO: Mr. David Tanoue, Director
Department of Planning and Permitting
City and County of Honolulu

FROM: Laura H. Thielen, Chairperson
Commission on Water Resource Management

SUBJECT: WATER USE PERMIT APPLICATION
Puuloa Ground Water Management Area, Oahu

For your review and record, we are forwarding a copy of the application (WUPA No. 884) for Haseko (Ewa) Inc. for Well Nos. 1901-06, 1902-01,-09,-10,-11, for confirmation of the zoning designation for the proposed uses on the attached application, confirmation of the consistency of the proposed projects with the current zoning designation, and any special management area issues. Public notice of this application will be published in the Honolulu Star Bulletin issues of January 29, 2010 and February 5, 2010. Please respond by returning this cover memo form by February 22, 2010, which is the legal deadline for objections. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period for this application, please contact Ryan Imata at 587-0255.

RI: ss
Attachment(s)

Response:

( ) The proposed water use(s) is consistent with the current zoning designation(s).

( ) This well project ( ) requires ( ) does not require a SMA. If a SMA is required it ( ) has ( ) has not been approved and ( ) is ( ) is not currently active.

( ) Comments attached

Contact person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
TO: Other Interested Parties

FROM: Ken C. Kawahara, P.E., Deputy Director Commission on Water Resource Management

SUBJECT: Request for Comments
Water Use Permit Application
Puuloa Ground Water Management Area, Oahu

In addition to serving you notice as required by 174C-52 (a), Hawaii Revised Statutes, we transmit for your review and comment a copy of a water use permit application (WUPA No. 884) for Haseko (Ewa) Inc. for Well Nos. 1901-06, 1902-01,-09,-10,-11. Public notice of this application will be published in the Honolulu Star Bulletin issues of January 29, 2010 and February 5, 2010.

We would appreciate your review of the attached application for any conflicts or inconsistencies with the programs, plans, and objectives of the organization or agency that you represent. Written objections should be made in accordance with Section 13-171-18, Hawaii Administrative Rules and must be filed by the February 22, 2010 deadline. If we do not receive your comments by this date, we will assume you have no objections to this application.

If you have any questions, require additional information, or would like to request an extension of the review period for this application, please contact Ryan Imata at 587-0255.

Response:

( ) We have no objections or comments
( ) Objections attached
( ) Only comments attached

Contact person: ___________________________________________ Phone: ____________________________
Signed: ___________________________________________ Date: ____________________________
<table>
<thead>
<tr>
<th>F YR APP D SRC/ OBJ COST CTR PROJECT PH ACT AMOUNT</th>
<th>NAME/DESCRIPTION (WANG INPUT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S 10 326 C 1026 0752 (1)</td>
<td>$25.00 Morihara Lau &amp; Fong LLP</td>
</tr>
<tr>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>(3)</td>
<td></td>
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<tr>
<td>(4)</td>
<td></td>
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<tr>
<td>(5)</td>
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<td></td>
</tr>
<tr>
<td>(9)</td>
<td></td>
</tr>
<tr>
<td>(10)</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** $25.00

**REMARKS:**

LINE (1) WUP No. 784

LINE (2)

LINE (3)

LINE (4)

LINE (5)

LINE (6)

LINE (7)

LINE (8)

LINE (9)

LINE (10)
Ms. Laura H. Thielen, Chairperson
and Members of the Commission
on Water Resource Management
Kalaninoku Building, Room 227
1151 Punchbowl Street
Honolulu, Hawaii 96813

Re: Water Use Permit No. 784 ("WUP #784")
HASEKO (Ewa), Inc. - Request for Modification

December 29, 2009

Dear Chairperson Thielen and Commissioners:

HASEKO (Ewa), Inc. ("Haseko") submits this application to modify WUP #784 by:

(1) reducing the amount of the allocation from 3.3 mgd to 1.5 mgd (12-MAV);

(2) modifying the location of use to encompass the entire Ocean Pointe/Hoakalei
    project area; and

(3) identifying the location of use by way of a map and deleting Special Condition b.
    requiring the reporting of TMK changes.

WUP #784 authorizes the withdrawal of 3.3 mgd of brackish water from the Puuloa
Sector of Ewa Caprock Aquifer for dust control, golf course and landscape irrigation.

I. Background

Haseko is owner and developer of the Ocean Pointe/Hoakalei project ("Project") located
at the southern edge of the east Ewa Plain. A man-made marina excavated out of fast lands
will be the focal point of this 1100-acre multi-use development, which also includes resort,
commercial and marine industrial components, an 18-hole Ernie Els signature golf course, and
nearly 5000 residences.

Until 1994, a large portion of the 1100-acre Project area was cultivated in sugar cane by
Oahu Sugar Company ("OSCo"). To irrigate the sugar cane, OSCo had a water use permit with
an allocation for 4.16 mgd. In 1994, as OSCo was ratcheting down its sugar operations and as
Haseko was gearing up for construction, OSCo relinquished 1.5 mgd of its agricultural allocation
and Haseko obtained a permit for the same amount for golf course and landscape irrigation,
maintenance, and dust control. The remaining 2.66 mgd was retained by OSCo for agricultural
use. After OSCo’s lease terminated at the end of 1994, its 2.66 mgd agricultural water use
permit was transferred to Haseko. At the time, Haseko held two water use permits: one for
1.5 mgd for urban types uses (WUP #347), and another for 2.66 mgd for agricultural uses (WUP #192). The allocation for the agricultural water use permit was reduced to 1.8 mgd in 1997.

In 2003, Haseko sought approval to replace EP-27 with a battery of small, shallow wells without changing the allocation amount. Approval was granted administratively, and in the process, the two water use permits were combined into one, WUP #650, with an allocation of 3.3 mgd. Subsequently, in 2006, the Commission on Water Resource Management ("Commission") converted all Ewa caprock water use permits from interim to permanent permits pursuant to a Hawaii Supreme Court opinion in an unrelated case. Haseko's permanent permit was designated WUP #784.

II. Reducing Allocation to 1.5 mgd

WUP #784 carries an allocation of 3.3 mgd. Haseko no longer needs that amount of water and is willing to voluntarily relinquish 1.8 mgd and be left with an allocation of 1.5 mgd.

After OSCo's lease terminated at the end of 1994, Haseko continued to use some of the 1100-acre Project site to grow agricultural crops primarily to prevent the landscape from becoming a dust bowl. As development of the Project and construction progressed, agricultural operations diminished, although some of the land, to this day, continues to be used in a nursery operation that provides plants for the Project. As a result of the decrease in agricultural uses, the amount of water needed for irrigation has also significantly decreased.

Additionally, since 2008, the Hoakalei Golf Course has been receiving from the Honolulu Board of Water Supply up to 600,000 gpd of R-1 water from the Honouliuli wastewater treatment plant.

Today Haseko needs only 1.5 mgd of caprock water to supplement the available R-1 water for golf course irrigation, for other landscape irrigation, and for dust control.

III. Modifying Location of Use

As indicated in Section I, above, WUP #784 has its origins in permits held by OSCo when it was cultivating sugar cane in the area. About two-thirds of the 1100-acre Ocean Pointe/Hoakalei project area used to be cultivated in sugar cane. The remainder of the land was comprised of the shoreline area, a wetland, and some kiawe forest close to the shoreline. When OSCo held the water use permits, the location of use was identified by OSCo field numbers, which, of course, did not include the uncultivated shoreline, wetland and kiawe forest areas. When the permits were transferred or taken over by Haseko, the field numbers were converted to TMKs, but the location of use was not changed.

For years, Haseko incorrectly assumed that the water use permits it held covered the entire 1100-acre Project area. It was in 2008, as Haseko was working with Commission staff in attempting to update TMK numbers that Haseko realized that the location of use authorized by
WUP #784 did not encompass the entire Project area, but instead was limited to the areas previously cultivated by OSCo.

Development will occur throughout the entire 1100-acre Project site (except within the protected wetland area). Water will be needed for dust control, at least, over the entire Project area. Thus, Haseko is requesting that the location of use be modified to encompass the entire Project site, even though the amount of the allocation is being decreased.

III. Identify Location of Use by Map and Delete Special Condition b

Special Condition b. to WUP #784 provides:

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.

When Haseko first acquired the Project site in 1988, there were only a handful of TMK numbers associated with the entire 1100 acres. With every subdivision and consolidation, the TMK numbers change. Today, there are thousands of TMK numbers associated with the Project site, and those numbers continue to change.

Because it would take a lot of time and effort to continually update TMK numbers, Haseko proposes that the location of use be identified with a map of the Project site instead of by TMK numbers (see Exhibit A attached hereto). Should the Commission agree to identify the location of use by way of a map, Special Condition b. would then be irrelevant and unnecessary.

The Commission uses maps to identify locations of use for the Waiahole Ditch permits. In that situation, because the authorized locations of use sometimes constitute only portions of large TMKs, maps are useful to identify the areas where the water allocation may be used.

IV. Criteria for Water Use Permit Modification

Pursuant to HRS § 174C-57(b), “[a]ll permit modification applications shall be treated as initial permit applications and be subject to sections 174C-51 to 174C-56[.]” Under HRS § 174C-53(a), the Commission needs to determine whether the conditions set forth in HRS § 174C-49(a) have been established. As set forth below, Haseko’s application for permit modification meets the requirements of HRS § 174C-49(a).

HRS § 174C-49(a) reads as follows:

Conditions for a permit. (a) To obtain a permit pursuant to this part, the applicant shall establish that the proposed use of water:

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

A. Can Be Accommodated With Available Water Source

This permit modification request includes a proposal to reduce the allocation currently permitted.

B. Is Reasonable-Beneficial

The term "reasonable-beneficial use" is defined in HRS § 174C-3 as "the use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and the public interest."

In granting WUP #784 (or, more precisely, the predecessor permits WUP #192 and WUP #347), the Commission found that the proposed uses were reasonable-beneficial. Since then, agricultural use has diminished (but not completely terminated), but water continues to be used and needed for golf course and other irrigation and dust control. Due to the decrease in agricultural use, Haseko is proposing to decrease its allocation from 3.3 mgd to 1.5 mgd.

Alternative Sources. In accordance with the Commission's policy of championing the use of reclaimed water, the Hoakalei Golf Course has been receiving from the Honolulu Board of Water Supply ("BWS") up to 600,000 gpd of R-1 water from the Honouliuli wastewater treatment plant. Under the agreement with BWS, Haseko is obligated to take 600,000 gpd of R-1 water so long as that amount is available. Thus, caprock water is used to supplement R-1 water to the extent that R-1 water is not sufficient to meet daily irrigation needs.

The only other alternative would be to use potable water provided by BWS.

C. Will Not Interfere With Any Existing Legal Use of Water

Although Haseko seeks to expand the location of use, the requested modification also proposes to reduce the amount of the currently permitted allocation. The water will
be withdrawn from the currently permitted sources. Therefore, there should be no adverse impact on any existing legal uses of water.

D. Is Consistent With the Public Interest

Dust control measures during construction are required by the State Department of Health.

The Hoakalei Golf Course is part of the greenbelt that winds through the many developments within secondary urban center. In addition, the golf course serves as retention/detention basins for stormwater flows, thus minimizing the amount of stormwater discharge into the ocean. Irrigating the golf course is essential to fulfilling these purposes.

Using brackish caprock water for irrigation and dust control is in the public interest for it reduces the demand on potable water supplied by BWS.

E. Consistent with State and County General Plans and Land Use Designations

The appropriate land use approvals and entitlements have been obtained for development of the Ocean Pointe/Hoakalei project, including the golf course. Zoning designations within the project site include: A-1 Apartment; A-2 Apartment; B-1 Neighborhood Business; B-2 Community Business; BMX-3 Commercial; I-3 Marina Waterfront; P-2 General (golf course and marina); R-5 Residential; and Resort. (See attached zoning map.)

F. Consistent With County Land Use Plans and Policies

The Ocean Pointe/Hoakalei project is a recognized in the City's Ewa Development Plan ("Ewa DP"). (The currently approved Ewa DP, which dates back to August 1997, denominates the Project as the Ewa Marina Community Development.) As indicated in the Ewa DP, the Hoakalei Golf Course is part of the greenbelt that winds through the many developments within secondary urban center. One of the policies set forth in the Ewa DP is to encourage the use of drainage swales rather than concrete channels to deal with stormwater runoff. Consistent with this policy, the Hoakalei Golf Course, which provides retention/detention basins for stormwater flows, promotes recharge of the caprock aquifer and minimizes the amount of stormwater discharge into the ocean.

G. No Interference with DHHL Rights

The Department of Hawaiian Home Lands ("DHHL") does not have a reservation for Ewa caprock water. Neither does it own any lands downgradient of the EP-27
battery of wells. Therefore, the proposed modification will have no impact on DHHL's rights to water under Section 221 of the Hawaiian Homes Commission Act.

V. Conclusion

Based on the foregoing, Haseko respectfully requests that the Commission approve the modification of WUP #784 by:

(1) reducing the amount of the allocation from 3.3 mgd to 1.5 mgd (12-MAV);

(2) modifying the location of use to encompass the entire Ocean Pointe/Hoakalei project area; and

(3) identifying the location of use by way of a map and deleting Special Condition b. requiring the reporting of TMK changes.

Respectfully submitted,

Yvonne Y. Izu
Attorney for HASEKO (Ewa), Inc.

c: HASEKO (Ewa), Inc.

Attachments:
1. Project area
2. Zoning map

HK-OCEAN POINTE/LAND USE/WATER USE PERMITS/GOLF COURSE WUP/2009-12-28 DRAFT APPLICATION FOR MODIFICATION.DOC
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
APPLICATION FOR GROUND WATER USE PERMIT FOR PROPOSED NEW USE IN A DESIGNATED GROUND WATER MANAGEMENT AREA

FORM GWUPA-N

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

The following must be attached before this application is accepted as complete:

- Portion of 7.5-Minute Series USGS topographic map (scale 1:24,000) with source location labeled and include the name of the quad map.
- Property tax map, showing source location referenced to established property boundaries.
- Photograph(s) of the source(s) and location(s) of proposed end use(s), if applicable.

**APPLICANT INFORMATION**

Name/Company: HASEKO (Ewa), Inc.
Mailing Address: c/o Yvonne Y. Izu, Esq.
Morihara Lau & Fong, LLP
841 Bishop Street, Suite 400
Honolulu, Hawaii 96813

Phone: 526-2888
Fax: 566-0800
E-mail: yizu@moriharagroup.com

Contact Person: Yvonne Y. Izu, attorney for HASEKO (Ewa), Inc.

**GROUND WATER MANAGEMENT AREA**

Puuloa 4A.

**SOURCE INFORMATION**

Attach additional sheets, if necessary.

<table>
<thead>
<tr>
<th>Well Number</th>
<th>Well Name</th>
<th>Proposed?</th>
<th>TMK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901-006</td>
<td>Ocean Pointe 4</td>
<td>Existing</td>
<td>9 - 1</td>
</tr>
<tr>
<td>1902-01</td>
<td>EP-27</td>
<td>Existing</td>
<td>9 - 1</td>
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<tr>
<td>1902-09</td>
<td>Ocean Pointe 1</td>
<td>Existing</td>
<td>9 - 1</td>
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<tr>
<td>1902-10</td>
<td>Ocean Pointe 2</td>
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<tr>
<td>1902-11</td>
<td>Ocean Pointe 3</td>
<td>Existing</td>
<td>9 - 1</td>
</tr>
</tbody>
</table>

**TOTAL QUANTITY OF WATER REQUESTED:** In the space below, enter total from Box M in Item 11 (Table 1) of this application.

1.5 gallons per day, averaged over 1 year

**SOURCE LANDOWNER/Joint Applicant**

Yvonne Y. Izu, attorney for Applicant

**APPLICANT'S INFORMATION**

**SOURCE LANDOWNER'S INFORMATION**

Name/Company: HASEKO (Ewa), Inc.
Mailing Address: c/o Yvonne Y. Izu, Esq.
Morihara Lau & Fong, LLP
841 Bishop Street, Suite 400
Honolulu, Hawaii 96813

Phone: 526-2888
Fax: 566-0800
E-mail: yizu@moriharagroup.com

Contact Person: Yvonne Y. Izu, attorney for HASEKO (Ewa), Inc.

**SUSTAINABLE YIELD FOR ITEM 4**

<table>
<thead>
<tr>
<th>1000mg/l MGD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

Note: in accordance with HRS § 174C-8(1), the landowner shall be the joint applicant in the event the applicant is a lessee, licensee, developer or any person with a terminable interest or estate in the land that is the water source of the permitted water.

**APPLICANT**

Yvonne Y. Izu, attorney for Applicant

Date: 12/29/2009

**Print Name**

**FOR USE ONLY:**

COMMISSION ON WATER RESOURCE MANAGEMENT

2009 DEC 29 PM 2:11
### PROPOSED NEW USE OR MODIFIED USE INFORMATION

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

<table>
<thead>
<tr>
<th>LAND USE CATEGORY</th>
<th>STATE LAND DISTRICT</th>
<th>COUNTY CODE</th>
<th>USES THAT REQUIRE POTABLE (DRINKING) WATER</th>
<th>TOTAL POTABLE USE</th>
<th>USES THAT DO NOT REQUIRE POTABLE WATER</th>
<th>TOTAL QUANTITY OF WATER REQUESTED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yes, date approved:</td>
<td></td>
<td>Yes, date approved:</td>
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<tr>
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<td></td>
<td></td>
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<td></td>
<td>No</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Yes, not acquired:</td>
<td></td>
<td>Yes, not acquired:</td>
<td></td>
</tr>
<tr>
<td>Irrigation / Dust Control</td>
<td>See attached</td>
<td>U</td>
<td>1,500,000 GPD</td>
<td>1,500,000 GPD</td>
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<td></td>
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<td>Yes, not acquired:</td>
<td></td>
<td>Yes, not acquired:</td>
<td></td>
</tr>
</tbody>
</table>

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

See attached
**PROPOSED NEW USE OR MODIFIED USE INFORMATION (continued)**

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

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>See attached</strong></td>
<td><strong>Crop</strong></td>
<td><strong>Total Acreage</strong></td>
<td><strong>Net Irrigated Acreage</strong></td>
<td><strong>BEG. GROWTH PERIOD (WEEKS)</strong></td>
<td><strong>END. GROWTH PERIOD (WEEKS)</strong></td>
<td><strong>Irrigation System</strong> (Refer to Instructions)</td>
<td><strong>Irrigation Practice</strong></td>
<td><strong>Comments</strong></td>
</tr>
<tr>
<td>Zone</td>
<td>Sector</td>
<td>Plat</td>
<td>Parcel</td>
<td>Golf Course</td>
<td>231 ac.</td>
<td>231 ac.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Zone</td>
<td>Sector</td>
<td>Plat</td>
<td>Parcel</td>
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<td>Zone</td>
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<td>Zone</td>
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<td>Parcel</td>
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<td>Zone</td>
<td>Sector</td>
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<td>Parcel</td>
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<td>Parcel</td>
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</tr>
</tbody>
</table>

Comments (continued from Column 1). Please clearly indicate the crop (i.e., the row in table) these comments relate to.

See attached
### 13. TABLE 3: ALTERNATIVES ANALYSIS

<table>
<thead>
<tr>
<th>A. Analysis of potable alternatives</th>
<th>B. Analysis of non-potable alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal sources</td>
<td>See attached</td>
</tr>
<tr>
<td>Wastewater reuse</td>
<td>See attached</td>
</tr>
<tr>
<td>Ditch system</td>
<td></td>
</tr>
<tr>
<td>Desalination</td>
<td></td>
</tr>
<tr>
<td>Surface water</td>
<td></td>
</tr>
<tr>
<td>Conservation Measures</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

### 14. PUBLIC INTEREST

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

Explain how the proposed new use(s) in your application are consistent with the public interest.

See attached

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

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

See attached

### 16. INTERFERENCE WITH ANY EXISTING LEGAL USES

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

See attached

### 17. PUBLIC WATER SYSTEM INFORMATION

Check the appropriate box or boxes.
- PUC-Regulated Private System
- Non-PUC-Regulated Private System
- Not a Public Water System
- Intended dedication to Honolulu Board of Water Supply or to County of Maui, Department of Water Supply.
The Phase 2 Water Cons. plan looks good. Does the use sound high?

\[ 1.08 \text{ mgd} = 4000 \text{ gad} \quad (270 \text{ ac}) \]

Does anyone have a table showing use amounts from our library for golf courses across the state? (Units: gad)

[See back calc]
$3.3 \text{ mgd} = 1284 \text{ mg/yr} = 3,696.5 \text{ ac-ft/yr}$

$3,696.5 \text{ ac-ft/yr} \times 270 \text{ ac} \times \frac{12 \text{ in}}{\text{ ft}} = 164 \text{ in/yr}$

$1.08 \text{ mgd} = 394,200 \text{ mg/yr} = 1,209.75 \text{ ac-ft/yr}$

$1,209.75 \text{ ac-ft/yr} \times \frac{1}{270 \text{ ac}} \times 12 \text{ in} = 53.77 \text{ in/yr}$

$1.08 \text{ mgd} \div 270 \text{ ac} = 4000 \text{ gpd/acre}$

U.S. AVE

$152.5 \text{ ac-ft/yr} \times 325,851 \text{ gals/ac-ft} = 1,687 \text{ gpd/acre/day}$

$\frac{365 \text{ days}}{} \times 80.7 = 1,748 \text{ gpd}$

Pacific $152 \text{ ac-ft/yr}$

$\text{ a nice round figure. I think reasonable based on U.S. Ave.}$

$\text{ Second only to Southern only. State and almost most west too}$
GOLF COURSE DEVELOPMENT ON OAHU
### Exhibit 6

**WATER USAGE FOR SELECTED GOLF COURSES ON OAHU**

<table>
<thead>
<tr>
<th>GOLF COURSE</th>
<th>ACREAGE</th>
<th>HIGH</th>
<th>LOW</th>
<th>AVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ALA WAI*</td>
<td>150</td>
<td>1.3 (8,450)</td>
<td>0.05 (317)</td>
<td>0.7 (4,540)</td>
</tr>
<tr>
<td>2. TED MAKALENA</td>
<td>150</td>
<td>0.8 (5,210)</td>
<td>0.2 (1,355)</td>
<td>0.5 (3,472)</td>
</tr>
<tr>
<td>3. SHERATON MAKANA COUNTRY CLUB</td>
<td>167</td>
<td>2.3 (13,971)</td>
<td>0.4 (2,617)</td>
<td>1.6 (9,512)</td>
</tr>
<tr>
<td>4. HAWAII KAI** CHAMPIONSHIP AND EXECUTIVE</td>
<td>204</td>
<td>1.9 (9,437)</td>
<td>0.3 (1,351)</td>
<td>1.3 (6,328)</td>
</tr>
<tr>
<td>5. MAKAHA VALLEY COUNTRY CLUB</td>
<td>145</td>
<td>1.6 (11,326)</td>
<td>0.6 (4,197)</td>
<td>1.1 (7,391)</td>
</tr>
<tr>
<td>6. HONOLULU INTERNATIONAL COUNTRY CLUB</td>
<td>177</td>
<td>---</td>
<td>---</td>
<td>1.0 (5,762)</td>
</tr>
<tr>
<td>7. WAIKALAE COUNTRY CLUB</td>
<td>145</td>
<td>---</td>
<td>---</td>
<td>1.0 (7,034)</td>
</tr>
</tbody>
</table>

* Does not include water from private wells
** Does not include wastewater used as irrigation source

SOURCE: Board of Water Supply, July 1989
EXHIBIT 6
WATER USAGE FOR SELECTED GOLF COURSES ON OAHU

<table>
<thead>
<tr>
<th>GOLF COURSE</th>
<th>ACREAGE</th>
<th>HIGH</th>
<th>LOW</th>
<th>AVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ALA WAI*</td>
<td>150</td>
<td>0.4 (2.833)</td>
<td>0.003 (200)</td>
<td>0.2 (1.513)</td>
</tr>
<tr>
<td>2. TED MAKALENA</td>
<td>150</td>
<td>0.3 (1.736)</td>
<td>0.07 (1,355)</td>
<td>0.2 (1.157)</td>
</tr>
<tr>
<td>3. SHERATON MAKANA COUNTRY CLUB</td>
<td>167</td>
<td>0.8 (4.650)</td>
<td>0.15 (872)</td>
<td>0.5 (3.170)</td>
</tr>
<tr>
<td>4. HAWAII KAI** CHAMPIONSHIP AND EXECUTIVE</td>
<td>204</td>
<td>0.65 (3.145)</td>
<td>0.1 (450)</td>
<td>0.4 (2.100)</td>
</tr>
<tr>
<td>5. MAKAHA VALLEY COUNTRY CLUB</td>
<td>145</td>
<td>0.55 (3.775)</td>
<td>0.2 (1,400)</td>
<td>0.35 (2.463)</td>
</tr>
<tr>
<td>6. HONOLULU INTERNATIONAL COUNTRY CLUB</td>
<td>177</td>
<td>----</td>
<td>----</td>
<td>0.34 (1.920)</td>
</tr>
<tr>
<td>7. WAIALAE COUNTRY CLUB</td>
<td>145</td>
<td>----</td>
<td>----</td>
<td>0.34 (2.344)</td>
</tr>
</tbody>
</table>

* Does not include water from private wells
** Does not include wastewater used as irrigation source

SOURCE: Board of Water Supply, July 1989

(Revised 8/28/89)
Table 4. Irrigated turfgrass acres, water use, and water use per irrigated turfgrass acre on an average 18-hole golf facility by agronomic region.

<table>
<thead>
<tr>
<th>Agronomic region*</th>
<th>NE</th>
<th>NC</th>
<th>Trans</th>
<th>SE</th>
<th>SW</th>
<th>UW/Mtn</th>
<th>Pac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigated turfgrass (acres)**</td>
<td>54f</td>
<td>66e</td>
<td>74d</td>
<td>100b</td>
<td>115a</td>
<td>103b</td>
<td>84c</td>
</tr>
<tr>
<td>Water use (acre-feet)**</td>
<td>42.4f</td>
<td>76.7e</td>
<td>78.9e</td>
<td>241.8c</td>
<td>459.0a</td>
<td>300.4b</td>
<td>158.0d</td>
</tr>
<tr>
<td>Water use/irrigated turfgrass acre (acre-feet)</td>
<td>0.8</td>
<td>1.2</td>
<td>1.1</td>
<td>2.4</td>
<td>4.0</td>
<td>2.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Water use/irrigated turfgrass acre (inches)</td>
<td>9.4</td>
<td>13.9</td>
<td>12.8</td>
<td>29.0</td>
<td>47.9</td>
<td>35.0</td>
<td>22.6</td>
</tr>
</tbody>
</table>

* Agronomic regions: NE, Northeast; NC, North Central; Trans, Transition; SE, Southeast; SW, Southwest; UW/Mtn, Upper West/Mountain; Pac, Pacific.

** Within a row, values followed by the same letter are not significantly different from one another. Letters denote significance at the 90% confidence level.

Table 5. Changes in irrigated turfgrass acres on U.S. golf facilities since 2001.

<table>
<thead>
<tr>
<th>Changes in turfgrass acres since 2001</th>
<th>US</th>
<th>NE</th>
<th>NC</th>
<th>Trans</th>
<th>SE</th>
<th>SW</th>
<th>UW/Mtn</th>
<th>Pac</th>
</tr>
</thead>
<tbody>
<tr>
<td>% increased**</td>
<td>25</td>
<td>33a</td>
<td>28ab</td>
<td>25b</td>
<td>18c</td>
<td>16c</td>
<td>26ab</td>
<td>28ab</td>
</tr>
<tr>
<td>Avg. increase (acres)</td>
<td>13.0</td>
<td>14.0</td>
<td>20.5</td>
<td>10.7</td>
<td>5.1</td>
<td>16.7</td>
<td>9.5</td>
<td>7.7</td>
</tr>
<tr>
<td>% stayed the same**</td>
<td>66</td>
<td>60c</td>
<td>66abc</td>
<td>66abc</td>
<td>71a</td>
<td>70ab</td>
<td>63bc</td>
<td>60c</td>
</tr>
<tr>
<td>% decreased**</td>
<td>9</td>
<td>7b</td>
<td>6</td>
<td>9ab</td>
<td>11ab</td>
<td>14a</td>
<td>11ab</td>
<td>12ab</td>
</tr>
<tr>
<td>Avg. decrease (acres)</td>
<td>12.3</td>
<td>9.4</td>
<td>14.1</td>
<td>14.5</td>
<td>10.0</td>
<td>17.9</td>
<td>8.2</td>
<td>12.7</td>
</tr>
</tbody>
</table>

* Agronomic regions: US, United States; NE, Northeast; NC, North Central; Trans, Transition; SE, Southeast; SW, Southwest; UW/Mtn, Upper West/Mountain; Pac, Pacific.

** Within a row, values followed by the same letter are not significantly different from one another. Letters denote significance at the 90% confidence level.
Golf Course Environmental Profile
Volume II
Water Use and Conservation Practices on U.S. Golf Courses

With Forewords by Greg Norman, World Golf Hall of Fame Member,
and David S. Downing II, CGCS, 2008 GCSAA President
Irrigation Water Use

From 2003-2005, the average total water use for golf course irrigation in the U.S. was estimated to be 2,312,701 acre-feet of water per year. Using water use data nationally, an 18-hole golf course uses an average of 152.5 acre-feet of water per year to irrigate 80.7 acres of turfgrass. This is an average of 1.9 acre-feet of irrigation water per irrigated acre (Figure 7, Appendix Table 6).

- One acre-foot or 12 inches of water over one acre equals 325,851 gallons.
- Water use figures for 18-hole facilities are based upon the following measures: 50 percent metered, 37 percent estimated, 13 percent both.
- 50 percent of 18-hole golf facilities are required to report water use volumes to a state or local governing entity.

Figure 7 – Average water use in acre-feet for 18-hole golf facilities in the U.S. by agronomic region (Appendix Table 6).

[Image of bar graph showing average water use by region: Southwest - 459.0 (a), Upper West/Mountain - 300.4 (b), Southeast - 241.8 (c), Pacific - 158.0 (d), U.S. Average - 152.5, Transition - 78.9 (e), North Central - 76.7 (e), Northeast - 42.4 (f). Letters denote significance at 90% confidence level.]
# Irrigation Water Use Across Agronomic Regions

## Southwest

The Southwest agronomic region has the greatest use of irrigation water per acre, the largest irrigated acreage per 18-hole golf facility and uses the second greatest total volume of water per agronomic region.

- An 18-hole facility in the Southwest agronomic region irrigates, on average, 115 acres of turfgrass.

- An 18-hole facility in the Southwest agronomic region irrigates with an average 459 acre-feet annually.

- An 18-hole facility in the Southwest agronomic region irrigates with 4 acre-feet (47.9 inches) of water per irrigated turfgrass acre annually.

- There are 1,272 golf facilities in the Southwest agronomic region including 9-hole, 18-hole and greater-than-18-hole golf facilities, approximately 7.5 percent of the total nationally.

- The total irrigation water use for all facilities in the Southwest agronomic region is estimated to be 553,442 acre-feet per year.

## North Central

The North Central agronomic region has more facilities than any other region. The water use per irrigated acre is comparable to the Transition region and is significantly lower than all other regions except the Northeast. Because of the relatively large number of facilities, it ranks third in the total water use per region.

- An average 18-hole facility in the North Central agronomic region irrigates, on average, 66 acres of turfgrass.

- An 18-hole facility in the North Central agronomic region irrigates with an average of 76.7 acre-feet annually.

- An 18-hole facility in the North Central agronomic region irrigates with 1.2 acre-feet (13.9 inches) of water per irrigated turfgrass acre annually.

- There are 4,238 golf facilities in the North Central agronomic region including 9-hole, 18-hole and greater-than-18-hole facilities.

- The total irrigation water use for all facilities in the North Central agronomic region is estimated to be 313,037 acre-feet per year.
Mr. Ken Kawahara, Deputy Director  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawai'i  
P.O. Box 621  
Honolulu, HI 96809  

Attention: Mr. Neal Fujii  

Subject: Water Use Permit (WUP) 784 (formerly 650)  
Water Conservation Plan for Hoakalei Golf Course  

Dear Mr. Kawahara:

On behalf of the Hoakalei Golf Club, we are pleased to submit the enclosed Water Conservation Plan for the Hoakalei Golf Course (formerly Ewa Marina Golf Course). The Plan fulfills Special Condition "h" of Water Use Permit No. 784, which mandates compliance with the CWRM "Conservation Conditions for ‘Ewa Caprock Use Permits”. The basic components of this water conservation plan are compliant with the Conditions. These components include:

1. Reduction in the demand for ground water by the use of recycled (R-1) water.
2. Reduction of the demand for all irrigation water by:
   a. Extensive use of drought-tolerant plants such as kiawe trees,
   b. Mulching of planting and waste areas with organic materials,
   c. Careful formulation of topsoil, design of drainage, and selection of plant types for optimum maintenance of the plantings,
   d. Continuous monitoring, using a state of the art SCADA system, of irrigation water application to minimize runoff and ensure effective maintenance of the system.

The course opened for limited play this January, and all water conservation measures described in the plan are currently in place. Please call me at 550-4539 or Mr. Kalani Voeller, the Golf Course Senior Superintendent, at 282-0181 with any questions you may have.

Sincerely,

Charles L. Morgan, Ph.D.  
Senior Environmental Planner  

Attachment:  
Ewa Marina Golf Course Water Conservation Plan  

cc: Ray Kanna, Executive Vice President, Haseko (Ewa), Inc.  
Kalani Voeller, Hoakalei Golf Course Senior Superintendent  
Angela Fong, Esquire, Ishikawa Morihara Lau & Fong
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EWA MARINA GOLF COURSE  
WATER CONSERVATION PLAN

1.0 INTRODUCTION

The Ewa Marina Golf Course will be constructed on approximately 270 acres of land along the mauka side of HASEKO (Ewa), Inc.'s 1,100-acre Ewa Marina Community project (Figure 1). The course is being developed independently of the marina from which the project derives its name. Construction of the course is slated to begin in 1996 and will continue for approximately two years.

This document was prepared pursuant to directives from the Commission on Water Resource Management to all users of Ewa caprock water (Appendix A). It describes water conservation measures that will be implemented during the design and operation of the proposed golf course. The discussion begins with a brief description of the environmental setting; emphasis is placed on aspects of the natural environment relevant to golf course irrigation needs and irrigation system design.

2.0 SITE DESCRIPTION

The proposed Ewa Marina Golf Course (the “site”) will be a 27-hole championship course located within the Ewa Marina community development on the Ewa plain of Oahu. It is surrounded by Barbers Point Naval Air Station and its golf course to the west and northwest, cane land (to be developed as housing and a golf course by Gentry) to the north, the Hawaii Prince Golf Course to the east (across Fort Weaver Road), and the proposed Ewa Marina and Ewa Beach residential area to the east and south. The site was cultivated for sugarcane until the spring of 1995; it is now fallow land overgrown with weeds.

3.0 NATURAL SETTING

3.1 Climate

Hawaii is at the northern extreme of the tropical climate zone, within a belt of cooling northeasterly trade winds. The climate is mild throughout the year, with average monthly air temperature ranging from 72.4°F to 79.4°. The maximum and minimum temperatures of record at Honolulu International Airport (only six miles east of the site) are 94°F and 43°F, respectively (Armstrong, 1973). Northeasterly trade winds are common over Oahu at all times of the year, but are more persistent in summer than in winter. At the airport, trade wind frequency is about 65 percent, with wind speeds of 4 to 24 mph (Armstrong, 1973). Moderate to strong southerly winds associated with kona frontal passages are dominant from November through March.
Annual rainfall in the Hawaiian Islands is highly variable and is dependent upon altitude and leeward or windward location. The site is in leeward Oahu at no more than 25 feet above mean sea level (+25 msl). Its annual rainfall over the past 40 years averaged 21 inches (CDM, 1993). Winter is typically wetter than summer. Average January rainfall in Ewa is 3.79 inches, and average June rainfall is 0.23 inches. With an average annual pan evaporation rate of approximately 80 inches per year (CDM, 1993), the rate of evapotranspiration in Ewa is nearly four times the average annual rainfall.

3.2 Geology and Soil

Bedrock at the site is highly permeable, pitted coralline (reef) rock mixed with alluvium; it is locally known as "caprock." The caprock is underlain by basalt at least 500 feet below ground surface (Macdonald et al., 1983). Both rock types function as aquifers. The deep basalt aquifer is separated from the caprock aquifer by an impermeable layer of clay. The upper, caprock aquifer is brackish and is recharged principally by rainfall. Until recently, it was also recharged by irrigation return water from sugarcane cultivation. Salinity ranges from 800 to 1000 parts per million (ppm) chloride (Murdoch and Green, 1994). The water table has a head of approximately 1.5 feet and is about 22 feet below grade at the site. Groundwater flow in the caprock aquifer is south towards the ocean (TNWRE, 1991). This aquifer has been pumped heavily over the last century by sugarcane irrigation methods. The caprock aquifer will be used for golf course irrigation.

Soils at the site consist of 6 to 50 inches of reddish-brown silty clay loam. According to the Soil Conservation Service, 6 to 24 inches of sugarcane waste mixed with crushed coral dredge spoils were used as fill in various portions of the site (SCS, 1972). All site soil exhibits moderate permeability, slow runoff, and slight erosion hazard.

During site development, coral outcrop at the west end of the site will be filled with soils excavated from other portions of the site. Topsoil will be added to provide suitable turf rooting depth.

3.3 Topography and Drainage

The topography of the Ewa plain is relatively level, with an average gradient toward the ocean of less than one percent. Elevations at the site range between +10 and +23 msl. The combination of low relief, low rainfall, and permeable soil and rock results in minimal surface drainage. There is no existing storm drain at the site. Stormwater drains directly into the underlying coralline rock or runs across the site to drain into a sinkhole in the rock.
3.4 Vegetation

Only plants adapted to low rainfall conditions flourish on the Ewa plain. Until the spring of 1995, vegetation at the site was dominated by sugarcane cultivated by Oahu Sugar Company with heavy irrigation from the caprock and basalt aquifers. Surrounding vegetation would normally consist of koa haole, kiawe, and associated underbrush. The last sugarcane crop has been harvested, and the site is now fallow, with miscellaneous grasses and shrubs growing sporadically in the old cane fields.

4.0 SOURCES OF WATER SUPPLY

The Ewa Marina Golf Course will use potable water for domestic water and nonpotable water for irrigation.

4.1 Potable Water

An Ewa Water Master Plan (1987) approved by the Board of Water Supply (BWS) has allocated 3.2937 million gallons per day (mgd) of potable water from the BWS system for Ewa Marina (Tyrone, 1991). The golf course clubhouse and associated domestic water uses will utilize an estimated 40,000 to 50,000 gpd of that allocation, which will be supplied via the BWS Waianae District water system (Tyrone, 1991). Potable water will not be used for golf course irrigation.

4.2 Nonpotable Water

Consistent with State and City policies, the Ewa Marina Golf Course is committed to using nonpotable water for irrigation purposes. Potential sources of nonpotable water include the Ewa caprock aquifer, reclaimed water, and desalinized seawater. The caprock aquifer is the preferred nonpotable source; reclaimed water will be used if this becomes unfeasible. Desalination is too costly at the present time to be a viable alternative.

4.2.1 Caprock Aquifer Water

The Ewa Marina Golf Course is expected to use about 1.35 mgd of nonpotable groundwater from the caprock aquifer (Tyrone, 1991). This water will come from the irrigation well and pump station (Well No. 3-1902-01, also known as EP27). This skimming well was installed by Oahu Sugar Company in 1964 and until recently was used to irrigate sugarcane at the site. Over the entire Ewa Marina project, the change from sugarcane cultivation to golf course and landscape irrigation will reduce pumping from the caprock aquifer by approximately 5.0 mgd.
4.2.2 Reclaimed Water

Wastewater treatment plant effluent may be reused—or "reclaimed"—for irrigation, conserving existing groundwater resources. New DOH regulations regulate the use of reclaimed water (Appendix B). Reclaimed water, for the purpose of this report, is wastewater treatment plant effluent. The Honouliuli wastewater treatment plant is presently the only public source of reclaimed water in the Ewa Plain. If caprock water sources were not available in sufficient quantity (e.g., if salinity in the caprock aquifer were to rise above usable levels), reclaimed water would become the most economically viable source at the site.

DOH guidelines for the use of effluent are included in Chapter 11-62-25 of the Hawaii Revised Statutes. The main points are summarized here to indicate the type and magnitude of restrictions on effluent reuse.

Reclaimed water under the DOH regulations is classified as follows:

- R-1: Virtually pathogen-free effluent
- R-2: Disinfected secondary effluent
- R-3: Undisinfected secondary effluent

The Honouliuli Wastewater Treatment Plant will provide Class R-2 reclaimed water.

Regulatory requirements have been proposed relative to design, operation, and maintenance of facilities for reclaimed water. Water used to irrigate golf courses and landscaped areas may be Class R-1, R-2, or R-3. The following restrictions apply, however:

Golf courses associated with residences:

- R-1: Any type of irrigation system
- R-2: Subsurface irrigation only

Restricted access golf courses:

- R-1: Any type of irrigation system
- R-2: Subsurface irrigation only

Non-edible vegetation and freeway landscaping with limited public access:

- R-1 and R-2: Any type of irrigation system
- R-3: Subsurface irrigation only
4.3 Evaluation of Nonpotable Water Supply Alternatives

Various water sources were considered for irrigation of the Ewa Marina Golf Course. Use of potable water was ruled out. Brackish water from the caprock aquifer is the preferred source, because it is a proven resource for golf course irrigation. Turf species will be selected for tolerance of existing salinity of the caprock water (see Section 5.1).

However, there is a possibility of increased salinity in the aquifer over time, due to the loss of freshwater recharge from sugarcane irrigation. If salinity were to rise above acceptable levels, reclaimed wastewater would be a preferred source of irrigation water.

Therefore, it is important to minimize water use through conservation measures. Such measures are discussed in Section 5.

5.0 WATER CONSERVATION MEASURES

Population growth and resultant development, especially in the relatively dry Ewa plain, have acutely increased awareness of the high value of water and the need to conserve it. Although potable water use at the golf course represents only a tiny fraction of total water use, low-flow plumbing fixtures will be installed and guests will be invited to cooperate in conserving potable water.

Golf course irrigation water use can be minimized by three primary practices. The first is selection and maintenance of plant materials and plumbing fixtures with the lowest water requirements. The second is providing necessary water using the most efficient possible irrigation system and practices. The third is maximum possible use of nonpotable and reclaimed water. As discussed below, selection of turfgrass and other plant materials, golf course design, and operation and maintenance will be undertaken with all of these factors in mind.

5.1 Selection and Maintenance of Plant Materials

The amount of water needed to maintain plant health varies widely among different species of turfgrass and other plants typically used on golf courses. In order to minimize water use at the proposed Ewa Marina Golf Course, plants with relatively low water use will be selected. Salt-tolerant species will be preferred, to maximize use of the brackish caprock water and to minimize the need for fertilizers and biocides. The final choice of turfgrass species will not be made until construction plans are being prepared for the golf course. However, the following species with proven ability to grow well under the anticipated conditions are being considered:
Water use can also be reduced through a variety of horticultural practices. For example, many plants require more water during their early growth stages and less water once they are well established. This is due to a number of factors, including the additional ground shading provided by mature foliage, the effect fully grown plants have on near-ground wind speeds (and, therefore, on evaporation rates), and the lower photosynthetic rate that occurs once plantings have matured. The operators of the Ewa Marina Golf Course will carefully maintain plant materials at the golf course to ensure the longest feasible life, thereby minimizing the maturation period during which higher-than-average watering rates are needed.

Trees and other landscaping plantings that will be used on the Ewa Marina Golf Course and in the landscaping surrounding the entrance driveway, the clubhouse, and other golf course facilities, will be mulched with organic material to minimize water loss from the area immediately surrounding them.

5.2 Irrigation System Design and Operation

The Ewa Marina Golf Course irrigation system will be designed and operated to eliminate unnecessary water use, in accordance with Condition 2(b) of the Conservation Conditions, Ewa Caprock Water Use Permits (Appendix A). The overall approach, including physical design features and irrigation management policies and practices, is discussed below.

5.2.1 Irrigation System Design

The irrigation system will include many features that help avoid unnecessary water use. The most important of these are listed below:

- Sprinkler heads will be carefully spaced to ensure even application of irrigation water, thereby avoiding wasteful double-coverage of any areas.
- Sprinkler heads will be selected which perform well under the sometimes windy conditions that prevail at the site; this will maximize the volume of irrigation water which actually reaches the turf.

- Sprinkler heads which minimize clogging will be selected to ensure that the water needs of plants can be met without over-watering some areas.

- The irrigation control system will provide information on temperature, relative humidity, wind speed and, most importantly, soil moisture, to the irrigation manager. Tensiometers and/or other devices for measuring soil moisture will be located at numerous locations. This will provide the golf course manager with information needed to adjust irrigation water application rates so that they are closely aligned with each area's needs.

- Meters will be located strategically throughout the system to assist in the identification of unusual water use patterns and leaks.

- Irrigation water storage ponds will be designed to limit evaporative losses. To the extent practicable, this will be accomplished by maintaining adequate water depth and minimizing the water surface area. Where appropriate, storage ponds will be sited in conjunction with vegetative screens to reduce the wind speed across the pond surfaces and to provide shade (further minimizing evaporation).

- The irrigation system will be designed to facilitate the use of reclaimed water if that should become necessary.

5.2.2 Irrigation Practices and Maintenance

Irrigation water will be applied to the golf course in a fashion which avoids waste. Factors such as temperature, wind, insolation, forecast precipitation, and the water-holding capacity of the soil will be considered in making the decision. Specific guidelines include the following:

- Irrigation water will be applied only to the extent necessary to maintain adequate soil moisture for healthy plant growth. Weather and soil moisture monitoring devices described above will provide the information needed to accomplish this objective.

- Except as needed to prevent plant damage, the course will be irrigated only during the late evening and early morning hours. This is the period when irrigation is most effective from an agronomic standpoint and when potential losses to the atmosphere are lowest.

- To the extent practicable, the turf will be irrigated only when wind speed is in the design range of the sprinkler system. This will prevent unnecessary drift losses.
Increased irrigation water usage can result from a number of factors, including normal wear, debris clogging sprinkler nozzles, accidental damage to sprinkler heads or piping that result in leaks, leaking storage ponds, and other factors. Unnecessary water use from these will be controlled by the following measures:

- The system will be inspected regularly while in operation to detect broken or malfunctioning sprinkler heads, reduced coverage resulting from vegetation growth, poorly programmed control systems, and other deficiencies. Correction of these deficiencies will be made a maintenance priority.

- Water meters located throughout the irrigation system will be read regularly to track water use rates over time; unusual patterns indicative of leaks or other problems will be investigated, and corrective action will be taken as necessary.

- The irrigation system will be checked regularly to ensure that it has not been tampered with and that settings designed to conserve water have not been altered by the staff or others.

The operators of the Ewa Marina Golf Course will emphasize the need for careful and wise water use practices through a systematic program of staff education and training. Staff will be made aware of Ewa Marina's conservation goals and the measures taken to achieve them. Staff will be encouraged to identify improvements in irrigation facilities and/or practices that could further reduce water use. Examples of water conservation techniques that will be covered by the training include:

- The use of sweeping in lieu of hosing for cleaning;

- The use of controllable nozzles on all hoses to ensure that they are shut off when not being used for the intended purpose; and

- The use of high-pressure/low volume systems for cleaning and other uses, where this is appropriate.

The staff will be thoroughly trained in water conservation techniques. Their full participation and support in implementing water conservation measures will be encouraged through incentives that reward wise water use practices. Supervisors and management will be instructed to solicit and act upon water-saving recommendations made by the field staff.
6.0 REFERENCES


FIGURE 1
Site Location
Figure 1
SITE LOCATION

Ewa Marina Golf Course Water Conservation Plan
Prepared By: Belt Collins Hawaii
May 1995
APPENDIX A
Conservation Conditions, Ewa Caprock Water Use Permits
CONSERVATION CONDITIONS
EWA CAPROCK WATER USE PERMITS

1. The permittee shall adopt self-administered water conservation programs and plans with collective monitoring to protect and maintain the caprock resource. Water conservation programs and plans shall be submitted to the Commission within 60 days from the date of Commission approval.

2. Water conservation programs and plans shall address (as applicable) but not be limited to the following:

   a. Reduce the demand for non-potable water by:
      - Identifying and utilizing water efficient plants and drought tolerant plants for landscaping and quantifying their demands (Xeriscape);
      - Mulching planting areas with organic materials, etc; to minimize evaporation;
      - Efficiently maintaining the plants;
      - Improving land management practices to conserve water.

   b. Improve efficiency in use and reduce losses and waste of non-potable water by:
      - Using efficiently designed landscaping and irrigation systems;
      - Monitoring irrigation requirements and controlling usage accordingly;
      - Managing irrigation scheduling to minimize water demand;
      - Eliminating opportunities for water wastage;
      - Maintaining and improving irrigation systems as necessary.

   c. Industrial users should employ the recirculation of cooling water and the reuse of cooling and process water.

3. The permittee shall pursue and participate in alternative non-potable water source development and use such as wastewater reuse (direct reuse and/or recharge injection).

4. In the event that water conservation programs and plans are not complied with or that a waste of water is occurring, the Commission shall proceed with the necessary actions to revoke this permit.

ATTACHMENT C
APPENDIX B

Summary of State Department of Health's Guidelines for Use of Reclaimed Water
GUIDELINES FOR THE USE OF RECLAIMED WATER

The information summarized in this Appendix is based on the Hawaii Department of Health (DOH) Guidelines For the Treatment and Use of Reclaimed Water dated November 22, 1993. The intent of the regulations is to protect public health, prevent degradation of aquifers and surface waters, and to facilitate and delineate use of reclaimed water. DOH allowable uses for reclaimed water are summarized in Table C-1. The items summarized herein are those required for submittal to DOH for approval of effluent reuse. The primary items are listed below and further detailed in the remainder of this Appendix.

A. Basis of Design Report for Reclamation Treatment Facility
B. Engineering Design Report for Reclamation Treatment Facility
C. Construction Plans for Reclamation Treatment Facility
D. Basis of Design Report for Water Reclamation Reuse
E. Engineering Design Report for Water Reclamation Reuse
F. Construction Plans for Water Reclamation Reuse

A. BASIS OF DESIGN REPORT FOR RECLAMATION TREATMENT FACILITY

This report requires:

1. Population and flow projections;

2. Wastewater characterization, including wastewater, effluent, and non-domestic waste;

3. Optimization for coagulants and polymers;

4. Water reclamation site selection, including existing and proposed collection systems, existing and proposed zoning and land use, wind rose, land availability, location with respect to floor plan, soil characteristics, geology, and topography;

5. Development and evaluation of treatment alternatives, which address treatment levels compatible with reuse proposals and unit processes with respect to hydraulic and wastewater loadings;

6. An institution plan, including development of reclamation standards, metering program, rates and charges, inspection program to assure
conformance to plans, inspection protocol and standards, regulations and policies regarding cross connections, sewers, and industrial pretreatment, and identifying the owner and entity with authority over work.

B. ENGINEERING DESIGN REPORT FOR RECLAMATION TREATMENT FACILITY

This report is to include:

1. Summary of "Basis of Design Report";

2. Selection of treatment processes, including schematics of the treatment train, descriptions and calculations for significant treatment processes, mass balances, and staging schedules of future changes;

3. Descriptions of how each of the "Treatment Design Parameters" contained in Chapter IV of the Guidelines are incorporated into the facility design, including secondary treatment, coagulation, filtration, disinfection, alarms, power supply, flexibility, reliability, storage impoundments, and emergency backup systems.

4. Development of an operations plan which incorporates intended design parameters, operation parameters, and the training of personnel to reliably produce the optimal water quality for the designated product level;

5. A treatment monitoring program which includes frequency and location of sampling.

C. CONSTRUCTION PLANS FOR RECLAMATION TREATMENT FACILITY

Required submittals include:

1. General layout plan: location and size of facility, site improvements, schematic flow diagrams, piping, hydraulic profiles, elevations of high and low water levels, requirements of Section 12.3.1 (Chapter 10 - "Plans of Wastewater Pump Station-General Layout"), bench mark elevation, and basis of bearings with description;

2. Detailed construction drawings: requirements of Section 12.3.2 (Chapter 10 - "Plans of Wastewater Pump Station-Details Plan"), location, dimensions, and elevations of facility units, and type, size, pertinent features, and rated capacity of all pumps, blowers, motors, and other mechanical devices.
D. BASIS OF DESIGN REPORT FOR WATER RECLAMATION REUSE

This report is to include:

1. Descriptions of the project area, properties of the raw and reclaimed wastewater, supplemental water supply, and transmission and distribution systems. Project area boundaries, present and anticipated land use within one mile of site boundaries, and project area drainage and soil survey are required. Data must be collected on the maximum daily permeability rate, design application rate, water balance, macro nutrient balance, total dissolved solids balance, and other constituents like heavy metals. Further, a vegetation cover monitoring and maintenance plan, and consumptive rates of water, nitrogen, phosphorus, and potassium are needed.

2. A Monitoring Plan which includes establishment of a baseline groundwater and coastal water quality, and a monitoring schedule (the frequency and type of monitoring depend on project location, depth to groundwater, etc.);

3. A Project Evaluation Plan which assesses the overall long-term effects of the proposed project on environmental resources in the area. The evaluation is to include changes in water table elevations due to natural fluctuations and application of reclaimed water, prediction of the rate and direction of movement of the applied water, and changes in the area associated with the project.

E. ENGINEERING DESIGN REPORT FOR WATER RECLAMATION REUSE

This report requires:

1. Irrigation Plan, which delineates the methods and controls to be used in the irrigation system such that no runoff or ponding will occur. The irrigation plan shall minimally describe the following components:

   a. The exact boundaries of the proposed use area, and delineated irrigation areas within these boundaries;

   b. Amount and type of reclaimed water available for irrigation and the associated maximum and minimum average gallons per day;

   c. Location and characteristics of the transmission line from the reclamation treatment facility to the proposed use area or storage reservoir;
d. Design data for storage reservoirs or impoundments (if needed);

e. All pertinent data for materials use in the system including types and size of pipes, meters, pumps, valves, and sprinklers; sprinkler pattern, height, and radius; flow, application rates, and periods; operating pressure, uniformity coefficient of irrigation distribution, and data on surface irrigation systems where used;

f. Identification of measures to prevent runoff to areas not under owner's control;

g. Location plan for area drinking water fountains.

2. Management Reuse Plan, which establishes and delineates responsibilities of operation and maintenance. This includes procedures and restrictions for distributors and users, operation criteria for irrigation, quality control, and provisions for a contingency plan that shall identify actions and precautions to be taken to protect public health in the event of a non-approved use;

3. Public Education Plan, to inform persons likely to come in contact with reclamation water, including signage, fencing, advisories, etc;

4. Employee Training Plan;

5. Vector Control Plan, which establishes conditions necessary to limit mosquito production in impoundments, conveyance facilities, and wetlands;


F. CONSTRUCTION PLANS FOR WATER RECLAMATION REUSE

The plans are to detail the piping system, including irrigation components. They are generally to conform to the requirements of Section 12 "Construction Plans" of Chapter 10, Design Standards of the Division of Wastewater Management, Vol. 1, except for section 12.2 which will be substituted by Section 9 - Construction Plans, Water System Standards. Additional details include a bench mark, bearings, and color coding of pipes.

G. OTHER SUBMITTALS

1. An Operations and Maintenance Manual is required to ensure that all equipment is kept in a reliable operating condition. A written statement is needed from the engineer responsible for the Operation and Maintenance
Manual that all applicable effluent requirements are met by operating under manual guidelines.

2. Contingency Plan, to be designed to assure that inadequately treated reclaimed water is not delivered to the user. The Contingency Plan shall include:

   a. A list of conditions which would require an immediate diversion to take place;

   b. A description of the diversion procedures;

   c. Designation of the diversion system components. If storage basins are used, they must be sized to prevent any overflows or discharges of effluent when the irrigation system is not in operation or when effluent quantities exceed the irrigation requirements, only basins with impervious impoundments are allowed. A minimum emergency storage of 20 days should be provided unless demonstrated otherwise. The system storage capacity should proved adequate retention under adverse weather conditions, based on a 50-year storm recurrence interval.

   d. A plan for the disposal of any inadequately treated effluent. Reclaimed water produced at the treatment facility that fails to meet the criteria established in the guidelines is not to be discharged into the system storage or to the distribution system. Substandard reclaimed water shall be either stored for subsequent-additional treatment or shall be discharged to another reuse system requiring lower levels of treatment or a DOH approved effluent disposal facility.

   e. A plan for notifying the reclaimed water user, DOH Wastewater Branch, and other appropriate agencies.

3. Compliance Report and Submittals:

   The items include:

   a. Conforming to the Sampling and Analysis Plan with submittal to DOH on a regular basis.
b. An annual report to DOH describing the quality and quantity of water reclaimed, method of irrigation and areas irrigated, rates of application, total application and climatic conditions, corrective actions taken, and monitoring reports.

c. Monthly operating records to be filed with DOH.

d. Inspection, supervision, employee training and record keeping requirements for operation of the system.

There are also infrastructure requirements for irrigation systems. Cross connection control must be provided for the reclaimed water system where the supply is supplemented with potable water supply or from irrigation wells. Below grade piping separations and concrete jacketing requirements apply to reclaimed water and potable water lines. All reclaimed water piping, valves, and outlets are to be permanently labeled to differentiate them from potable or other water.
Table C-1: Summary of Suitable Uses for Reclaimed Water

<table>
<thead>
<tr>
<th>SUITABLE USES OF RECLAIMED WATER¹</th>
<th>R1</th>
<th>R2</th>
<th>R3</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRRIGATION: (S)pray, (D)rip &amp; Surface, S(U)bsurface, (A)ll = S D &amp; U, Spray with (B)uffer, (N)ot allowed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Golf course landscapes</td>
<td>A</td>
<td>UB</td>
<td>N</td>
</tr>
<tr>
<td>Freeway and cemetery landscapes</td>
<td>A</td>
<td>A</td>
<td>N</td>
</tr>
<tr>
<td>Parks, elementary schoolyards, athletic fields and landscapes around some residential property</td>
<td>A</td>
<td>U</td>
<td>N</td>
</tr>
<tr>
<td>Roadside and median landscapes</td>
<td>A</td>
<td>UB</td>
<td>N</td>
</tr>
<tr>
<td>Non-edible vegetation in areas with limited public exposure</td>
<td>A</td>
<td>DUB</td>
<td>U</td>
</tr>
<tr>
<td>Sod farms</td>
<td>A</td>
<td>DUB</td>
<td>U</td>
</tr>
<tr>
<td>Ornamental plants for commercial use</td>
<td>A</td>
<td>DUB</td>
<td>U</td>
</tr>
<tr>
<td>Food crops above ground &amp; not contacted by irrigation</td>
<td>A</td>
<td>U</td>
<td>N</td>
</tr>
<tr>
<td>Pastures for milking and other animals</td>
<td>A</td>
<td>U</td>
<td>N</td>
</tr>
<tr>
<td>Fodder, fiber, and seed crops not eaten by humans</td>
<td>A</td>
<td>DUB</td>
<td>DU</td>
</tr>
<tr>
<td>Orchards and vineyards bearing food crops</td>
<td>A</td>
<td>DU</td>
<td>DU</td>
</tr>
<tr>
<td>Orchards and vineyards not bearing food crops during irrigation</td>
<td>A</td>
<td>DUB</td>
<td>DU</td>
</tr>
<tr>
<td>Timber and trees not bearing food crops</td>
<td>A</td>
<td>DUB</td>
<td>DU</td>
</tr>
<tr>
<td>Food crops undergoing commercial pathogen destroying process before consumption</td>
<td>A</td>
<td>DUB</td>
<td>DU</td>
</tr>
<tr>
<td>SUPPLY TO IMPOUNDMENTS: (A)llowed (N)ot allowed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restricted recreational impoundments</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Basins at fish hatcheries</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Landscape impoundments without decorative fountain</td>
<td>A</td>
<td>A</td>
<td>N</td>
</tr>
<tr>
<td>Landscape impoundments with decorative fountain</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUITABLE USES OF RECLAIMED WATER</th>
<th>R1</th>
<th>R2</th>
<th>R3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPLY TO OTHER USES: (A)llowed (N)ot allowed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flushing toilets and urnals</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Fire fighting</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Commercial and public laundries</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Cooling saws while cutting pavement</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Decorative fountains</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Washing yards, lots and sidewalks</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Flushing sanitary sewers</td>
<td>A</td>
<td>A</td>
<td>N</td>
</tr>
<tr>
<td>High pressure water blasting to clean surfaces</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Industrial process without exposure of workers</td>
<td>A</td>
<td>A</td>
<td>N</td>
</tr>
<tr>
<td>Industrial process with exposure of workers</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Cooling or air conditioning system without tower, evaporative</td>
<td>A</td>
<td>A</td>
<td>N</td>
</tr>
<tr>
<td>condenser, spraying or other features that emit vapor or droplets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial boiler feed</td>
<td>A</td>
<td>A</td>
<td>N</td>
</tr>
<tr>
<td>Water jetting for consolidation of backfill material around</td>
<td>A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>potable water piping during water shortages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water jetting for consolidation of backfill material around</td>
<td>A</td>
<td>A</td>
<td>N</td>
</tr>
<tr>
<td>piping for reclaimed water, sewage, storm drainage, and gas and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>electrical conduits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washing aggregate and making concrete</td>
<td>A</td>
<td>A</td>
<td>N</td>
</tr>
<tr>
<td>Dampening roads and other surfaces for dust control</td>
<td>A</td>
<td>A</td>
<td>N</td>
</tr>
<tr>
<td>Dampening brushes and street surfaces in street sweeping</td>
<td>A</td>
<td>A</td>
<td>N</td>
</tr>
</tbody>
</table>
Ms. Yvonne Y. Izu, Esq.
Morihara Lau & Fong LLP
400 Davies Pacific Center
841 Bishop Street
Honolulu, HI 96813

Dear Ms. Izu:

Request for Variance from Chloride Limit
HASEKO (Ewa), Inc., Water Use Permit No. 784
EP-27 Battery of Wells – Well Nos. 1901-06, 1902-01, and 1902-09 to -11

We received, on July 16, 2008, the letter you sent on behalf of Haseko (Ewa), Inc. (Haseko) requesting a variance from the 1,000 mg/l chloride limit for the EP-27 battery of wells, which draws brackish water from the Puuloa Aquifer System. The EP-27 battery is near the ocean, there are no wells downgradient or other water users downgradient of the EP-27 battery, and Haseko owns the land from the well site to the shoreline.

The Commission on Water Resource Management’s (Commission) July 18, 2001, action to extend interim caprock water use permits delegated the authority to the Chairperson to approve variances from the chloride limit, with consideration to a well’s proximity to the ocean and to other wells, it’s history of chloride concentrations and pumpage, the availability of alternative sources of water, and the possibility of conversion to another source. Under this authority, on March 12, 2003, the Commission granted a variance from the chloride limit for Well No. 1902-01. That variance was to expire six months after the first date of reclaimed water delivery to Haseko’s project area. Our approval of that variance was based on the observation that chloride levels in Well No. 1902-01 fluctuated around the 1,000 mg/l for two years of record, sometimes exceeding this limit, and because chloride levels above this limit are not likely to adversely impact other ground water users in the area.

The EP-27 battery was expanded in 2003 by the construction of Well Nos. 1902-09 to -11 and Well No. 1901-06. Data from the EP-27 battery show that chloride levels have fluctuated around 1,000 mg/l and have frequently risen above 1,000 mg/l. As you have noted, since the cessation of sugar cane agriculture on the Ewa plain, the chloride concentration of well water in the area has gradually increased, as was expected with the loss of imported basal irrigation water.
We understand that Haseko has entered into an agreement with the Honolulu Board of Water Supply (HBWS) to provide reclaimed water from the Honolulu Wastewater Reclamation Plant to supply nonpotable reclaimed water (R-1 water) for Haseko’s development around the Ewa Marina project. When we met with you on July 3, 2008 you stated that, in early 2008, Haseko started using up to 600,000 gallons per day of R-1 water for golf course irrigation. However, the amount of R-1 water available to Haseko is not sufficient to supply all of the project’s nonpotable water needs. Consequently, Haseko continues to rely on the EP-27 battery to meet its total irrigation and dust control water use needs. If Haseko is required to stop pumping when chloride levels exceed 1,000 mg/l, the only alternative would be to use potable water from the HBWS municipal system to supplement the available R-1 water supply and meet its water demands. This alternative would not result in the most efficient use of available water resources.

For the reasons stated above and in accordance with our delegated authority, Haseko’s request for a variance from the 1,000 mg/l chloride limit is approved. The variance will expire, unless otherwise extended by the Commission, on the date when the marina begins operation. In the event Haseko requires the term of this variance to be extended, a request shall be made in writing at least 180 days before the marina is scheduled to begin operating.

If you have questions or to discuss our comments and questions, please call Denise Mills of the Commission staff at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DM:ss

c: HASEKO (Ewa), Inc.
Ms. Laura Thielen, Chairperson
Mr. Ken Kawahara, Deputy Director
Commission on Water Resource Management
P. O. Box 621
Honolulu, Hawaii 96809

Dear Chairperson Thielen and Mr. Kawahara:

HASEKO (Ewa), Inc. (Haseko) is requesting a variance from the 1,000 mg/l chloride limit for the EP 27 Battery of wells (Well Nos. 1901-06, 1902-01, -09, -10, -11) in the Puuloa Aquifer System, Ewa Caprock, O’ahu.

The Commission on Water Resource Management, on July 18, 2001, delegated to Chairperson the authority to approve variances from the chloride limit with consideration of the well’s proximity to the ocean and to other wells, its history of chloride pumpage, the availability of alternative sources of water and possibility for conversion.

The EP 27 Battery is near the ocean; there are no other wells downgradient of these wells. Haseko owns the land from the well site to the ocean. Therefore, it is highly unlikely that anyone else will be adversely affected by the granting of this variance.

Since the cessation of sugarcane agriculture on the Ewa plain, the chloride concentration of caprock water at this well site has gradually increased, as was expected with the loss of imported basal irrigation water. Although the most recent data from the EP 27 Battery show chloride levels slightly below 1000 mg/l, the level has fluctuated and frequently risen above the 1000 mg/l chloride limit in the past.

Haseko began using R-1 water from the Honolulu Board of Water Supply to irrigate its golf course earlier this year. Pumping from the EP 27 Battery has decreased considerably with the availability of R-1 water. Nevertheless, because the amount of R-1 water available to Haseko is not sufficient to supply all of the project’s non-potable water needs, Haseko continues to rely on caprock water from the EP 27 Battery. Should Haseko be required to halt pumping when chloride levels exceed 1000 mg/l, the only alternative would be to use potable water to the extent that need exceeds R-1 availability.
Your favorable consideration of this request is greatly appreciated. Should you have any questions, please feel free to contact me.

Very truly yours,

Yvonne Y. Izu
Attorney for HASEKO (Ewa), Inc.

Cc: Haseko
See letter requesting to verify no "new" expanded TMK's added (otherwise modification is required).

More info & clarification/ corrections -

Table attached showing TMK info for MLS db & questions noted.

Plz update transfer request date in WVP database for 784 ("received" field).
September 26, 2008

Ms. Yvonne Y. Izu, Esq.
Morihara Lau & Fong LLP
400 Davies Pacific Center
841 Bishop Street
Honolulu, HI 96813

Dear Ms. Izu:

HASEKO (Ewa), Inc., Water Use Permit No. 784
Well Nos. 1901-06, 1902-01, 1902-09 to -11

We have reviewed the updated tax map key (TMK) information you provided in your letter, dated July 7, 2008, for HASEKO (Ewa), Inc.’s urban and other nonagricultural water uses allowed under Water Use Permit No. 784. We are unable to verify some of the information you provided and require additional information to update our records. The following specific issues need to be resolved before we can update our records.

1. **TMK 9-1-134:012 and 013 (portions of each)** – What is the area (in acres or square feet) of the portions of these parcels where water is used for golf course irrigation?

2. **TMK 9-1-134:007, 012, and 013 (portions of each)** – What is the area (in acres or square feet) of the portions of these parcels where water is used for dust control?

3. **TMK 9-1-011:001 to 007** – These parcels are within plat 11, and were not included in the original water use permits issued to the Oahu Sugar Company or, subsequently, to HASEKO. A water use permit modification is required to include these parcels among the permitted use TMKs for the Ewa Marina project.

4. **TMK 9-1-123:116 to 104**
   a. Please verify the parcel number sequence provided in your letter. Tentatively, we have interpreted this sequence as parcels 9-1-123:104 to 116; however, our research suggests that the parcel numbering sequence could be 9-1-123:116 to 134, which are located within a cluster on Kaiko Street. Please verify the parcel information and provide the correct TMKs for the parcels within plat 123 where water is used for dust control.
Our research shows that the parcels within plat 123 are owned by Ke Noho Kai Development, LLC. Please confirm whether Ke Noho Kai is owned and/or managed by HASEKO.

5. **TMK 9-1-027:143 to 161** – Our research indicates that plat 27 within zone 9, sector 1 does not exist. However, we are able to verify that HASEKO (Ewa) does own the parcels designated by TMKs 9-1-127:143 to 161. Please confirm if the current use TMKs in this sequence are within plat 127.

6. **TMK 9-1-142:001 to 148** – Our research indicates that the sequence of TMKs within plat 142 and owned by HASEKO consists of only 35 parcels numbered 9-1-142:001 to 032, 141, 145, and 148. The combined area of these parcels is 9.51 acres. Please confirm whether our information is correct.

WUP No. 784 authorizes urban and other nonagricultural water uses (i.e., golf course irrigation, roadway landscape irrigation, and dust control) on a total of 620 acres within TMKs originally given (in 1993) as 9-1-012:005, 006, and 007. (The total quantity of permitted urban and other nonagricultural water use on these areas is 1.5 million gallons per day.) We need additional details to reconcile the total acreage for which water use is authorized with the updated use TMKs and use areas. A map showing how the original use TMKs covered by WUP No. 784 relate to the current TMK designations and boundaries would help with this reconciliation.

Unless we can verify that all of the new TMKs are located within the same footprint covered by WUP No. 784 and that the total area of the new TMKs is not greater than the permitted area, HASEKO will be required to apply for a water use permit modification.

If you have questions or to discuss our comments and questions, please call Denise Mills of the Commission staff at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DM:ss

c: HASEKO (Ewa), Inc.
RUSH (Immediately) - ASAP (in ½ hr) - ROUTINE - OTHER TIME: ________

Name/Address: CWRM

Case Name: HK Water Use Compliance

Number in Sequence: ________

Filing Fee Check ______ of Cash $ ______

Special Instructions: __________________________

________ X Return file-stamped copies

Please call if document is rejected  Yes____ No____

Document Receipt Acknowledgment:
Date: ________________ Signature: __________________

COMPLETED BY: __________________________
Date: ________________ Time: ________________

Comments: __________________________________

Secretary's Acknowledgment: ________________________
Mr. Ken C. Kawahara, P.E., Deputy Director  
Commission on Water Resource Management  
Kalanimoku Building, Room 227  
1151 Punchbowl Street  
Honolulu, Hawaii 96813  
Attention: Mr. Roy Hardy  
Ms. Denise Mills

Re: Water Use Permit No. 784, TMK 9-1-012-005  
Well Nos. 1901-06, 1902-01, 1902-09 to 11  
Permittee: HASEKO (Ewa), Inc.

Dear Mr. Kawahara:

We would like to thank Mr. Roy Hardy and Ms. Denise Mills for meeting with us on February 3, 2008.

As mentioned during that meeting, one of the conditions of Haseko’s permit is to notify the Commission when the tax map key number at the location of water use have changed. In accordance with such condition, we provide you with the following tax map key numbers:

1. Hoakalei Golf Course:  
   - 9-1-134-003, 009, por 012, and por 013; and  
   - 9-1-137-065

2. Dust Control:  
   - 9-1-011-001 to 007;  
   - 9-1-012-081 and 084;  
   - 9-1-123-116 to 104;  
   - 9-1-027-143 to 161;  
   - 9-1-128-143 to 146;  
   - 9-1-134-001, por 007, 008, 011, por 012, por 013;  
   - 9-1-142-001 to 148; and  
   - 9-1-143-001 to 063.

Please feel free to call should you have any questions.

Very truly yours,

【Signature】

Yvonne Y. Izu

cc: HASEKO (Ewa), Inc.
<table>
<thead>
<tr>
<th>Use Description</th>
<th>TMK</th>
<th>Area (acres) (MLS Research)</th>
<th>Total Area, TMK Plat (acres)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoakalei Golf Course</td>
<td>9-1-134:003</td>
<td>189.44</td>
<td>507.04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9-1-134:009</td>
<td>21.64</td>
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HASEKO (Ewa), Inc.
WUP No. 784 - Well Nos. 1901-06, 1902-01, 1902-09 to -11
Use TMK Update

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Assessed Values reflect tax year 2008.

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Search criteria: TMK Owner HASEKO (EWA) INC OR HASEKO (EWA) INC /ETAL OR HASEKO CENTER PROPERTY OWNER LLC OR HASEKO HOMES INC OR HASEKO HOMES INC /ETAL...

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Prior Page   Next Page

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Prior Page  Next Page
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Prior Page
August 3, 2006

Ref: ewa caprock wup conversion. act

Dear Water Use Permittee:

Hawaii Prince Golf Club/Hawaii Prince Hotel Waikiki Corp.,
Well Nos. 1900-02, 1900-17 to 20, 1901-03, WUP No. 469, 0.301 mgd, TMK 9-1-10:6
Haseko (Ewa), Inc., Well Nos. 1901-06, 1902-01, 1902-09 to 11, WUP No. 650, 3.300 mgd, TMK 9-1-12:5
Department of Parks and Recreation, Well No. 2001-03, WUP No. 167, 0.030 mgd, TMK 9-1-61:35
Palm Court Association, Well No. 2001-07, WUP No. 171, 0.063 mgd, TMK 9-1-61:22
Palm Villa II Association, Well No. 2001-08, WUP No. 168, 0.048 mgd, TMK 9-1-61:27
Arbors Association, Well No. 2001-02, WUP No. 169, 0.040 mgd, TMK 9-1-61:22
U.S. Fish & Wildlife, Well No. 2101-14, WUP No. 247, 0.216 mgd, TMK 9-1-17:12
Gentry Development Co., Well No. 2001-04, WUP No. 302, 0.040 mgd, TMK 9-1-61:7
Gentry Development Co., Well No. 2001-09, WUP No. 344, 0.023 mgd, TMK 9-1-61:2
Ewa by Gentry Community Association, Well No. 2001-05, WUP No. 450, 0.066 mgd, TMK 9-1-70:132
Gentry Homes, Ltd., Well No. 2001-12, WUP No. 504, 0.249 mgd, TMK 9-1-102:31
Gentry Homes, Ltd., Well No. 1901-05, WUP No. 505, 0.056 mgd, TMK 9-1-69:8
U.S. DOC/NOAA/NWS, Well No. 1900-23, WUP No. 501, 0.023 mgd, TMK 9-1-1:1
Coral Creek Golf, Inc., Well No. 2001-17, WUP No. 577, 0.498 mgd, TMK 9-1-69:10
Coral Creek Golf, Inc., Well No. 2001-13, WUP No. 578, 0.800 mgd, TMK 9-1-69:10
Coral Creek Golf, Inc., Well Nos. 2001-14, 2002-15,17,19,
WUP No. 579, 0.892 mgd, TMK 9-1-69:10&11, 9-1-61:54
AOAO Suncrest/The Shores/Lombard Way/Avalon, Well No. 2001-10,
WUP No. 629, 0.022 mgd, TMK 9-1-10:17
State Housing Community Development Corporation of Hawaii,
Well Nos. 2003-04,07, WUP No. 432, 0.494 mgd, TMK 9-1-16:25
State Housing Community Development Corporation of Hawaii,
Well Nos. 2003-08, WUP No. 520, 0.237 mgd, TMK 9-1-16:108
Kapolei People’s Inc., Well Nos. 2003-01,02,05, WUP No. 438, 1.000 mgd, TMK 9-1-16:25
Honolulu Board of Water Supply, Well Nos. 1905-08,10, WUP No. 740, 0.302 mgd, TMK 9-1-16:1

Conversion of Interim Water Use Permits for
New Irrigation Uses to Permanent Water Use Permits
Puuloa and Kapolei Ground Water Management Areas, Oahu

This letter serves as your official notice of action by the Commission on Water Resource Management (Commission) on the subject water use permits.
By a unanimous vote at their meeting on July 12, 2006, the Commission corrected the error of approving and issuing interim permits for new irrigation uses in the Puuloa and Kapolei Ground Water Management Areas of the Ewa Caprock Aquifer Sector Area by converting the subject interim water use permits to permanent water use permits. All terms and conditions of the permits shall remain unchanged, except for Special Condition d., which is deleted.

The Commission ruled that permittees shall be notified by letter of the Commission's action to convert these water use permits from interim to permanent and the deletion of Special Condition d. The Commission further ruled that re-issuance of these water use permits is not necessary.

Please be advised that a compliance review will be initiated shortly as required under §174C-56 Hawaii Revised Statutes. We recommend that you carefully review the conditions of your permit and ensure that you are in compliance with all Standard and Special Conditions.

If you have any questions, please contact Lenore Nakama at 587-0218.

Sincerely,

DEAN A. NAKANO
Acting Deputy Director

LYN:ss
4. The permittee shall submit a detailed agriculture plan to support any future water use permit application for increased agricultural use at this parcel.

MOTION: (Ching/Frazier)
To approve submittal as amended by staff
UNANIMOUSLY APPROVED

C. GROUND WATER REGULATION


CONVERSION OF INTERIM WATER USE PERMITS, FOR NEW IRRIGATION USES TO PERMANENT WATER USE PERMITS, Puualoa and Kapolei Ground Water Management Areas, Oahu

Presentation of submittal: Lenore Nakama
RECOMMENDATION:

Staff recommends that the Commission correct the error of approving and issuing interim permits for new irrigation uses in the Puuloa and Kapolei Ground Water Management Areas of the Ewa Caprock Aquifer Sector Area by converting the subject interim water use permits to permanent water use permits. All terms and conditions of the permits shall remain unchanged, except for Special Condition d., which is deleted. The permittees shall be notified by letter of the Commission's action to convert these water use permits from interim to permanent and the deletion of Special Condition d. Re-issuance of these water use permits is not necessary.

DISCUSSION:

Ms. Nakama stated that these interim permits expired on July 1, 2006 and staff is recommending that the Commission correct the error that was made in issuing the permits as interim, rather than permanent, water use permits. Action is also requested to inform these users that they may continue to pump their wells in accordance with their allocations and the chloride limit placed on irrigation wells in the Ewa Caprock Aquifer Sector Area.

Commissioner Ching inquired whether the subject permits covered all the users in the Ewa Caprock Aquifer Sector Area. She was concerned that giving certain permits a permanent status may give them a higher priority or status over other interim permits.

Ms. Nakama stated that the submittal covered all the new irrigation users which had a duration of July 1, 2006 attached to their interim permits. There are other interim permits that have been issued for industrial and other non-irrigation uses in the Ewa Caprock Aquifer Sector Area, there are also other interim permits that have been issued for other new and existing uses elsewhere in the State. Staff will address the rest of the interim permits as part of the 20-year compliance review that is mandated by the Water Code. Staff does not feel that the type of permit (i.e., interim or permanent) under which the water is being used will have a bearing on water use priorities should a future competition situation arise.

MOTION: (Ching/Frazier)

Approval of staff recommendation
UNANIMOUSLY APPROVED

G. NON-ACTION ITEMS

1. Rainfall Index Update Presentation by Dr. Pao Shin Chu, State Climatologist, University of Hawaii, Department of Meteorology

Presentor of non-action item: Neal Fujii
Minutes

July 12, 2006

Graduate student, Ms. Cindy Ditner presented an update of rainfall throughout the state through a PowerPoint presentation. She stated that it has been 33 years since the last update was done. In preparing this index they gathered rainfall data throughout the State through temperature, elevation and rain gages. If a station did not submit information for 4 months within a calendar year then it was deleted.

H. NEXT COMMISSION MEETING (TENTATIVE)

1. August 16, 2006
2. September 20, 2006

The meeting was adjourned at 12:00 p.m.

Respectfully submitted,

PAULYNE K. ANAKALEA
Secretary

Approved as submitted:

DEAN A. NAKANO
Acting Deputy Director
Ref: ewa caprock interim wup conversion.sub

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

July 12, 2006
Honolulu, Oahu

Hawaii Prince Golf Club/Hawaii Prince Hotel Waikiki Corp.,
Well Nos. 1900-02, 1900-17 to 20, 1901-03, WUP No. 469, 0.301 mgd, TMK 9-1-10:6
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Arbors Association, Well No. 2001-07, WUP No. 171, 0.063 mgd, TMK 9-1-61:32
U.S. Fish & Wildlife, Well No. 2101-14, WUP No. 247, 0.216 mgd, TMK 9-1-17:12
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Honolulu Board of Water Supply, Well Nos. 1905-08, 10, WUP No. 740, 0.302 mgd, TMK 9-1-16:1

CONVERSION OF INTERIM WATER USE PERMITS
FOR NEW IRRIGATION USES TO PERMANENT WATER USE PERMITS
Puuloa and Kapolei Ground Water Management Areas, Oahu

ITEM C-2
PERMITTEES: See Exhibit 1
LANDOWNERS: See Exhibit 1

SUMMARY OF REQUEST:

Staff recommends that the Commission correct past water use permit approval errors in the Puuloa and Kapolei Aquifer Systems Areas of the Ewa Caprock Ground Water Management Area and convert the interim water use permits for new irrigation uses to permanent water use permits.

LOCATION MAP: See Exhibit 2

BACKGROUND:

On March 3, 1993, the Commission officially adopted the boundary of the entire brackish Ewa Caprock Aquifer as a separate aquifer overlying the existing designated ground water management areas of the Waipahu-Waiawa, Ewa-Kunia, and Makaiwa Aquifer System Areas. Due to uncertainties regarding the caprock's sustainable yield and nonpotable utility, the Commission did not adopt a sustainable yield estimate for the caprock. All permitted Ewa Caprock irrigation uses prior to 1993 were operating under permanent water use permits.

Designation of the Ewa Caprock and its Aquifer System Areas as water management areas was precipitated by the City and County of Honolulu's (City) urbanization plans for the Ewa area and a City ordinance requiring dual water systems for all new developments. Potable water was to be provided through the municipal system. Possible sources of non-potable water were brackish ground water from the Ewa Caprock Aquifer Sector Area and reclaimed sewage effluent from the Honouliuli Wastewater Reclamation Facility. The estimated non-potable demand of 25 mgd after full buildout (Kumagai, 1996) far exceeded the estimated natural recharge to the caprock aquifer of less than 16 mgd (Bauer, 1996).

Because there were concerns regarding the future viability of the caprock as a dependable source of brackish water due to the significant loss of return irrigation recharge from sugarcane agriculture, in 1993, the Commission began awarding temporary one-year permits for new uses of caprock ground water. In analyzing water availability, the Commission used guidelines for estimating sustainable yields for the Puuloa, Kapolei, and Malakole Aquifer System Areas (Yuen & Associates, Inc., 1989; Exhibit 2).

On July 13, 1994, the Commission extended temporary one-year permits. The duration of the extended permits was to July 12, 1995.

On July 5, 1995, the Commission extended the permits, which were now called interim (instead of temporary) permits.

On March 13, 1996, the Commission deferred action on existing interim permits and new applications pending a decision on the establishment of a formal sustainable yield for the caprock.

Also on March 13, 1996, the Commission adopted the following policy statement, clearing the way for application of reclaimed water on lands overlying the Ewa Caprock Aquifer Sector Area:
"It is the policy of the Commission on Water Resource Management (Commission) to promote the viable and appropriate reuse of reclaimed water in so far as it does not compromise beneficial uses of existing water resources.

I. Ewa Caprock

Recognizing that reclaimed water is a valuable resource in the Ewa Plain, direct or indirect reuse will be championed by the Commission. It is the policy of the Commission that the water resources of the Ewa Caprock Aquifer will be allocated only for nonpotable uses."

On May 14, 1997, the Commission adopted a sustainable yield based on a sustainable capacity for each individual irrigation well at 1,000 milligrams per liter (mg/l) of chloride as an interim management plan, subject to review within two (2) years. The rationale behind the chloride cap was to limit pumpage in those wells approaching the limit, to prevent a build-up of sodium in the clay soils, and to protect other users adjacent to those pumping higher chloride water. The Commission also adopted the Puuolua, Kapolei, and Malakole Aquifer System Areas in the Ewa Caprock Aquifer Sector Area and approved pending applications for new and continued irrigation uses. The interim water use permits were to expire on October, 1998 or until such time that a significant change in permitted, actual, or projected uses or water supply occurs. The October, 1998 date coincided with the possible revocation of unused (former Oahu Sugar Company) agricultural permits and also provided a milestone date to check on the progress of wastewater reuse for private caprock well owners, the availability of which was then scheduled for July, 1999. (Note: Wastewater reuse was anticipated due to the 309 Consent Decree settlement between the City and DOH/EP in 1994, which required the City to implement a reuse program with agreed-upon time schedule and associated volumes: 2.0 mgd by 7/1/98, 5 mgd by 6/30/99 and 10 mgd by 7/1/01. The City requested and received extensions to the implementation schedule.)

On October 22, 1998, the Commission extended the interim water use permits, subject to the Standard Conditions of a water use permit and new special conditions. The interim permits specified a duration to July, 2001, or 1) until treated wastewater is available and acceptable for use, or 2) until such time that a significant change in permitted, actual, or projected uses or water supply occurs.

On July 20, 2000, an agreement was reached between the Honolulu Board of Water Supply (BWS), the City, and U.S. Filter for BWS' purchase of the Honolulu Wastewater Reclamation Facility. The agreement includes BWS becoming the purveyor of reuse water, with the task of securing customers for 10 mgd by July 1, 2001. U.S. Filter will operate the facility for BWS under a 20-year service agreement. The City will provide secondary effluent to the facility and will take back 4 mgd of the R-1 water for City reuse applications. Some of the reclaimed water will supply industrial uses at Campbell Industrial Park.

On July 18, 2001, the Commission extended the interim water use permits, subject to the Standard Conditions of a water use permit and new special conditions (Exhibits 3 and 4). Special Condition 3 specifies that the duration of the interim permits is to July 1, 2006, or 1) until treated wastewater is available and acceptable for use, or 2) until such time that a significant change in permitted, actual, or projected uses of water supply occurs.
ANALYSIS/ISSUES:

All of the subject permits are for new irrigation uses that have a July 1, 2006 expiration date. Under the Water Code and Administrative Rules, interim permits are only mentioned in the sections dealing with existing uses. Section §174C-50 HRS contains the provisions for existing uses. Subsection (e) provides for the issuance of interim permits for existing uses:

"§174C-50 Existing uses. ...(e) The commission shall issue an interim permit; provided that the existing use meets the conditions of subsection (b). The commission shall also issue an interim permit for an estimated, initial allocation of water if the quantity of water consumed under the existing use is not immediately verifiable, but the existing use otherwise meets the conditions of subsection (b) for a permit of an interim permit. An interim permit is valid for such time period specified therein. The commission may issue successive interim permits of limited duration. Interim permits are subject to revocation under section 174C-58. Whenever interim permits are to be issued, the time periods specified in subsection (d) apply to the issuance or nonissuance of interim permits." §174C-50(e) HRS

Staff believes the intent of the provision is to bring existing users in newly-designated areas under regulation in a timely manner by issuing interim permits pending verification of the quantity of the existing use. Subsection (f) provides for the installation of metering or gauging devices, and if so prescribed, "...such metering or gauging devices shall be in place and operational for at least one year before a determination is made as to the quantity of water being consumed in an existing use and a final permit is issued." §174C-50(f) HRS

Because the Water Code gives preference to existing uses over new uses and water reservations, it is important that permitted existing use quantities be verified. In the event of future competition, existing uses may have a higher priority than new uses.

In issuing permits for new uses, the applicable statute, §174C-53 HRS, does not mention interim permits.

The recommended action is to correct the error that was made in issuing interim permits for new uses and to let users know that they can continue their use beyond July 1, 2006, subject to the Standard and Special Conditions that have been attached to these permits (Exhibits 3 and 4), with the exception of Special Condition d., which limits the duration of these new use permits. Special Condition d. is not necessary because the Water Code provides for review of water use permits (§174C-56 HRS), modification of water use permits (§174C-57 HRS), and revocation of water use permits (§174C-58 HRS); therefore, permanent permits are still subject to review, modification, and revocation.

The Deputies Attorney General have concurred that the awarding of interim permit for new uses is an error. The erroneous practice of approving and issuing interim permits for new uses was corrected beginning in about 2003. The current practice of the Commission is to approve permanent permits for new uses, which are always subject to standard and special conditions that define limitations of these permits.

There are other instances in which the Commission has issued interim permits for new uses in the Ewa Caprock and other water management areas. However, the Commission did not attach specific expiration dates to other interim permits for new uses. Therefore, the staff is planning to address the status of other interim permits, as well as all permanent water use permits, including the subject permits, as part of the 20-year compliance review that is required under §174C-56 HRS. This compliance review will be initiated in 2007 and completed in 2008.
RECOMMENDATION:

Staff recommends that the Commission correct the error of approving and issuing interim permits for new irrigation uses in the Puuloa and Kapolei Ground Water Management Areas of the Ewa Caprock Aquifer Sector Area by converting the subject interim water use permits to permanent water use permits. All terms and conditions of the permits shall remain unchanged, except for Special Condition d., which is deleted. The permittees shall be notified by letter of the Commission’s action to convert these water use permits from interim to permanent and the deletion of Special Condition d. Re-issuance of these water use permits is not necessary.

Respectfully submitted,

DEAN A. NAKANO
Acting Deputy Director

Exhibit(s):
1 (Interim Water Use Permits)
2 (Location Map)
3 (Standard Water Use Permit Conditions)
4 (Special Water Use Permit Conditions)

APPROVED FOR SUBMITTAL:

PETER T. YOUNG
Chairperson
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**Exhibit 1**
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STANDARD WATER USE PERMIT CONDITIONS

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

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

3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
   a. Can be accommodated with the available water source;
   b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
   c. Will not interfere with any existing legal use of water;
   d. Is consistent with the public interest;
   e. Is consistent with State and County general plans and land use designations;
   f. Is consistent with County land use plans and policies; and
   g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).

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

5. The ground-water use here must not interfere with interim or permanent instream flow standards. If it does, then:
   a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
   b. The interim or permanent instream flow standard, as applicable, must be amended.

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

7. The water use permit application and submittal, as amended, approved by the Commission at its July 18, 2001 meeting are incorporated into this permit by reference.

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

9. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
   a. protect the water sources (quantity or quality);
   b. meet other legal obligations including other correlative rights;

EXHIBIT 3
c. insure adequate conservation measures;
d. require efficiency of water uses;
e. reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
f. meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
g. carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

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

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

11. This permit shall be subject to the Commission's periodic review of the [Puuloa or Kapolei] 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 [Puuloa or Kapolei] Aquifer System, or relevant modified aquifer(s), is reduced.

12. A permit may be transferred, in whole or in part, from the permittee to another, if:
   a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
   b. The Commission is informed of the transfer within ninety days.

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

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

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

15. The permittee understands that under HRS § 174C-58(4), that partial or total nonuse, for reasons other than conservation, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period of forfeiture.
16. The permittee shall prepare and submit a water shortage plan within 30 days of the issuance of this permit as required by HAR § 13-171-42(c). The permittee's water shortage plan shall identify what the permittee is willing to do should the Commission declare a water shortage in the [Puuloa or Kapolei] Ground-Water Management Area.

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

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

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

EXHIBIT 3
SPECIAL CONDITIONS

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

b. 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.

c. 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.

d. 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.

e. 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).

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

g. Require adherence to the chloride sampling protocol shown in Attachment B and the submittal of weekly chloride data. The authority to approve variances from the weekly reporting requirement is delegated to the Chairperson.

h. Require adherence to the Conservation Conditions shown in Attachment C.

i. In the event a water shortage is declared by the Commission, permittees in the Puuloa Aquifer System shall comply with the Puuloa Water Shortage Plan adopted by the Commission.
GUIDELINES FOR CHLORIDE CONCENTRATION SAMPLING FOR EWA CAPROCK

1. **Sample Collection**

   • Sampling Schedule

      The sampling schedule depends upon your pump capacity:

      | Pump Capacity (gpm) | Sampling Schedule |
      |--------------------|-------------------|
      | Less than or equal to 50 | Once a month |
      | Greater than 50      | Once a week      |

   • When to Sample

      Before taking a sample, allow a minimum length of time to elapse after turning on the pump. This minimum time can be read off the attached table for your well casing diameter and your pump capacity. If you sample 20 minutes after the minimum time, you should consistently sample 20 minutes after the minimum time each time you take samples.

   • Sample Bottle

      Use a plastic container and cap that holds a volume of about a pint. Rinse the container three times with the water to be sampled before taking the sample. Also rinse the cap with sample water.

   • Labeling

      On the sample bottle, affix a label that contains the following information:

      Well No.
      Date
      Time Sampled
      Elapsed Time after pump on
      Sampler's Name
      Water Temperature (if available)
      Pumping Rate (prior to sampling)

Attachment B
2. Determination of Chloride Concentration

- Private Laboratories

If the sample is sent to a private laboratory, then prepare the water sample and label the bottle in the manner described above.

Private laboratories will use methods that are more accurate than field methods described below.

- Hach Kit (Drop Count Titrator)

Be aware of the approximate chloride concentration range in your well. Use the appropriate sample bottle for titration. Be consistent with the end-point color change.

For low chloride concentrations (5-100 mg/l) each drop will equal 5 mg/l. For higher concentrations (20-400 mg/l) each drop equals 20 mg/l. Other kits for concentrations greater than 400 mg/l (500-10,000 mg/l) each drop is equal to 500 mg/l. Obviously, for water greater than 400 mg/l, a "drop-count" Hach Kit is not appropriate, and a digital titrator, described below, should be used.

- Hach Kit (Digital Titrator)

A digital titrator is the appropriate method for water with greater than 400 mg/l chloride. A digital titrator using silver nitrate is accurate to within 10 mg/l for a chloride range from 10-10,000 mg/l, and for a titrator using mercuric nitrate accuracy varies from 0.1-20 mg/l for a chloride range of 10-8,000 mg/l.

Note: Be consistent with the end-point color. Silver nitrate ages and needs to be replenished within the recommended guidelines of the Hach Company.

- Other Methods

An ion-selective probe for chloride is available, and can measure concentration from 1.8-35,500 mg/l.
3. **Reporting Results**

- **How to Report**

  The following information should be entered on the "Monthly Ground Water Use Report" form provided by the Commission on Water Resource Management:

  1. Chloride concentration (mg/l) and temperature (°F) in the columns provided.

  **Under "Notes" Section of the Monthly Water Use Report:**

  2. Method used for chloride analysis:_______________

  3. Total elapsed time before sampling:______________

If there are any questions, please call the Commission on Water Resource Management staff at 587-0265 on Oahu or toll free from the neighbor islands 1-800-468-4644 ext. 70265.
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1 Assumes saturated well depth of 100 feet.

2 Five well volumes is a standard guideline recommended by EPA.
CONSERVATION CONDITIONS
EWA CAPROCK WATER USE PERMITS

1. The permittee shall adopt self-administered water conservation programs and plans with collective monitoring to protect and maintain the caprock resource. Water conservation programs and plans shall be submitted to the Commission within 60 days from the date of Commission approval.

2. Water conservation programs and plans shall address (as applicable) but not be limited to the following:
   a. Reduce the demand for non-potable water by:
      - Identifying and utilizing water efficient plants and drought tolerant plants for landscaping and quantifying their demands (Xeriscape);
      - Mulching planting areas with organic materials, etc., to minimize evaporation;
      - Efficiently maintaining the plants;
      - Improving land management practices to conserve water.
   b. Improve efficiency in use and reduce losses and waste of non-potable water by:
      - Using efficiently designed landscaping and irrigation systems;
      - Monitoring irrigation requirements and controlling usage accordingly;
      - Managing irrigation scheduling to minimize water demand;
      - Eliminating opportunities for water wastage;
      - Maintaining and improving irrigation systems as necessary.
   c. Industrial users should employ the recirculation of cooling water and the reuse of cooling and process water.

3. The permittee shall pursue and participate in alternative non-potable water source development and use such as wastewater reuse (direct reuse and/or recharge injection).

4. In the event that water conservation programs and plans are not complied with or that a waste of water is occurring, the Commission shall proceed with the necessary actions to revoke this permit.

Attachment C
May 5, 2010

Mr. Ken Kawahara
Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Kawahara:

Addition of HASEKO's Excavated Marina to WUP 884 in the Puuola Ground Water Management Area, Oahu

HASEKO (Ewa), Inc. has recently received approval of WUP 884 for Wells 1901-06, 1902-01, and 1902-09 to -11 for 1.337 MGD from the Puuola Ground Water Management Area. Uses of the water are for golf course irrigation, other landscape irrigation, and dust control. By this letter, HASEKO (Ewa), Inc. requests that its excavated marina, currently not cut through to the shoreline, be added to the sites from which water would be extracted under WUP 884. The marina water is too saline for irrigation (chlorides in excess of 5,000 MG/L), so its use would be limited to dust control. The attached map shows the marina site in relation to the HASEKO property and its other extraction points included in WUP 884.

Based on a conversation with Roy Hardy of your staff, it is my understanding that this written request will suffice to add the marina to WUP 884. If you require anything else, please let me know.

Sincerely,

Tom Nance

cc: Ray Kanna [Email Only]  
    Yvonne Izu [Email Only]  
    Charles Morgan [Email Only]  

Attachment
Ryan, please get this finished today if possible. Tom called and said they're using potable water from a fire hydrant for dust control when they could use the marina water instead and I agreed it made sense to go ahead and do the conservative thing and use the marina water already. Thanks. (please file this email string in the well folder too).

----- Forwarded by Roy Hardy/DLNR/StateHiUS on 07/01/2010 08:03 AM -----

Roy Hardy/DLNR/StateHiUS
07/01/2010 07:58 AM
To: Tom Nance <tom@tnwre.com>
cc: Ryan R Imata/DLNRIStateHiUS@StateHiUS
Subject: Re: Fwd: Addition of HASEKO's Excavated Marina to WUP 884 ...

Thanks Tom. I remember discussing, but I don't believe it actually passed my desk as it wasn't logged in our system and assigned a new WUP #. Anyway, it will be merging WUPs 409 and 884 administratively into WUP 897 via declaratory ruling DEC-ADM97-A1.

Tom Nance <tom@tnwre.com>

Roy:
The letter we sent in is attached to the email to Ryan.

Tom

-------- Forwarded message --------
From: Tom Nance <tom@tnwre.com>
Date: Tue, Jun 29, 2010 at 8:57 AM
Subject: Addition of HASEKO's Excavated Marina to WUP 884 ...
To: "Imata, Ryan (5-09)" <Ryan.R.Imata@hawaii.gov>

Ryan:
Attached is a copy of the letter sent to allow pumping from the excavated marina for dust control.

Tom

--
Tom Nance Water Resource Engineering
680 Ala Moana Boulevard - Suite 406
Honolulu, Hawaii  96813

Tel: 808-537-1141 / Fax: 808-538-7757

--
Tom Nance Water Resource Engineering
680 Ala Moana Boulevard - Suite 406
Honolulu, Hawaii  96813

Tel: 808-537-1141 / Fax: 808-538-7757[attachment "cwrn.pdf" deleted by Roy Hardy/DLNR/StateHiUS]
WATER USE PERMIT NO. 784

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: Haseko (Ewa), Inc.
91-1001 Kaimaile St., Suite 205
Ewa Beach, HI 96706

Landowner of Source: Haseko (Ewa), Inc.
91-1001 Kaimaile St., Suite 205
Ewa Beach, HI 96706

Permitted Withdrawal Rate: 3.30 mgd (Based upon a 12-month moving average)

Water Management Area: Pu’uloa

Island: Oahu

Aquifer Sector/System: Ewa Caprock/Pu’uloa

System Sustainable Yield: 1000 mg/l

Water Type: Brackish

Original CWRM Date: July 12th, 2006

Standard Conditions: 1-19

Special Conditions: 1-2, 38, 40-44

Water Source

State Well Number(s): 1901-06, 1902-01, 1902-09, 1902-10, 1902-11

Well Name: EP 27 Battery

Water Source TMK Number(s): 1st Division, 9-1-012:039, 9-1-012:057

State Land Use Classification(s): Urban

County Zoning Classification(s): A-2, BMX-3, P-2, R-5

Geographical Coordinates:

Well No. 1901-06
Latitude 21° 19' 17.6" North
Longitude 158° 01' 39.6" West

Well No. 1902-01
Latitude 21° 18' 52.5" North
Longitude 158° 02' 22.9" West

Well No. 1902-09
Latitude 21° 19' 07.9" North
Longitude 158° 02' 01.2" West
Well No. 1902-10
Latitude 21° 19' 08.1" North
Longitude 158° 01' 57.9" West

Well No. 1902-11
Latitude 21° 19' 13.8" North
Longitude 158° 01' 49.6" West

End Use
End Use TMK Number(s): 1st Division, 9-1-012:039, 9-1-012:045, 9-1-012:046, 9-1-012:057
State Land Use Classification(s): Urban
County Zoning Classification(s): A-2, BMX-3, P-2, R-5
Beneficial Use Explanation: Use for golf course irrigation and water features

Background Information
State Well Nos. 1901-06, 1902-01, 1902-09, 1902-10, and 1902-11 were originally governed by Water Use Permit 650, which was approved during the July 18th, 2001 Commission on Water Resource Management meeting for use of 3.30 mgd. In August of 2006, Water Use Permit 650 was transferred from an interim to a permanent status and was superseded by Water Use Permit 784, which is the most current water use permit.

Consistent water use reporting records are available up until mid-2005 when water use reporting was halted. During the time period when water use was being reported, the permittee's 12-month moving average did not exceed the permitted allocation of 3.30 mgd. Reference the permit file for additional information on reporting history.

Water Use Permit 784 was approved during the July 12th, 2006 Commission on Water Resource Management meeting. Standard conditions 1-19 and special conditions 1-2, 38, & 40-44 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: Kalani Voeller
Site Address: Hoakalei Country Club
Ewa Beach, HI 96706

Brown and Caldwell conducted a field investigation on March 12th, 2008 from 2:30 p.m. until 3:30 p.m. with Mr. Kalani Voeller. 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 at the future location of the Hoakalei Country Club at the end of Keonihula Boulevard. 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. 784

State Well Nos. 1902-01, 1902-09, 1902-10, and 1902-11 are located on TMK parcel 9-1-012:039. State Well No. 1901-06 is located on TMK parcel 9-1-012:057. GPS coordinates of the wells are given in the ‘Water Source’ section of this report. TMK parcels 9-1-012:039, 9-1-012:045, 9-1-012:046, and 9-1-012:057 are the end use areas where water will be used for irrigation once the golf course construction is complete. Once development is further along, there is a chance that land may be re-parceled and re-zoned. As such, the water source TMK’s, end use TMK’s, State Land Use Classifications, and County Zoning Classifications should be verified upon completion of the Hoakalei Country Club.

Currently, only State Well No. 1902-01 is in use. It is an Artesian well that is being used for irrigation of the golf course. A pump draws water from a small pond that is fed by artesian overflow and directs water across the golf course for irrigation purposes. State Well Nos. 1901-06 and 1902-11 both are drilled, fitted with submersible well pumps and flowmeters, and are ready for immediate use. These two wells will empty into a water feature that will double as a storage reservoir. A pump house adjacent to this feature will draw water from the reservoir and feed the main irrigation system. Once the pump house is online, the entire system will be run on automatic controls. On the date of the field visit (March 12th, 2008), the permittee advised that within one week these two wells and the pump house would be fully operational.

State Well Nos. 1902-09 and 1902-10 are drilled, but do not have the necessary appurtenances to be put into operation. Once golf course development furthers, these two wells will be fitted with submersible pumps and flowmeters, and will be used to maintain water features on the grounds. Reference the Appendix for photographs of the previously described system components.

The following are a list of standard condition(s) that the permittee is found to be in non-compliance with:
(10) An approved flowmeter must be installed to measure monthly withdrawals and a month 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.

After inspection, it was found that the permittee has flowmeters installed on all wells being used. However, since no monthly water use reports have been made since 2005, the permittee is in violation of Standard Condition (10).

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. Visual inspection also confirmed that water use was within the permitted TMK boundaries. Water use and salinity, however, are not currently being reported.

Recommendations

- Address the following discrepancies between the Commission’s electronic database and actual field investigation findings:
  - Water source and end use TMK’s
  - State land use and county zoning classifications
- Address violation of Standard Condition (10) regarding non-reporting of water use and salinity.
- Follow up on WUP 784 once Hoakalei Country Club is completed to check on any potential TMK, land use, or zoning changes.
20-Year Water Use Permit Review
Water Use Permit No. 784

APPENDIX

Field Investigation Photographs
Figure 1 – State Well No. 1902-11 w/installed flowmeter

Figure 2 – State Well No. 1901-06 w/installed flowmeter
Figure 3 – State Well No. 1902-09

Figure 4 – State Well No. 1902-10
Figure 5 – State Well No. 1902-01

Figure 6 – Well pump and system flowmeter for State Well No. 1902-01
Figure 7 – Storage reservoir/water feature for future irrigation system

Figure 8 – Pump house (under construction) w/booster pumps, controls, & other appurtenances
Figure 9 - Typical end use area

Figure 10 - Typical end use area
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 Kakako 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.
Water Use Permit Survey
(Please complete one survey form for each WUP)

WUP Number: 784
Well Number(s): 1901-06, 1902-1.09, 10+11

Contact Information (of the person who will be present at site visit):
Name: Kalani Uoeller
Phone (for phone interview): 282-0181  Fax: 689-5757
Email: Higalfoconstruct@aoa.com
Best time to reach for phone interview: 1:00 pm

Property Information (of the water use/well location):
Address: Ho'okale Country Club (under construction)
City: Ewa Beach  Zip: 96706
Well Location TMK (list all if multiple wells present): 9-1-34:001,003,009
Water Use TMK (list all if used on multiple lots): 9-1-34:003

Water Use/Well Information:
Is the water source currently in use?    Yes [ ] No [ ]
If no, please explain: 90L-1 in use; others under construction

What are you currently using the water for? (example: "Use for 45 acres of diversified agriculture and 3 residences"):
golf course irrigation

Is a flow meter installed and working properly?    Yes [ ] No [ ]
If no, please explain:

Do you submit monthly water use reports to the State?    Yes [ ] No [ ]
If no, please explain:

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 reach them.

Option #1 Date (M-F): Mon.  Time: 9:00 am [ ] 12:00 pm [ ] 3:00 pm [ ]
Option #2 Date (M-F): Tue.  Time: 9:00 am [ ] 12:00 pm [ ] 3:00 pm [ ]
Option #3 Date (M-F): Wed.  Time: 9:00 am [ ] 12:00 pm [ ] 3:00 pm [ ]

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 12th, 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
mcsmith@brownandcaldw.com

For Official Use Only
Received: 2/4/2008  Information Updated: 2/7/2008  Phone Interview Complete: 3/6/08
Notes/Comments:
Phone Interview

WUP Number: 764
Well Number(s): 1901-06, 1902-01, 09-10-11

Contact Name: Kalei Voeller
Phone Number: 232-0181

Attempt #1: Date/Time: 3/6/08 (2:30) Result: Reached

Attempt #2: Date/Time: N/A Result: N/A

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

Water Source Address: Hookulei Country Club (Under Construction)
City: Ewa Beach
Zip Code: 96706

Currently using water source? Yes ☑ No ☐
Notes/Comments: Use for golf course irrigation

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: 3/12/08 @ 1:00 p.m
Notes (Special directions, site conditions, potential hazards, general notes, etc.):
Off Kealohalua Blvd. — Meet at the good shack

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: 3/6/08 Time: 2:30 p.m.
Field Investigation Checklist

**Water Source**

- **WUP Number:** __784__
- **Well Number(s):** 1901-06, 1902-01, 09, 10-11
- **Well Location TMK(s):** 9-1-012.039, 9-1-012.057, 9-1-012.039
- **Well Head GPS Coordinates:**
  - Latitude: Below
  - Longitude: Below
- **Well Type:** Well Pump
- **Currently using water source?** Yes [x] No
- **Notes/Comments:** Sources in use, not yet in use

**Water Use**

- **Water Use TMK(s):** 9-1-012.039, 9-1-012.045, 9-1-012.057
- **What is the water being used for?** Golf course irrigation & water features
- **Is the water being used within the permitted boundaries?** Yes [x] No
  - If no, explain: N/A - No water in use yet
- **Is there any observed wasting of water or water loss?** Yes [x] No
  - If no, explain:________________________
- **Are the permit conditions being complied with?** Yes [x] No
  - If no, explain:________________________

**Other**

- **Photographs of:** Water Source [✓] Water Meter [✓] Usage Area [✓] Pump/Motor [✓]
- **General Notes/Comments:**
  - Flowmeter installed, well assembled
  - Well assembled
  - Drilled, out of use
  - Drilled, out of use
  - Drilled, out of use
  - Drilled, out of use
  - Drilled, out of use
  - Flowmeter installed, well assembled

- **Investigated By:** __M S__
- **Date:** 3/12/08
- **Time:** 1:00 p.m.
<table>
<thead>
<tr>
<th>Well ID</th>
<th>Well Name</th>
<th>WUP MGD</th>
<th>Beginning</th>
<th>Ending</th>
</tr>
</thead>
</table>

**12 Month Moving Average**

![Graph showing 12 Month Moving Average](image)
Dear Water Use Permittee:

Hawaii Prince Golf Club/Hawaii Prince Hotel Waikiki Corp.,
Well Nos. 1900-02, 1900-17 to 20, 1901-03, WUP No. 469, 0.301 mgd, TMK 9-1-10:6
Haseko (Ewa), Inc., Well Nos. 1901-06, 1902-01, 1902-09 to 11, WUP No. 650, 3.300 mgd, TMK 9-1-12:5
Department of Parks and Recreation, Well No. 2001-03, WUP No. 167, 0.030 mgd, TMK 9-1-61:35
Palm Court Association, Well No. 2002-12, WUP No. 169, 0.040 mgd, TMK 9-1-61:22
Palm Villa II Association, Well No. 2001-08, WUP No. 168, 0.048 mgd, TMK 9-1-61:27
Arbors Association, Well No. 2001-07, WUP No. 171, 0.063 mgd, TMK 9-1-61:32
U.S. Fish & Wildlife, Well No. 2101-14, WUP No. 247, 0.216 mgd, TMK 9-1-17:12
Gentry Development Co., Well No. 2001-04, WUP No. 302, 0.040 mgd, TMK 9-1-61:7
Gentry Development Co., Well No. 2001-09, WUP NO. 344, 0.023 mgd, TMK 9-1-61:2
Ewa by Gentry Community Association, Well No. 2001-05, WUP No. 450, 0.066 mgd, TMK 9-1-70:132
Gentry Homes, Ltd., Well No. 2001-12, WUP No. 504, 0.249 mgd, TMK 9-1-102:31
Gentry Homes, Ltd., Well No. 1901-05, WUP No. 505, 0.056 mgd, TMK 9-1-69:8
U.S. DOC/NOAA/NWS, Well No. 1900-23, WUP No. 501, 0.023 mgd, TMK 9-1-1:1
Coral Creek Golf, Inc., Well No. 2002-17, WUP No. 577, 0.498 mgd, TMK 9-1-69:10
Coral Creek Golf, Inc., Well No. 2001-13, WUP No. 578, 0.800 mgd, TMK 9-1-69:10
Coral Creek Golf, Inc., Well Nos. 2001-14, 2002-15,17,19,
WUP No. 579, 0.892 mgd, TMK 9-1-69:10&11, 9-1-61:54
AOAO Suncrest/The Shores/Lombard Way/Avalon, Well No. 2001-10,
WUP No. 629, 0.022 mgd, TMK 9-1-10:17
State Housing Community Development Corporation of Hawaii,
Well Nos. 2003-04,07, WUP No. 432, 0.494 mgd, TMK 9-1-16:25
State Housing Community Development Corporation of Hawaii,
Well Nos. 2003-08, WUP No. 520, 0.237 mgd, TMK 9-1-16:108
Kapolei People’s Inc., Well Nos. 2003-01,02,05, WUP No. 438, 1.000 mgd, TMK 9-1-16:25
Honolulu Board of Water Supply, Well Nos. 1905-08,10, WUP No. 740, 0.302 mgd, TMK 9-1-16:1

Conversion of Interim Water Use Permits for
New Irrigation Uses to Permanent Water Use Permits
Puuloa and Kapolei Ground Water Management Areas, Oahu

This letter serves as your official notice of action by the Commission on Water Resource Management (Commission) on the subject water use permits.
By a unanimous vote at their meeting on July 12, 2006, the Commission corrected the error of approving and issuing interim permits for new irrigation uses in the Puuloa and Kapolei Ground Water Management Areas of the Ewa Caprock Aquifer Sector Area by converting the subject interim water use permits to permanent water use permits. All terms and conditions of the permits shall remain unchanged, except for Special Condition d., which is deleted.

The Commission ruled that permittees shall be notified by letter of the Commission's action to convert these water use permits from interim to permanent and the deletion of Special Condition d. The Commission further ruled that re-issuance of these water use permits is not necessary.

Please be advised that a compliance review will be initiated shortly as required under §174C-56 Hawaii Revised Statutes. We recommend that you carefully review the conditions of your permit and ensure that you are in compliance with all Standard and Special Conditions.

If you have any questions, please contact Lenore Nakama at 587-0218.

Sincerely,

DEAN A. NAKANO
Acting Deputy Director
STANDARD WATER USE PERMIT CONDITIONS

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

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

3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
   a. Can be accommodated with the available water source;
   b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
   c. Will not interfere with any existing legal use of water;
   d. Is consistent with the public interest;
   e. Is consistent with State and County general plans and land use designations;
   f. Is consistent with County land use plans and policies; and
   g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).

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

5. The ground-water use here must not interfere with interim or permanent instream flow standards. If it does, then:
   a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
   b. The interim or permanent instream flow standard, as applicable, must be amended.

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

7. The water use permit application and submittal, as amended, approved by the Commission at its July 18, 2001 meeting are incorporated into this permit by reference.

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

9. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
   a. protect the water sources (quantity or quality);
   b. meet other legal obligations including other correlative rights;

EXHIBIT 3
c. insure adequate conservation measures;
d. require efficiency of water uses;
e. reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
f. meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
g. carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

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

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

11. This permit shall be subject to the Commission's periodic review of the [Puuloa or Kapolei] 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 [Puuloa or Kapolei] Aquifer System, or relevant modified aquifer(s), is reduced.

12. A permit may be transferred, in whole or in part, from the permittee to another, if:
   a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
   b. The Commission is informed of the transfer within ninety days.

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

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

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

15. The permittee understands that under HRS § 174C-58(4), that partial or total nonuse, for reasons other than conservation, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period of forfeiture.
16. The permittee shall prepare and submit a water shortage plan within 30 days of the issuance of this permit as required by HAR § 13-171-42(c). The permittee's water shortage plan shall identify what the permittee is willing to do should the Commission declare a water shortage in the [Puuloa or Kapolei] Ground-Water Management Area.

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

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

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

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

b. 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.

c. 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.

d. 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.

e. 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).

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

g. Require adherence to the chloride sampling protocol shown in Attachment B and the submittal of weekly chloride data. The authority to approve variances from the weekly reporting requirement is delegated to the Chairperson.

h. Require adherence to the Conservation Conditions shown in Attachment C.

i. In the event a water shortage is declared by the Commission, permittees in the Pualoa Aquifer System shall comply with the Pualoa Water Shortage Plan adopted by the Commission.
Mr. Nelson W.G. Lee
Executive Vice President
Haseko (EWA), Inc.
820 Mililani St., Ste. 810
Honolulu, HI 96813

Dear Mr. Lee:

Modification of Water Use Permit for Well Nos. 1901-06, 1902-01, 09, 10, 11
Puuloa Ground-Water Management Area, Oahu

This letter transmits your water use permit for the EP 27 Battery (Well No. 1901-06, 1902-01, 09, 10, 11) for use of 3,300 million gallons per day (mgd) of water on a 12-month moving average basis that was administratively modified by the Commission on Water Resource Management (Commission) per Declaratory Ruling DEC-ADM97-A1 and Administrative Rule 13-171-23(b). This water use permit, WUP No. 650, supersedes WUP Nos. 192 and 347, which have been cancelled. As part of the Commission’s approval, the following special conditions were added and are part of your permit under Standard Permit Condition 19:

**Special Conditions**

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

b. 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.

c. 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.

d. 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.

e. 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).
Mr. Nelson W.G. Lee  
Page 2  
May 15, 2003  

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

g. Require adherence to the chloride sampling protocol shown in Attachment A and the submittal of weekly chloride data. The authority to approve variances from the weekly reporting requirement is delegated to the Chairperson.

h. Require adherence to the Conservation Conditions shown in Attachment B.

i. In the event a water shortage is declared by the Commission, permittees in the Puuloa Aquifer System shall comply with the Puuloa Water Shortage Plan adopted by the Commission.

Enclosed with this letter of approval are the following:

1. Your water use permit
2. Your official monthly water use report form

Please be sure to read the conditions of your approved permit.

We draw your attention to two key conditions of your permit that require your response. First, you are required 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. You should make copies of the enclosed report form as needed.

Second, you are required to submit a water shortage plan to the Commission within thirty (30) days of the issuance date of this permit. Your water shortage plan simply identifies what you are willing to do should the Commission declare a water shortage situation in the Puuloa Ground-Water Management Area and can be as short as a one page letter. In a water shortage situation, the Commission may require temporary reductions in pumpage from all sources. The Commission is required, by law, to formulate a plan to implement such area-wide reductions, which should accommodate, include, and be consistent with your plans. Therefore, your help, by submitting your water shortage plan, is greatly needed in formulating the Commission's overall Water Shortage Plan.

If you have any questions, please call Lenore Y. Nakama of the Commission staff at 587-0218.

Sincerely,

[Signature]

Peter T. Young
Chairperson

Attachments
GROUND-WATER USE PERMIT
WUP NO. 650

PERMITTEE

Permittee/Water User
Address Haseko (EWA), Inc.
820 Mililani St., Ste. 810
Honolulu, HI 96813

Landowner of Source
Address Same

PERMITTED SOURCE INFORMATION

Island Oahu
Water Management Area Ewa Caprock
Aquifer Sector Puuloa
Aquifer System EP 27 Battery
System Sustainable Yield 1000 mg/l of Chloride
Well Name 1901-06, 1902-01, 09, 10, 11
State Well No.

PERMITTED USE INFORMATION

Reasonable beneficial use Dust Control, Golf Course and Landscaping Irrigation
Withdrawal (12 month moving ave.) 3.300 mgd
Location of water use
TMK # 9-1-12:5
Address Ocean Pointe
State land use classification Urban
County zoning classification Various

Pursuant to Hawaii's State Constitution, Article XI, Section 7, Hawaii Revised Statutes, Chapter 174C; Hawaii Administrative Rules, Chapters 13-167 through 13-171; and Hawaii decisional law and custom, the permittee is hereby authorized to use ground water from the sources and in the amount and from and upon the locations described above; subject however, to the requirements of law including but not limited to the following conditions:
1. The water described in this water use permit may only be taken from the location described and used for the reasonable beneficial use as 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 May 14, 1997 and July 18, 2001 meeting are incorporated into this permit by reference.

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

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

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

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

11. This permit shall be subject to the Commission's periodic review of the Puuolo 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 Puuolo Aquifer System, or relevant modified aquifer(s), is reduced.

12. A permit may be transferred, in whole or in part, from the permittee to another, if:
   a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
   b. The Commission is informed of the transfer within ninety days.

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

13. The use(s) authorized by law and by this permit do not constitute ownership rights.
14. The permittee shall request modification of the permit as necessary to comply with all applicable laws, rules, and ordinances 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 conservation, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period of forfeiture.

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

PETER T. YOUNG, Chairperson
Commission on Water Resource Management
October 3, 2008

Mr. Raymond S. Kanna
HASEKO (Ewa), Inc.
91-1001 Kaimalie Street, Suite 205
Ewa Beach, HI 96706-5005

Dear Mr. Kanna:

Water Meter Requirement and Notice of No Pumping
Well Nos. 1902-09 to -11 and 1901-06

We received, on March 6, 2008, the Well Completion Reports Part II from your pump installation contractor for Ocean Pointe Well Nos. 1 to 4 (Well Nos. 1902-09 to 11 and 1901-06). We accepted these reports as complete on October 1, 2008, with the exception of the installation of a flowmeter on each well. Submittal of these well completion reports to the Commission completes your pump installation contractor’s obligations under the pump installation permit for these wells. We have sent a letter to Beylik Drilling & Pump Services to this effect and you will receive a copy for your record.

The pump installer has indicated that water meters have not yet been installed on any of the subject wells. By our acknowledgement that the contractor’s obligations under the permit are complete, the responsibility to install flowmeters on each of these wells is transferred to HASEKO (Ewa), Inc.

Please be aware that flowmeters must be installed and operational, and the attached Water Meter Installation Report form completed and submitted to our office prior to pumping these wells for purposes other than testing. (Please submit a separate Water Meter Installation Report for each well.) Upon our receipt of an acceptably complete water meter installation report for each well, we will issue a certificate of pump installation completion for each well to acknowledge that all permit obligations have been satisfied. This certificate will allow you to begin pumping and using water from these wells on a permanent basis. Use of water from this well (for any purpose other than well and aquifer 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 Denise Mills of the Commission staff at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DM:ss
Encl: Water Meter Installation Report

c: Beylik Drilling & Pump Services, Inc.
Ms. Toni Gonsalves
Beylik Drilling & Pump Services, Inc.
91-259A Olai Street
Kapolei, HI 96707

Dear Ms. Gonsalves:

Well Completion Reports Part II
Well Nos. 1902-09 to -11 and 1901-06

We received the Well Completion Reports Part II for the Ocean Pointe Well Nos. 1 to 4 (Well Nos. 1902-09 to -11 and 1901-06) on March 6, 2008, and acknowledge that these reports are complete with the exception of the flowmeter installation. We understand that the meter installation will be the responsibility of the landowner/well operator and will likely follow planned well testing.

These reports complete your obligations under your pump installation permit for the subject wells. The landowner and/or well operator will be responsible for seeing that a flowmeter is installed and for submitting a meter installation report to the Commission after that work has been completed. For your information, we will issue a certificate of pump installation completion to the landowner and/or well operator upon receiving documentation showing that the meter is installed and operational. No pumping is allowed for purposes other than well and aquifer testing until we have issued a certificates of pump installation completion for each well.

If you have any questions, please contact Denise Mills of the Commission staff at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DM:ss

c: Raymond S. Kanna, HASEKO (Ewa), LLC
WCR 2 Check for Well No. 1902-09-11 & 1901-06 (survey to regulation memo)

1. **Pump Tests Check** (special condition of PIP? Yes/No: D. England)
   - **Step-Drawdown Test:**
     - Followed WCPI Stds analysis attached
     - Proposed pump cap o.k.
   - **Aquifer Pump Test:**
     - Followed WCPI Stds T & S analysis attached
   - Potential Well Interference:
   - Potential Stream Impacts: stream names:
   - Additional Testing or Data Required:
   - Pump Test Comments Attached:

   - Saltwater wells - no test required

2. **Pump Installation Check** Mitch Ohye (initial)
   - Data complete followed Special Cond & Elev.
   - Well database updated

   - HASEKO plans to do more well testing before installing meters. Flow meters to be installed at later date. Not part of RPI contract.

3. Charley/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)

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

4. Roy (initial) check(Entered WCR 2/PICC accept date into database)

5. Susan Hoagbin (initial) finalize

6. Ken (initial) signature

7. Faith Ching (initial) enter into WUR database

8. Charley/Ryan File

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Saltwater wells - no test required

HASEKO plans to do more well testing before installing meters. Flow meters to be installed at later date. Not part of RPI contract.
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>State Well No.</strong></td>
<td><strong>1902-09</strong></td>
</tr>
<tr>
<td><strong>Well Name</strong></td>
<td><strong>Ocean Pointe #1 - Hoakalei</strong></td>
</tr>
<tr>
<td><strong>Island</strong></td>
<td><strong>Oahu</strong></td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td><strong>Ewa Beach, Oahu</strong></td>
</tr>
<tr>
<td><strong>Tax Map Key</strong></td>
<td><strong>9-1-012:039</strong></td>
</tr>
<tr>
<td><strong>Pump Installation Company</strong></td>
<td><strong>Beylik Drilling &amp; Pump Svc, Inc.</strong></td>
</tr>
<tr>
<td><strong>Date Pump Installed</strong></td>
<td><strong>12/26/2007</strong></td>
</tr>
<tr>
<td><strong>Pump Type, Make, Serial No.</strong></td>
<td><strong>Subm, Grundfos, P10736145</strong></td>
</tr>
<tr>
<td><strong>Rated Capacity</strong></td>
<td><strong>200 gpm</strong></td>
</tr>
<tr>
<td><strong>at head of</strong></td>
<td><strong>40 ft.</strong></td>
</tr>
<tr>
<td><strong>Motor Type, H.P., Voltage, rpm</strong></td>
<td><strong>Subm, 3 HP, 230V, 3600 RPM</strong></td>
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<td><strong>Pump type (check one):</strong></td>
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<td></td>
<td><strong>Submersible</strong></td>
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<tr>
<td><strong>Method of flow measurement:</strong></td>
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<td></td>
<td><strong>Flowmeter w/ totalizer</strong></td>
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<tr>
<td><strong>Fill in the as-built section on the other side of this sheet.</strong></td>
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<tr>
<td><strong>Attach the rating curve for the installed pump.</strong></td>
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<tr>
<td><strong>Attach photograph of well clearly showing the benchmark on the concrete pad, the well head, and the method of flow measurement.</strong></td>
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<tr>
<td><strong>Well Owner</strong></td>
<td><strong>Haseko Inc</strong></td>
</tr>
<tr>
<td><strong>Company</strong></td>
<td><strong>Ocean Pointe Office</strong></td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td><strong>91-1001 Kamalie Street, Ste 205</strong></td>
</tr>
<tr>
<td><strong>Phone</strong></td>
<td><strong>808-689-7772</strong></td>
</tr>
<tr>
<td><strong>Fax</strong></td>
<td><strong>808-689-5757</strong></td>
</tr>
<tr>
<td><strong>Land Owner</strong></td>
<td><strong>Same As Above</strong></td>
</tr>
<tr>
<td><strong>Pump Installation Contractor</strong></td>
<td><strong>Beylik Drilling &amp; Pump Svc, Inc</strong></td>
</tr>
<tr>
<td><strong>Signature</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Date</strong></td>
<td><strong>2/26/2007</strong></td>
</tr>
</tbody>
</table>
7. AS-BUILT PUMP SECTION (Please attach as-built if different from diagram provided below)

Bench mark elevation surveyed to nearest 0.01 ft. = 28.4 ft. mean sea level

Elevation of top of chase tube 29.4 ft. mean sea level

Pump intake depth = 32 ft. (referenced to bench mark)

Chase tube depth = 30 ft. (referenced to bench mark)

If airline installed, bottom of airline elevation = N/A ft. mean sea level
VERIFIED PERFORMANCE TEST  07-09-06C
GRUNDFOS PUMPS MODEL  230S30-1A

FLOW (U.S. GPM)

HEAD (FEET)

3 - 1902 - 09 OCEAN POINTE #1
**State of Hawaii**  
**COMMISSION ON WATER RESOURCE MANAGEMENT**  
**Department of Land and Natural Resources**  

**WELL COMPLETION REPORT - PART II**  
**Pump Installation**  

*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 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-6225. For updates to this form or additional information, please visit our website at [http://www.hawaii.gov/dlnr/cwrm/](http://www.hawaii.gov/dlnr/cwrm/).*

1. **State Well No.:**  **1902-10**  
   **Well Name:**  **Ocean Pointe #2 - Hoakalei**  
   **Island:**  **Oahu**

2. **Address:**  **Ewa Beach, Oahu**  
   **Tax Map Key:**  **9-1-012:039**

3. **Pump Installation Company:**  **Beylik Drilling & Pump Svcs, Inc.**

4. **Date Pump Installed:**  **12/26/2007**

5. **PERMANENT PUMP INFORMATION**
   
   **Pump Type, Make, Serial No.:**  **Subm, Grundfos, P10736146**
   
   **Rated Capacity:**  **200 gpm**  
   **at head of:**  **40 ft.**
   
   **Motor Type, H.P., Voltage, rpm:**  **Subm, 3 HP, 230V, 3600 RPM**

   **Pump type (check one):**
   
   ☐ Deep Well Turbine  
   ✅ Submersible  
   ☐ Rotary  
   ☐ Propeller  
   ☐ Rotary-Displacement  
   ☐ Reciprocating  
   ☐ Rotary-Gear  
   ☐ Impulse

6. **Method of flow measurement:**
   
   ☐ Flowmeter w/ totalizer  
   Manufacturer  
   Model no.  
   Size
   
   ☐ Other, explain and attach schematic

7. **Fill in the as-built section on the other side of this sheet.**

8. **Attach the rating curve for the installed pump.**

9. **Attach photograph of well clearly showing the benchmark on the concrete pad, the well head, and the method of flow measurement.**

10. **Well Owner**  
    **Company:**  **Haseko Inc**  
    **Contact:**  **Ocean Pointe Office**  
    **Address:**  **91-1001 Kamalie Street, Ste 205**  
    **Phone:**  **808-689-7772**  
    **Fax:**  **808-689-5757**

11. **Land Owner**  
    **Company:**  **Same As Above**  
    **Contact:**  
    **Address:**  
    **Phone:**  
    **Fax:**

12. **Remarks**

   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

**Pump Installation Contractor (print):**  **Beylik Drilling & Pump Svcs, Inc**  
**Lic. No.:**  **AC-21896**

**Signature:**  
**Date:**  **2/26/2007**
7. AS-BUILT PUMP SECTION  
(Please attach as-built if different from diagram provided below)

Bench mark elevation surveyed to nearest 0.01 ft. = 26.5 ft. mean sea level

Elevation of top of chase tube = 27.5 ft. mean sea level

Pump intake depth = 32 ft. (referenced to bench mark)

Chase tube depth = 30 ft. (referenced to bench mark)

If airline installed, bottom of airline elevation = N/A ft. mean sea level

25 ft
VERIFIED PERFORMANCE TEST  07-09-06A
GRUNDFOS PUMPS MODEL  230S20-1B

FLOW (U.S. GPM)

HEAD (FEET)

3-1902-10 OCEAN POINTE #2

TERRY KENNEDY
SEP. 6, 2007
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

WELL COMPLETION REPORT - PART II
Pump Installation

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 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 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/cwrm/

1. State Well No.: **1902-11**
   Well Name: **Ocean Pointe #3, Hoakalei**
   Island: **Oahu**

2. Address: **Ewa Beach, Oahu**
   Tax Map Key: **9-1-012-039**

3. Pump Installation Company: **Beylik Drilling & Pump Svc, Inc.**

4. Date Pump Installed: **12/26/2007**

5. PERMANENT PUMP INFORMATION
   Pump Type, Make, Serial No.: **Subm, Grundfos, P10736143**
   Rated Capacity: **200** gpm at head of: **30** ft.
   Motor Type, H.P., Voltage, rpm: **Subm, 2 HP, 230V, 3600 RPM**
   Pump type (check one):
   - Deep Well Turbine
   - Submersible
   - Centrifugal
   - Other, explain and attach schematic

6. Method of flow measurement:
   - Flowmeter w/ totalizer
   - Other, explain and attach schematic

7. Fill in the as-built section on the other side of this sheet.

8. Attach the rating curve for the installed pump.

9. Attach photograph of well clearly showing the benchmark on the concrete pad, the well head, and the method of flow measurement.

10. Well Owner
    Company: **Haseko Inc**
    Address: 91-1001 Kamalie Street, Ste 205
    Phone: **808-689-7772**
    Fax: **808-689-5757**

11. Land Owner
    Company: **Same As Above**
    Address: 
    Phone: 
    Fax: 

12. Remarks
    
    
    

Pump Installation Contractor (print): **Beylik Drilling & Pump Svc, Inc.**
License No.: **AC-21896**

Signature: 
Date: **2/26/2007**
7. AS-BUILT PUMP SECTION (Please attach as-built if different from diagram provided below)

Bench mark elevation surveyed to nearest 0.01 ft. = 24.75 ft. mean sea level

Elevation of top of chase tube 25.75 ft. mean sea level

Pump intake depth = 30 ft. (referenced to bench mark)

Chase tube depth = 28 ft. (referenced to bench mark)

If airline installed, bottom of airline elevation = N/A ft. mean sea level

23.22 ft
VERIFIED PERFORMANCE TEST 07-09-06C
GRUNDFOS PUMPS MODEL 230S30-1A

FLOW (U.S. GPM)

HEAD (FEET)

3-1902-11 OLEAN POINTE #3

TERRY KENNEDY
SEPT. 12, 2007
### State of Hawaii

**COMMISSION ON WATER RESOURCE MANAGEMENT**

**Department of Land and Natural Resources**

**WELL COMPLETION REPORT - PART II**

**Pump Installation**

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<td>Well Name: <strong>Ocean Pointe #4-Hoakalei</strong> Island: <strong>Oahu</strong></td>
</tr>
<tr>
<td>2. Address: <strong>Ewa Beach, Oahu</strong></td>
<td>Tax Map Key: <strong>9-1-012:040</strong></td>
</tr>
<tr>
<td>3. Pump Installation Company: <strong>Beylik Drilling &amp; Pump Sys, Inc.</strong></td>
<td></td>
</tr>
<tr>
<td>4. Date Pump Installed: <strong>12/26/2007</strong></td>
<td></td>
</tr>
<tr>
<td>5. PERMANENT PUMP INFORMATION</td>
<td></td>
</tr>
<tr>
<td>Pump Type, Make, Serial No.: <strong>Subm, Grundfos, P10736144</strong></td>
<td></td>
</tr>
<tr>
<td>Rated Capacity: <strong>200 gpm</strong> at head of: <strong>30 ft.</strong></td>
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<td>□ Rotary-Displacement</td>
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<td>□ Rotary</td>
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<td>□ Rotary-Gear</td>
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<td>10. Well Owner Company <strong>Haseko Inc</strong> Contact <strong>Ocean Pointe Office</strong></td>
<td></td>
</tr>
<tr>
<td>Address <strong>91-1001 Kamalie Street, Ste 205</strong></td>
<td></td>
</tr>
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<td>Phone <strong>808-689-7772</strong> Fax <strong>808-689-5757</strong></td>
<td></td>
</tr>
<tr>
<td>11. Land Owner Company <strong>Same As Above</strong> Contact</td>
<td></td>
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**Pump Installation Contractor (print)** **Beylik Drilling & Pump Sys, Inc C-57/C-57a/A** Lic. No. **AC-21896**

**Signature** | **Date 2/26/2007**
7. AS-BUILT PUMP SECTION (Please attach as-built if different from diagram provided below)

Bench mark elevation surveyed to nearest 0.01 ft. = 21.20 ft. mean sea level

Elevation of top of chase tube 22.20 ft. mean sea level

Pump intake depth = 27 ft. (referenced to bench mark)

Chase tube depth = 25 ft. (referenced to bench mark)

If airline installed, bottom of airline elevation = N/A ft. mean sea level
VERIFIED PERFORMANCE TEST 07-09-06A
GRUNDFOS PUMPS MODEL 230S20-1B

FLOW (U.S. GPM) vs. HEAD (FEET)

3 - 1901-06 OCEAN POINTE #4

TERRY KENNEDY
TO
COMMISSION ON WATER RESOURCE MGMT

PO 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  ☐ ________________

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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 LOAD TO US

REMARKS ____________________________________________________

OPY TO 1510T / C FILE

SIGNED: ____________________________ FOR: TONI GONSALVES

If enclosures are not as noted, kindly notify us at once.
October 1, 2008

Ms. Yvonne Y. Izu, Esq.
Morihara Lau & Fong LLP
400 Davies Pacific Center
841 Bishop Street
Honolulu, HI 96813

Dear Ms. Izu:

Request for Variance from Chloride Limit
HASEKO (Ewa), Inc., Water Use Permit No. 784
EP-27 Battery of Wells – Well Nos. 1901-06, 1902-01, and 1902-09 to -11

We received, on July 16, 2008, the letter you sent on behalf of Haseko (Ewa), Inc. (Haseko) requesting a variance from the 1,000 mg/l chloride limit for the EP-27 battery of wells, which draws brackish water from the Puuloa Aquifer System. The EP-27 battery is near the ocean, there are no wells downgradient or other water users downgradient of the EP-27 battery, and Haseko owns the land from the well site to the shoreline.

The Commission on Water Resource Management’s (Commission) July 18, 2001, action to extend interim caprock water use permits delegated the authority to the Chairperson to approve variances from the chloride limit, with consideration to a well’s proximity to the ocean and to other wells, it’s history of chloride concentrations and pumpage, the availability of alternative sources of water, and the possibility of conversion to another source. Under this authority, on March 12, 2003, the Commission granted a variance from the chloride limit for Well No. 1902-01. That variance was to expire six months after the first date of reclaimed water delivery to Haseko’s project area. Our approval of that variance was based on the observation that chloride levels in Well No. 1902-01 fluctuated around the 1,000 mg/l for two years of record, sometimes exceeding this limit, and because chloride levels above this limit are not likely to adversely impact other ground water users in the area.

The EP-27 battery was expanded in 2003 by the construction of Well Nos. 1902-09 to -11 and Well No. 1901-06. Data from the EP-27 battery show that chloride levels have fluctuated around 1,000 mg/l and have frequently risen above 1,000 mg/l. As you have noted, since the cessation of sugar cane agriculture on the Ewa plain, the chloride concentration of well water in the area has gradually increased, as was expected with the loss of imported basal irrigation water.
We understand that Haseko has entered into an agreement with the Honolulu Board of Water Supply (HBWS) to provide reclaimed water from the Honouliuli Wastewater Reclamation Plant to supply nonpotable reclaimed water (R-1 water) for Haseko's development around the Ewa Marina project. When we met with you on July 3, 2008 you stated that, in early 2008, Haseko started using up to 600,000 gallons per day of R-1 water for golf course irrigation. However, the amount of R-1 water available to Haseko is not sufficient to supply all of the project's nonpotable water needs. Consequently, Haseko continues to rely on the EP-27 battery to meet its total irrigation and dust control water use needs. If Haseko is required to stop pumping when chloride levels exceed 1,000 mg/l, the only alternative would be to use potable water from the HBWS municipal system to supplement the available R-1 water supply and meet its water demands. This alternative would not result in the most efficient use of available water resources.

For the reasons stated above and in accordance with our delegated authority, Haseko's request for a variance from the 1,000 mg/l chloride limit is approved. The variance will expire, unless otherwise extended by the Commission, on the date when the marina begins operation. In the event Haseko requires the term of this variance to be extended, a request shall be made in writing at least 180 days before the marina is scheduled to begin operating.

If you have questions or to discuss our comments and questions, please call Denise Mills of the Commission staff at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DM:ss

c: HASEKO (Ewa), Inc.
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- Last paragraph is most compelling argument.
- Seems counterproductive to allow variance though.
- Discuss thoughts?
7/15/02 Authorized monthly sampling for chlorides
(A for requirement for weekly)
Chloride conc. plot for HASERO Well 2
Water use

3/12/03 CWRM variance for 1,000 mg/L C1 limit for Well 1

WUP 784 7/18/01

Use TMK 9-1-012.005
July 16, 2008

Ms. Laura Thielen, Chairperson
Mr. Ken Kawahara, Deputy Director
Commission on Water Resource Management
P. O. Box 621
Honolulu, Hawaii 96809

Dear Chairperson Thielen and Mr. Kawahara:

HASEKO (Ewa), Inc. (Haseko) is requesting a variance from the 1,000 mg/l chloride limit for the EP 27 Battery of wells (Well Nos. 1901-06, 1902-01, -09, -10, -11) in the Puuloa Aquifer System, Ewa Caprock, O'ahu.

The Commission on Water Resource Management, on July 18, 2001, delegated to Chairperson the authority to approve variances from the chloride limit with consideration of the well’s proximity to the ocean and to other wells, its history of chloride pumpage, the availability of alternative sources of water and possibility for conversion.

The EP 27 Battery is near the ocean; there are no other wells downgradient of these wells. Haseko owns the land from the well site to the ocean. Therefore, it is highly unlikely that anyone else will be adversely affected by the granting of this variance.

Since the cessation of sugarcane agriculture on the Ewa plain, the chloride concentration of caprock water at this well site has gradually increased, as was expected with the loss of imported basal irrigation water. Although the most recent data from the EP 27 Battery show chloride levels slightly below 1000 mg/l, the level has fluctuated and frequently risen above the 1000 mg/l chloride limit in the past.

Haseko began using R-1 water from the Honolulu Board of Water Supply to irrigate its golf course earlier this year. Pumping from the EP 27 Battery has decreased considerably with the availability of R-1 water. Nevertheless, because the amount of R-1 water available to Haseko is not sufficient to supply all of the project’s non-potable water needs, Haseko continues to rely on caprock water from the EP 27 Battery. Should Haseko be required to halt pumping when chloride levels exceed 1000 mg/l, the only alternative would be to use potable water to the extent that need exceeds R-1 availability.
Ms. Laura Thielen and Mr. Ken Kawahara  
July 16, 2008  
Page 2

Your favorable consideration of this request is greatly appreciated. Should you have any questions, please feel free to contact me.

Very truly yours,

Yvonne Y. Izu  
Attorney for HASEKO (Ewa), Inc.

Cc: Haseko
Yvonne,
Here is an updated history of water use permits approved for Oahu Sugar and, later, HASEKO. I added some information after our meeting last week, including the approved urban uses and agricultural uses and allocations. Please call if you have questions or if you see any errors.

It was nice to meet you last week. --denise

Denise E. Mills
HYDROLOGIST
Hawaii Department of Land and Natural Resources
Commission on Water Resource Management
1151 Punchbowl Street, Room 227
Honolulu, Hawaii 96813
Phone: (808) 587-0251
Denise.E.Mills@hawaii.gov

HASEKO Ewa_WUP history & chronology_July08.xls
## HASEKO (Ewa) - State Well No. 1902-01 - 'Ewa Caprock Aquifer
### CWRM Action and WUP History

<table>
<thead>
<tr>
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<th>Comments</th>
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| 3/31/1994        | Reallocated 1.5 mgd for urban uses, from 4.16 mgd original allocation<sup>1</sup> | " | 1.5-<sup>2</sup> | 1-yr permit, approved 1.5 mgd | GC, other irrigation<sup>2</sup> | First temporary WUPs for Ewa Caprock WUPAs issued April 28, 1993. WUP#192: 2.66 mgd. Ag use. WUP#347: 1.5 mgd. Urban use. \[4.16 \text{ mgd} \]
<p>| 7/13/1994        | &quot; | &quot; | 1.5-&lt;sup&gt;2&lt;/sup&gt; | Extended 1-yr temporary permit, 1.5 mgd | GC, other irrigation&lt;sup&gt;2&lt;/sup&gt; |
| 4/1/1995         | Transition 1-yr permit from OSCo to Haseko | &quot; | 1.5-&lt;sup&gt;2&lt;/sup&gt; | Approved 1.5 mgd | GC, other irrigation&lt;sup&gt;2&lt;/sup&gt; |
| 6/23/1995        | Transfer agricultural water use allocation from OSCo to HASEKO (Ewa) | &quot; | 2.66 | Approved 2.66 mgd transfer | Ag | 2.66 mgd allocation&lt;sup&gt;1&lt;/sup&gt; &amp; WUP transferred from OSCo to HASEKO. Allocation is for balance of 4.16 mgd allocation (1992), after 1.5 allocated for golf course irrigation and other irrigation uses&lt;sup&gt;2&lt;/sup&gt;. |
| 3/13/1996        | Extended temporary permit 1 year, pending SY decision | &quot; |
| 5/14/1997        | Issued WUP #192 for agricultural uses; revoked 0.86 mgd for non-use and reduced approved use to 1.8 mgd. | &quot; | 1.8 | 192 | Ag | Water Use Permit #192 assigned for 1.8 mgd allocation for agricultural uses [8.66 - 0.86 = 1.8 \text{ mgd} ] |</p>
<table>
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<td>Staff recommendation to Commission: Modify WUP #192 to reduce 1.8 mgd allocation to 0.770 mgd. On recommendation from DAG, Commission deferred action on WUP #192 pending legal analysis of process required to modify or revoke permits subject a contested case hearing (in this case the Ewa Marina CCH).</td>
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<td>10/27/1998</td>
<td>Letter from HASEKO advising CWRM that it concurred with staff's recommendation to modify WUP #192, and reduce allocation to 0.770 mgd; HASEKO would accept as a voluntary reduction in its allocation.</td>
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<td>5/15/2003</td>
<td>Modification and combined 347 &amp; 192</td>
<td>1901-06, 1902-01, 1902-09, 1902-10, and 1902-11</td>
<td>3.30</td>
<td>650</td>
<td>GC</td>
<td>WUP #650 supercedes WUP #347 and #192. 1.5 mgd urban + 1.8 mgd = 3.30 mgd. Comm. to reduce to 1.54 mgd due to CWRM action on 10/27/98</td>
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<td>7/12/2006</td>
<td>Commission action to convert interim WUPs for new irrigation uses to permanent WUPs</td>
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<td>0.20 mgd</td>
<td>784</td>
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<td>WUP #784 supercedes WUP #650. Notice of Commission action sent to all temporary permit holders on August 3, 2006. No permits reissued.</td>
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Notes:

- Reallocated 1.5 mgd for urban uses (in 1997, incorporated into WUP #347), from 4.16 mgd original allocation. Allocations as follows:

  - 1.08 golf course irrigation
  - 0.105 landscape irrigation
  - 0.315 maintenance and dust control for fallow fields surrounding golf course
  - 2.66 agriculture

  \[
  \text{Total allocation} = 1.08 + 0.105 + 0.315 + 2.66 = 4.16
  \]

- Permitted urban uses: golf course irrigation, landscape irrigation, and maintenance and dust control.

G:\USERS\cmilde\Well & Pump Permits\Leeward Oahu\Ewa Caprock\Haseko\HASEKO Ewa_WUP history & chronology_July08.xls
Printed on 7/8/2008
**Calendar Entry**

**Meeting**

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<td>Denise E Mills/DLNR/StateHiUS@StateHiUS, Roy Hardy/DLNR/StateHiUS@StateHiUS</td>
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<td>Optional (cc)</td>
<td>Lenore Y Nakama/DLNR/StateHiUS@StateHiUS</td>
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**Description**

**Your Notes**
MEETING WITH CWRM STAFF
RE WUP #650
JULY 3, 2008
9:00 a.m.

I. Background and Status of Project
   • Status of Marina Excavation
   • CDM Reports

II. WUP #650
   A. Background
      • OSCO WUP #192
      • HASEKO WUP #347
      • WUP #650 – Administrative Modification
   B. Allocation Amount
      • Voluntary relinquishment of portion of allocation by WUP #192
   C. Location of Use – TMK Changes
   D. Chloride Variance

III. Reclaimed Water
   A. Current Usage
   B. Caprock as Backup Source
HAVANA.

Jill (HASEKO)

Yvonne Jezu, Jill  Roy Hardy, Denise Miller - CANAL

404 permit from Corps - permit conditions, incl. requirement to continue to run model, calibrate;

CDM did the modeling - provided March 2003

- Updated Model report

Started Marina excavation in 1997; didn't encounter water until 2003; used excavated material for fill in residential areas.

Plan changed due to WTP outfall design & geotechnical report; footprint of Marina reduced to 2002 decision - Marina level available around Marina to do what HASEKO required to do by permits & wanted to do - footprint further reduced = 50 ac. 51.3 acres (4/29/05 USACE)

- Target Marina ready for opening 2011 & 12
- Expected to start opening to Ocean in 2009

WUP # 650

2003 - HASEKO decided to develop battery of wells

* Check record for 0.770 acres to HASEKO – voluntary reduction
HASEKO prepared to relinquish its ag allocation
- What is process for voluntary relinquishment?
- CWRM needs to meet with AG
- Can this be done voluntarily administratively?
* CWRM needs to get back to Yrime in process.

TMK in permit 650 uncorrect (old) is too large
- Will provide corrected TMKs to use in writing
* Need to update TMK info

Chloride variance - not included in WRP #650
HASEKO doesn't have the variance today
HASEKO doesn't have the variance today
Has been getting reclaimed water 600,000 gpd
Wish to request the variance again
HASEKO agreement w/ BWS for providing piping down to weir to convey water to GC
- Still using caprock aquifer for dust control
  - CWP pumping 30k gpd - Cl = 985 mg/l
  - backup source is reclaimed water
    - BWS agreement to provide potable water
      - if insufficient reclaimed water supply
HASEKO would prefer to use caprock aquifer
HASEKO interested in applying for variance
to use caprock ag as backup source (future)
* Variance can be done administratively (should be
administrative)
Marina permit requires giving up Cape Rock permits when reclaimed water available.

Marina WUP says this only, not other permits.
3008  Updated Groundwater Modeling Study. Ocean Pointe Marina Project. - March 2003
3010  Groundwater Monitoring Data Analysis for 2007. Hoakalei Marina Project
3011  Groundwater Monitoring Data Analysis for 2005. Hoakalei Marina Project
3012  Groundwater Monitoring Data Analysis for 2006. Hoakalei Marina Project

Downloaded to CWRM library db. Cds in library.
DM 7/3/08
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<td>Approved 1.5 mgd</td>
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<td>OSCo lease expired 12/31/1994</td>
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2.66 mgd allocation & WUP transferred from OSCo to HASEKO. Allocation is for balance of 4.16 mgd allocation (1992), after 1.5 allocated for golf course irrigation and other irrigation uses. |
| 3/13/1996        | Extended temporary permit 1 year, pending SY decision | "              | "              |         | "          | |
| 5/14/1997        | Issued WUP #192 for agricultural uses; revoked 0.86 mgd for non-use and reduced approved use to 1.8 mgd. | "              | 1.8            | 192     | Ag  
Water Use Permit #192 assigned for 1.8 mgd allocation for agricultural uses |
| 5/14/1997        | Extended WUP #347 | "              | 1.5            | 347     | Ag  
|                  |              |                |                |         | "          | Temporary WUP #347 extended annually in July 1998 through 2005. CWRM staff recommended conversion to permanent WUP in July 2006 (see entry for July 12, 2006, below). |
### HASEKO (Ewa) - State Well No. 1902-01 - 'Ewa Caprock Aquifer

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#### Notes:

- **a** Reallocated 1.5 mgd for urban uses (in 1997, incorporated into WUP #347), from 4.16 mgd original allocation. Allocations as follows:
  - 1.08 golf course irrigation
  - 0.105 landscape irrigation
  - 0.315 maintenance and dust control for fallow fields surrounding golf course
  - 2.66 agriculture

  \[ \text{Total allocation} = 4.16 \]

- **b** Permitted urban uses: golf course irrigation, landscape irrigation, and maintenance and dust control.
Dear Water Use Permittee:

Hawaii Prince Golf Club/Hawaii Prince Hotel Waikiki Corp.,
Well Nos. 1900-02, 1900-17 to 20, 1901-03, WUP No. 469, 0.301 mgd, TMK 9-1-10:6
Haseko (Ewa), Inc., Well Nos. 1901-06, 1902-01, 1902-09 to 11, WUP No. 650, 3.300 mgd, TMK 9-1-12:5
Department of Parks and Recreation, Well No. 2001-03, WUP No. 167, 0.030 mgd, TMK 9-1-61:35
Palm Court Association, Well No. 2002-12, WUP No. 169, 0.040 mgd, TMK 9-1-61:22
Palm Villa II Association, Well No. 2001-08, WUP No. 168, 0.048 mgd, TMK 9-1-61:27
Arbors Association, Well No. 2001-07, WUP No. 171, 0.063 mgd, TMK 9-1-61:32
U.S. Fish & Wildlife, Well No. 2101-14, WUP No. 247, 0.216 mgd, TMK 9-1-17:12
Gentry Development Co., Well No. 2001-04, WUP No. 302, 0.040 mgd, TMK 9-1-61:7
Gentry Development Co., Well No. 2001-09, WUP No. 344, 0.023 mgd, TMK 9-1-61:2
Ewa by Gentry Community Association, Well No. 2001-05, WUP No. 450, 0.066 mgd, TMK 9-1-70:132
Gentry Homes, Ltd., Well No. 2001-12, WUP No. 504, 0.249 mgd, TMK 9-1-102:3
Gentry Homes, Ltd., Well No. 1901-05, WUP No. 505, 0.056 mgd, TMK 9-1-69:8
U.S. DOC/NOAA/NWS, Well No. 1900-23, WUP No. 501, 0.023 mgd, TMK 9-1-1:1
Coral Creek Golf, Inc., Well No. 2002-17, WUP No. 577, 0.498 mgd, TMK 9-1-69:10
Coral Creek Golf, Inc., Well No. 2001-13, WUP No. 578, 0.800 mgd, TMK 9-1-69:10
Coral Creek Golf, Inc., Well Nos. 2001-14, 2002-15, 17, 19,
WUP No. 579, 0.892 mgd, TMK 9-1-69:10&11, 9-1-61:54
AOAO Suncrest/The Shores/Lombard Way/Avalon, Well No. 2001-10,
WUP No. 629, 0.022 mgd, TMK 9-1-10:17
State Housing Community Development Corporation of Hawaii,
Well Nos. 2003-04, 07, WUP No. 432, 0.494 mgd, TMK 9-1-16:25
State Housing Community Development Corporation of Hawaii,
Well Nos. 2003-08, WUP No. 520, 0.237 mgd, TMK 9-1-16:108
Kapolei People's Inc., Well Nos. 2003-01, 02, 05, WUP No. 438, 1.000 mgd, TMK 9-1-16:25
Honolulu Board of Water Supply, Well Nos. 1905-08, 10, WUP No. 740, 0.302 mgd, TMK 9-1-16:1

Conversion of Interim Water Use Permits for
New Irrigation Uses to Permanent Water Use Permits
Puuloa and Kapolei Ground Water Management Areas, Oahu

This letter serves as your official notice of action by the Commission on Water Resource Management (Commission) on the subject water use permits.
By a unanimous vote at their meeting on July 12, 2006, the Commission corrected the error of approving and issuing interim permits for new irrigation uses in the Puuloa and Kapolei Ground Water Management Areas of the Ewa Caprock Aquifer Sector Area by converting the subject interim water use permits to permanent water use permits. All terms and conditions of the permits shall remain unchanged, except for Special Condition d., which is deleted.

The Commission ruled that permittees shall be notified by letter of the Commission’s action to convert these water use permits from interim to permanent and the deletion of Special Condition d. The Commission further ruled that re-issuance of these water use permits is not necessary.

Please be advised that a compliance review will be initiated shortly as required under §174C-56 Hawaii Revised Statutes. We recommend that you carefully review the conditions of your permit and ensure that you are in compliance with all Standard and Special Conditions.

If you have any questions, please contact Lenore Nakama at 587-0218.

Sincerely,

DEAN A. NAKANO
Acting Deputy Director

LYN:ss
Minutes July 12, 2006

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

MOTION: (Ching/Frazier)
To approve submittal as amended by staff
UNANIMOUSLY APPROVED

C. GROUND WATER REGULATION


CONVERSION OF INTERIM WATER USE PERMITS, FOR NEW IRRIGATION USES TO PERMANENT WATER USE PERMITS,
Puuloa and Kapolei Ground Water Management Areas, Oahu

Presentation of submittal: Lenore Nakama
RECOMMENDATION:

Staff recommends that the Commission correct the error of approving and issuing interim permits for new irrigation uses in the Puuloa and Kapolei Ground Water Management Areas of the Ewa Caprock Aquifer Sector Area by converting the subject interim water use permits to permanent water use permits. All terms and conditions of the permits shall remain unchanged, except for Special Condition d., which is deleted. The permittees shall be notified by letter of the Commission’s action to convert these water use permits from interim to permanent and the deletion of Special Condition d. Re-issuance of these water use permits is not necessary.

DISCUSSION:

Ms. Nakama stated that these interim permits expired on July 1, 2006 and staff is recommending that the Commission correct the error that was made in issuing the permits as interim, rather than permanent, water use permits. Action is also requested to inform these users that they may continue to pump their wells in accordance with their allocations and the chloride limit placed on irrigation wells in the Ewa Caprock Aquifer Sector Area.

Commissioner Ching inquired whether the subject permits covered all the users in the Ewa Caprock Aquifer Sector Area. She was concerned that giving certain permits a permanent status may give them a higher priority or status over other interim permits.

Ms. Nakama stated that the submittal covered all the new irrigation users which had a duration of July 1, 2006 attached to their interim permits. There are other interim permits that have been issued for industrial and other non-irrigation uses in the Ewa Caprock Aquifer Sector Area, there are also other interim permits that have been issued for other new and existing uses elsewhere in the State. Staff will address the rest of the interim permits as part of the 20-year compliance review that is mandated by the Water Code. Staff does not feel that the type of permit (i.e., interim or permanent) under which the water is being used will have a bearing on water use priorities should a future competition situation arise.

MOTION: (Ching/Frazier)
Approval of staff recommendation
UNANIMOUSLY APPROVED

G. NON-ACTION ITEMS

1. Rainfall Index Update Presentation by Dr. Pao Shin Chu, State Climatologist, University of Hawaii, Department of Meteorology

Presentor of non-action item: Neal Fujii
Minutes July 12, 2006

Graduate student, Ms. Cindy Ditner presented an update of rainfall throughout the state through a PowerPoint presentation. She stated that it has been 33 years since the last update was done. In preparing this index they gathered rainfall data throughout the State through temperature, elevation and rain gages. If a station did not submit information for 4 months within a calendar year then it was deleted.

H. NEXT COMMISSION MEETING (TENTATIVE)

1. August 16, 2006
2. September 20, 2006

The meeting was adjourned at 12:00 p.m.

Respectfully submitted,

PAULYNE K. ANAKALEA
Secretary

Approved as submitted:

DEAN A. NAKANO
Acting Deputy Director
Roy,

A copy of the Commission meeting minutes and CWRM staff submittal is included in the file for the EP-27 battery of wells (Well Nos. 1901-06, 1902-01, 1902-09 through -11). The staff recommendation, which was unanimously approved by the Commission, was that reissuance of affected permits was not necessary. I will have copies of the Commission meeting minutes for our meeting today.  

--dm
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Ryan, plz handle. Thx.

extended A.F. on well.
June 29, 2007

Mr. Raymond Kanna  
Haseko (Ewa), Inc.  
91-1001 Kaimalie Street, Suite 205  
Ewa Beach, HI 96706-5005

Dear Mr. Kanna:

Extension of Pump Installation Permit for Well Nos. 1901-06 and 1902-09 to -11

This is in response to your letter dated June 20, 2007 requesting an extension for the completion date of the EP7 Battery (Well No. 1901-06 and 1902-09 to -11). Your request is approved. Your new completion date is May 20, 2008. All other conditions of your permit remain the same.

If you have any questions, please contact Ryan Imata of the Commission staff at 587-0255.

Sincerely,

KEN C. KAWAHARA, P.E.  
Deputy Director

RI:ss  
c: Tom Nance Water Resource Engineering  
Beylik Drilling & Pump Service, Inc.
June 20, 2007

Mr. Peter Young
Interim Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Young:

Request for an Extension of the Pump Installation Permit for the EP 27 Battery, Well Nos. 1901-06 and 1902-09-11 in Ewa, Oahu, Hawaii

By the letter, we respectively request that the above-referenced pump installation permit be extended for one year to May 20, 2008. The construction plans to outfit the wells were submitted for county approval in January 2007 and are still pending due to agency review backlogs. We hope to have plan approvals soon and will proceed with the pump installation when the final grading is completed.

If you need additional information, feel free to call me (224-1365). Thank you for your attention to this matter.

Sincerely,

Raymond S. Kanna
Executive Vice President

cc: Tom Nance - Tom Nance Water Resource Engineering
TO: STATE OF HAWAII - DLNR

COMMISSION ON WATER RESOURCE MGMT.

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

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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
-

REMARKS


COPY TO 1510 T/C FILE

SIGNED: [Signature]

If enclosures are not as noted, kindly notify us at once.
REQUEST FOR EXTENSION

June 20, 2007

Commission on Water Resource Management
PO Box 621
Honolulu, HI 96809

Re: Request for Extension - Pump Installation Permit for Well No. 1901-06 & 1902-09 to 11

We kindly request that an extension be granted for the attached Pump Installation Permit issued for EP 27 Battery, Wells No. 1901-06 & 1902-09 to 11, as the project has been delayed beyond the expiration date.

Your immediate response is greatly appreciated.

Very truly yours,

Dwight Ho
Vice President
PUMP INSTALLATION PERMIT
EP 27 Battery, Well Nos. 1901-06 & 1902-09 to 11

Note: This permit shall be prominently displayed at the site until the work is completed

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for EP 27 Battery (Well Nos. 1901-06 & 1902-09 to 11) at TMK 9-1-12:86 & 40, Oahu, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. No withdrawal of water shall be made other than for testing until a Certificate of Pump Installation Completion has been issued by the Commission.

3. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

4. The pump installation permit shall be for installation of a 200 gpm rated capacity, or less, pump in each well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.

5. A water-level measurement access shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels.

6. The permittee shall install an approved meter or other appropriate means for measuring and reporting withdrawals and appropriate devices or means for measuring chlorides and temperature at the well head.

7. Well Completion Report Part II shall be submitted to the Chairperson within 60 days after completion of work. This form can be obtained by contacting staff or on the internet at www.hawaii.gov/cwrm.

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

9. The pump installation permit application and any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the HWCPIS. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

10. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.

11. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

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

Date of Approval: May 20, 2005
Expiration Date: May 20, 2007

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Installer's Signature: C-57, C-57a, or A License #:AC21896 Date: 6-8-07
Printed Name: DWIGHT HO Firm or Title: BEYLIK DRILLING & PUMP SERVICE, INC.

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachments:
c: USGS
Honolulu Board of Water Supply
TO
STATE OF HAWAII - DLNR
COMMISSION ON WATER RESOURCE MGMT.
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

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☐ 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

______________________________
SIGNED: _______________________

COPY TO ________________________

*If enclosures are not as noted, kindly notify us at once.*

TONI GONSALVES, PROJ. MGR.
PUMP INSTALLATION PERMIT
EP 27 Battery, Well Nos. 1901-06 & 1902-09 to 11

Note: This permit shall be prominently displayed at the site until the work is completed.

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for EP 27 Battery (Well Nos. 1901-06 & 1902-09 to 11) at TMK 9-1-12:39 & 40, Oahu, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. No withdrawal of water shall be made other than for testing until a Certificate of Pump Installation Completion has been issued by the Commission.

3. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

4. The pump installation permit shall be for installation of a 200 gpm rated capacity, or less, pump in each well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.

5. A water-level measurement access shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels.

6. The permittee shall install an approved meter or other appropriate means for measuring and reporting withdrawals and appropriate devices or means for measuring chlorides and temperature at the well head.

7. Well Completion Report Part II shall be submitted to the Chairperson within 60 days after completion of work. This form can be obtained by contacting staff or on the Internet at www.hawaii.gov/dlnr/cwrm.

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

9. The pump installation permit application and any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the HWCPIS. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

10. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.

11. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, agents, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

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

Date of Approval: May 20, 2005
Expiration Date: May 20, 2007

W. Roy Yancy
PETER T. YOUNG, Chairperson
Commission on Water Resource Management

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Installer's Signature: C-57, C-57a, or A License #: AC21896 Date: 6-8-07
Printed Name: DWIGHT HO Firm or Title: BEYLIK DRILLING & PUMP SERVICE, INC.

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachments
- USGS
- Honolulu Board of Water Supply
May 25, 2005

Ref: 1901-06 & 1902-09 to 11

Mr. Ray Kanna
HASEKO (Ewa), Inc.
820 Mililani St., Ste. 820
Honolulu, HI 96813

Dear Mr. Kanna:

Pump Installation Permit
EP 27 Battery (Well Nos. 1901-06 & 1902-09 to 11)

Enclosed are two (2) originals of your approved Pump Installation Permit for the captioned well(s) that authorize permanent pump installation work for your well(s). As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 11:

Special Conditions

1. If the elevation benchmark needs to be altered, the permittee, well operator, and/or well owner shall ensure that the benchmark is transferred (or the well resurveyed) and documentation of the new benchmark shall be submitted to the Commission within sixty (60) days after the pump is installed.

2. Separate Well Completion Reports - Part II shall be filed for each well.

The permittee is responsible for all conditions of the permit. This includes ensuring the submission of a completed Well Completion Report Part II form within sixty (60) days after the pump installation work is completed. Be advised that you may be subject to fines of up to $5,000 per day for any violations of your permit conditions starting from the permit approval date.

Please sign both permit originals and return one for our files.

IMPORTANT - Pump installation shall not commence until a fully signed permit is returned to the Commission.

Finally, this cover letter is notice of our acceptance of your Well Completion Reports—Part I as complete as of May 20, 2005.

If you have any questions, please call Lenore Y. Nakama of the Commission staff at 587-0218.

Sincerely,

Peter T. Young
Chairperson

Enclosure
c: USGS
Honolulu Board of Water Supply
PUMP INSTALLATION PERMIT

EP 27 Battery, Well Nos. 1901-06 & 1902-09 to 11

Note: This permit shall be prominently displayed at the site until the work is completed

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for EP 27 Battery (Well Nos. 1901-06 & 1902-09 to 11) at TMK 9-1-12:39 & 40, Oahu, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. No withdrawal of water shall be made other than for testing until a Certificate of Pump Installation Completion has been issued by the Commission.

3. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

4. The pump installation permit shall be for installation of a 200 gpm rated capacity, or less, pump in each well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.

5. A water-level measurement access shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels.

6. The permittee shall install an approved meter or other appropriate means for measuring and reporting withdrawals and appropriate devices or means for measuring chlorides and temperature at the well head.

7. Well Completion Report Part II shall be submitted to the Chairperson within 60 days after completion of work. This form can be obtained by contacting staff or on the internet at www.hawaii.gov/dlnr/cwrm.

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

9. The pump installation permit application and any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the HWCPIS. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

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11. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

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

Date of Approval: May 20, 2005
Expiration Date: May 20, 2007

PETER T. YOUNG, Chairperson
Commission on Water Resource Management

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Installer’s Signature: ______________________ C-57, C-57a, or A License #: Date: ____________________

Printed Name: ______________________ Firm or Title: ______________________

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachments:
c: USGS
Honolulu Board of Water Supply
## Well Check Program
4/1/04 - Revised for update to Well Standards (February 2004)

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<tr>
<td>Grouting Method</td>
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<td>Solid Casing Material</td>
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</tr>
<tr>
<td>Solid Casing Specification</td>
<td>Schedule 80</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Open Casing Length</td>
<td>10</td>
</tr>
</tbody>
</table>

### Results

#### Well Depth

- Theoretical Thickness of Aquifer: 61.09
- 1/4 Aquifer Thickness: 15.2725

- Depth of Well below Sea Level: -10.52 okay  
  - Section 2.2

#### Well Casing

- Minimum Wall Thickness
  - Material: pvc plastic
  - Minimum Thickness per standards: no requirement
  - Wall Thickness Provided: 0 too small  
    - Section 2.4(b)
  - Minimum Length of Solid Casing
    - 90% of ground to top of aquifer: 20.871
    - Length of solid casing Provided: 25.2 okay  
      - Section 2.4(c)
  - Casing Material
    - Schedule 80
    - In compliance  
      - Section 2.4(d)
  - (for pvc only - check for 200' limit) okay  
    - Section 2.4(d)

#### Annular Space

- Depth of Grouting
  - Calculated Depth of Grouting: 16.233
  - Depth of Grouting provided: 23.2 okay  
    - Section 2.6(c)
  - Minimum Annular Space required: 1.5
  - Thickness of Annular Space: 6 okay  
    - Section 2.6(d)
<table>
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<td>Cement Grout</td>
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<tr>
<td>Grouting Method</td>
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<td>Hole Diameter</td>
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<td>Total Depth</td>
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<table>
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<tr>
<td>Material</td>
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</tr>
<tr>
<td>Minimum Thickness per standards</td>
<td>no requirement</td>
</tr>
<tr>
<td>Wall Thickness Provided</td>
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<tr>
<td>Thickness of Annular Space</td>
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## Well Check Program
4/1/04 - Revised for update to Well Standards (February 2004)

### Data Input

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<tr>
<td>Public Water Supply Well?</td>
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<td>Solid Casing Material</td>
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<td>Open Casing Length</td>
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### Results

#### Well Depth

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Theoretical Thickness of Aquifer</td>
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<td>1/4 Aquifer Thickness</td>
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#### Well Casing

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
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<tbody>
<tr>
<td>Minimum Wall Thickness Material</td>
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</tr>
<tr>
<td>Minimum Thickness per standards</td>
<td>no requirement</td>
</tr>
<tr>
<td>Wall Thickness Provided</td>
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<td>Casing Material</td>
<td>Schedule 80 In compliance (Section 2.4(d))</td>
</tr>
<tr>
<td>(for pvc only - check for 200' limit)</td>
<td>okay (Section 2.4(d))</td>
</tr>
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</table>

#### Annular Space

<table>
<thead>
<tr>
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<tr>
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</tr>
</tbody>
</table>
### Well Check Program

4/1/04 - Revised for update to Well Standards (February 2004)

#### Data Input

<table>
<thead>
<tr>
<th>Parameter</th>
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<td>Well Name</td>
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<td>Grouting Method</td>
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<tr>
<td>Solid Casing Specification</td>
<td>Schedule 80</td>
</tr>
<tr>
<td>Solid Casing Length</td>
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<tr>
<td>Solid Casing Diameter</td>
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<td>Solid Casing Wall Thickness</td>
<td></td>
</tr>
<tr>
<td>Open Casing Length</td>
<td>10</td>
</tr>
</tbody>
</table>

#### Results

##### Well Depth

- Theoretical Thickness of Aquifer: 63.55
- 1/4 Aquifer Thickness: 15.8875
- Depth of Well below Sea Level: -8.14 (okay)

##### Well Casing

<table>
<thead>
<tr>
<th>Parameter</th>
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<td>Minimum Wall Thickness Material</td>
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<tr>
<td>Minimum Thickness per standards</td>
<td>no requirement</td>
</tr>
<tr>
<td>Wall Thickness Provided</td>
<td>0 too small</td>
</tr>
<tr>
<td>Minimum Length of Solid Casing</td>
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<td>90% of ground to top of aquifer</td>
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<td>18.8 (okay)</td>
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<tr>
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<tr>
<td>(for PVC only - check for 200’ limit)</td>
<td>okay</td>
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##### Annular Space

<table>
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<td>Calculated Depth of Grouting</td>
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<tr>
<td>Depth of Grouting provided</td>
<td>16.8 (okay)</td>
</tr>
<tr>
<td>Minimum Annular Space required</td>
<td>1.5</td>
</tr>
<tr>
<td>Thickness of Annular Space</td>
<td>8 (okay)</td>
</tr>
</tbody>
</table>

Sections:
- Section 2.2
- Section 2.4(a)
- Section 2.4(b)
- Section 2.4(c)
- Section 2.4(d)
- Section 2.6(c)
- Section 2.6(d)
MEMORANDUM FOR THE RECORD

From: Lenore Nakama
Subject: Requested Pump Capacities for 1902-09 to 11, 1901-06 and Amendment to Well Completion Report – Part I for 1901-06

5/20/05 Tom Nance returned my phone call inquiring as to the requested pump capacities for the 4 wells and the pumping rate for 1901-06 during the constant rate test.

Per Tom, a pump installation permit specifying 200 gpm capacities for each well should be issued, instead of the 350 gpm originally requested.

Also, Tom said the pumping rate for 1901-06 during the constant rate test was 250 gpm.
Ocean Pointe Well 1 on May 15, 2005
Ocean Pointe Well 2 on May 15, 2005
Lenore:

The conversions are in the attached letter. Several of the wells are to the Diamond Head side of where they were initially going to go for two reasons: HASEKO's land use plan got changed so the locations were pushed to accommodate that; and a test hole at the west end of the initially chosen array of wells showed the groundwater to be too salty to use. Hope this is not a problem.

Tom

_nakano_.pdf
May 5, 2005
05/169r (05-06)

Tom Nance Water Resource Engineering

Mr. Dean Nakano
Acting Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Nakano:

Additional Data for the
Well Completion Reports for Well Nos. 1902-09, 1902-10, 1902-11, and 1901-06 at Ocean Pointe, Ewa, Oahu

In response to a voicemail message from Lenore Nakama of your staff, the following information is provided as a supplement to our April 21, 2005 submittal. The well locations, as determined by GPS and expressed in the NAD83 datum, are listed below. If you need these in a different datum or format, please let me know.

Ocean Pointe Irrigation Well Locations (NAD83 Datum)

<table>
<thead>
<tr>
<th>State Well No.</th>
<th>Ocean Pointe Well No.</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1902-09</td>
<td>1</td>
<td>21° 19' 8.2&quot;</td>
<td>158° 02' 1.2&quot;</td>
</tr>
<tr>
<td>1902-10</td>
<td>2</td>
<td>21° 19' 8.0&quot;</td>
<td>158° 01' 58.0&quot;</td>
</tr>
<tr>
<td>1902-11</td>
<td>3</td>
<td>21° 19' 13.7&quot;</td>
<td>158° 01' 49.7&quot;</td>
</tr>
<tr>
<td>1901-06</td>
<td>4</td>
<td>21° 19' 7.7&quot;</td>
<td>158° 01' 39.8&quot;</td>
</tr>
</tbody>
</table>

In addition, there was a mistake in the As-Built Well Section for Well No. 1901-06. The lengths of solid and perforated casing are correct (18.8 and 10 feet, respectively), but the total well depth should have been listed as 28.8 rather than 31.0 feet. If you need additional information, please feel free to call.

Sincerely,

Tom Nance

cc: Ray Kanna - HASEKO
    Dwight Ho - Beylik
Mr. Dean Nakano  
Acting Deputy Director  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P. O. Box 621  
Honolulu, Hawaii 96809  

Dear Mr. Nakano:

Additional Data for the  
Well Completion Reports for Well Nos. 1902-09,  
1902-10, 1902-11, and 1901-06 at Ocean Pointe, Ewa, Oahu

In response to a voicemail message from Lenore Nakama of your staff, the following information is provided as a supplement to our April 21, 2005 submittal. The well locations, as determined by GPS and expressed in the NAD83 datum, are listed below. If you need these in a different datum or format, please let me know.

**Ocean Pointe Irrigation Well Locations (NAD83 Datum)**

<table>
<thead>
<tr>
<th>State Well No.</th>
<th>Ocean Pointe Well No.</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1902-09</td>
<td>1</td>
<td>21° 19.137'</td>
<td>158° 02.020'</td>
</tr>
<tr>
<td>1902-10</td>
<td>2</td>
<td>21° 19.134'</td>
<td>158° 01.967'</td>
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<tr>
<td>1902-11</td>
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<td>21° 19.229'</td>
<td>158° 01.828'</td>
</tr>
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<td>1901-06</td>
<td>4</td>
<td>21° 19.295'</td>
<td>158° 01.664'</td>
</tr>
</tbody>
</table>

In addition, there was a mistake in the As-Built Well Section for Well No. 1901-06. The lengths of solid and perforated casing are correct (18.8 and 10 feet, respectively), but the total well depth should have been listed as 28.8 rather than 31.0 feet. If you need additional information, please feel free to call.

Sincerely,

Tom Nance

cc: Ray Kanna - HASEKO  
Dwight Ho - Beylik
Mr. Dean Nakano  
Acting Deputy Director  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P. O. Box 621  
Honolulu, Hawaii  96809

Dear Mr. Nakano:

Well Completion Reports - Part I, for Well Nos. 1902-09, 1902-10, 1902-11, and 1901-06 at Ocean Pointe in Ewa, Oahu, Hawaii

Enclosed with this letter are the Well Completion Reports, Part 1, for four brackish irrigation wells for the Ocean Pointe project in Ewa, Oahu. If you need additional information, feel free to call.

Sincerely,

Tom Nance  

cc: Ray Kanna - HASEKO  
    Dwight Ho - Beylik

Enclosures
Well Name: Ocean Pointe Well #1 (1909)
Date of Test: March 14, 2005
Date of Analysis: 27-Apr-05

Alternative way for determining T from step-drawdown data (Mink, per. comm)

Q = ft^3/d
s = ft.

Q1 (gpm) = 304 = 58520 ft^3/d
Q2 (gpm) = 186 = 35805 ft^3/d

Set up two equations:

s1 = jQ1 + nQ1^2
s2 = jQ2 + nQ2^2

Q2 = 35805 s2 = 0.03
d = ft. Q2 (gpm) = 35805 ft^3/d
Q1 = 58520 s1 = 0.08

Well Depth below sea level = 13
Radius of well (ft) = 0.5 = r

n = s1 - (Q1/Q2)s2/Q1(Q1-Q2) = 2.33E-11
j = s/Q - nQ = 3.74E-09

Laminar flow equation:
s = jQ = 0.000219 0.27% Head loss due to laminar flow

Thiem Eq.

T = 1/2pi(jn(re/r))

re = Well Depth BSL * 1.6 = 20.8

Therefore:
T = 1/2pi(jn(re/r)) = 158769010 ft^2/d

much too high - must be in a void - do not put into database - maybe into memo field.
1. State Well No.: \textbf{1502-09}  
2. Address: Ewa Beach, Oahu  
4. Drilling method used during construction: \(\Box\) Rotary \(\Box\) Percussion \(\Box\) Other (describe)  
5. Date Well Construction (drilled, cased, grouted) completed: 2/10/05  
   Fill out attached Driller's Log  
6. Was the subject well cored? \(\checkmark\) Yes \(\Box\) No  
7. Initial water-level encountered: 22.0' ft. below ground  
   Date and time of measurement: 2/10/05  
8. Step-Drawdown Test completed? \(\Box\) No \(\checkmark\) Yes  
   Attach Step-Drawdown Test form (12/17/97 SDPTD Form)  
9. Constant Rate Aquifer Test completed? \(\Box\) No \(\checkmark\) Yes  
   Attach Constant Rate Aquifer Test form (12/17/97 CRPTD Form)  
10. Water-level: 1.49' ft. above msl  
    Date and time of measurement: 3-14-05 14:00  
11. Chloride: 925 ppm  
    Date and time of sampling: 3-14-05 14:10  
12. Temperature: 78.2 °F  
    Date and time of measurement: 3-14-05 14:10  
13. Fill in the as-built section on the other side of this sheet.  
14. Attach photograph of well and concrete pad showing benchmark on concrete pad.  
15. Fill in attached surveyor's report.  
16. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)  
17. Remarks:  
   

\textbf{Licensed Driller (print)}  
Beylik Drilling & Pump Service Inc.  
\textbf{C-57 Lic. No.} AC-21896  
\textbf{Signature}  
\textbf{Date} 4/14/05
13. AS-BUILT WELL SECTION

(Please attach as-built if different from diagram provided below)

Elevation at top of casing \( \text{NA} \) ft., msl
(to nearest 0.01 ft.)

Hole Diameter: 24" in.

Minimum of 2' Radius & 4" Thick Concrete Pad

Ground Elevation: \( \text{NA} \) ft., msl

Bench mark elevation:
\( \text{NA} \) ft., msl
(Survey to nearest 0.01 ft.)

Grouting method:
- Positive displacement
- Other

Cement Grout: 23.2 ft.
(min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less.)

Annular space between hole and casing (1.5" for positive displacement, 3" for other methods):
6 in.

Rock or Gravel Packing:
12 ft.

Material: Crushed Basalt
- Rounded Gravel

Water Level Elevation:
22.0 GL ft., msl

\*msl = mean sea level

Solid Casing Material:
- 3-1902-09 OCEAN PONT

Carbon Steel: compliant with (check one or more):
- ANSI/AWWA C200
- API Spec. 5L
- ASTM A53
- ASTM A139
And compliant with (check one or more):
- ASTM A242 or A606
- Type E
- Type S
- Grade B
- Other

Stainless Steel: (check one):
- ASTM A409 (production wells)
- ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one):
- Schedule 40
- Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one):
- Schedule 40
- Schedule 80
- Schedule 120

Thermoset Plastic: (check one):
- Filament Wound Resin Pipe conforming to ASTM D2996
- Centrifugally Cast Resin Pipe conforming to ASTM D2997
- Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
- Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
- PTFE Fluorocarbon Tubing conforming to ASTM D3296
- FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:

Carbon Steel: compliant with (check one or more):
- ANSI/AWWA C200
- API Spec. 5L
- ASTM A53
- ASTM A139
And compliant with (check one or more):
- ASTM A242 or A606
- Type E
- Type S
- Grade B
- Other

Stainless Steel: (check one):
- ASTM A409 (production wells)
- ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one):
- Schedule 40
- Schedule 80

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- Schedule 40
- Schedule 80
- Schedule 120

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- Filament Wound Resin Pipe conforming to ASTM D2996
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- PTFE Fluorocarbon Tubing conforming to ASTM D3296
- FEP Fluorocarbon Tubing conforming to ASTM D3296

WCR1 Form 10/18/04 Page 2 of 5
**DRILLER'S LOG**

**WELL NUMBER:** 1902-09

<table>
<thead>
<tr>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
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<tbody>
<tr>
<td>0 to 5</td>
<td>Dirt &amp; Coral</td>
<td>2/10/05</td>
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<tr>
<td>5 to 10</td>
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<td>2/10/05</td>
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<tr>
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<td>Coral &amp; Sand</td>
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<tr>
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<td>22.0' Water</td>
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<td>35.2 Total Depth</td>
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<td>___ to ___</td>
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**Remarks:**
Well Elevation

Well Site #1
Bench mark "□" box cut located at the south corner of the concrete pad.

Benchmark Elevation 24.68(MSL)

Attach photos of completed well and concrete pad showing benchmark location.

I certify that the elevation shown above:

1) Was done in accordance with acceptable surveying practices
2) Is accurate to the nearest 0.01 ft.
3) Is referenced to mean sea level

Surveyor: George A. Sumida
License No.: 4330
Date: 4/7/05
May 5, 2005
05/169r (05-06)

Dear Mr. Nakano:

Additional Data for the
Well Completion Reports for Well Nos. 1902-09, 1902-10, 1902-11, and 1901-06 at Ocean Pointe, Ewa, Oahu

In response to a voicemail message from Lenore Nakama of your staff, the following information is provided as a supplement to our April 21, 2005 submittal. The well locations, as determined by GPS and expressed in the NAD83 datum, are listed below. If you need these in a different datum or format, please let me know.

Ocean Pointe Irrigation Well Locations (NAD83 Datum)

<table>
<thead>
<tr>
<th>State Well No.</th>
<th>Ocean Pointe Well No.</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1902-09</td>
<td>1</td>
<td>21° 19' 8.2&quot;</td>
<td>158° 02' 1.2&quot;</td>
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<tr>
<td>1902-10</td>
<td>2</td>
<td>21° 19' 8.0&quot;</td>
<td>158° 01' 58.0&quot;</td>
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<tr>
<td>1902-11</td>
<td>3</td>
<td>21° 19' 13.7&quot;</td>
<td>158° 01' 49.7&quot;</td>
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<tr>
<td>1901-06</td>
<td>4</td>
<td>21° 19' 7.7&quot;</td>
<td>158° 01' 39.8&quot;</td>
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</table>

In addition, there was a mistake in the As-Built Well Section for Well No. 1901-06. The lengths of solid and perforated casing are correct (18.8 and 10 feet, respectively), but the total well depth should have been listed as 28.8 rather than 31.0 feet. If you need additional information, please feel free to call.

Sincerely,

Tom Nance

cc: Ray Kanna - HASEKO
    Dwight Ho - Beylik
STEP-DRAWDOWN PUMP TEST DATA
(not required for wells producing < 100,000 gpd or 70 gpm)

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<tr>
<th>Pumped Well No.</th>
<th>Observation Well No.</th>
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<tr>
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<table>
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<th>Pumped Well Name</th>
<th>Distance between Obs. &amp; Pumped Well</th>
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<tr>
<td>Well No. 1</td>
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<table>
<thead>
<tr>
<th>Target Q</th>
<th>ft. msl</th>
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<tbody>
<tr>
<td>200 ±</td>
<td>26.03</td>
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</table>

<table>
<thead>
<tr>
<th>Reference pt. for depth to water</th>
<th>Static Water Level @ start of test</th>
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<tbody>
<tr>
<td></td>
<td>1.49 ft. msl</td>
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</table>

Water level measurements by:  □ electrical sounder  ■ pressure transducer  □ airline

START TEST Date: 3-14-2005  Time of day: 14:10

Flow Meter Reading Start: 16,103,607 gallons

<table>
<thead>
<tr>
<th>Suggested Elapsed Time (min)</th>
<th>Actual Elapsed Time (min)</th>
<th>Depth to water (nearest 0.1 ft)</th>
<th>Drawdown (nearest 0.1 ft)</th>
<th>Pumping Rate Q (gallons/minute)</th>
<th>EC (mg/l)</th>
<th>CF (mg/l)</th>
<th>Temp @ From F or °C</th>
<th>Notes</th>
<th>Remarks</th>
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</tbody>
</table>

30' Chloride sample taken

Step 2 begin?
<p>| Suggested Elapsed Time (min) | Actual Elapsed Time (min) | Depth to Water (feet) to nearest 0.1 ft | Drawdown (ft) | Pumping Rate (gpm) | EC (ppm) | CF | | Remarks |
|-----------------------------|--------------------------|----------------------------------------|--------------|-------------------|----------|---|----------------|
| 31                          | .04                      |                                        |              |                   |          |   | | Start 2nd Step |
| 32                          | .04                      |                                        |              |                   |          |   | |                      |
| 33                          | .05                      |                                        |              |                   |          |   | |                      |
| 34                          | .05                      |                                        | 249.3        |                   |          |   | |                      |
| 35                          | .05                      |                                        |              |                   |          |   | |                      |
| 36                          | .05                      |                                        |              |                   |          |   | |                      |
| 37                          | .05                      |                                        | 249.9        |                   |          |   | |                      |
| 38                          | .05                      |                                        |              |                   |          |   | |                      |
| 39                          | .04                      |                                        |              |                   |          |   | |                      |
| 40                          | .05                      |                                        | 249.3        |                   |          |   | |                      |
| 45                          | .05                      |                                        | 3730         | 78.4              |          |   | |                      |
| 50                          | .05                      |                                        | 249.3        |                   |          |   | |                      |
| 55                          | .05                      |                                        |              |                   |          |   | |                      |
| 60                          | .05                      |                                        | 249.7        | 3740              | 945      | 78.4 | | End 2nd Step         |
| 61                          | .07                      |                                        |              |                   |          |   | | Start 3rd Step       |
| 62                          | .07                      |                                        |              |                   |          |   | |                      |
| 63                          | .07                      |                                        | 302.5        |                   |          |   | |                      |
| 64                          | .07                      |                                        |              |                   |          |   | |                      |
| 65                          | .07                      |                                        | 3760         | 78.4              |          |   | |                      |
| 66                          | .07                      |                                        |              |                   |          |   | |                      |
| 67                          | .07                      |                                        |              |                   |          |   | |                      |
| 68                          | .07                      |                                        |              |                   |          |   | |                      |
| 69                          | .08                      |                                        |              |                   |          |   | |                      |
| 70                          | .07                      |                                        | 3780         | 78.4              |          |   | |                      |
| 75                          | .07                      |                                        | 304.0        |                   |          |   | |                      |
| 80                          | .08                      |                                        | 303.6        |                   |          |   | |                      |
| 85                          | .07                      |                                        |              |                   |          |   | |                      |
| 90                          | .08                      |                                        | 303.9        | 3790              | 955      | 78.4 | | End 3rd Step         |
|                             |                          |                                        |              |                   |          |   | | Meter @ End          |
|                             |                          |                                        |              |                   |          |   | | 16,125,360           |</p>
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<th>Recovery Drawdown</th>
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<th>EC</th>
<th>GI</th>
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<td>(umhos)</td>
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<td>C</td>
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</tbody>
</table>

**END TEST** Date: 3-14-09 Time of day: 15:40 (End of Pumping)

ADDITIONAL REMARKS: Drawdown adjusted for tidal variation (tidal variation is greater than the drawdown)

Person in charge of pump test (print): TOM KELCE

Signature: [Signature]

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
### CONSTANT-RATE PUMP TEST DATA

<table>
<thead>
<tr>
<th>Pumped Well No.</th>
<th>Observation Well No.</th>
<th>Target Q</th>
<th>Distance between Obs. &amp; Pumped Well</th>
<th>Static Water Level @ start of test</th>
<th>Water level measurements by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1902-07</td>
<td>n/a</td>
<td>200 gpm</td>
<td>ft.</td>
<td>ft. msl</td>
<td>☐ electrical sounder ☐ pressure transducer ☐ airline</td>
</tr>
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</table>

START TEST Date: 3-14-2005 Time of day: 16:00

Flow Meter Reading Start: 16,125,360 gallons

<table>
<thead>
<tr>
<th>Suggested elapsed time (min)</th>
<th>Actual elapsed time (min)</th>
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Max possible duration, water level or quality did not stabilize for any 24 hour period

Begin recovery data next page

Flow meter reading at end of pumped period: 16,413,102 gals

Chloride sampling required

Use same ending drawdown figure as start for recovery

287,740 GALS PUMPED (AVC = 199.8 CFM)
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**Start recovery**

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**END TEST**
Date: **3-16-2005**
Time of day: **16:00 (End of Pumping)**

**ADDITIONAL REMARKS:**
Drainage adjusted for head loss

**Person in charge of pump test (print):**

**Signature:**

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
Well Name: Ocean Pointe Well #2 (1010)
Date of Test: February 16, 2005
Date of Analysis: 28-Apr-05

Alternative way for determining $T$ from step-drawdown data (Mink, per. comm)

$Q = \text{ft}^3/d$
$Q_1 \text{ (gpm)} = 313 = 60253 \text{ ft}^3/d$
$s = \text{ft.}$
$Q_2 \text{ (gpm)} = 169 = 32533 \text{ ft}^3/d$

Set up two equations:

$s_1 = jQ_1 + nQ_1^2$
$s_2 = jQ_2 + nQ_2^2$

$Q_2 = 32533$ $s_2 = 0.2$
green = input
$Q_1 = 60253$ $s_1 = 0.48$
red = calculated

Radius of well (ft) = 0.5 = $r$
blue = equations

$n = s_1 - (Q_1/Q_2)s_2/Q_1(Q_1-Q_2) = 6.56E-11$

$j = s/Q - nQ = 4.01E-06$

Laminar flow equation:
$s = jQ = 0.241803$ 50.38% Head loss due to laminar flow

Thiem Eq.
$T = 1/2\pi j(ln(r_0/r))$
$re = \text{Well Depth BSL * 1.6} = 20.8$

Therefore:
$T = 1/2\pi j(ln(re/r)) = 147850 \text{ ft}^2/d$
### WELL COMPLETION REPORT - PART I

#### Well Construction

**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 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 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.state.hi.us/dlnr/cwrm/](http://www.state.hi.us/dlnr/cwrm/).

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<td>D Percussion</td>
<td>D Other (describe)</td>
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<td>5. Date Well Construction (drilled, cased, grouted) completed:</td>
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*In addition to the driller's log, if a geologic log was prepared, please submit with this form.*

| 6. Was the subject well cored? | ☑ Yes | ☐ No |
| 7. Initial water-level encountered | 22.1' ft. below ground | Date and time of measurement: | 2/10/05 |
| 8. Step-Drawdown Test completed? | ☐ No | ☑ Yes | Attach Step-Drawdown Test form (12/17/97 SDPTD Form) |
| 9. Constant Rate Aquifer Test completed? | ☐ No | ☑ Yes | Attach Constant Rate Aquifer Test form (12/17/97 CRPTD Form) |

#### Parameters prior to pump test:

| 10. Water-level: | 1.52 ft. above msl | Date and time of measurement: | 2-16-05 14:45 |
| 11. Chloride: | 850 ppm | Date and time of sampling: | 2-16-05 14:55 |
| 12. Temperature: | 77.7°F | Date and time of measurement: | 2-16-05 14:55 |

| 13. Fill in the as-built section on the other side of this sheet. |
| 14. Attach photograph of well and concrete pad showing benchmark on concrete pad. |
| 15. Fill in attached surveyor's report. |
| 16. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.). |
| 17. Remarks: |

---

**Licensed Driller (print):** Beylik Drilling & Pump Service Inc.

**C-57 Lic. No.:** AC-21896

**Signature:** [Signature]

**Date:** 4/14/05

---

**For Official Use Only:**
13. AS-BUILT WELL SECTION (Please attach as-built if different from diagram provided below)

Elevation at top of casing **NA** ft., msl* (to nearest 0.01 ft.)

Hole Diameter: **24"** in.

Minimum of 2' Radius & 4" Thick Concrete Pad

Ground Elevation: **NA** ft., msl

**Bench mark elevation**

NA **ft., msl**
(Survey to nearest 0.01 ft.)

**Grouting method:**
- Positive displacement
- Other

Cement Grout: **23.2 ft.**
(min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less.)

Annular space between hole and casing (1.5" for positive displacement, 3" for other methods):
6 **in.**

Rock or Gravel Packing:

**12 ft.**

Material:
- Crushed Basalt
- Rounded Gravel

Water Level Elevation: **22.1 GL** ft., msl*

Solid Casing: (≥ 90% x (Ground Elev.-Water Level Elev))

Length: **25.2 ft.**

Nominal Diameter: **12"**

Wall Thickness: **Sched 80** in.

Bottom Elevation: **NA** ft., msl

Open Casing:
- Perforated
- Screen

Length: **10 ft.**

Nominal Diameter: **12"**

Wall Thickness: **Sched 80** in.

Bottom Elevation: **NA** ft., msl

Open Hole:

Length: **NA** ft.

Diameter: **NA** in.

Bottom Elevation: **NA** ft., msl

*msl = mean sea level

**Solid Casing Material:**

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<th>ASTM A139</th>
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<tbody>
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<td>StainLess Steel: (check one):</td>
<td>ASTM A409 (production wells)</td>
<td>ASTM A312 (monitor wells)</td>
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<tr>
<td>ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one):</td>
<td>Schedule 40</td>
<td>Schedule 80</td>
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<tr>
<td>PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one):</td>
<td>Schedule 40</td>
<td>Schedule 80</td>
<td>Schedule 120</td>
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<tr>
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<td>Filament Wound Resin Pipe conforming to ASTM D2996</td>
<td>Centrifugally Cast ResiN Pipe conforming to ASTM D2997</td>
<td>Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517</td>
<td>Glass Fiber Reinforced ResiN Pressure Pipe conforming to AWWA C950</td>
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**Open Casing Material:**

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<th>ANSI/AWWA C200</th>
<th>API Spec. 5L</th>
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<td>ASTM A312 (monitor wells)</td>
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<td>Schedule 80</td>
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<td>Schedule 80</td>
<td>Schedule 120</td>
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<td>Filament Wound Resin Pipe conforming to ASTM D2996</td>
<td>Centrifugally Cast Resin Pipe conforming to ASTM D2997</td>
<td>Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517</td>
<td>Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950</td>
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Please refer to the HAWAI'I WELL CONSTRUCTION AND PUMP INSTALLATION STANDARDS to ensure that your as-built is in compliance with applicable standards.

WCR1 Form 10/18/04 Page 2 of 5
DRILLER'S LOG

WELL NUMBER: 1902 - 10

<table>
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<tr>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
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<td>2/10/05</td>
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<td>2/10/05</td>
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Well Elevation

Well Site #2
Bench mark "□" box cut located at the south corner of the concrete pad.

Benchmark Elevation 24.09(MSL)

Attach photos of completed well and concrete pad showing benchmark location.

I certify that the elevation shown above:

1) Was done in accordance with acceptable surveying practices
2) Is accurate to the nearest 0.01 ft.
3) Is referenced to mean sea level

Surveyor: [Signature]
License No.: 4330
Date: 4/7/05
Dear Mr. Nakano:

In response to a voicemail message from Lenore Nakama of your staff, the following information is provided as a supplement to our April 21, 2005 submittal. The well locations, as determined by GPS and expressed in the NAD83 datum, are listed below. If you need these in a different datum or format, please let me know.

Ocean Pointe Irrigation Well Locations (NAD83 Datum)

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<tr>
<th>State Well No.</th>
<th>Ocean Pointe Well No.</th>
<th>Latitude</th>
<th>Longitude</th>
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<td>158° 02' 1.2&quot;</td>
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<td>1902-10</td>
<td>2</td>
<td>21° 19' 8.0&quot;</td>
<td>158° 01' 58.0&quot;</td>
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<tr>
<td>1902-11</td>
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<td>21° 19' 13.7&quot;</td>
<td>158° 01' 49.7&quot;</td>
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<td>4</td>
<td>21° 19' 7.7&quot;</td>
<td>158° 01' 39.8&quot;</td>
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In addition, there was a mistake in the As-Built Well Section for Well No. 1901-06. The lengths of solid and perforated casing are correct (18.8 and 10 feet, respectively), but the total well depth should have been listed as 28.8 rather than 31.0 feet. If you need additional information, please feel free to call.

Sincerely,

Tom Nance

cc: Ray Kanna - HASEKO
Dwight Ho - Beylik

680 Ala Moana Boulevard, Suite 406 • Honolulu, Hawaii 96813-5411 • Phone: (808) 537-1141 • Fax: (808) 538-7757 • E-mail: office@tnwre.com
STEP-DRAWDOWN PUMP TEST DATA
(not required for wells producing < 100,000 gpd or 70 gpm)

Pumped Well No. 1902-10 Observation Well No. N/A
Pumped Well Name WELL NO. 2
Target Q 250 gpm

Distance between Obs. & Pumped Well 25.70 ft.
Reference pt. for depth to water 25.70 ft. msl
Static Water Level @ start of test 1.52 ft. msl

Water level measurements by: □ electrical sounder ■ pressure transducer □ airline

START TEST Date: 2/16/2005 Time of day: 2:45 PM

Flow Meter Reading Start: 15,314.500 gallons

<table>
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<tr>
<th>Suggested Elapsed Time (min)</th>
<th>Actual Elapsed Time (min)</th>
<th>Depth to water (nearest 0.1 ft)</th>
<th>Drawdown (unadjusted to nearest 0.1 ft)</th>
<th>Pumping rate Q (at least 3 steps) (gpm)</th>
<th>EC (ppm)</th>
<th>CI (mg/L)</th>
<th>Test Result</th>
<th>Remarks</th>
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</table>
| Suggested Elapsed Time (min) | Actual Elapsed Time (min) | Depth to water (nearest 0.1 ft) | Drawdown S (unadjusted to nearest 0.1 ft) | Pumping rate Q (at least 3 steps) (gpm) | EC (µhos) | CT (mg/l) | Temp °F or °C | Data in this table is for:  
  ■ Pumped Well  
  □ Observation Well  
  Remarks |
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END OF 3RD STEP

FLOWMETER 12

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<th>Recovery Drawdown (adjusted to nearest 0.1 ft)</th>
<th>Pumping rate Q (gpm)</th>
<th>EC (unitless)</th>
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END TEST Date: 2/16/2005  Time of day: 5:15 pm

ADDITIONAL REMARKS: ____________________________________________________________________________

Person in charge of pump test (print): Tom Nance

Signature: ___________________________________________________________________________________

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
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1 Chloride sampling required
2 Use same ending drawdown figure as start for recovery

Max possible duration, water level or quality did not stabilize for any 24 period.
Begin recovery data next page
Flow meter reading at end of pumped period:

\[15,701,000\] gals
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END TEST Date: 2-18-05 Time of day: 12:00 noon

ADDITIONAL REMARKS: ____________________________________________

Person in charge of pump test (print): Tom Hance

Signature: ____________________________________________

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
**WELL ID: Ocean Pointe no 3**

**INPUT**

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<td>Casing dia. ( (d_c) )</td>
</tr>
<tr>
<td>Annulus dia. ( (d_a) )</td>
</tr>
<tr>
<td>Screen Length (L)</td>
</tr>
</tbody>
</table>

**Depths to:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>water level (DTW)</td>
<td>20 Feet</td>
</tr>
<tr>
<td>Top of Aquifer</td>
<td>20 Feet</td>
</tr>
<tr>
<td>Base of Aquifer</td>
<td>50 Feet</td>
</tr>
</tbody>
</table>

**Annular Fill:**

| across screen --  | Gravel          |
| above screen --   | Cement          |
| Aquifer Material  -- Reef Limestone |

**ASSUMED S =** 0.1 d'less

\[ K = 5000 \text{ is greater than likely maximum of 1000 for Reef Limestone} \]

\[ T = 5000 \text{ Feet/Day} \]

\[ S = 100,000 \text{ Feet2/Day} \]

\[ S_{annular} = 5000 \text{ Feet/Day} \]

\[ Skin = -0.09 \text{ d'less} \]

**COMPUTED**

Aquifer thickness = 30 Feet

Input is consistent.

**REMARKS:**

Step-drawdown analysis of single-well aquifer test

KANNULAR is estimated by fitting simulated drawdowns to measured drawdowns in a secondary plot. A reasonable storage value must be assigned by the user because storage and KANNULAR cannot be estimated independently. The estimate of T is not affected by changes in estimates of storage and KANNULAR.
<table>
<thead>
<tr>
<th>Entry</th>
<th>Time, Hr:Min:Sec</th>
<th>Water Level, Feet</th>
<th>Entry</th>
<th>Time, Hr:Min:Sec</th>
<th>Water Level, Feet</th>
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<tbody>
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<td>1</td>
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<td>----------</td>
<td>--------</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. State Well No.:</td>
<td>1902-11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Address:</td>
<td>Ewa Beach, Oahu</td>
<td></td>
<td></td>
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<tr>
<td>4. Drilling method used during construction:</td>
<td>Rotary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Date Well Construction (drilled, cased, grouted) completed:</td>
<td>2/9/05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Was the subject well cored?</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Initial water-level encountered:</td>
<td>19.5' ft. below ground</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Step-Drawdown Test completed?</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Constant Rate Aquifer Test completed?</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Water-level:</td>
<td>1.53 ft. above msl</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Chloride:</td>
<td>880 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Temperature:</td>
<td>78.0 °F</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Signature:</td>
<td>4/14/05</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
13. AS-BUILT WELL SECTION

(Please attach as-built if different from diagram provided below)

Elevation at top of casing: \( \text{NA} \) ft., msl

Bench mark elevation:

\( \text{NA} \) ft., msl

(Survey to nearest 0.01 ft.)

Grouting method:

\( \checkmark \) Positive displacement

\( \square \) Other

Hole Diameter: 24" in.

Minimum of 2' Radius & 4" Thick Concrete Pad

Ground Elevation: \( \text{NA} \) ft., msl

Cement Grout: 20.6 ft.

(\( \text{min. 70\% of distance from ground elevation to top of water surface or 500 ft. whichever is less.} \))

Annular space between hole and casing (1.5" for positive displacement, 3" for other methods):

6 in.

Rock or Gravel Packing:

12 ft.

Material:

\( \checkmark \) Crushed Basalt

\( \square \) Rounded Gravel

Water Level Elevation:

19.5 GL ft., msl*

Solid Casing: (\( \geq 90\% \)) \( \times \) (Ground Elev.-Water Level Elev)

Length: 22.6 ft.

Nominal Diameter: 12" in.

Wall Thickness: \( \text{Sched 80} \) in.

Bottom Elevation: \( \text{NA} \) ft., msl

Open Casing:

\( \checkmark \) Perforated

\( \square \) Screen

Length: 10 ft.

Nominal Diameter: 12" in.

Wall Thickness: \( \text{Sched 80} \) in.

Bottom Elevation: \( \text{NA} \) ft., msl

Open Hole:

Length: \( \text{NA} \) ft.

Diameter: \( \text{NA} \) in.

Bottom Elevation: \( \text{NA} \) ft., msl

*msl = mean sea level

Solid Casing Material:

- \( \text{Carbon Steel:} \) compliant with (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
  - And compliant with (check one or more):
  - ASTM A242 or A606
  - Type E
  - Type S
  - Grade B
  - Other

- \( \text{Stainless Steel:} \) (check one):
  - ASTM A409 (production wells)
  - ASTM A312 (monitor wells)

- \( \text{ABS Plastic} \) conforming to ASTM F480 and ASTM D1527: (check one)
  - Schedule 40
  - Schedule 80

- \( \text{PVC Plastic} \) conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)
  - Schedule 40
  - Schedule 80

- \( \text{Thermoset Plastic:} \) (check one)
  - Filament Wound Resin Pipe conforming to ASTM D2996
  - Centrífugally Cast Resin Pipe conforming to ASTM D2997
  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:

- \( \text{Carbon Steel:} \) compliant with (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
  - And compliant with (check one or more):
  - ASTM A242 or A606
  - Type E
  - Type S
  - Grade B
  - Other

- \( \text{Stainless Steel:} \) (check one):
  - ASTM A409 (production wells)
  - ASTM A312 (monitor wells)

- \( \text{ABS Plastic} \) conforming to ASTM F480 and ASTM D1527: (check one)
  - Schedule 40
  - Schedule 80

- \( \text{PVC Plastic} \) conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)
  - Schedule 40
  - Schedule 80

- \( \text{Thermoset Plastic:} \) (check one)
  - Filament Wound Resin Pipe conforming to ASTM D2996
  - Centrífugally Cast Resin Pipe conforming to ASTM D2997
  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296

WCR1 Form 10/18/04 Page 2 of 5
### DRILLER'S LOG

#### WELL NUMBER: 1902-11

<table>
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<tr>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
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<td></td>
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<tr>
<td>5 to 10</td>
<td>Coral</td>
<td>2/9/05</td>
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<td>2/9/05</td>
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**Remarks:**

WCR1 Form 10/18/04 Page 3 of 5
Well Elevation
3-1902-11 OCEAN POINTE 3

Well Site #3
Bench mark "0" box cut located at the south corner of the concrete pad.

Benchmark Elevation 21.92 (MSL)

Attach photos of completed well and concrete pad showing benchmark location.

I certify that the elevation shown above:

1) Was done in accordance with acceptable surveying practices
2) Is accurate to the nearest 0.01 ft.
3) Is referenced to mean sea level

Surveyor

License No.

Date
May 5, 2005
05/169 (05-06)

Mr. Dean Nakano
Acting Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P. O. Box 821
Honolulu, Hawaii 96809

Dear Mr. Nakano:

Additional Data for the Well Completion Reports for Well Nos. 1902-09, 1902-10, 1902-11, and 1901-06 at Ocean Pointe, Ewa, Oahu

In response to a voicemail message from Lenore Nakama of your staff, the following information is provided as a supplement to our April 21, 2005 submittal. The well locations, as determined by GPS and expressed in the NAD83 datum, are listed below. If you need these in a different datum or format, please let me know.

Ocean Pointe Irrigation Well Locations (NAD83 Datum)

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<th>State Well No.</th>
<th>Ocean Pointe Well No.</th>
<th>Latitude</th>
<th>Longitude</th>
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<td>21° 19'</td>
<td>8.2°</td>
</tr>
<tr>
<td>1902-10</td>
<td>2</td>
<td>21° 19'</td>
<td>8.0°</td>
</tr>
<tr>
<td>1902-11</td>
<td>3</td>
<td>21° 19'</td>
<td>13.7°</td>
</tr>
<tr>
<td>1901-06</td>
<td>4</td>
<td>21° 19'</td>
<td>7.7°</td>
</tr>
</tbody>
</table>

In addition, there was a mistake in the As-Built Well Section for Well No. 1901-06. The lengths of solid and perforated casing are correct (18.8 and 10 feet, respectively), but the total well depth should have been listed as 28.8 rather than 31.0 feet. If you need additional information, please feel free to call.

Sincerely,

Tom Nance

cc: Ray Kanna - HASEKO
Dwight Ho - Beylik
**STEP-DRAWDOWN PUMP TEST DATA**

(Not required for wells producing < 100,000 gpd or 70 gpm)

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<th>Pumped Well No.</th>
<th>Observation Well No.</th>
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<th>Pumped Well Name</th>
<th>Target Q</th>
<th>Distance between Obs. &amp; Pumped Well</th>
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<tr>
<td>WELL NO. 3</td>
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Water level measurements by: [ ] electrical sounder [ ] pressure transducer [ ] airline

**START TEST** Date: 2-16-2005  Time of day: 12:00 noon

Flow Meter Reading Start: 29,343,900 gallons

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<th>Actual Trig. Time (min)</th>
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<th>Drawdown S (unadjusted to nearest 0.1 ft)</th>
<th>Pumping Rate Q (at least 3 steps) (gpm)</th>
<th>EC (μmhos)</th>
<th>CF (mg/l)</th>
<th>Temp °F or °C</th>
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Step 2 begin?
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<th>Pumping rate Q (at least 3 steps) (GPD)</th>
<th>EC (mumhos)</th>
<th>CR (mg/l)</th>
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Data in this table is for:
- Pumped Well
- Observation Well

Remarks:
- START 2ND STEP
- END 2ND STEP
- START 3RD STEP
- END 3RD STEP
- MEASURE @ END
- = 29,367,100
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<th>Actual elapsed time (min)</th>
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<th>Recovery Drawdown S (unadjusted to nearest 0.1 ft)</th>
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<th>EC (uS/cm)</th>
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END TEST Date: 2/16/2005 Time of day: 3:00 PM

ADDITIONAL REMARKS: 

Person in charge of pump test (print): TOM NANCE

Signature: 

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
## CONSTANT-RATE PUMP TEST DATA

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<th>Suggested elapsed time (min)</th>
<th>Actual elapsed time (min)</th>
<th>Depth to water (nearest 0.1 ft)</th>
<th>Drawdown S (unadjusted to nearest 0.1 ft)</th>
<th>Pumping rate Q (gpm)</th>
<th>EC (in ppm)</th>
<th>CF (mg/l)</th>
<th>Temp from pipe line (°F or °C)</th>
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1 Chloride sampling required
2 Use same ending drawdown figure as start for recovery

Max possible duration, water level or quality did not stabilize for any 24 period

Begin recovery data next page
Flow meter reading at end of pumped period: 29,731,120 gals
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END TEST Date: 2-19-05 Time of day: 11:00 AM

ADDITIONAL REMARKS: __________________

Person in charge of pump test (print): TOM HANCE

Signature: __________________

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
WELL ID: Ocean Pointe no 4

INPUT

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Assumed S = 0.1 d'less

Aquifer thickness = 30 Feet

Input is consistent.

Computed

Aquifer thickness = 30 Feet

K = 10000 Feet/Day

T = 400,000 Feet2/Day

S = 0.1 d'less

K_aquicular = 20000 Feet/Day

Skin = -0.3 d'less

K = 10000 is greater than likely maximum of 1000 for Reef Limestone

REMARKS: Step-drawdown analysis of single-well aquifer test

K_aquicular is estimated by fitting simulated drawdowns to measured drawdowns in a secondary plot. A reasonable storage value must be assigned by the user because storage and K_aquicular cannot be estimated independently. The estimate of T is not affected by changes in estimates of storage and K_aquicular.
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State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

WELL COMPLETION REPORT - PART I
Well Completion 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 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 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.state.hi.us/dlnr/cwrm/

<table>
<thead>
<tr>
<th>1. State Well No.:</th>
<th>2001-06</th>
<th>Well Name:</th>
<th>Ocean Pointe Well #4</th>
<th>Island:</th>
<th>Oahu</th>
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<tbody>
<tr>
<td>2. Address:</td>
<td>Ewa Beach, Oahu</td>
<td>Tax Map Key:</td>
<td>9-1-12-40</td>
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<tr>
<td>4. Drilling method used during construction:</td>
<td>☐ Rotary</td>
<td>☐ Percussion</td>
<td>☐ Other (describe)</td>
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<td></td>
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<tr>
<td>5. Date Well Construction (drilled, cased, grouted) completed:</td>
<td>2/9/05</td>
<td>Fill out attached Driller's Log</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

In addition to the driller's log, if a geologic log was prepared, please submit with this form.

| 6. Was the subject well cored? | ☐ Yes | ☐ No |
| 7. Initial water-level encountered | 18.3' ft. below ground | Date and time of measurement: | 2/9/05 |

| 8. Step-Drawdown Test completed? | ☐ No | ☐ Yes |
| 9. Constant Rate Aquifer Test completed? | ☐ No | ☐ Yes |

Parameters prior to pump test:

| 10. Water-level: | 1.55 ft. above msl | Date and time of measurement: | 2-18-05 14:00 |
| 11. Chloride: | 930 ppm | Date and time of sampling: | 2-18-05 14:10 |
| 12. Temperature: | 78.9°F | Date and time of measurement: | 2-18-05 14:10 |

13. Fill in the as-built section on the other side of this sheet.
14. Attach photograph of well and concrete pad showing benchmark on concrete pad.
15. Fill in attached surveyor's report.
16. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)

17. Remarks:

Licensed Driller (print) Beylik Drilling & Pump Service Inc. AC-21896

Signature

Date 4/14/05
13. AS-BUILT WELL SECTION (Please attach as-built if different from diagram provided below)

Elevation at top of casing NA ft, msl (to nearest 0.01 ft.)

Ground Elevation: NA ft, msl

Minimum of 2' Radius & 4' Thick Concrete Pad

Hole Diameter: 24" in.

Cement Grout: 16.8 ft.

( min. 70% of distance from ground elevation to top of water surface or 500 ft, whichever is less.)

Annular space between hole and casing (1.5" for positive displacement, 3" for other methods):
6 in.

Rock or Gravel Packing:

12 ft.

Material:

Crushed Basalt
Rounded Gravel

Water Level Elevation: 18.8 GL ft, msl*

*msl = mean sea level

Solid Casing Material:

Carbon Steel: compliant with (check one or more):

☐ ANSI/AWWA C200
☐ API Spec. 5L
☐ ASTM A53
☐ ASTM A139

And compliant with (check one or more):

☐ ASTM A242 or A606
☐ Type E
☐ Type S
☐ Grade B
☐ Other

Stainless Steel: (check one):

☐ ASTM A409 (production wells)
☐ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one)

☐ Schedule 40
☐ Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)

☐ Schedule 40
☐ Schedule 80
☐ Schedule 120

Thermoset Plastic: (check one)

☐ Filament Wound Resin Pipe conforming to ASTM D2996
☐ Centrifugally Cast Resin Pipe conforming to ASTM D2997
☐ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
☐ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
☐ FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:

Carbon Steel: compliant with (check one or more):

☐ ANSI/AWWA C200
☐ API Spec. 5L
☐ ASTM A53
☐ ASTM A139

And compliant with (check one or more):

☐ ASTM A242 or A606
☐ Type E
☐ Type S
☐ Grade B
☐ Other

Stainless Steel: (check one):

☐ ASTM A409 (production wells)
☐ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one)

☐ Schedule 40
☐ Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)

☐ Schedule 40
☐ Schedule 80
☐ Schedule 120

Thermoset Plastic: (check one)

☐ Filament Wound Resin Pipe conforming to ASTM D2996
☐ Centrifugally Cast Resin Pipe conforming to ASTM D2997
☐ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
☐ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
☐ FEP Fluorocarbon Tubing conforming to ASTM D3296

GRouting method:

☐ Positive displacement
☐ Other

Total Depth 21.0 ft.
28.8

WELL CONSTRUCTION AND
PUMP INSTALLATION STANDARDS

Please refer to the
HAWAII WELL CONSTRUCTION AND
PUMP INSTALLATION STANDARDS
to ensure that your as-built is in compliance
with applicable standards.

Solid Casing: ( ≥ 90% x (Ground Elev.-Water Level Elev))
Length: 18.8 ft.
Nominal Diameter: 12" in.
Wall Thickness: Sched 80 in.
Bottom Elevation:_________ ft, msl

Open Casing: ☑ Perforated ☐ Screen
Length: 10 ft.
Nominal Diameter: 12" in.
Wall Thickness: Sched 80 in.
Bottom Elevation:_________ ft, msl

Open Hole:
Length: NA ft.
Diameter:_________ in.
Bottom Elevation:_________ ft, msl

1-1901-06 OCEAN POINTE 4

WCR1 Form 10/18/04 Page 2 of 5
## DRILLER'S LOG

**WELL NUMBER:** 1901-06

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<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
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**Remarks:**

---

WCR1 Form 10/18/04 Page 3 of 5
Well Elevation

Well Site #4
Bench mark "☐" box cut located at the south corner of the concrete pad.

Benchmark Elevation 20.66(MSL)

Attach photos of completed well and concrete pad showing benchmark location.

I certify that the elevation shown above:

1) Was done in accordance with acceptable surveying practices
2) Is accurate to the nearest 0.01 ft.
3) Is referenced to mean sea level

Surveyor: [Signature]
License No.: 4330
Date: 4/7/05
May 5, 2005
05/169r (05-06)

Mr. Dean Nakano
Acting Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii  96809

Dear Mr. Nakano:

Additional Data for the Well Completion Reports for Well Nos. 1902-09, 1902-10, 1902-11, and 1901-06 at Ocean Pointe, Ewa, Oahu

In response to a voicemail message from Lenore Nakama of your staff, the following information is provided as a supplement to our April 21, 2005 submittal. The well locations, as determined by GPS and expressed in the NAD83 datum, are listed below. If you need these in a different datum or format, please let me know.

Ocean Pointe Irrigation Well Locations (NAD83 Datum)

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<th>Ocean Pointe Well No.</th>
<th>Latitude</th>
<th>Longitude</th>
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<td>21° 19'</td>
<td>158° 01'</td>
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In addition, there was a mistake in the As-Built Well Section for Well No. 1901-06. The lengths of solid and perforated casing are correct (18.8 and 10 feet, respectively), but the total well depth should have been listed as 28.8 rather than 31.0 feet. If you need additional information, please feel free to call.

Sincerely,

Tom Nance

cc: Ray Kanna - HASEKO
    Dwight Ho - Beylik
## STEP-DRAWDOWN PUMP TEST DATA

(not required for wells producing < 100,000 gpd or 70 gpm)

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<th>Pumped Well No.</th>
<th>Observation Well No.</th>
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<table>
<thead>
<tr>
<th>Pumped Well Name</th>
<th>Distance between Obs. &amp; Pumped Well</th>
<th>Reference pt. for depth to water</th>
<th>Static Water Level @ start of test</th>
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<tr>
<td>Well No. 4</td>
<td>ft.</td>
<td>ft. msl</td>
<td>ft. msl</td>
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Water level measurements by:  
- ☐ electrical sounder  
- ☐ pressure transducer  
- ☐ airline

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<th>Time of day:</th>
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<td>2-18-2005</td>
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Flow Meter Reading Start: 15,715,050 gallons

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<th>Suggested Elapsed Time (min)</th>
<th>Actual Elapsed Time (min)</th>
<th>Depth to water (nearest 0.1 ft)</th>
<th>Drawdown S (unadjusted to nearest 0.1 ft)</th>
<th>Pumping rate Q (at least 3 steps)</th>
<th>EC</th>
<th>Cl</th>
<th>Temp.</th>
<th>Remarks</th>
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- ☐ Observation Well  
- ☐ Remarks
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END TEST  Date: 2-18-2005  Time of day: 4:00 PM

ADDITIONAL REMARKS: ________________________________

Person in charge of pump test (print): TOM NANCE

Signature: ________________________________

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
CONSTANT-RATE PUMP TEST DATA

Pumped Well No. 1901-06
Pumped Well Name WELL NO. 4
Target Q 250 gpm

Observation Well No. 4
Distance between Obs. & Pumped Well
Reference pt. for depth to water
Static Water Level @ start of test

Target Q 10 gpm
Reference pt. for depth to water
Static Water Level @ start of test

START TEST Date: 2-15-2005 Time of day: 4:20 PM

Flow Meter Reading Start: 15,737.235 gallons

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* amended per 5/20/05 voice message from J. Namie M.
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Max possible duration, water level or quality did not stabilize for any 24 period

Begin recovery data next page
Flow meter reading at end of pumped period:

1 Chloride sampling required
2 Use same ending drawdown figure as start for recovery
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<th>Actual elapsed time (min)</th>
<th>Depth to water (nearest 0.1 ft)</th>
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<th>Pumping rate Q (gpm)</th>
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END TEST Date: 2-19-05 Time of day: 5:50 PM

ADDITIONAL REMARKS: ____________________________________________________________

Person in charge of pump test (print): Tom Hance

Signature: ____________________________

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
WELL CONSTRUCTION PERMIT
EP 27 Battery, Well No. 1901-06 & 1902-09 to 11

Note: This permit shall be prominently displayed at the site until the work is completed

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of EP 27 Battery (Well No. 1901-06 & 1902-09 to 11) at Ocean Pointe, Ewa, Oahu, TMK 9-1-12:39 & 40, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. The well construction permit shall be for construction and testing of the well only. A minimum 1 1/4-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee, well operator, and/or well owner shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee, well operator, and/or well owner shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.

3. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.

4. The permittee, well operator, and/or well owner shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee, well operator, and/or well owner shall stop work and contact the Department's Historic Preservation immediately.

6. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   b. Elevation (referenced to mean sea level, msl) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

10. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee, well operator, and/or well owner notice of the proposed action and an opportunity to be heard.

11. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee, well operator, and/or well owner must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

12. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

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

Date of Approval: September 2, 2003
Expiration Date: September 2, 2005

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall commence work until I and the driller have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day starting from the permit date of approval.

Permittee's Signature: ____________ Date: ____________
Printed Name: Raymond S. Kane Firm or Title: Haasco - Project Mgr.

Driller's Signature: William C. Hoole C-57 License #: 1B22096 Date: 9/9/03
Printed Name: William C. Hoole Firm or Title: ____________

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment c: USGS
Department of Health/Safe Drinking Water, Wastewater, and Clean Water Branches
Honolulu Board of Water Supply
Dwight Ho, Sketch Driller
RECEIVED

03 SEP 12 09:45

COMMISSION ON WATER
RESOURCE MANAGEMENT
September 4, 2003

Ref: 1901-06, 1902-09 to 11.wcp

Mr. Ray Kanna
HASEKO (Ewa), Inc.
820 Millilani St., Ste. 820
Honolulu, HI 96813

Dear Mr. Kanna:

Well Construction Permit
EP 27 Battery (Well No. 1901-06 & 1902-09 to 11)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for your permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 13:

Special Conditions

1. Attached for your information is a copy of the Department of Health's (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities.

2. Separate Well Completion Reports – Part 1 shall be filed for each well.

Please sign and have the contractor sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use.

IMPORTANT - Drilling work shall not commence until a fully signed permit is returned to the Commission. Please provide all the information in this packet to your well drilling contractor. The permittee, well operator, and/or well owner are responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions starting from the permit approval date.

If you have any questions, please call Lenore Y. Nakama of the Commission staff at 587-0218.

Sincerely,

Peter T. Young
Chairperson

Enclosures

c: Dwight Ho, Beylik Drilling
WELL CONSTRUCTION PERMIT
EP 27 Battery, Well No. 1901-06 & 1902-09 to 11

Note: This permit shall be prominently displayed at the site until the work is completed.

In accordance with the Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of EP 27 Battery (Well No. 1901-06 & 1902-09 to 11) at Ocean Pointe, Ewa, Oahu, TMK 9-1-12:39 & 40, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-16, Hawaii Administrative Rules.

2. The well construction permit shall be for construction and testing of the well only. A minimum 1/2-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee, well operator, and/or well owner shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee, well operator, and/or well owner shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.

3. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.

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   b. Elevation (referenced to mean sea level, msl) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances: non-compliance may be grounds for revocation of this permit.

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

10. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee, well operator, and/or well owner notice of the proposed action and an opportunity to be heard.

11. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee, well operator, and/or well owner must apply for a well abandonment permit in accordance with §13-166-12(f) prior to any well sealing or plugging work.

12. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

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

Date of Approval: September 2, 2003
Expiration Date: September 2, 2005

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I and the driller have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day starting from the permit date of approval.

Permittee's Signature: ___________________________ Date: ______________________
Printed Name: ___________________________ Firm or Title: ___________________________
Driller's Signature: ___________________________ C-57 License # : ___________ Date: ______________________
Printed Name: ___________________________ Firm or Title: ___________________________

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment:
USGS
Department of Health's Safe Drinking Water, Wastewater, and Clean Water Branches
Honolulu Board of Water Supply
Dwight Ho, Bevilik Driller
**SECTION 1: WELL LOCATION INFORMATION**

<table>
<thead>
<tr>
<th>Island</th>
<th>OAHU</th>
<th>Proposed Use</th>
<th>Irrigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquifer System</td>
<td>EWA CAPROCK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquifer Sector</td>
<td>#</td>
<td>Proposed Withdrawal</td>
<td>3300000</td>
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<tr>
<td></td>
<td></td>
<td>System Sustainable Yield</td>
<td>15</td>
</tr>
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</table>

**SECTION 2: WELL SECTION DATA** *(enter data in grey cells only)*

<table>
<thead>
<tr>
<th>Elevation at top of casing</th>
<th>25 ft., m.s.l.</th>
<th>Solid Casing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Elevation</td>
<td>23 ft., m.s.l.</td>
<td>Material</td>
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<tr>
<td>Cement GROUT</td>
<td>20 ft.</td>
<td>Designation</td>
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<tr>
<td>Rock Packing</td>
<td>0 ft.</td>
<td>Length</td>
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<tr>
<td>Hole Diameter</td>
<td>24 in.</td>
<td>Diameter</td>
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<tr>
<td>Total Depth</td>
<td>35 ft.</td>
<td>Wall Thickness</td>
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</table>

<table>
<thead>
<tr>
<th>Estimated Head</th>
<th>15 ft., m.s.l.</th>
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</thead>
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<tr>
<td>Calculated Aquifer Thickness</td>
<td>61.5 ft.</td>
</tr>
<tr>
<td>County Water Supply (Y/N ?)</td>
<td>NO</td>
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</tbody>
</table>

**SECTION 3: CHECKLIST** *(values to check are shaded)*

<table>
<thead>
<tr>
<th>Well Depth</th>
<th>Theoretical Thickness of Aquifer</th>
<th>61.5 ft.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1/4 Aquifer Thickness</td>
<td>15.38 ft.</td>
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**Well Casing**

<table>
<thead>
<tr>
<th>Minimum Wall Thickness</th>
<th>PVC</th>
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<tr>
<td>Material</td>
<td>County or Non-County</td>
</tr>
<tr>
<td>Wall Thickness Provided</td>
<td>0.687 in.</td>
</tr>
<tr>
<td>Minimum Length of Solid Casing</td>
<td>0.687 in.</td>
</tr>
<tr>
<td>90% of ground to top of aquifer</td>
<td>19.35 ft.</td>
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<tr>
<td>Length of solid casing Provided</td>
<td>20 ft.</td>
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<tr>
<td>Casing Material</td>
<td>Sch 80</td>
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</table>

**Annular Space**

<table>
<thead>
<tr>
<th>Depth of Grouting</th>
<th>Calculated Depth of Grouting</th>
<th>15.05 ft.</th>
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</thead>
<tbody>
<tr>
<td>Depth of Grouting provided</td>
<td>20 ft.</td>
<td>okay (refer to HWCP/S Section 2.6 c)</td>
</tr>
<tr>
<td>Thickness of Annular Space</td>
<td>6 in.</td>
<td>okay (refer to HWCP/S Section 2.6 d)</td>
</tr>
</tbody>
</table>
APPLICANT/AGENCY: Ernest Y. W. Lau, Deputy Director
Commission on Water Resource Management


Ahuupua’a:  Honouliuli
District, Island:  ‘Ewa, O‘ahu
TMK:  (1) 9-1-012:039 &040

1. We believe there are no historic properties present, because:

____ a) intensive cultivation has altered the land
____ b) residential development/urbanization has altered the land
____ c) previous grubbing/grading has altered the land
____ d) an acceptable archaeological assessment or inventory survey found no historic properties
____ e) other:

2. This project has already gone through the historic preservation review process, and mitigation has been completed □.

✓ Thus, we believe that “no historic properties will be affected” by this undertaking.

Aloha,

P. Holly McEldowney, Acting Administrator
State Historic Preservation Division
August 14, 2003

TO: Honorable Chiyome L. Fukino, M.D., Director
Department of Health
Attention: Harold Yee, Waste Water Branch
William Wong, Safe Drinking Water Branch
Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
EP 27 Battery (Well No. 1901-06, 1902-09 to 11)

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by September 2, 2003. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments. The applicant has requested expedited processing of this application, and your earliest review and comment would be appreciated.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

LYN:ss
Attachment(s)

RESPONSE:

This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

For the applicant's information, a source of possible wastewater contamination is not located near the proposed well site (information attached).

An NPDES permit is required.

Other relevant DOH rules/regulations, information, or recommendations are attached.

No comments/objections

Contact Person: Lori N. Kajiwara
Phone: 586-4294

Signed: Lori N. Kajiwara
Date: 8-21-2003
August 14, 2003

TO: Honorable Chiyome L. Fukino, M.D., Director
    Department of Health
    Attention: Harold Yee, Wastewater Branch
               William Wong, Safe Drinking Water Branch
               Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
               Alec Wong, Clean Water Branch

FROM: 

SUBJECT: Well Construction/Pump Installation Permit Application

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LYN:ss
Attachment(s)

RESPONSE:

This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20:29. This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

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For the applicant's information, a source of possible wastewater contamination is not located near the proposed well site (information attached).

An NPDES permit is required.

Other relevant DOH rules/regulations, information, or recommendations are attached.

No comments/objections

Contact Person: Bill Wong
Phone: 586-4058

Signed: Bill Wong
Date: 2003
TO: Dede Mamiya, Administrator
Land Division

FROM: Ernest Y.W. Lau, Deputy Director
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
EP 27 Battery (Well No. 1901-06, 1902-09 to 11)

August 14, 2003

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Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

LYN:ss
Attachment(s)

RESPONSE:
[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.
[ ] A water lease/permit is not required of this applicant.
[ ] A water lease/permit has been obtained by the applicant through lease no. ____________________________
[ ] This well project [ ] requires [ ] does not require a CDUP. If a CDUP is required it [ ] has [ ] has not been approved and [ ] is [ ] is not currently active.
[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.
[ ] No objections
[ ] Other comments: Original source of private title was issued prior to statehood.

Contact Person: George Martin
Phone: 877-0421
Signed: LINDA LINGLE
Date: AUG 22, 2003

PETER T. YOUNG
CHAIRPERSON
MEREIDTH J CHING
CLAYTON W. DELA CRUZ
JAMES A. FRAZIER
CHIYOME L. FUKINO, M.D
STEPHANIE A. WHALEN
ERNEST Y.W. LAU
DEPUTY DIRECTOR
August 14, 2003

TO: Honorable Chiyome L. Fukino, M.D., Director
   Department of Health
   Attention: Harold Yee, Wastewater Branch
   William Wong, Safe Drinking Water Branch
   Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
   Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
      Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
   EP 27 Battery (Well No. 1901-06, 1902-09 to 11)

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Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

LYN:as
Attachment(s)

RESPONSE:

1. This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or less 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-28.

2. This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before utilizing such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

3. If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable systems with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

4. It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

5. For the applicant's information, a source of possible wastewater contamination [['] is [] is not located near the proposed well site (information attached).

6. An NPDES permit is required.

7. Other relevant DOH rules/regulations, information, or recommendations are attached.

8. No comments/objections.

Contact Person: Dr. Keith Kawaoka Phone: 586-4249

Signed: 

Fax to: Commission on Water Resource Mgt. 587-0219
August 20, 2003

TO: Lenore Y. Nakama, Staff  
Commission on Water Resources Management  
Department of Land and Natural Resources

FROM: Keith Kawaoka, D. Env.  
Hazard Evaluation & Emergency Response (HEER) Office  
Hawaii State Department of Health

SUBJECT: Well Construction/Pump Installation Permit Application  
EP 27 Battery Wells (Well No. 1901-06 & 1902-09 to 11)

Ewa Sugar Mill/Oahu Sugar Co. – Coral Waste pit

This site has undergone a Preliminary Assessment (6/93), Site Inspection (9/99) and subsequent site screening by the HEER Office for the possibility of chemical contamination at a coral waste pit. The HEER Office issued a No-Further-Action (NFA) letter in January 2001.
August 14, 2003

TO: Honorable Chiyome L. Fukino, M.D., Director
    Department of Health
Attention: Harold Yee, Wastewater Branch
          William Wong, Safe Drinking Water Branch
          Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
          Alex Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
      Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application

EP 27 Battery (Well No. 1901-06, 1902-09 to 11)

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by September 2, 2003. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments. The applicant has requested expedited processing of this application, and your earliest review and comment would be appreciated.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 988-6218.

LYN:ss
Attachment(s)

RESPONSE:

1. This well qualifies as a source which will serve as a source of notifiable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Public Water Systems, §11-20-29.

2. This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year of 10 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

3. If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating the potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable supplies with warning signs to prevent inadvertent consumption of non-potable water. Backflow preventer devices should be routinely inspected and tested.

4. It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

5. For the applicant's information, a source of possible wastewater contamination (Jet) is not located near the proposed well site (information attached).

6. An NPDES permit is required.

7. Other relevant DOH rules/regulations, information, or recommendations are attached.

No comments/objections.

Contact Person: Alec Wong
Phone: 86-6039

Signed: Alec Wong
Date: 8/24/03

03D107
The Department of Health, Clean Water Branch has the following comments:

1. **For Well-Drilling Activities**

Any discharge to State waters of treated process wastewater effluent associated with well drilling activities is regulated by Hawaii Administrative Rules, Title 11, Chapter 55, Appendix I, effective September 22, 1997. Treated process wastewater effluent covered by this general permit includes well drilling slurries, lubricating fluids wastewaters, and well purge wastewaters. This general permit does not cover well pump testing. The applicable Notice of Intent Forms and filing fee shall be submitted at least thirty (30) days before the start of discharge to the Department of Health, Clean Water Branch at 919 Ala Moana Boulevard, Room 301, Honolulu, Hawaii 96814-4920 or P.O. Box 3378, Honolulu, Hawaii 96801-3378. Inquiries may be directed to the Clean Water Branch at (808) 586-4309 or by fax at (808) 586-4352.

2. **For Well Pump Testing**

The discharger shall take all measures necessary to prevent the discharge of pollutants from entering State waters. Such measures shall include, if necessary, containment of the initial discharge until the discharge is essentially free of pollutants. If the discharge is entering a stream or river bed, best management practices shall be implemented to prevent the discharge from disturbing the clarity of the receiving water. If the discharge is entering a storm drain, the discharger must obtain written permission from the owner of that storm drain prior to discharge. Furthermore, best management practices shall be implemented to prevent the discharge from collecting sediments and other pollutants prior to entering the storm drain.

JS/cr
August 14, 2003

Mr. Ray Kanna
HASEKO (Ewa), Inc.
820 Mililani Street, Ste. 820
Honolulu, HI 96813

Dear Mr. Kanna:

Well Construction/Pump Installation Permit Application for Well No. 1901-06, 1902-09 to 11

We acknowledge receipt, on August 8, 2003, of your completed Well Construction/Pump Installation permit application and filing fee for the EP 27 Battery (Well No. 1901-06, 1902-09 to 11). We understand that you are requesting expedited review and processing and we will accommodate you to the best of our ability.

For your information, the process of constructing a well is normally regulated and permitted in two (2) steps. First, a well construction permit is issued for drilling and testing purposes only. Based upon information provided by you through a Well Completion Report Part 1 (Well Construction), a pump installation permit (upon completed application) may then be issued to authorize pump work. If a pump is installed then a Well Completion Report Part 2 (Pump Installation) is required.

If you have any questions about your permit application, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

Sincerely,

ERNEST Y.W. LAU
Deputy Director

LYN:ss
TO: Honorable Chiyome L. Fukino, M.D., Director
Department of Health
Attention: Harold Yee, Wastewater Branch
William Wong, Safe Drinking Water Branch
Dr. Keith Kawoaka, Hazardous Evaluation and Emergency Response
Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
EP 27 Battery (Well No. 1901-06, 1902-09 to 11)

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Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

LYN:ss
Attachment(s)

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-20.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

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[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination is not located near the proposed well site (information attached).

[ ] An NPDES permit is required.

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] No comments/objections

Contact Person: __________________________ Phone: __________________________

Signed: __________________________ Date: __________________________
TO: Dede Mamiya, Administrator  
Land Division
FROM: Ernest Y.W. Lau, Deputy Director  
Commission on Water Resource Management
SUBJECT: Well Construction/Pump Installation Permit Application  
EP 27 Battery (Well No. 1901-06, 1902-09 to 11)

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RESPONSE:
[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.
[ ] A water lease/permit is not required of this applicant.
[ ] A water lease/permit has been obtained by the applicant through lease no. ________________________.
[ ] This well project [ ] requires [ ] does not require a CDUP. If a CDUP is required it [ ] has [ ] has not been approved and [ ] is [ ] is not currently active.
[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.
[ ] No objections
[ ] Other comments:

Contact Person: ___________________________ Phone: __________
Signed: ___________________________ Date: __________
August 14, 2003

TO: Holly McEldowney, Acting Administrator
   Historic Preservation

FROM: Ernest Y.W. Lau, Deputy Director

SUBJECT: Well Construction/Pump Installation Permit Application
         EP 27 Battery (Well No. 1901-06, 1902-09 to 11)

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LYN:ss
Attachment(s)
RESPONSE:

[ ] There may be areas in the vicinity of the well site that contain subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal.

[ ] Other relevant Historic Preservation rules/regulations, information, or recommendations are attached.

[ ] No objections

[ ] Other comments:

Contact Person: ____________________________ Phone: _______

Signed: ____________________________ Date: ___________
<table>
<thead>
<tr>
<th>F YR</th>
<th>APP D</th>
<th>SRC OBJ</th>
<th>COST CTR</th>
<th>PROJECT</th>
<th>PH ACT</th>
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<td>(1) $25.00 TNWRE INC.</td>
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<td>(2) $25.00 Wailani Drilling</td>
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<td>(3) $25.00 Wailani Drilling</td>
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<td>TOTAL $ 75.00</td>
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</tbody>
</table>

REMARKS: LINE (1) Well No. 1901-06, 1902-09 to 11
LINE (2) Hina-Grace Bible Well (TMK: 3-8-71:81)
LINE (3) Kaupakalua-upCOUNTRY LLC Well (TMK: 2-7-13:50)
LINE (4)                                           
LINE (5)                                           
LINE (6)                                           
LINE (7)                                           
LINE (8)                                           
LINE (9)                                           
LINE (10)                                          


July 8, 2003

Ernest Y.W. Lau, Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Lau:

Per your correspondence dated July 2, 2003, Mr. Raymond Kanna is our authorized representative for Ke Noho Kai Development, LLC, the landowner at TMK: 9-1-12:40 for all matters related to the Department of Land and Natural Resources.

If you have any further questions, please contact me at (808) 224-1365.

Sincerely yours,

By Haseko Homes, Inc., a Hawaii Corporation
  Its Manager

[Signature]
Toru Nagayama
President
July 8, 2003

Ernest Y.W. Lau, Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

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Sincerely yours,

By Haseko Homes, Inc., a Hawaii Corporation
Its Manager

Toru Nagayama
President
July 2, 2003

Mr. Ray Kanna
HASEKO (Ewa), Inc.
820 Millilani Street, Ste. 820
Honolulu, HI 96813

Dear Mr. Kanna:

Well Construction/Pump Installation Permit Application for
Well No. 1901-06, 1902-01, 09 to 11

We have received your Well Construction/Pump Installation permit application and filing fee for the EP 27 Battery (Well No. 1901-06, 1902-01, 09 to 11). However, your application is incomplete. Matters which must be addressed before we accept your application as complete are as follows:

1. Please provide the signature of an authorized representative for Ke Noho Kai Dev LLC, landowner at Tax Map Key 9-1-12:40, on the above-referenced application or attached to a statement acknowledging that an application is being made to construct a new well(s) on its land.

Upon receipt of the above information we will accept your application as complete and you can then expect your application to be processed within ninety (90) days.

If you have any questions about your permit application, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

Sincerely,

ERNEST Y.W. LAU
Deputy Director

LYN:ss
<table>
<thead>
<tr>
<th>Taxkey</th>
<th>Subdiv/Condo</th>
<th>Tnr</th>
<th>Address</th>
<th>Owner/Lessee</th>
<th>Bds</th>
<th>Bths</th>
<th>Land area</th>
<th>Liv area</th>
<th>Last Sale</th>
<th>Instr</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>1-9-1-12-39</td>
<td></td>
<td></td>
<td></td>
<td>HASEKO (EWA)</td>
<td></td>
<td></td>
<td>183.20 ac</td>
<td>0</td>
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</tbody>
</table>

This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed.
# PUBLIC RECORD DATA

**TMK # 1-9-1-12-40**

**Owner:** KE NOHO KAI DEV LLC  
**Tax Payer:** KE NOHO KAI DEV LLC  
**Tenure:** Fee Simple

<table>
<thead>
<tr>
<th>Assessed Value</th>
<th>Exemption</th>
<th>Size</th>
<th>Building</th>
<th>Dwellings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land: $3,637,000</td>
<td>$0</td>
<td>83.49 ac</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Buildings: $0</td>
<td>$0</td>
<td>0 sq ft</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total: $3,637,000</td>
<td>$0</td>
<td>$0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**SALES**  
5/3/2002 DEED -M  
$15,455,000 LCD 2801403 TCT 610660  
K NOHO KAI DEVELOPMENT LLC, A Company or Corporation(Tenants in Severalty)

---

**DEPARTMENT OF PLANNING AND PERMITTING**

This data from the Department of Planning and Permitting is unofficial and is subject to change without notice. It is the user's responsibility to verify the accuracy of information from official documents which are available for inspection at the City department responsible for the data.

**CIVIL FINES**  
NONE

**DEVELOPMENT PLAN AREA**  
EWA

**DEVELOPMENT PLAN DESIGN**  
SUPERSEDED BY ORD 97-49. EFFECTIVE 10/21/97.

**FLOOD ZONE**  
FIRM ZONE D

**HEIGHT LIMIT**  
25 FEET

**HISTORIC SITE REGISTER**  
NONE

**LOT RESTRICTIONS**  
NONE

**SMA/SHORELINE**  
NOT IN SMA

**SPECIAL DISTRICT**  
NOT IN SPECIAL DISTRICT

**STATE LAND USE**  
URBAN DISTRICT

**STREET SETBACK**  
NONE

**ZONING (CZC)**  
AG-2 GENERAL AGRICULTURAL

**ZONING (LUO)**  
AG-2 GENERAL AGRICULTURAL DISTRICT

This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is therefore, not guaranteed.
<table>
<thead>
<tr>
<th>Approved Well No.</th>
<th>Well Name</th>
<th>Applicant</th>
<th>Driller</th>
<th>Type</th>
<th>Well Construction</th>
<th>Pump Installation</th>
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</thead>
<tbody>
<tr>
<td>12/12/2001</td>
<td>7449-02 Hawi 1</td>
<td>Hawaii DWS</td>
<td>AC-21896</td>
<td>PUMP</td>
<td>12/12/2001</td>
<td>1/31/2002</td>
</tr>
</tbody>
</table>
Mr. Ernest Y.W. Lau  
Deputy Director  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P. O. Box 621  
Honolulu, Hawaii 96809

Dear Mr. Lau:

Well Construction Permit Application  
for the EP27 Battery Wells (State Well Nos. 1902-09, 1902-10, 1902-11, and 1901-06)

Attached is the Well Construction and Pump Installation permit application and filing fee for the EP27 Battery Wells (State Well Nos. 1902-09, 1902-10, 1902-11, and 1901-06). Feel free to call me or Ray Kanna (224-1365) if you have questions.

Sincerely,

Tom Nance

cc: Ray Kanna

Attachments
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT
6-23-03

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Application must be accompanied by 5 copies and a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. This Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-0225. For further information and updates to this application form, visit http://www.state.hi.us/landres.

APPLICANT INFORMATION: (Fill out all three, if applicable, and place a check next to the primary contact)

1. (a) WELL OWNER: HASEKO (Ewa), Inc. Contact Person: Ray Kanna Phone: 224-1365
Mailing Address: 820 Mililani Street - Suite 820 Honolulu, Hawaii 96813
Fax: 538-7654
(b) LAND OWNER: HASEKO (Ewa), Inc. Contact Person: Ray Kanna Phone: 224-1365
Mailing Address: 820 Mililani Street - Suite 820 Honolulu, Hawaii 96813
Fax: 538-7654
(c) CONTRACTOR: Beylik Drilling, Inc. Contact Person: Dwight Ho Phone: 682-5554
Mailing Address: 91-259-A Olai Street, Kapolei, Hawaii 96707
Fax: 682-5866

WELL & PUMP INFORMATION: (Please fill in the diagram on the back of this form.)

2. WELL NAME: EP-27 Battery Island: Oahu
Address Ocean Pointe, Ewa Tax Map Key: 9 Zone Sec 1 Parcel 40
Attach: (a) portion of a 7.5-Minute Series USGS topographic map (scale 1:24,000) with well location labeled and include the name of the quadr map (b) a property tax map, showing well location referenced to established property boundaries

3. PROPOSED WORK:
(check all that apply)

- Construct New Well
- Modify Existing Well
- Abandon/Seal
- Install New Pump
- Modify Pump
- Drilled
- Dug
- Shaft
- Tunnel
- Four drilled wells

4. CONSTRUCTION:

- Drilled
- Dug
- Shaft
- Tunnel
- Is this well part of a battery of wells? Yes
- No (Please describe) of the EP-27 Battery

5. PROPOSED PUMPING RATE:

- Municipal (including hotels, stores, etc.)
- Industrial
- Agriculture and dust control
- Other (explain)

6. PROPOSED USE:
(check all that apply)

- Domestic (individual, noncommercial water system)
- Other (explain)

7. (a) PROPOSED AMOUNT OF WITHDRAWAL:

- 3,300,000 gallons per day

(b) METHOD OF FLOW MEASUREMENT:

- Flowmeter
- Open-pipe
- Weir
- Office
- Other (explain)

OTHER IMPORTANT INFORMATION:

8. LEGAL REQUIREMENTS: If required, these permits must be obtained before the Commission can legally issue a permit.

Conservation District Use Permit (CDUP) To find out if a CDUP is necessary, call DLNR Land Division at 587-0414
- Not Required
- If required, date approved

Environmental Impact Statement (EIS) or Environmental Assessment (EA) To determine if an EIS or EA is necessary, call OEC at 586-4185
- Not Required
- If required, date published in OEC bulletin

Special Management Area Permit (SMAP) To determine if an SMAP is necessary: on Oahu, call 627-3374; on Hawaii, call 961-8288; for Maui county, call 270-7235; on Kauai, call 241-6677.
- Not Required
- If required, date approved

9. REMARKS, EXPLANATIONS: The well section shown on the back of this application is essentially identical for all four wells.

NOTE: Signing below indicates the signatory understands and swears that the information provided on this application is accurate and true to the best of their knowledge. Further, the signatory understands that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 60 days after the completion date of the permitted work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity; 5) in the event that the application is not completed correctly, an permit may be suspended until the item is brought in to compliance, and any work done while the permit is in suspension may result in fines in excess of $25.00 per day.

Well Owner: HASEKO (Ewa), Inc. Landowner: HASEKO (Ewa), Inc. Contractor: Beylik Drilling
Signature Date

For official use only
Aquifer System No.
State Well No.
For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or, Bottom Elevation of Well Limit = \( \frac{(2 \times \text{Water Elevation} - 	ext{Ground Elevation})}{4} \)

Example: Estimated + 2 ft. Water Level Elev. \( \rightarrow \) Bottom Elevation of Well Limit = \( \frac{(2 \times (21 - 10.5))}{4} \) = -18.5 ft.

Solid Casing Material:
- Carbon Steel: compliant with (check one or more): □ ANSI/AWWA C200 □ API Spec. 5L □ ASTM A53 □ ASTM A139
- Stainless Steel: (check one): □ ASTM A409 (production wells) □ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one): □ Schedule 40 □ Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2341): (check one): □ Schedule 40 □ Schedule 80 □ Schedule 120

Thermoset Plastic: (check one)
- Filament Wound Resin Pipe conforming to ASTM D2696
- Centrifugally Cast Resin Pipe conforming to ASTM D2697
- Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
- Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
- PTFE Fluorocarbon Tubing conforming to ASTM D3296
- FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
- Carbon Steel: compliant with (check one or more): □ ANSI/AWWA C200 □ API Spec. 5L □ ASTM A53 □ ASTM A139
- Stainless Steel: (check one): □ ASTM A409 (production wells) □ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one): □ Schedule 40 □ Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2341): (check one): □ Schedule 40 □ Schedule 80 □ Schedule 120

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